

# APPENDIX B

## MADISON EAST-WEST BRT

Documented Categorical Exclusion  
Land Use and Zoning Technical Report

May 10, 2022

Prepared for:

City of Madison



Prepared by:

SRF Consulting Group

Commonwealth Heritage Group

Cross-Spectrum Acoustics

# REVISIONS

---

Revision No.	Date	Prepared By

---

# Contents

1.	Introduction .....	1
2.	Regulatory Context and Methodology .....	1
2.1.	Regulatory Context .....	1
2.2.	Methodology.....	2
3.	Existing Land Use and Zoning; Planned Land Use.....	3
3.1.	Overview.....	3
3.2.	Mineral Point Road .....	7
3.2.1.	Existing Land Use.....	7
3.2.2.	Zoning.....	8
3.2.3.	Future Land Use .....	9
3.3.	Whitney Way .....	10
3.3.1.	Existing Land Use.....	10
3.3.2.	Zoning.....	12
3.3.3.	Future Land Use .....	14
3.4.	Sheboygan Avenue and University Avenue (West of University Bay).....	15
3.4.1.	Existing Land Use.....	15
3.4.2.	Zoning.....	16
3.4.3.	Future Land Use .....	17
3.5.	Campus Drive, University Avenue, and West Johnson Street .....	18
3.5.1.	Existing Land Use.....	18
3.5.2.	Zoning.....	19
3.5.3.	Future Land Use .....	20
3.6.	State Street and Capitol Square.....	21
3.6.1.	Existing Land Use.....	21
3.6.2.	Zoning.....	22
3.6.3.	Future Land Use .....	23
3.7.	East Washington Avenue Between Capitol Square and Wright Street .....	24
3.7.1.	Existing Land Use.....	24
3.7.2.	Zoning.....	25
3.7.3.	Future Land Use .....	26
3.8.	Wright Street, Anderson Street, and Mendota Street.....	27
3.8.1.	Existing Land Use.....	27
3.8.2.	Zoning.....	28

3.8.3.	Future Land Use .....	29
3.9.	East Washington Avenue East of Mendota Street.....	30
3.9.1.	Existing Land Use.....	30
3.9.2.	Zoning.....	31
3.9.3.	Future Land Use .....	32
3.10.	Other Project Areas.....	32
3.10.1.	Metro Satellite Maintenance Facility .....	32
3.10.2.	Sun Prairie Park-and-Ride Electric Bus Charging Equipment .....	33
4.	Environmental Consequences .....	33
4.1.	No Build Alternative.....	33
4.2.	Build Alternative .....	33
4.2.1.	Operating Phase Impacts .....	33
4.2.2.	Construction Phase Impacts.....	33
4.2.3.	Indirect and Cumulative Effects.....	33
5.	Mitigation Measures.....	37

## List of Figures

Figure 1: 2020 Existing Land Use in Project Area .....	4
Figure 2: Current Zoning Map of Study Area.....	5
Figure 3: Planned Land Use Map of Study Area .....	6
Figure 4: 2020 Existing Land Use for Mineral Point Road Segment .....	7
Figure 5: Zoning for Mineral Point Road Segment.....	8
Figure 6: Planned Land Use for Mineral Point Road Segment.....	9
Figure 7: 2020 Existing Land Use for Whitney Way Segment .....	10
Figure 8: Zoning for Whitney Way Segment.....	12
Figure 9: Planned Land Use for Whitney Way Segment.....	14
Figure 10: 2020 Existing Land Use for Sheboygan Avenue and University Avenue Segment.....	15
Figure 11: Zoning for Sheboygan Avenue and University Avenue Segment .....	16
Figure 12: Planned Land Use for Sheboygan Avenue and University Avenue Segment .....	17
Figure 13: 2020 Existing Land Use for Campus Drive, University Avenue, and West Johnson Street Segment.....	18
Figure 14: Zoning for Campus Drive, University Avenue, and West Johnson Street Segment .....	19
Figure 15: Planned Land Use for Campus Drive, University Avenue, and West Johnson Street Segment .....	20
Figure 16: 2020 Existing Land Use for State Street and Capitol Square Segment .....	21

Figure 17: Zoning for State Street and Capitol Square Segment.....22

Figure 18: Planned Land Use for State Street and Capitol Square Segment .....23

Figure 19: 2020 Existing Land Use East for Washington Avenue between Capitol Square and Wright Street Segment.....24

Figure 20: Zoning for East Washington Avenue between Capitol Square and Wright Street Segment .....25

Figure 21: Planned Land Use for East Washington Avenue between Capitol Square and Wright Street Segment 26

Figure 22: 2020 Existing Land Use for Wright Street, Anderson Street, and Mendota Street Segment .....27

Figure 23: Zoning for Wright Street, Anderson Street, and Mendota Street Segment.....28

Figure 24: Planned Land Use for Wright Street, Anderson Street, and Mendota Street Segment.....29

Figure 25: 2020 Existing Land Use for East Washington Avenue East of Mendota Street.....30

Figure 26: Zoning for East Washington Avenue East of Mendota Street .....31

Figure 27: Planned Land Use for East Washington Avenue East of Mendota Street .....32

## Attachments

Attachment A: City of Madison Growth Priority Areas

# 1. Introduction

The Madison East-West Bus Rapid Transit (BRT) Project (the project) is a proposed 15-mile route serving east-west travel needs in central Madison, Wisconsin. The project extends from East Springs Drive on the east side of Madison to a proposed new park-and-ride at Junction Road on the west side of Madison. Operating primarily via East Washington Avenue, University Avenue, and Mineral Point Road, the BRT line would serve the major regional destinations of the Isthmus (downtown Madison), the University of Wisconsin-Madison (UW) campus, Madison Area Technical College, and major employers and several shopping centers located throughout the corridor. BRT buses would use a combination of center-running bus lanes, side bus lanes, and mixed-traffic lanes. The project also includes electric bus charging infrastructure at the Sun Prairie Park-and-Ride and the Metro Satellite Maintenance Facility where BRT layovers will occur.

This technical memo describes current land use, zoning, and planned land use within a half mile of the proposed BRT line.

## 2. Regulatory Context and Methodology

This section evaluates the project's potential land use impacts within the study area. This includes the following:

- Description of existing land use conditions and zoning.
- Description of planned land uses and land use planning efforts.
- Evaluation of the East-West BRT's compatibility with local land use and transportation planning policies including local approved planning documents and policies.
- Evaluation of existing zoning and planned land use.

The City of Madison *Imagine Madison Comprehensive Plan*<sup>1</sup> and *Madison in Motion*<sup>2</sup>, and the Greater Madison Metropolitan Planning Organization (MPO) *Regional Transportation Plan 2050 (RTP 2050)*<sup>3</sup> call for a transportation system that accommodates transportation needs and demands while mitigating congestion, promoting air quality, and supporting affordable housing goals, sustainability, and energy conservation. Transit service also plays a critical role in increasing access to services. A high-capacity electrified transit system investment that leverages existing transportation facilities while reducing reliance on single-occupant motor vehicles will be necessary to achieve these goals.

### 2.1. Regulatory Context

The National Environmental Policy Act (NEPA) and relevant sections of Wisconsin State law form the general basis for consideration of land use issues. The documented categorical exclusion (DCE) covers the documentation required by NEPA for federally funded transit projects. In addition to NEPA requirements,

---

1 City of Madison, *Imagine Madison Comprehensive Plan*. Available at [cityofmadison.com/dpced/planning/documents/Part%201\\_Comprehensive%20Plan.pdf](http://cityofmadison.com/dpced/planning/documents/Part%201_Comprehensive%20Plan.pdf). Accessed 19 November 2021.

2 City of Madison, *Madison in Motion*. Available at <https://www.cityofmadison.com/transportation/documents/MIM/MIMReportWeb.pdf>. Accessed 19 November 2021.

3 Greater Madison MPO, *Regional Transportation Plan 2050*. Available at <https://www.greatermadisonmpo.org/planning/RegionalTransportationPlan2050.cfm>. Accessed 19 November 2021.

federally funded transit projects like the East-West BRT Project must be consistent with official plans for the comprehensive development of an area, as well as with the goals and objectives of affected communities.<sup>4</sup>

Wisconsin state law includes guidance and requirements for municipalities developing comprehensive plans. Section 62.23<sup>5</sup> of Wisconsin state statute dictates that municipal master plans strive to outline a coordinated, adjusted, and harmonious development of the municipality which will, in accordance with existing and future needs, best promote public health, safety, morals, order, convenience, prosperity or the general welfare, as well as efficiency and economy in the process of development. The master plan must include certain elements, including a transportation element, (Section 66.1001) which outlines the objectives, policies, goals, maps, and programs to guide the future development of the various modes of transportation, including transit. In accordance with state statute, municipal comprehensive plans are required to include content that pertains to land use and community health. Therefore, they are an important source for studying the project's compatibility with local land use and zoning plans.

## 2.2. Methodology

The study area for the Madison East-West BRT Project is in Dane County, WI and includes relatively densely populated and developed areas<sup>6</sup> in the City of Madison as well as three municipalities located within the borders of Madison: The Village of Shorewood Hills, the Town of Blooming Grove, and the Town of Madison. For the land use analysis, the study area is defined as the area within one-half mile of the proposed route. The half mile radius is commonly used by transit planners to represent the distance transit users are willing to walk to access a transit station and the station's area of real estate development influence.

Project staff obtained land use data from adopted comprehensive and related plans and policies for the City of Madison, the Village of Shorewood Hills, Greater Madison Metropolitan Planning Organization (MPO), and the University of Wisconsin-Madison. Information from the comprehensive plans was supplemented by historic and recent aerial photography, field inspections, and local knowledge of the study area. Assessment of compatibility with existing and planned land uses was based on the land use inventories and policies in the adopted comprehensive and related plans. Source documents include:

- City of Madison, *Imagine Madison Comprehensive Plan* (October 2018)<sup>6</sup>
- City of Madison, *Madison in Motion* (February 2017)<sup>7</sup>
- Greater Madison MPO, *Regional Transportation Plan 2050* (April 2017)<sup>8</sup>
- Village of Shorewood Hills, *2021 Comprehensive Plan Update* (November 2021)<sup>9</sup>
- University of Wisconsin-Madison, *2015 Campus Master Plan Update*<sup>10</sup>
- University of Wisconsin-Madison, *Long Range Transportation Plan* (2015)<sup>11</sup>

---

4 Urban Mass Transportation Act of 1970. Available at <http://uscode.house.gov/statutes/pl/91/453.pdf>. Accessed 19 November 2021.

5 Wisconsin State Statute Section 62.23. Available at <https://docs.legis.wisconsin.gov/statutes/statutes/62/i/23>. Accessed 19 November 2021.

6 City of Madison, *Imagine Madison Comprehensive Plan*. Available at [cityofmadison.com/dpced/planning/documents/Part%201\\_Comprensive%20Plan.pdf](http://cityofmadison.com/dpced/planning/documents/Part%201_Comprensive%20Plan.pdf). Accessed 19 November 2021.

7 City of Madison, *Madison in Motion*. Available at <https://www.cityofmadison.com/transportation/documents/MIM/MIMReportWeb.pdf>. Accessed 19 November 2021.

8 Greater Madison MPO, *Regional Transportation Plan 2050*. Available at <https://www.greatermadisonmpo.org/planning/RegionalTransportationPlan2050.cfm>. Accessed 19 November 2021.

9 Village of Shorewood Hills, *2021 Comprehensive Plan Update*. Available at [https://www.shorewood-hills.org/vertical/sites/%7B00D5AF3F-ADFE-4173-AF3A-FC0C1A78DA4B%7D/uploads/SH\\_Comprehensive\\_Plan\\_2021\\_8\\_13\\_reduced.pdf](https://www.shorewood-hills.org/vertical/sites/%7B00D5AF3F-ADFE-4173-AF3A-FC0C1A78DA4B%7D/uploads/SH_Comprehensive_Plan_2021_8_13_reduced.pdf). Accessed 19 November 2021.

10 University of Wisconsin-Madison, *2015 Campus Master Plan Update*. Available at <https://d1t7dpw65z19lw.cloudfront.net/wp-content/uploads/sites/20/2017/10/RPT-MP-Tech-Report-2016-1019-low-res.pdf>. Accessed 19 November 2021.

11 University of Wisconsin-Madison, *Long Range Transportation Plan*. Available at <https://d1t7dpw65z19lw.cloudfront.net/wp-content/uploads/sites/20/2017/10/Appen-3-Long-Range-Transportation-Plan-2016-1019-low-res.pdf>. Accessed 19 November 2021.

## 3. Existing Land Use and Zoning; Planned Land Use

### 3.1. Overview

The study area for the project includes 15.5 square miles of densely populated and developed areas<sup>12</sup> in the City of Madison, the University of Wisconsin-Madison (UW) campus, and two municipalities mostly located within the borders of Madison: the Village of Shorewood Hills and the Town of Blooming Grove. Figure 1, Figure 2, and Figure 3 show land use, current zoning, and planned land use maps of the study area. The remainder of this report will break down the land use along each segment of the planned BRT line from west to east, as well as around the Sun Prairie Park-and-Ride and the Metro Satellite Maintenance Facility.

For the land use and zoning analysis, the study area was defined as the area within one-half mile of the proposed BRT route. The one-half mile study area is commonly used by transit planners to represent the distance transit users are willing to walk to access a transit station and the station's area of real estate development influence. Residential and commercial densities in the corridor support the Project. Commercial and residential uses along the corridor are typical for urban and suburban arterials, and there is potential for more intensive development. **Error! Reference source not found.** and **Error! Reference source not found.** show existing and future land uses and zoning designations along the East-West BRT corridor.

The City of Madison *Imagine Madison Comprehensive Plan* and *Madison in Motion*, and the Greater Madison MPO *Regional Transportation Plan 2050* (RTP 2050) call for a transportation system that accommodates transportation needs and demands while mitigating congestion, promoting air quality, and supporting affordable housing goals, sustainability, and energy conservation. The City of Madison *Imagine Madison Comprehensive Plan* calls for concentration of the highest intensity development along transit corridors, downtown, and at activity centers, and identifies as an action item implementation of a transit-oriented development overlay zoning district along BRT and other existing and planned high-frequency transit service corridors. During preparation of this documented categorical exclusion, the City of Madison is considering a transit-oriented development overlay zoning district framework. While TOD overlay zoning and the East-West BRT project are separate actions, implementation of the TOD overlay zoning and changes in development patterns, population density, growth rates, and property values in the East-West BRT Project area are indirect effects of the project.<sup>13</sup>

Policies from the UW *Campus Master Plan*<sup>14</sup> were also incorporated in the analysis. The UW master plan includes East-West BRT in their design plans for improving the aesthetics and utility of the corridors. Additionally, the Village of Shorewood Hill's 2021 comprehensive plan includes action items that correlate with Metro Transit's East-West BRT line on University Avenue.

The remainder of this section provides an overview of existing land use conditions, zoning, and planned land use conditions within the study area for the planned project. The study area analysis is broken down into eight segments along the planned East-West BRT route. The section also includes descriptions of land use and zoning conditions surrounding the planned Metro Satellite Maintenance Facility (a bus garage under development as a separate project with electric bus charging capabilities added by the BRT project), and the Sun Prairie Park-and-Ride, where bus charging equipment would be added as part of the project.

---

12 Greater Madison MPO, Regional Transportation Plan 2050. Available at <https://www.greatermadisonmpo.org/planning/RegionalTransportationPlan2050.cfm>. Accessed 19 November 2021.

13 Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems. (40 CFR § 1508.8 [Available at <https://www.ecfr.gov/current/title-40/chapter-V/subchapter-A/part-1508>. Accessed 19 November 2021])

14 University of Wisconsin-Madison, 2015 Campus Master Plan Update. Available at <https://cpla.fpm.wisc.edu/2015-campus-master-plan/>. Accessed 19 November 2021.



Figure 1: 2020 Existing Land Use in Project Area

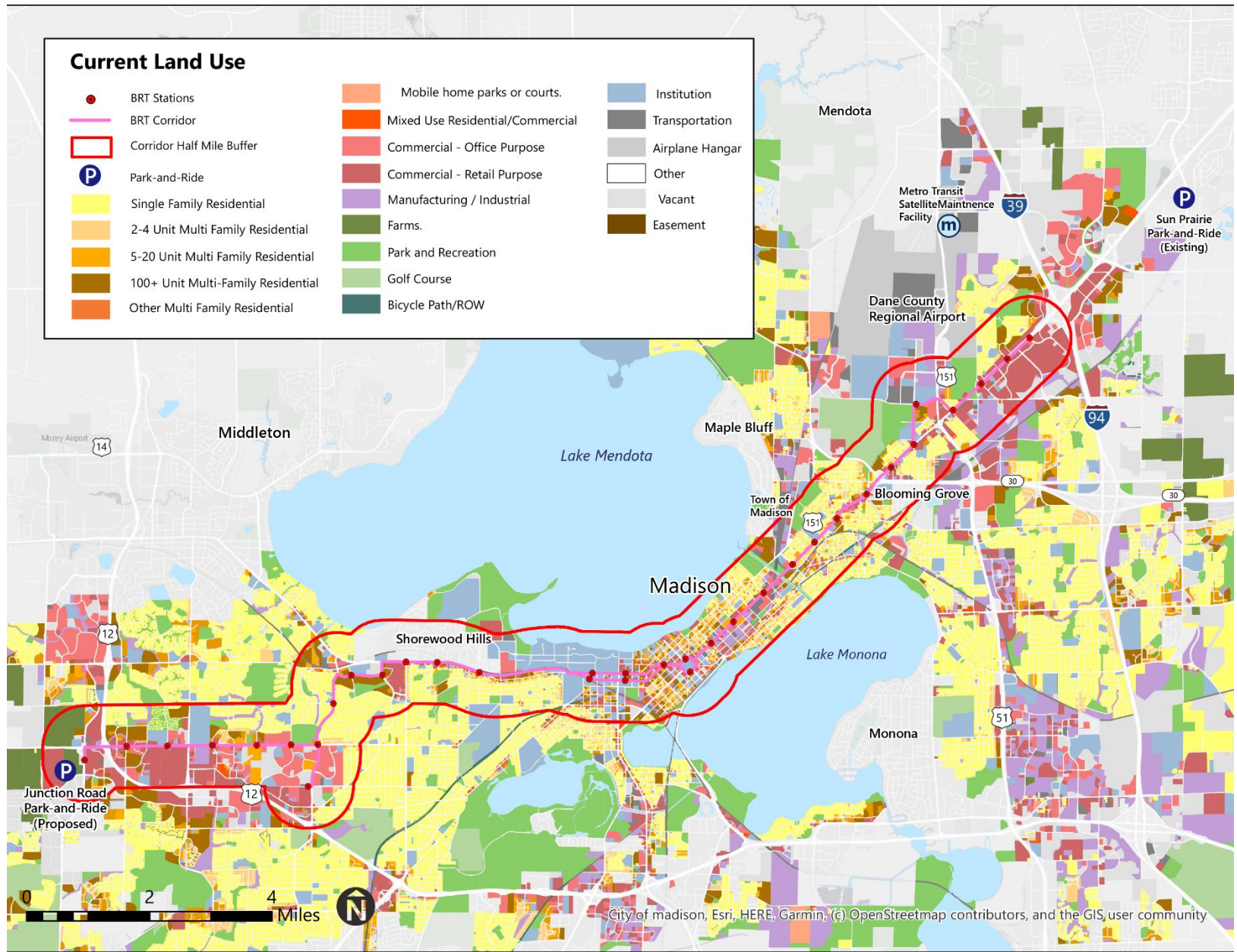


Figure 2: Current Zoning Map of Study Area

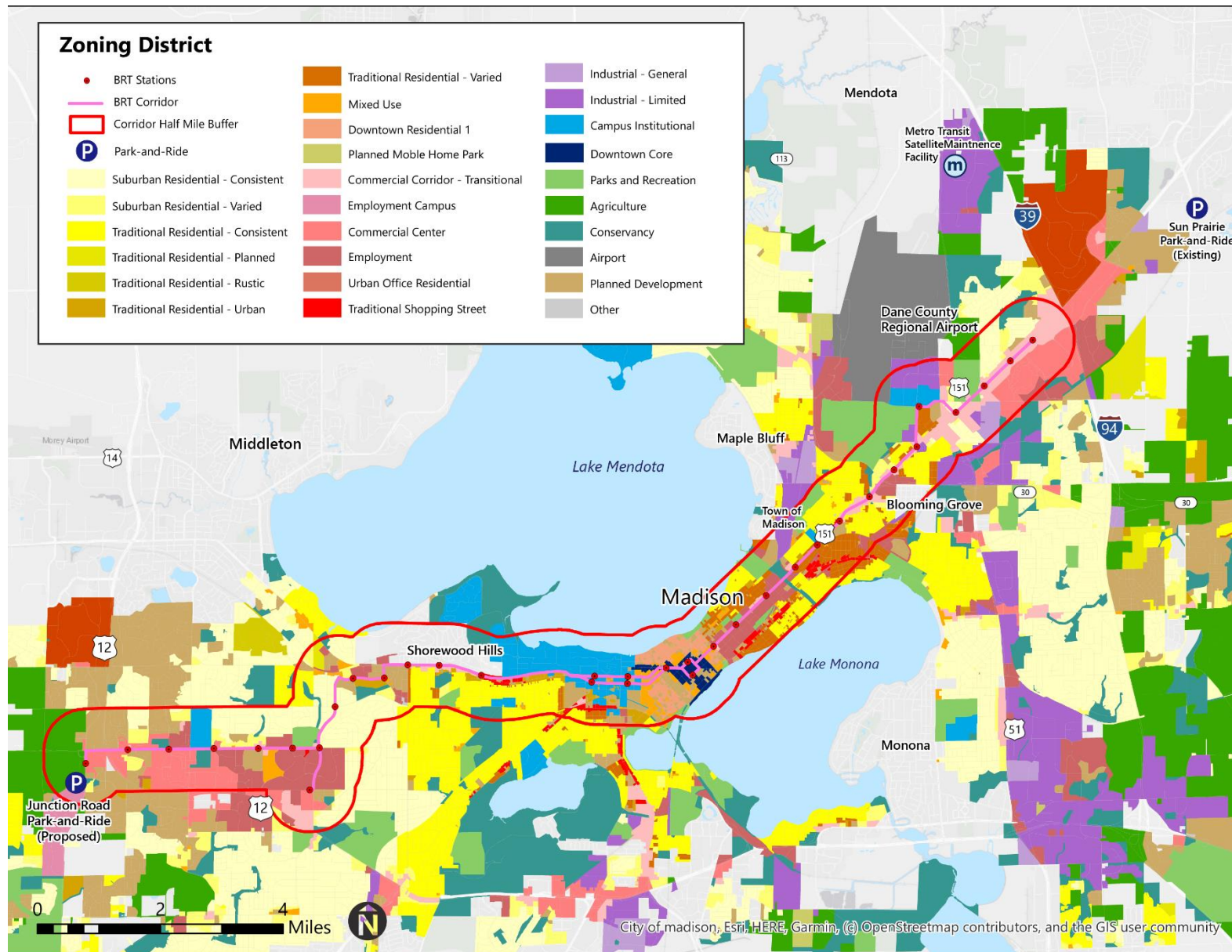
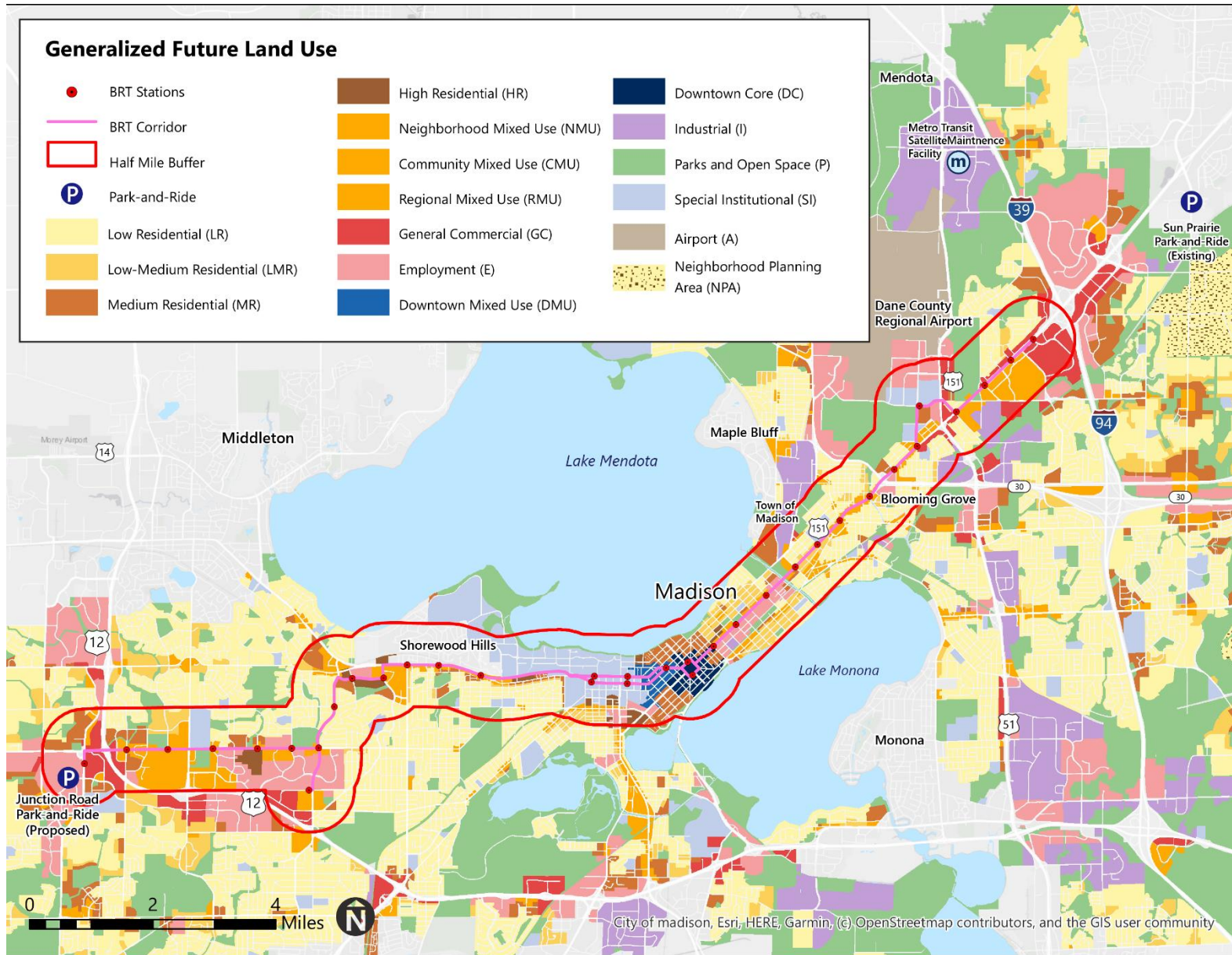


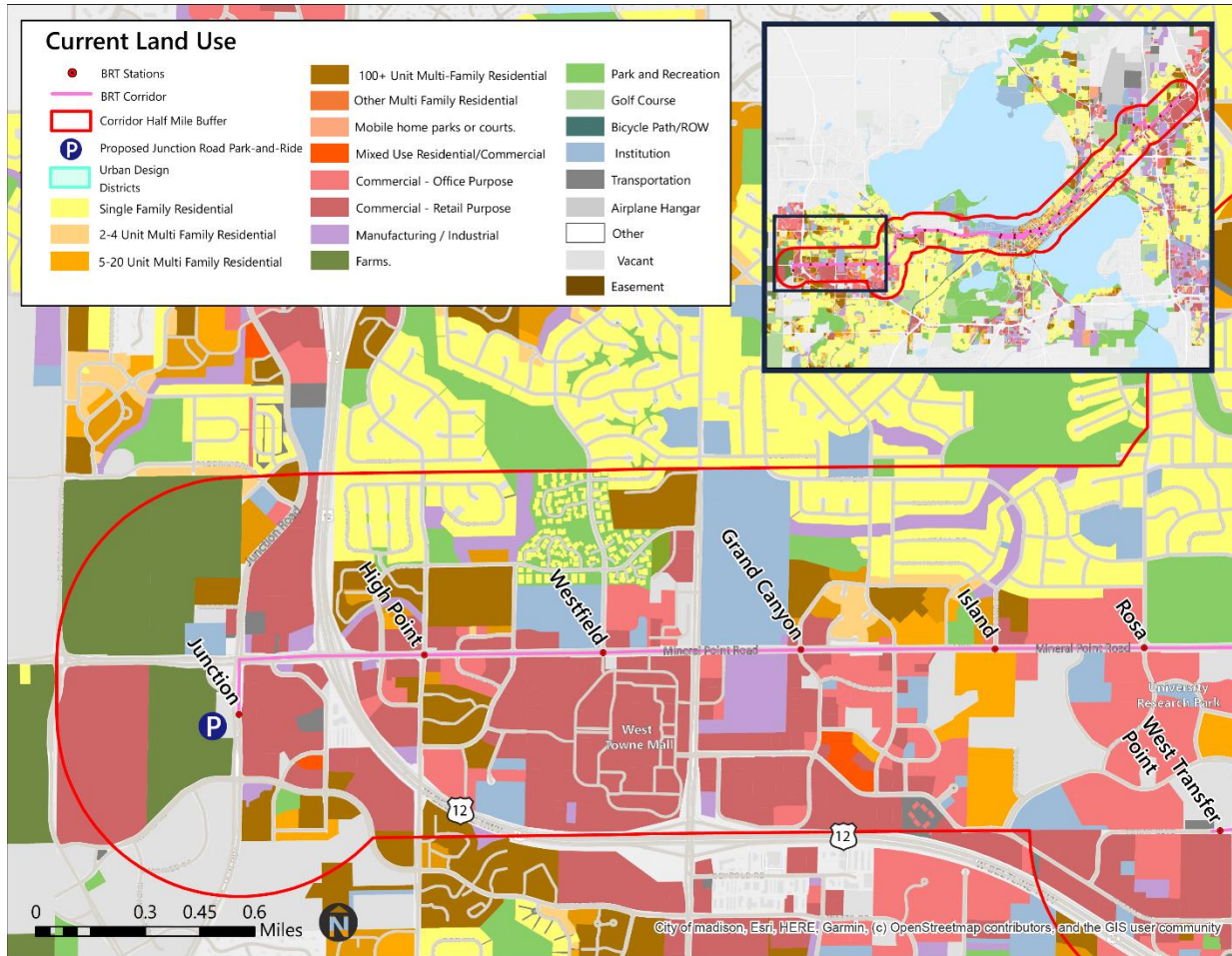
Figure 3: Planned Land Use Map of Study Area



## 3.2. Mineral Point Road

### 3.2.1. Existing Land Use

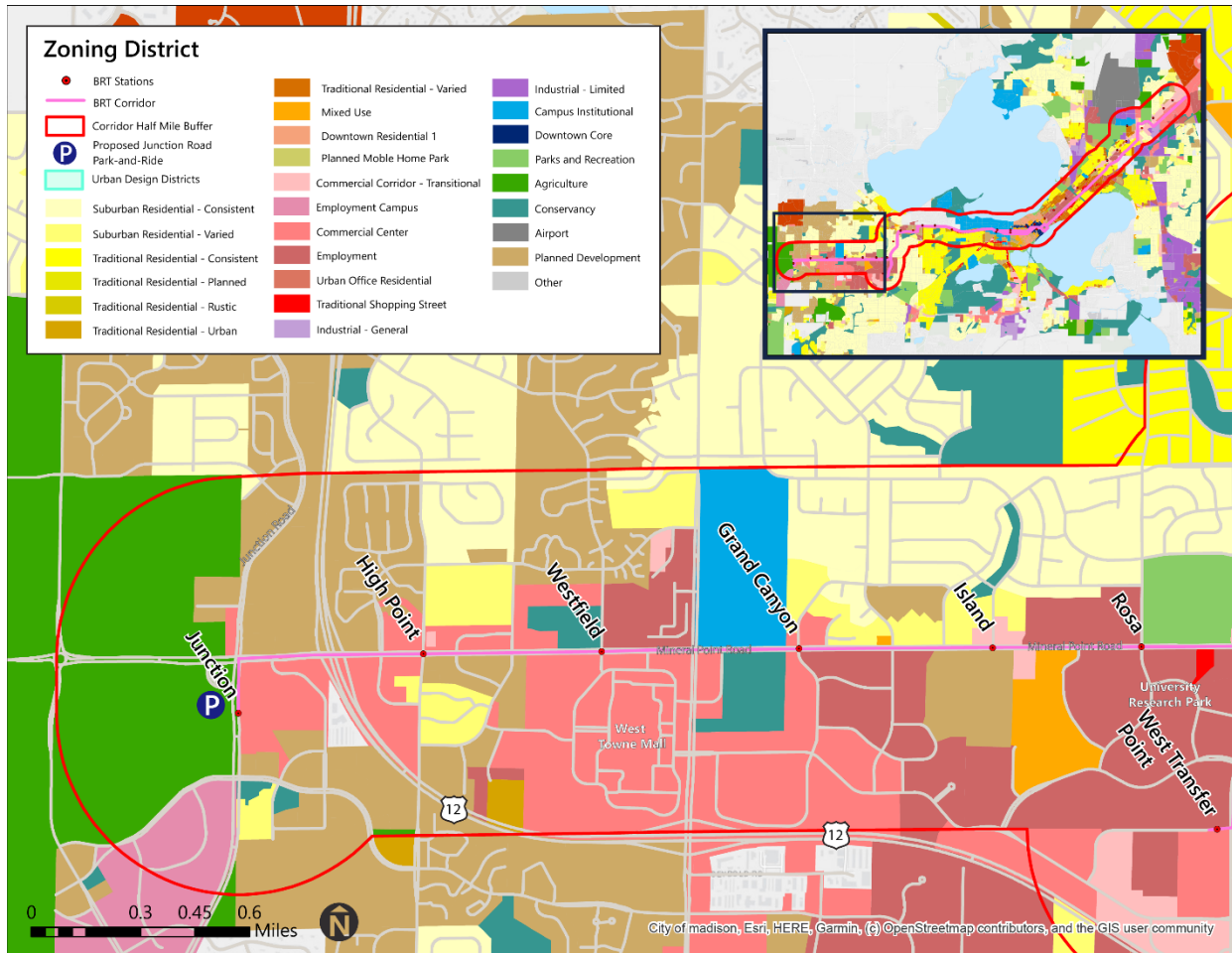
Figure 4: 2020 Existing Land Use for Mineral Point Road Segment



The East-West BRT route would run along 2.8 miles of Mineral Point Road from South Junction Road to South Whitney Way. There are six BRT stations along this segment of the route: Junction Road station, High Point Road station, Westfield Road station, Grand Canyon Drive station, Island Drive station, and Rosa Road station. Each are spaced about 0.3 to 0.5 miles apart. As shown in Figure 4, north of the route is a mix of multi-family housing located closer to Mineral Point Road and less dense single- and two-family housing located further from stations along this segment. The north side of Mineral Point Road also has two elementary schools, a junior high school, and James Madison High School. The high school has a student body of about 2,000 students and is located between the Westfield Road and Grand Canyon Drive stations and across Mineral Point Road from the West Towne Mall. There are some commercial properties along the north side of Mineral Point Road, but most of the commercial properties in this segment are located south of Mineral Point Road and along the east side of South Junction Road.

### 3.2.2. Zoning

Figure 5: Zoning for Mineral Point Road Segment



The land within one-half mile of the route along Mineral Point Road is a mix of residential zoning districts (multi-, two-, and single-family) and commercial zoning districts. Districts zoned for commercial use are located primarily on the south side of Mineral Point Road. The land north of the route is zoned primarily for residential, commercial, and institutional use. Within this segment there are many properties in special zoning districts called Planned Development (PD) Districts (colored brown on the map in Figure 5). These districts are established by the City “to provide a voluntary regulatory framework as a means to facilitate the unique development of land in an integrated and innovative fashion, to allow for flexibility in site design, and to encourage development that is sensitive to environmental, cultural, and economic considerations, and that features high-quality architecture and building materials”<sup>15</sup>. As shown in Figure 4, these districts have a variety of uses. The land west of South Junction Road and adjacent to the project’s western terminus park-and-ride station is primarily zoned for agricultural use, specifically grain farming. Figure 5 shows the zoning designations for parcels along Mineral Point Road.

15 City of Madison Code of Ordinances, Sec. 28.098(1), [https://library.municode.com/wi/madison/codes/code\\_of\\_ordinances?nodeId=COORMAWIV0IICH20--31\\_CH28ZOCCOR\\_SUBCHAPTER\\_28GSPDI\\_28.098PLDEDI](https://library.municode.com/wi/madison/codes/code_of_ordinances?nodeId=COORMAWIV0IICH20--31_CH28ZOCCOR_SUBCHAPTER_28GSPDI_28.098PLDEDI). Accessed August 2021.

### 3.2.3. Future Land Use

Figure 6: Planned Land Use for Mineral Point Road Segment

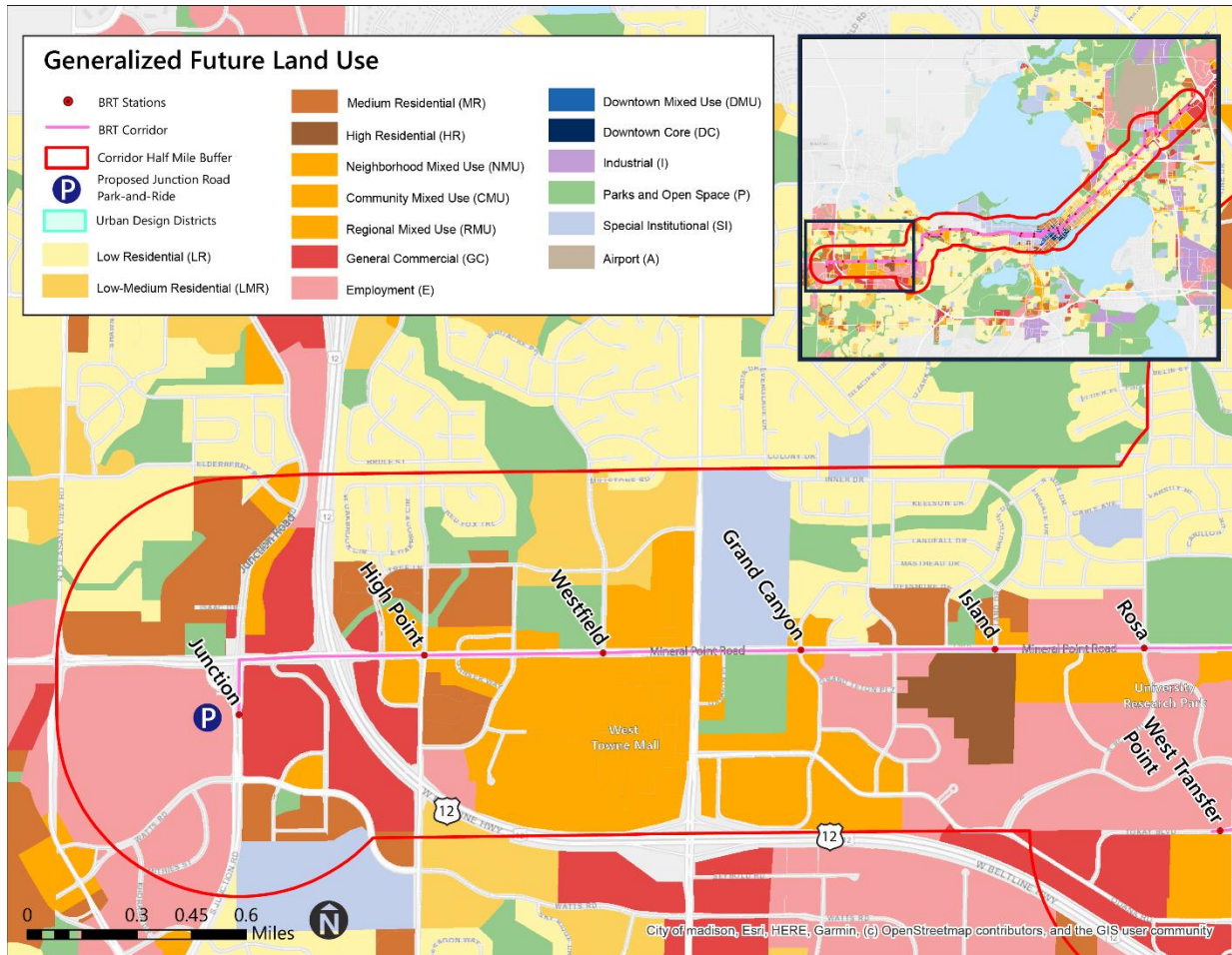


Figure 6 shows the City of Madison’s planned land uses along the corridor on Mineral Point Road. The *Imagine Madison Comprehensive Plan* identifies multiple “growth priority areas” that are or will be, “more intensely developed than their surroundings and serve as the visual and/or functional center of a neighborhood, [community], or a [region]”<sup>166</sup> A map of all growth priority areas can be found on page 16 of the comprehensive plan and is included as an attachment to this technical report (Attachment A). The identified areas are classified as “established”, “transitioning” (developing) or “future” (anticipated) activity centers<sup>17</sup>. Along Mineral Point Road and within the one-half mile study area, there are two growth priority areas: West Towne Mall (regional, transitioning) and the University Research Park district, (community, transitioning). There are also three “future” neighborhood and community centers located near the western terminus of the East-West BRT Project.

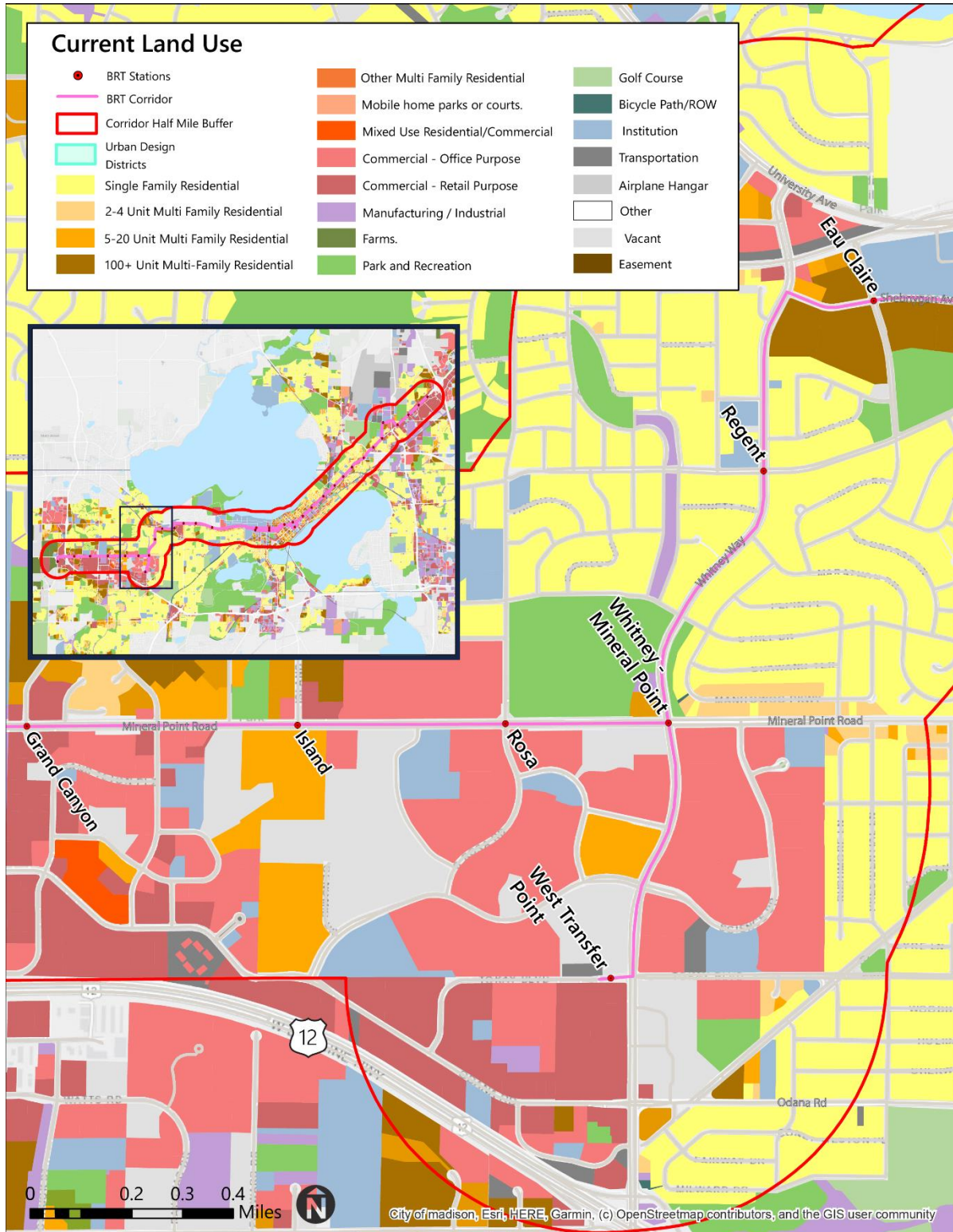
16 City of Madison, *Imagine Madison Comprehensive Plan*, page 36. Available at [cityofmadison.com/dpced/planning/documents/Part%201\\_Comprehensive%20Plan.pdf](http://cityofmadison.com/dpced/planning/documents/Part%201_Comprehensive%20Plan.pdf). Accessed 19 November 2021.

17 Throughout this document, the growth priority areas will be identified using their location or landmark followed in parenthesis with their size and classification (e.g. West Towne Mall (regional, transitioning)).

### 3.3. Whitney Way

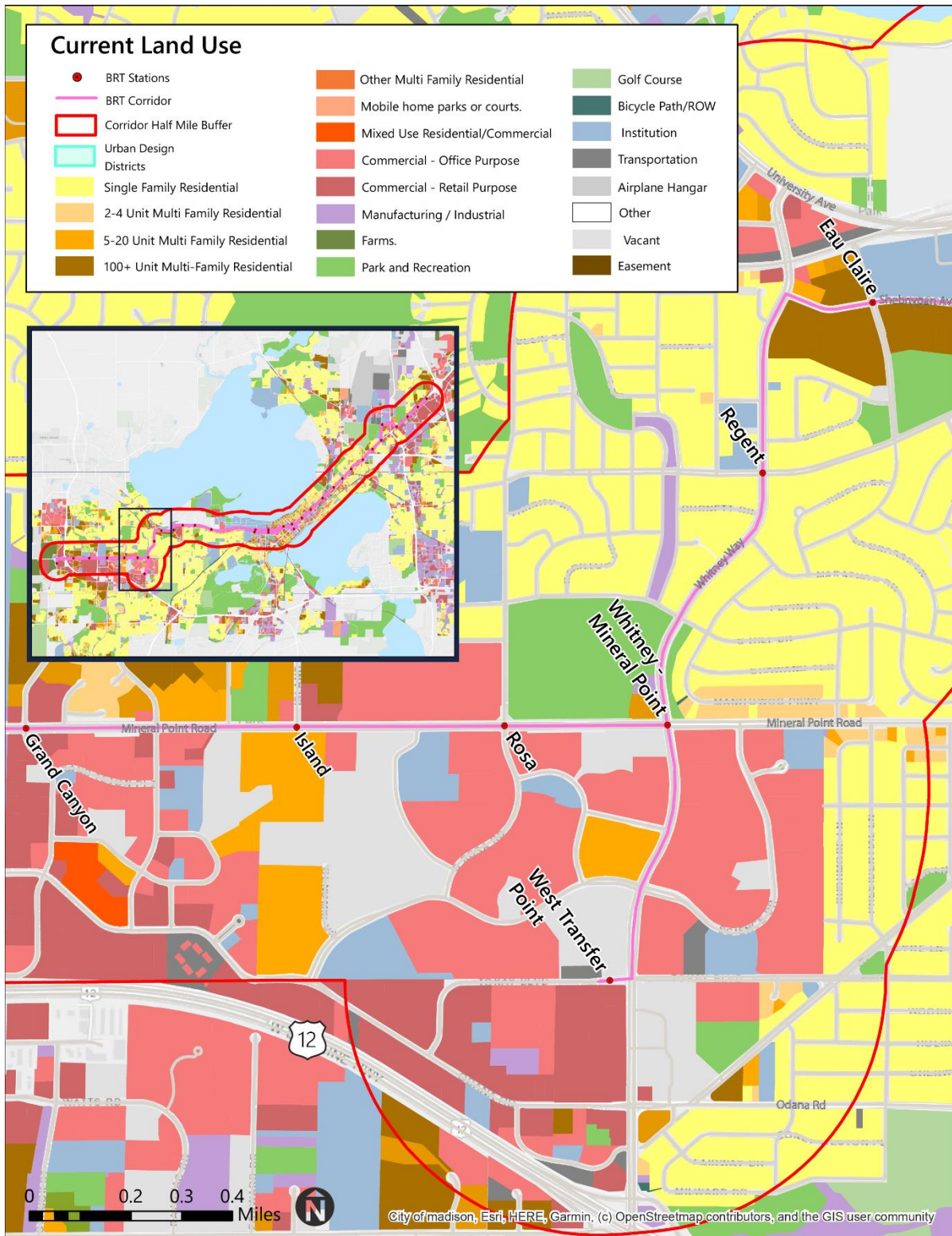
#### 3.3.1. Existing Land Use

Figure 7: 2020 Existing Land Use for Whitney Way Segment



The Whitney Way segment of the East-West BRT route would have two or three BRT stations: Whitney Way – Mineral Point Road station, possibly the West Transfer Point station, and Regent Street station. The West Transfer Point station is an optional station that would be located one-half mile south of Mineral Point Road (seen in Figure 7: 2020 Existing Land Use for Whitney Way Segment





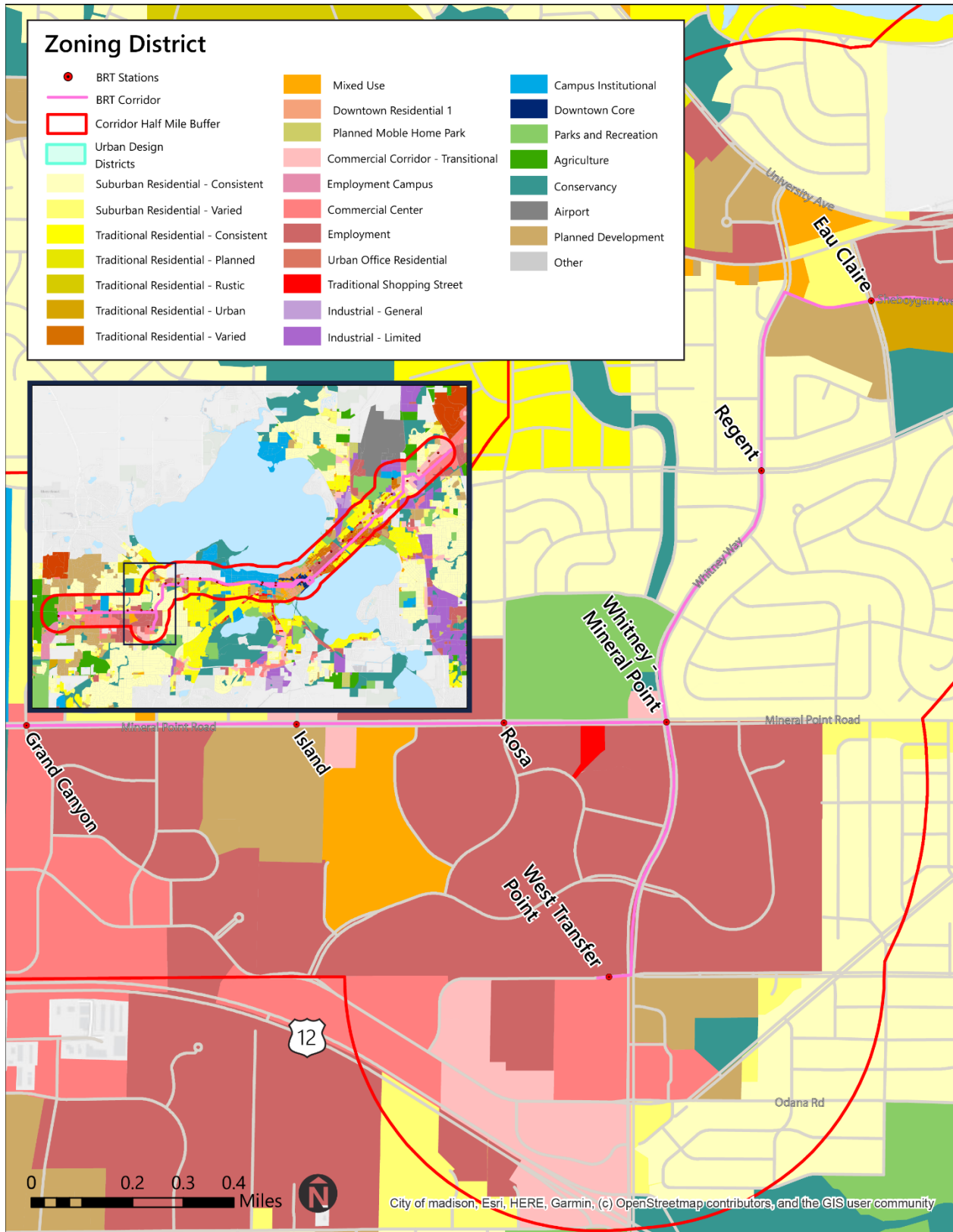
). This

station would connect the project to local bus routes and a commercial district that the City classifies as a transitioning community center. The Whitney Way – Mineral Point Road station would provide riders with access to Garner Park and commercial services south of Mineral Point Road. The Regent Street station is located one-half mile north of Mineral Point Road. The station provides access to two churches, two parks, and residential

neighborhoods. It is surrounded by mostly single-family housing and serves a cluster of several apartment complexes with hundreds of units north of the station at the corner of Whitney Way and Sheboygan Avenue.

### 3.3.2. Zoning

Figure 8: Zoning for Whitney Way Segment



The Whitney Way segment is zoned for commercial retail and some employment use southwest of the optional West Transfer Point station. East of Whitney Way, zoning predominantly allows for single-family housing along with limited areas zoned for multi-family housing near the intersection of Whitney Way and Sheboygan Avenue. South of Mineral Point Road, zoning allows for some employment and retail use. West of the route, there are areas zoned for parks and suburban employment south of Mineral Point Road; zoning north of Mineral Point Road allows for suburban and traditional residential uses.

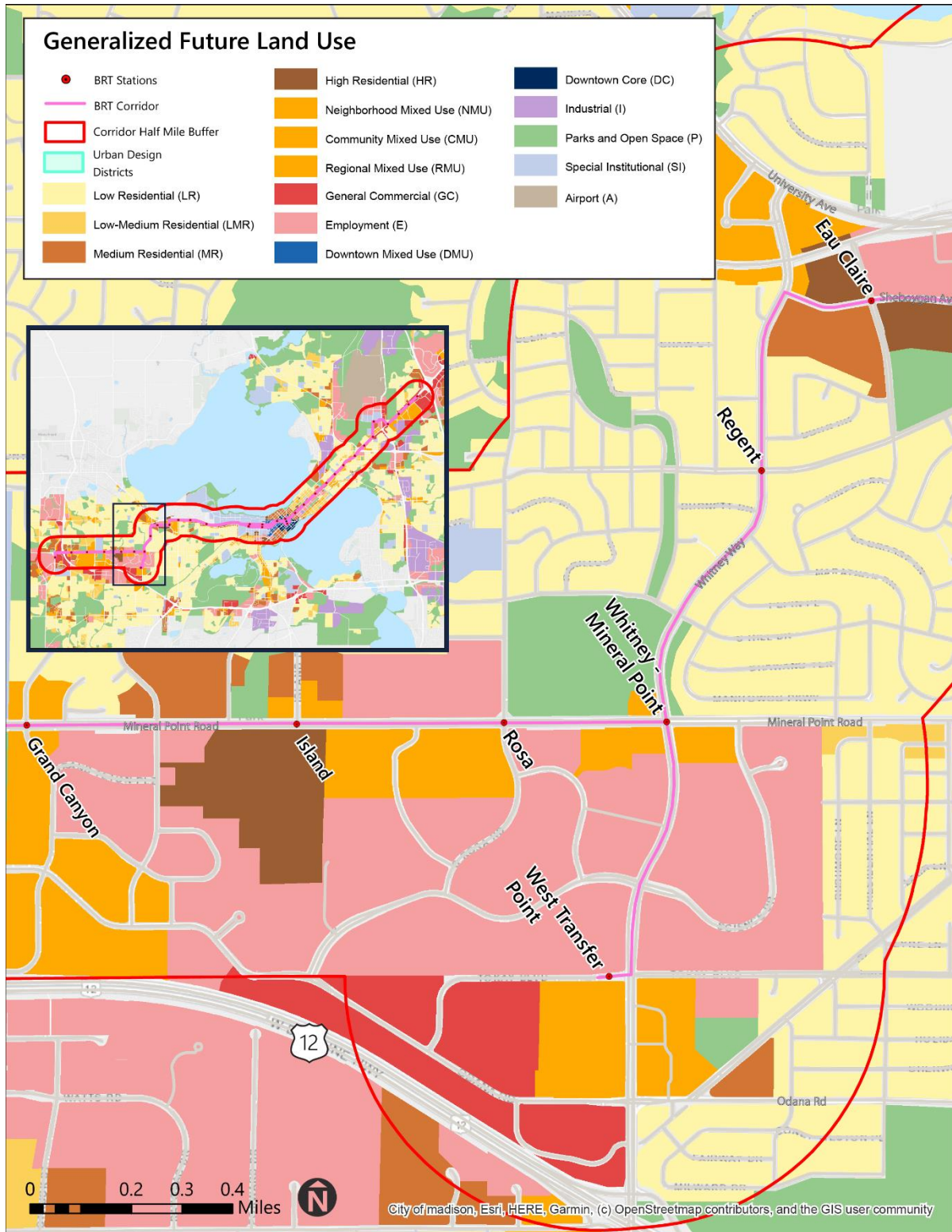
- **Urban Design Districts (UDDs):** The Whitney Way segment buffer includes part of a UDD. These districts are designated by the city for the purpose of informing development guidelines which, “assure that future development will complement the existing development in the district”<sup>18</sup>. The district in this segment is shown on the map in Figure 8 with an opaque blue-green overlay. Adding BRT service to this district that is already served by multiple local bus routes would be compatible with existing development.

---

<sup>18</sup> City of Madison Code of Ordinances, Sec. 33.24(11). Available at [https://www.cityofmadison.com/dpced/planning/documents/Urban\\_Design\\_District\\_4.pdf](https://www.cityofmadison.com/dpced/planning/documents/Urban_Design_District_4.pdf). Accessed March 2021.

### 3.3.3. Future Land Use

Figure 9: Planned Land Use for Whitney Way Segment

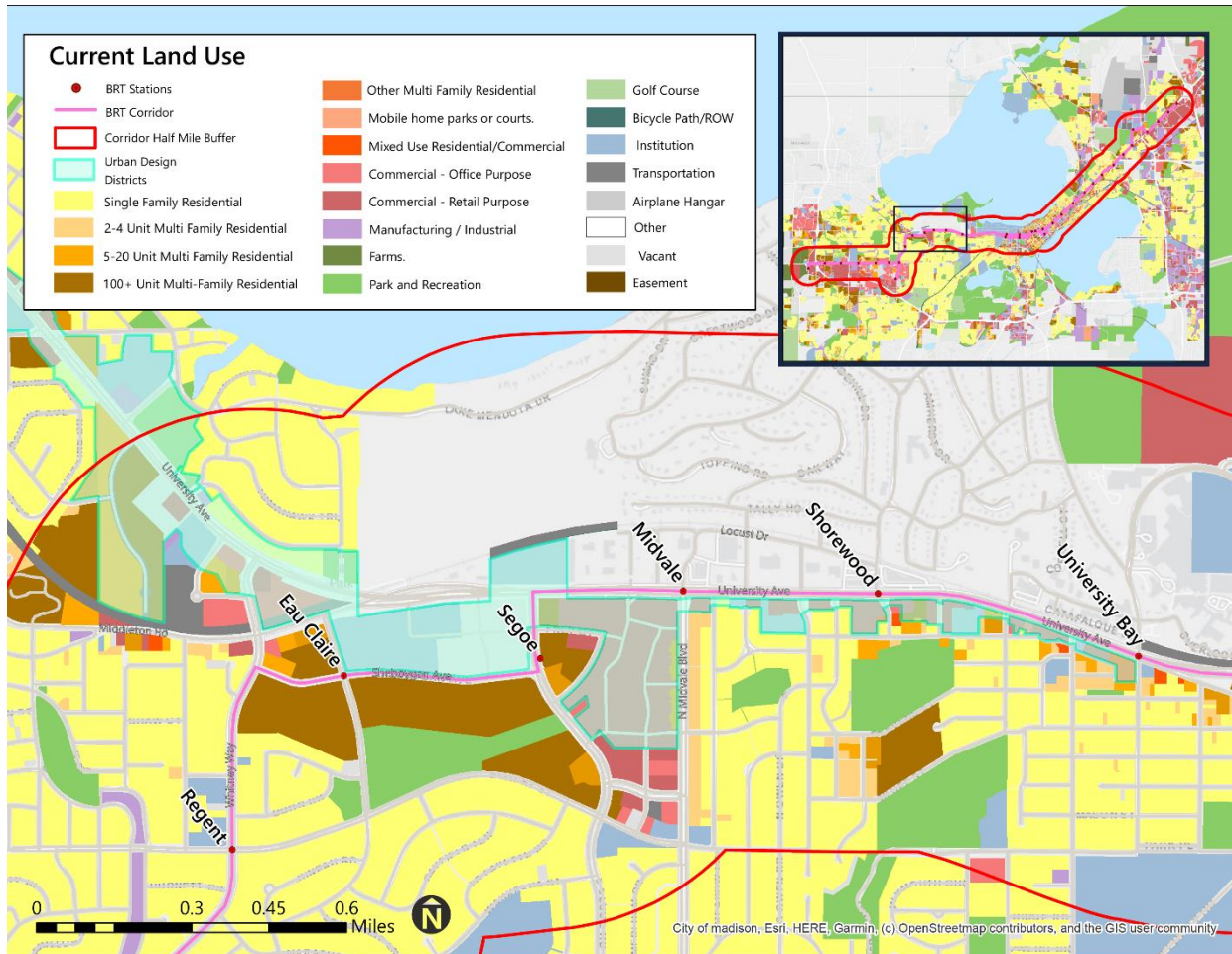


The planned land use map in **Error! Reference source not found.** shows that the City of Madison is planning for community mixed-use, employment, and commercial developments around the West Transfer Point station. The land around Whitney Way-Mineral Point and Regent Street stations, however, will maintain low-density residential, park, and employment uses. The area also serves as a connection to multiple local bus lines that stop at the Whitney Way/Mineral Point Road intersection. The planned uses and transit connection in this segment are compatible with the East-West BRT project.

### 3.4. Sheboygan Avenue and University Avenue (West of University Bay)

#### 3.4.1. Existing Land Use

Figure 10: 2020 Existing Land Use for Sheboygan Avenue and University Avenue Segment



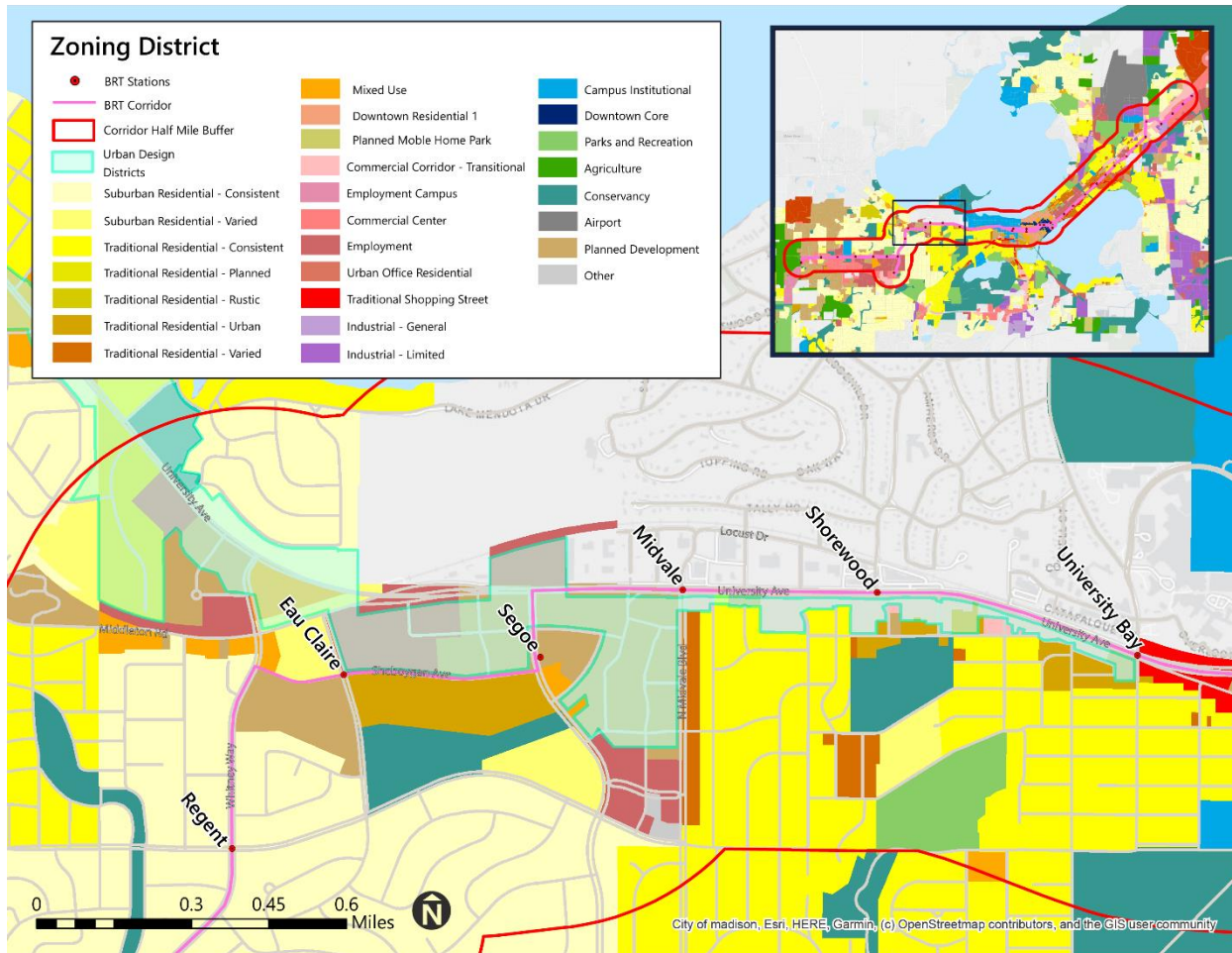
The next segment of the project route runs east-west on Sheboygan Avenue and University Avenue between Whitney Way and University Bay Drive. Five stations are planned for this segment, each spaced 0.3 to 0.5 miles apart: Eau Claire Avenue station, Segoe Road station, Midvale Boulevard station, Shorewood Boulevard station, and University Bay Drive station (Figure 10). Sheboygan Avenue is lined with large multi-family housing to the south and institutional uses (state and privately-owned facilities) to the north. On University Avenue, the corridor is lined with commercial shopping centers, services, and restaurants. South of the commercial services on University Avenue, there is single-family housing and some smaller (20 units or fewer) multi-family apartment complexes. North of the commercial buildings is primarily single-family housing and a country club in the Village of Shorewood Hills. The village's borders can be seen on the maps in Figure 10, Zoning

Figure 11, and Figure 12, where the land is not coded for a specific use. The village is located on Lake Mendota and is surrounded on all other sides by the City of Madison. The Village has its own comprehensive plan which

includes land use and transportation plans. The village plans the continue developing the land along the north side of University Avenue, which is mostly commercial. Most of the land in the Village north of Locust Drive is either single-family residential or dedicated to the Blackhawk Country Club and golf course. There is also a section of commercial developments and a large apartment complex north of University Avenue.

### 3.4.2. Zoning

Figure 11: Zoning for Sheboygan Avenue and University Avenue Segment

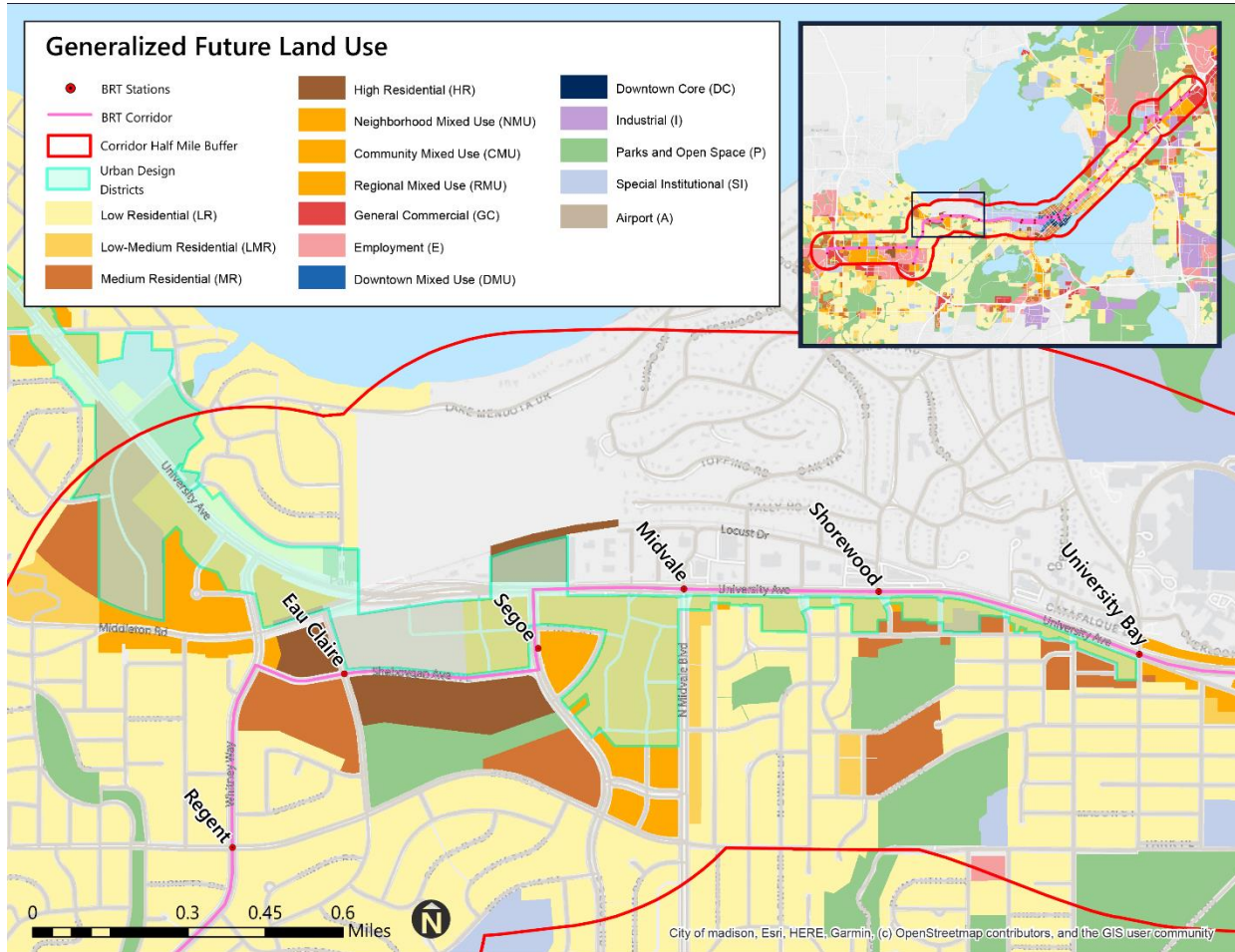


Parcels zoned for commercial use line the south side of University Avenue and University Bay Drive near the UW campus, east of Midvale Boulevard. The land south of the corridor is mostly zoned for single-family residential use (Figure 10). Apart from one apartment complex and a handful of parcels in the southeast corner of the Village, all residential areas in the Village of Shorewood Hills are zoned for single-family use. The country club and golf course are zoned for recreational use, and there is some space zoned for commercial use north of University Avenue.

- **Urban Design District (UDD):** UDD Six is located along University Avenue. The specified purpose for this district is to improve the appearance of University Avenue, which serves as a major transportation corridor and gateway to Capitol Square and Downtown Madison. The project would operate in mixed traffic in this part of the corridor.

### 3.4.3. Future Land Use

Figure 12: Planned Land Use for Sheboygan Avenue and University Avenue Segment



The Village of Shorewood Hills’ 2021 comprehensive plan includes action items that would be compatible with the addition of the project on University Avenue. Their action items include improving pedestrian safety, increasing density, and diversifying land use along University Avenue.<sup>19</sup> The City of Madison’s comprehensive plan also identifies a growth priority area, (established, regional) at the southwest corner of University Avenue and Midvale Boulevard. Shown in the map in Figure 12, this area is designated for commercial and recreational use and is part of UDD Six. There is an outdoor mall (Hilldale Shopping Center), a Target store, and a farmer’s market in the center. This area is coded for mixed use in the planned land use map and would be served by the East-West BRT at the Segoe Road and Midvale Boulevard stations. There is also a recreational area in the study area south of Sheboygan Boulevard —Rennebohm Park — which has open fields, tennis courts, a play area, and a basketball court.

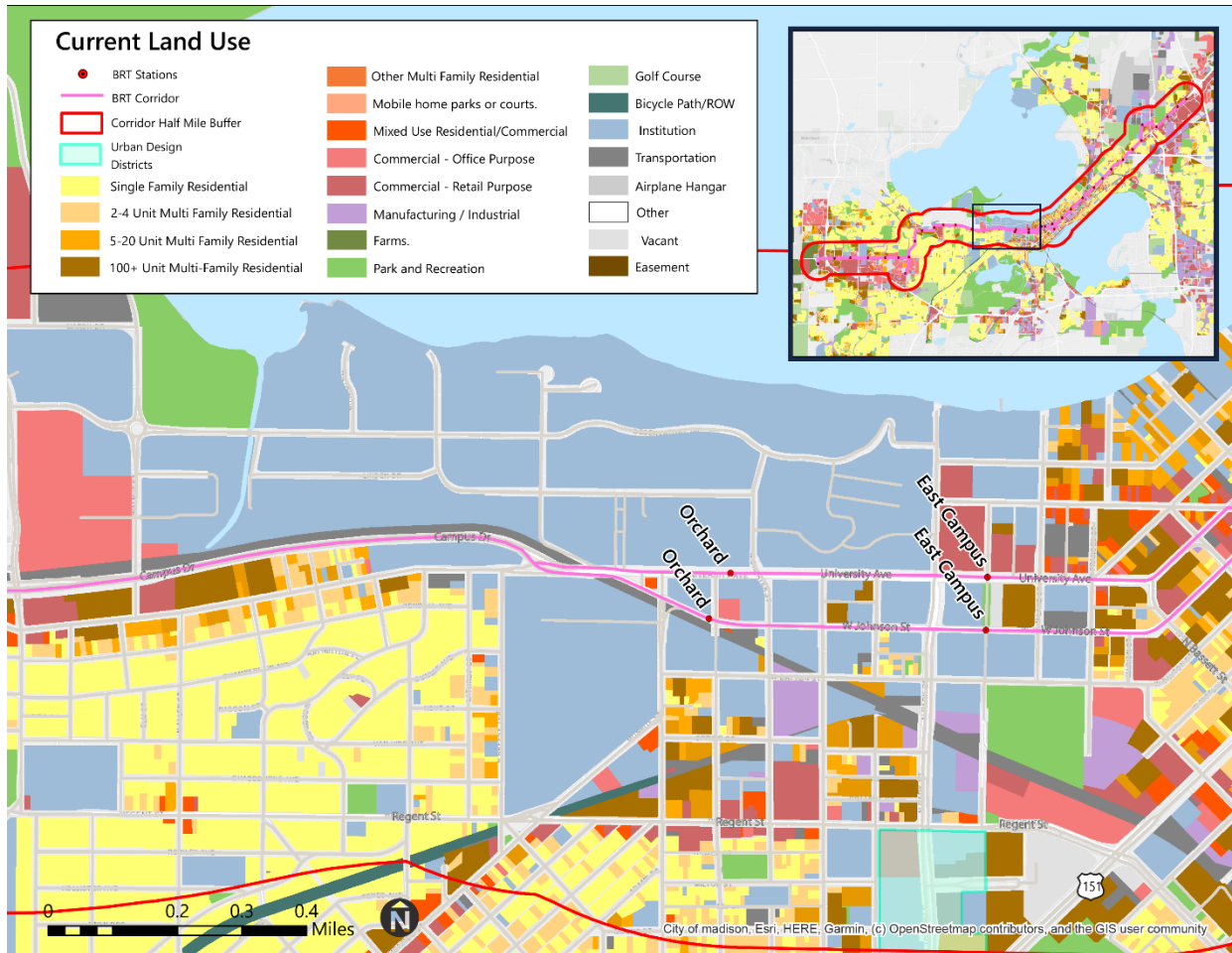
<sup>19</sup> Village of Shorewood Hills, 2021 Comprehensive Plan Update: Appendix A Action Plan. Available at [https://www.shorewood-hills.org/vertical/sites/%7B00D5AF3F-ADFE-4173-AF3A-FC0C1A78DA4B%7D/uploads/SH\\_Comprehensive\\_Plan\\_Appendix\\_A\\_Action\\_Plan\\_Adopted\\_2021\\_11\\_15.pdf](https://www.shorewood-hills.org/vertical/sites/%7B00D5AF3F-ADFE-4173-AF3A-FC0C1A78DA4B%7D/uploads/SH_Comprehensive_Plan_Appendix_A_Action_Plan_Adopted_2021_11_15.pdf). Accessed 19 November 2021.



## 3.5. Campus Drive, University Avenue, and West Johnson Street

### 3.5.1. Existing Land Use

Figure 13: 2020 Existing Land Use for Campus Drive, University Avenue, and West Johnson Street Segment

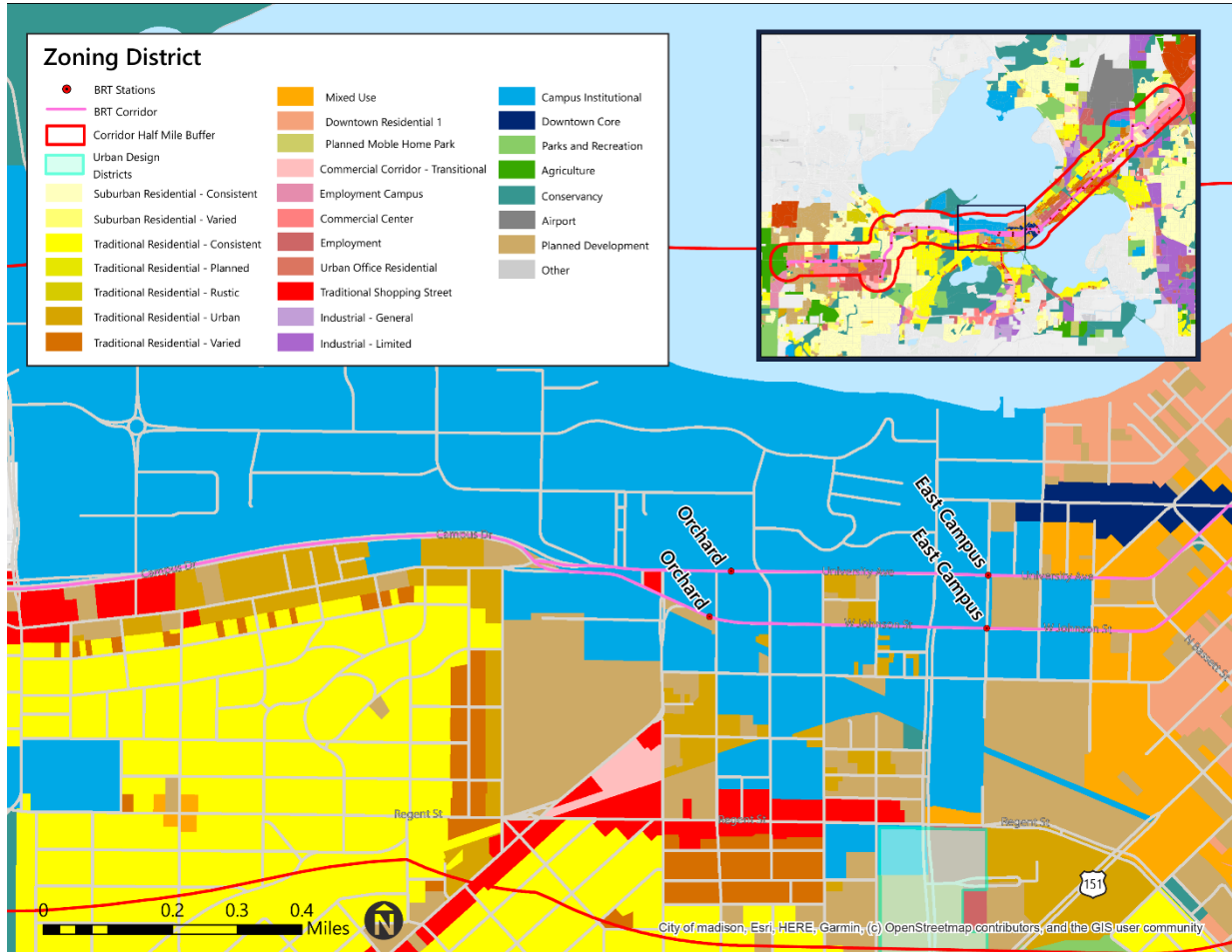


Madison East-West BRT travels through the UW campus on Campus Drive for 1.3 miles. There are no planned BRT stations on this stretch of the alignment and buses would travel on dedicated shoulder lanes. Currently, land use on the north side of Campus Drive is institutional and consists of UW buildings and facilities. To the south of Campus Drive, this segment is primarily residential and composed of housing for students and the community.

As shown on the map in Figure 13, East-West BRT would travel east on West Johnson Street and west on University Avenue between Campus Drive and State Street. Land use surrounding this part of the corridor is primarily institutional UW campus and campus-related facilities to the north and south of the corridor. East-West BRT would stop at two stations (Orchard Street station and East Campus Mall station) in both directions (Figure 13). They are spaced 0.4 miles apart. Overall, along this segment, the land is primarily used for UW campus facilities (institutional) and becomes more commercial as the route approaches State Street.

### 3.5.2. Zoning

Figure 14: Zoning for Campus Drive, University Avenue, and West Johnson Street Segment



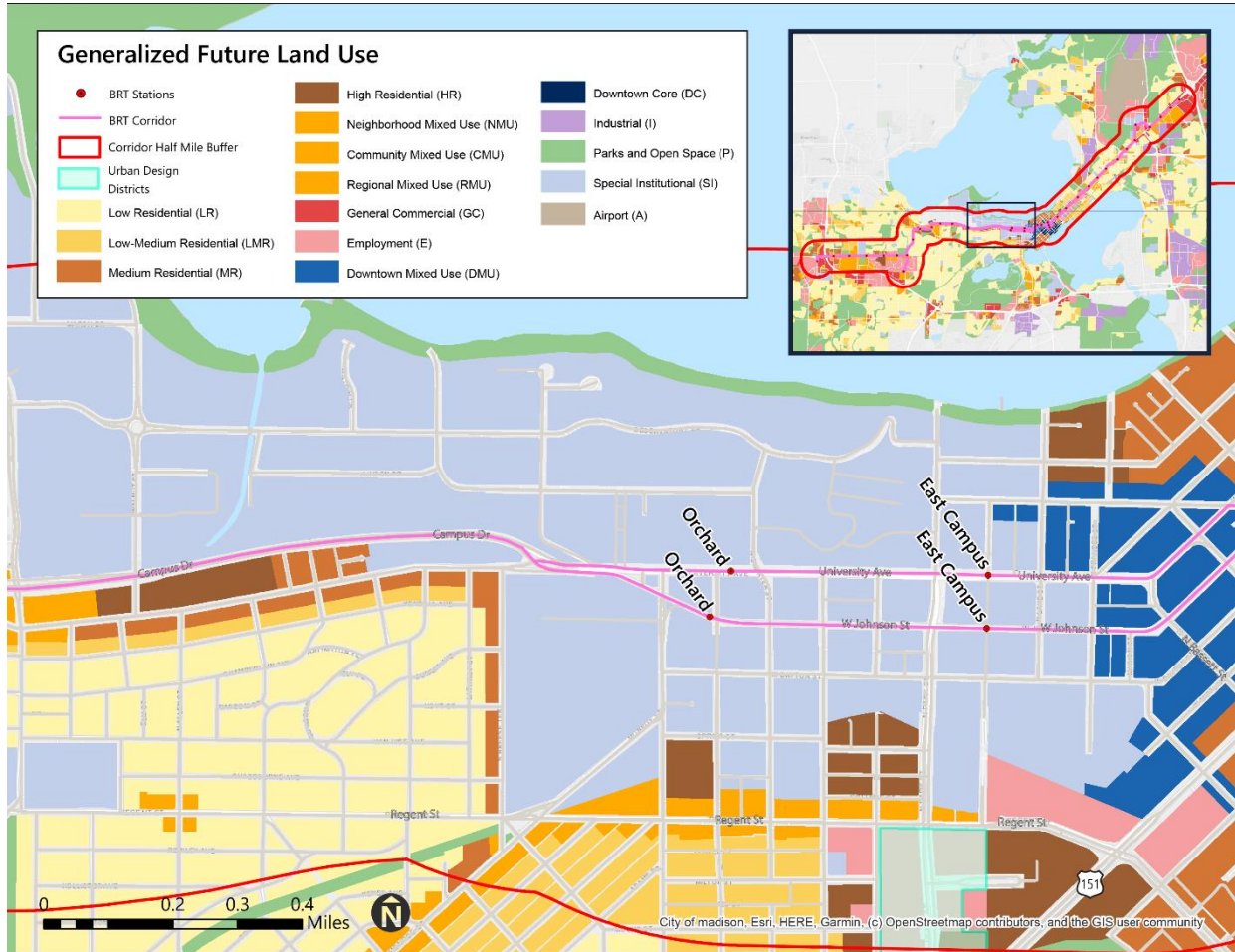
The map in Figure 14 shows that properties north of University Avenue and West of North Lake Street are zoned for institutional use (UW campus). There are also properties south of University Avenue and West Johnson Street zoned for institutional use which are also mostly UW properties. Many of the other properties are surrounded by or are adjacent to UW properties south of University Avenue are zoned for planned development and urban residential. These properties include the UW’s Camp Randall Stadium and privately owned housing targeted for students. West of the stadium most properties are zoned for residential use. East of North Frances Street, properties transition to downtown zoning designations.

- Urban Design District (UDD):** Urban Design District Seven is located on South Park Street south of Regent Street. The district was created to provide guidelines for urban development along the South Park Street corridor that runs along the Meriter Hospital property. The design requirements for the district include a requirement for new buildings to be at least two stories high to meet the City of Madison’s aesthetic desires for the corridor which serves as a major gateway to the downtown district and UW campus.<sup>20</sup>

20 City of Madison Code of Ordinances Sec. 33.24(14), [https://www.cityofmadison.com/dpced/planning/documents/Urban\\_Design\\_District\\_7.pdf](https://www.cityofmadison.com/dpced/planning/documents/Urban_Design_District_7.pdf). Accessed March 2021.

### 3.5.3. Future Land Use

Figure 15: Planned Land Use for Campus Drive, University Avenue, and West Johnson Street Segment



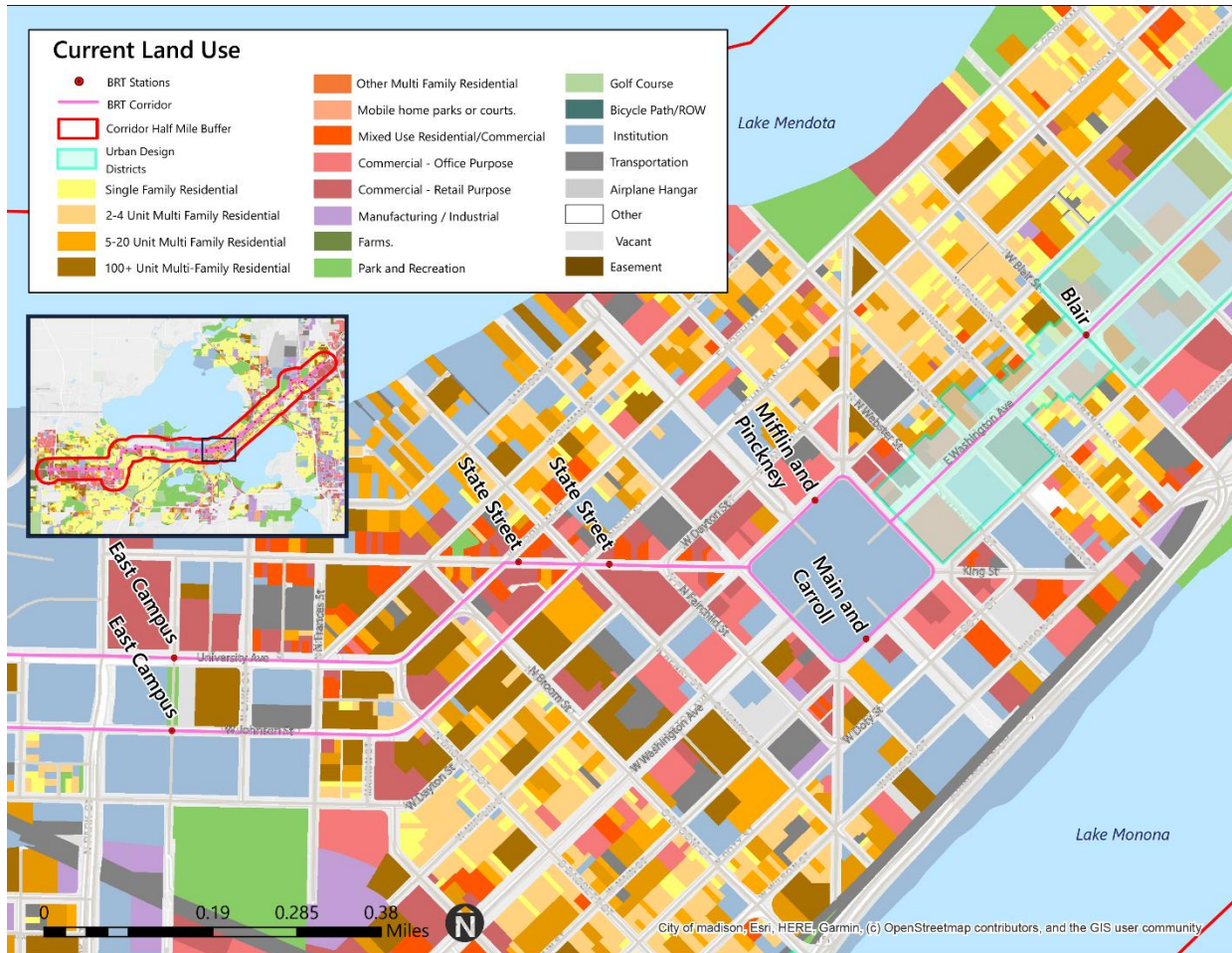
The planned land use map in Figure 15 shows that the north side of the route would continue to be designated for campus use; the area south of the route and east of the stadium is designated for mostly single- with some multi-family residential and mixed-use parcels east of the stadium. *Imagine Madison Comprehensive Plan* calls for a mix of uses among UW properties between North Randall Avenue and North Frances Street. A growth priority area (community, established) is located at West High School (the special institutional designated properties in the southwest corner of the map in Figure 15).

The City of Madison’s transportation plan, *Madison in Motion*, describes the UW campus area as a highly populated part of the city where congestion from private automobiles is a major problem despite a relatively high number of trips taken by alternative modes of transportation. The project is compatible with the plans described in *Madison in Motion* as well as with the plans for the University Avenue and West Johnson Street corridors in the *UW Long Range Transportation Plan*. In their plan, the University includes BRT in their design plans for improving the aesthetics and utility of the corridors.

## 3.6. State Street and Capitol Square

### 3.6.1. Existing Land Use

Figure 16: 2020 Existing Land Use for State Street and Capitol Square Segment

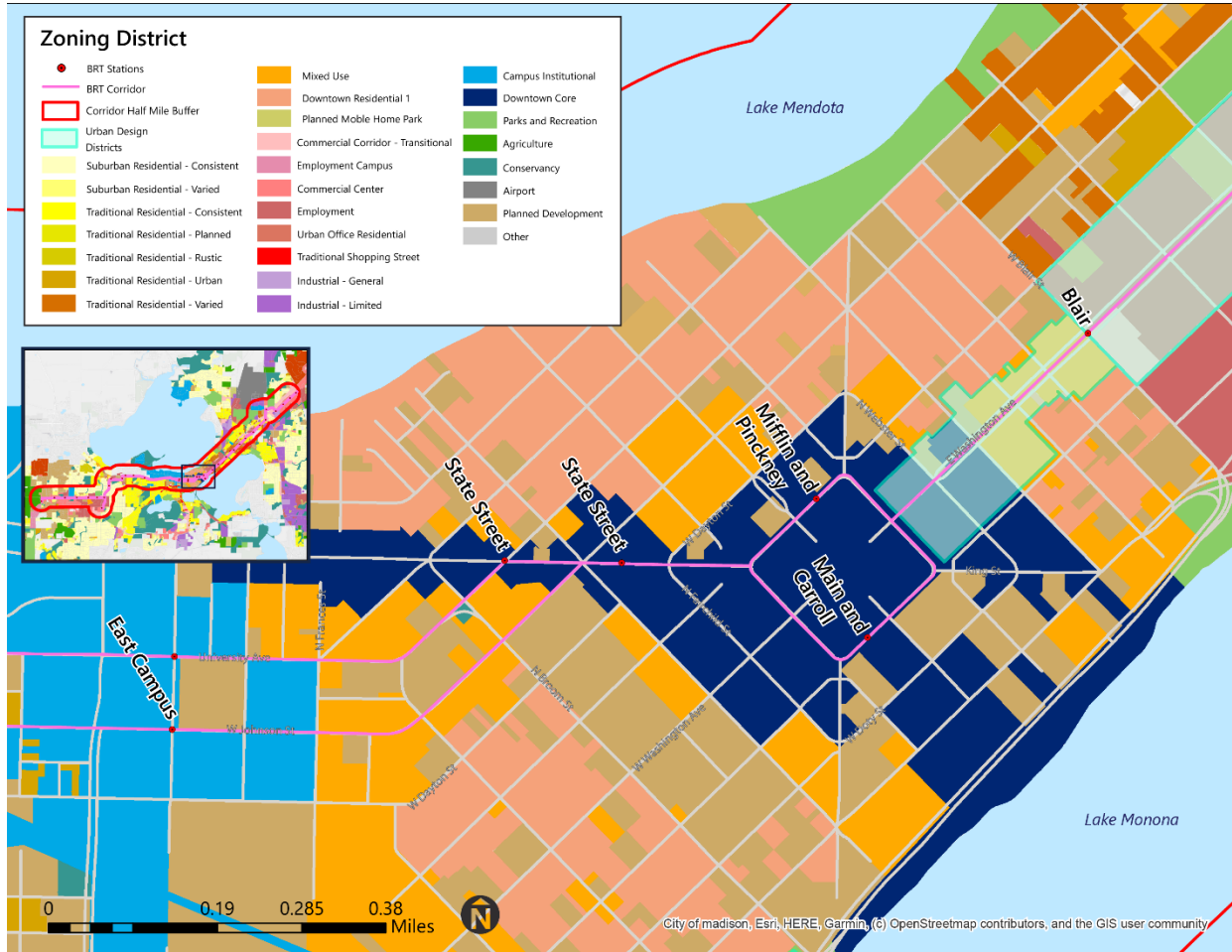


This segment includes one-quarter mile of the route that would run on State Street, around Capitol Square, and another one-quarter mile along East Washington Avenue to the Blair Street station. The surrounding area within the half-mile buffer is very dense. State Street is lined with commercial uses and small lots occupied by mixed use residential, retail, restaurants, and bars. Further away from the route, land use is primarily residential with dense multi-family housing and scattered retail and institutional uses. The density and attractions are compatible with the addition of East-West BRT and a BRT station on State Street.

As shown in Figure 16, Figure 17, and Figure 18, the East-West BRT Project would stop at the eastern State Street station after traveling east on West Johnson Street and stop at the western station before traveling west in University Avenue. East-West BRT would travel around the Wisconsin State Capitol Square. Eastbound, it would travel along the south side of the square and stop at the Capitol Square station at Main and Carroll Streets. Westbound, it would travel on the north side and stop at the Capitol Square station at Mifflin and Pinkney Streets. The half-mile radius surrounding the capitol hosts a mix of properties used for mixed purposes. This mix is visible in the inset map in Figure 16. The three-block radius of capitol square is a mix of institutional and commercial, and residential uses; government and state office buildings mixed with dining, retail, and entertainment venues. The area beyond is mostly dense housing and some commercial services where the one-half mile radius is not constrained by water.

### 3.6.2. Zoning

Figure 17: Zoning for State Street and Capitol Square Segment



This segment is zoned primarily for two- and multi-family, commercial, and institutional uses. To the east as State Street approaches Capitol Square, properties that line State Street are zoned for downtown core while other properties further north and south are zoned for mixed-use urban offices, and urban residential. Figure 17 shows downtown core, mixed-use, and urban residential designations surrounding Capitol Square.

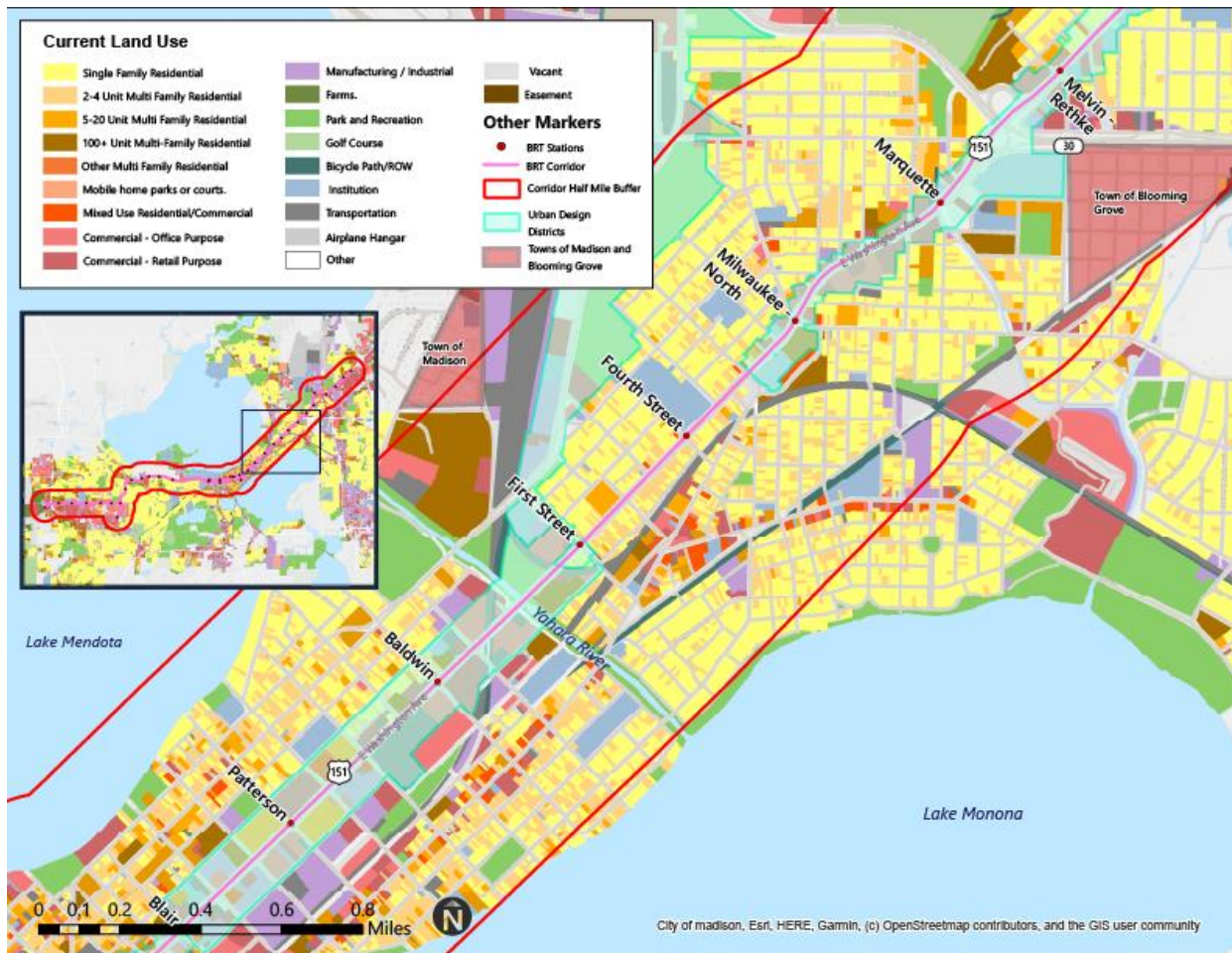
- Urban Design Districts (UDDs):** UDD Four extends along East Washington Avenue between Capitol Square and North Blair Street. The district was created to guide design for businesses and developments with frontage property on East Washington Avenue, to preserve or improve property values.



### 3.7. East Washington Avenue Between Capitol Square and Wright Street

#### 3.7.1. Existing Land Use

Figure 19: 2020 Existing Land Use East for Washington Avenue between Capitol Square and Wright Street Segment



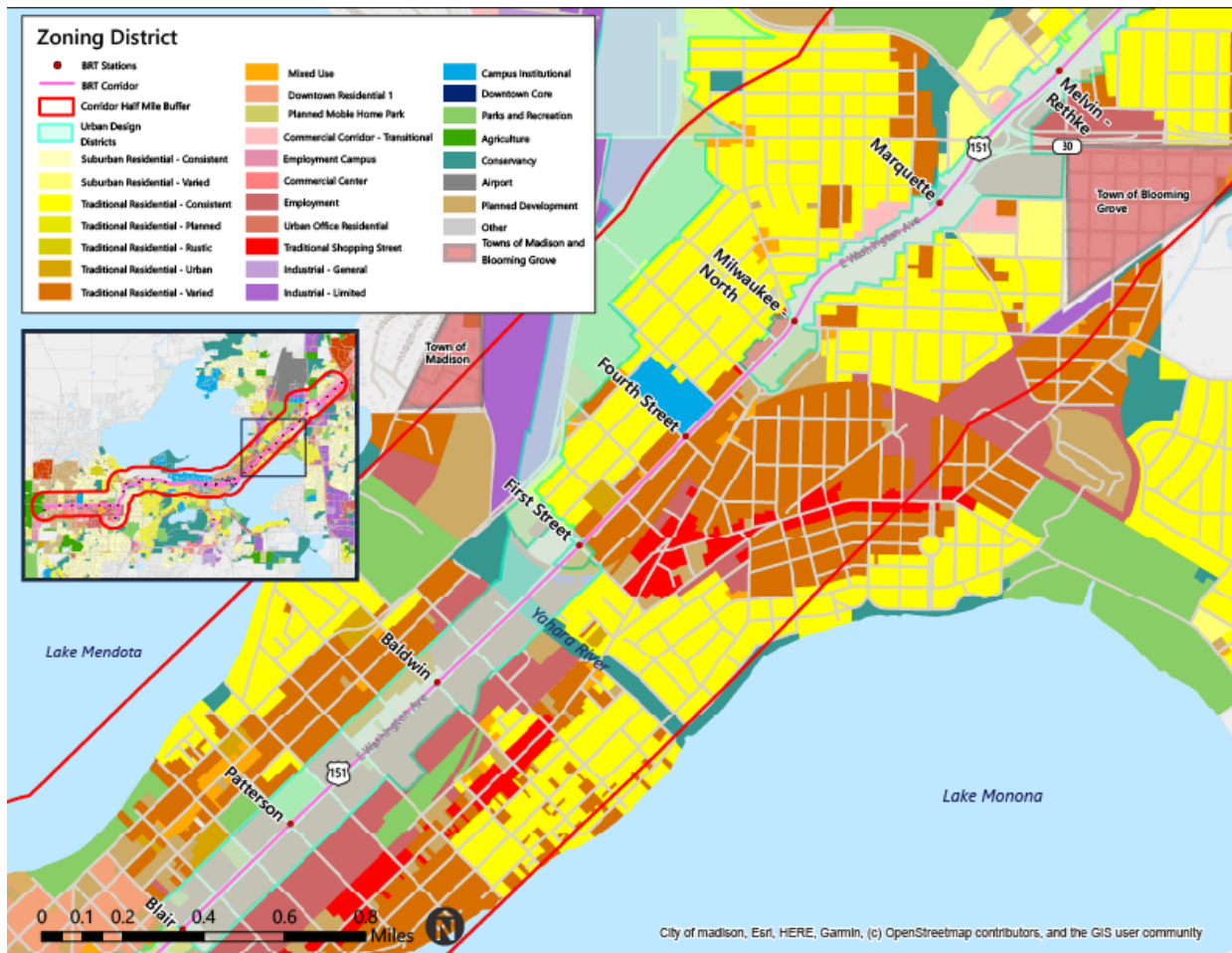
The next segment is a 3.75 mile stretch along the Isthmus from Blair Street to Wright Street along East Washington Avenue (also known as U.S. Highway 151). This segment of the route is mostly lined with commercial services, industrial and manufacturing facilities, mixed-use and multi-family housing, and other publicly owned facilities including parks and schools (Figure 19). There is a mix of small single-family housing and multi-family housing. Most of this housing is separated from East Washington Avenue by other uses, especially in the densest part of the segment on the Isthmus. East of the Isthmus there are more small, multi-family and single-family housing parcels located along the corridor.

The one-half mile buffer for the project in this segment includes a tenth of a square mile section of the Town of Blooming Grove and an even smaller section of the Town of Madison. The portion of the Town of Blooming Grove is located southeast of the intersection of East Washington Avenue and Aberg Avenue and the Town of Madison is northwest of the First Street Station at Fordem Avenue and South Lakewoods Garden Lane. Each town's jurisdiction is shown in Figure 19 by an opaque red triangle overlay. Both towns are comprised by small, isolated areas of land (less than one square mile), many of which are located within the City of Madison. The part of Blooming Grove within the buffer is primarily made up of small single-family housing with a few commercial retail and service buildings and a park. The part of the Town of Madison in the study area is primarily multi-family housing.

The segment has eight BRT stations, each spaced 0.3 to 0.5 miles apart, which would allow the East-West BRT Project to serve one of the densest areas of the city.

### 3.7.2. Zoning

Figure 20: Zoning for East Washington Avenue between Capitol Square and Wright Street Segment



The zoning regulations for this segment are best described in two parts: the isthmus (west of the Milwaukee-North Street station) and east of the isthmus (east of the Milwaukee-North Street station). Zoning on the isthmus is a mix of mostly residential parcels, offices, commercial, and retail uses. There are also a few parcels zoned for recreational use south of the corridor and along the southern shore of Lake Mendota. Additionally, there are parcels zoned for industrial use near surrounding the train yard due north of the First Street station. There is also a parcel zoned for institutional use at the Fourth Street Station where Madison East High School is located. The area east of Milwaukee-North Street station is mostly residential. There are some suburban residential zoning designations at the far west end of the segment north of the Melvin Court-Rethke Avenue station. Otherwise, residential zoning designations are mostly traditional. This part of the segment also includes some parcels zoned for commercial office use near the Melvin Court-Rethke Avenue station and along the south side of the one-half mile buffer west of the Town of Blooming Grove.

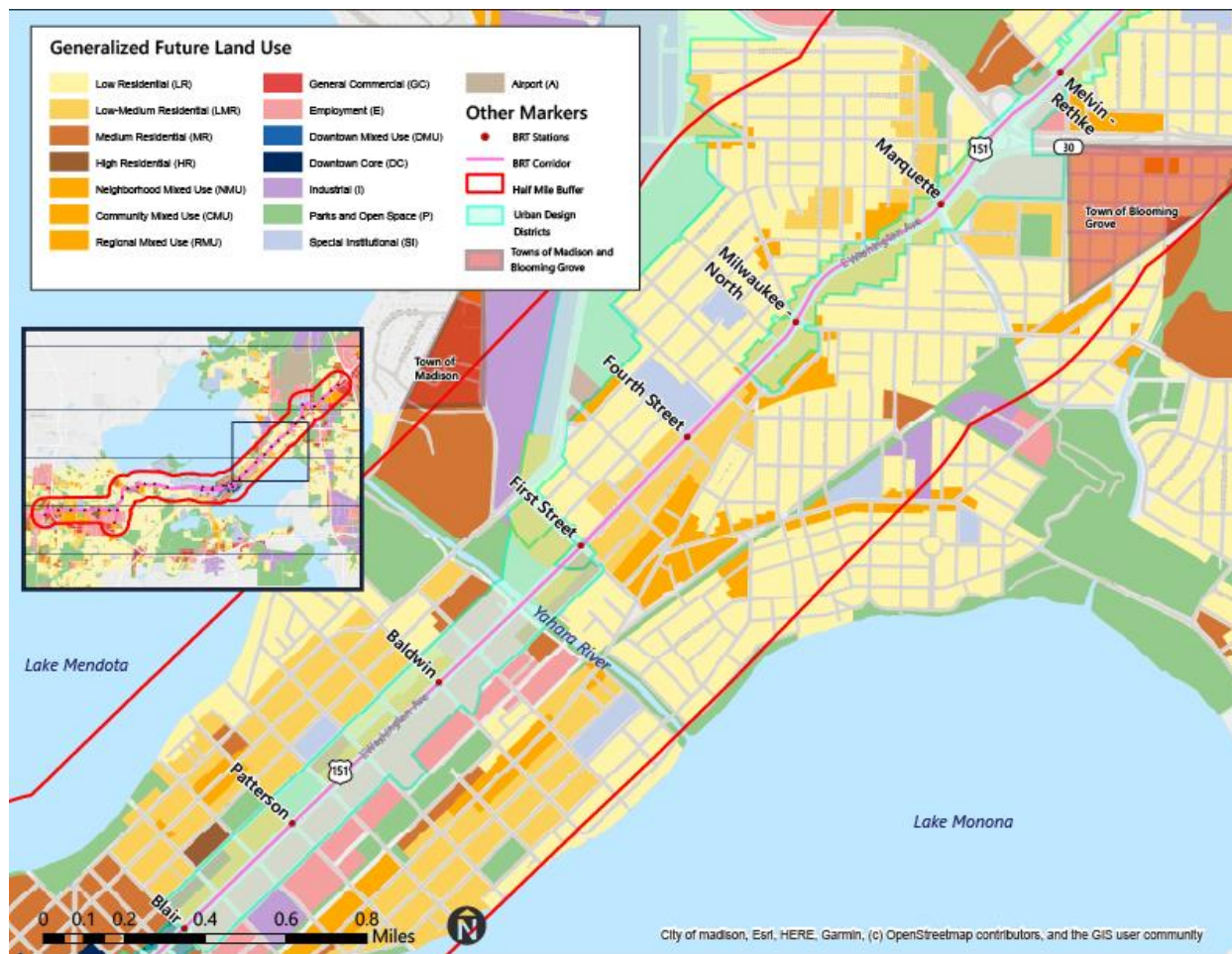
Overall, this segment has denser commercial, residential, and mixed-use zoning on its west end and becomes lower density to the east as zoning switches from majority residential and commercial to other industrial and transportation purposes.



- **Urban Design District (UDD):** There are three UDDs in this segment: UDD Eight, Four, and Five. District Four was also in the buffer for the Capitol Square segment. Districts Eight and Five serve similar purposes. These districts are tools the City uses along the corridor to make sure that property development and redevelopment is supportive of the resident needs, property values, and transit and other transportation improvements.
- **Rural zoning:** There are two rural zoning districts in this segment. One designates about 0.1 square miles of the Town of Blooming Grove (shown in Figure 19) for small single-family housing. Because the town of Blooming Grove is in a Rural Zoning District and not part of the City of Madison, Dane County determines the zoning designations. The district in this section is zoned primarily for compact single-family residential lots with limited other uses permitted. The other rural zone is in the Town of Madison north of East Washington Avenue. This zone is designated for multi-family residential use.

### 3.7.3. Future Land Use

Figure 21: Planned Land Use for East Washington Avenue between Capitol Square and Wright Street Segment



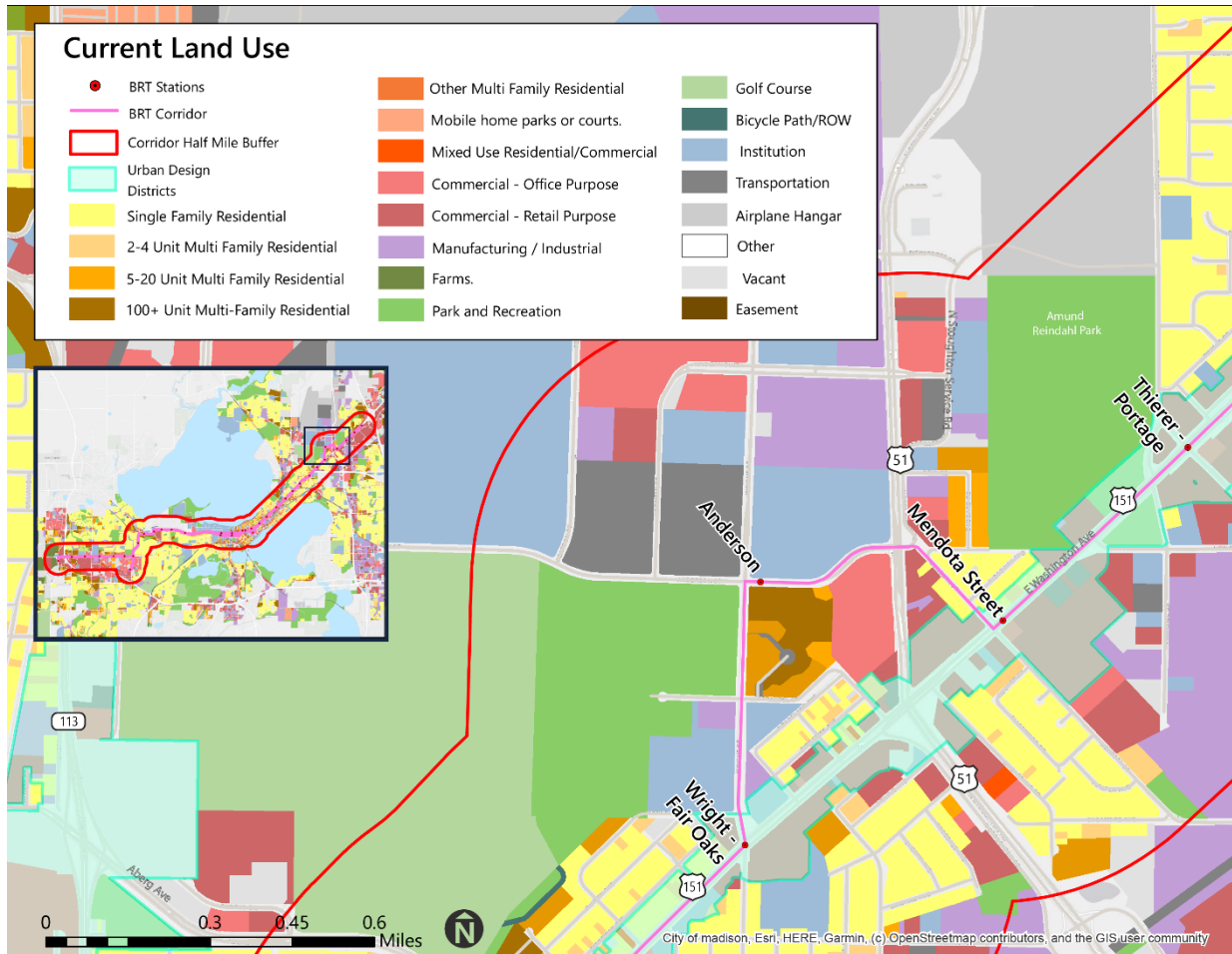
There are three growth priority areas within this segment. Two are established centers: a neighborhood activity center at James Madison Park (neighborhood, established) just east of North Blair Street on the north shore of the isthmus, and Yahara Place Park (community established) which is adjacent to the Yahara River on the south shore of the isthmus. The third growth priority area is located east of the Yahara River and is an area designated for future medium density residential use (see Figure 21).

When considering future land use in this segment of the project area, it is also helpful to note that the sections of the Town of Blooming Grove and the Town of Madison are scheduled to be annexed by the City of Madison by 2027<sup>21</sup> and October 2022<sup>22</sup> respectively. When the city annexes the parts of Blooming Grove and Madison (town) within its boundaries, it will help with land use and other policy uniformity within the project service area for this part of the route.

### 3.8. Wright Street, Anderson Street, and Mendota Street

#### 3.8.1. Existing Land Use

Figure 22: 2020 Existing Land Use for Wright Street, Anderson Street, and Mendota Street Segment



This segment of the East-West BRT route is a short detour off East Washington Avenue. East-West BRT would travel north-south on Wright Street, east-west on Anderson Street through the Madison Area Technical College campus, and north-south on Mendota Street. The one-half mile buffer includes park space, campus facilities, retail, single- and multi-family housing, and facilities associated with the nearby National Guard Armory and Dane County Regional Airport (Figure 22). Between Anderson Street and East Washington Avenue there is single- and small multi-family housing along East Washington Avenues well as commercial retail and offices. At the southeast corner of Wright Street and Anderson Street there is significant multi-family housing development

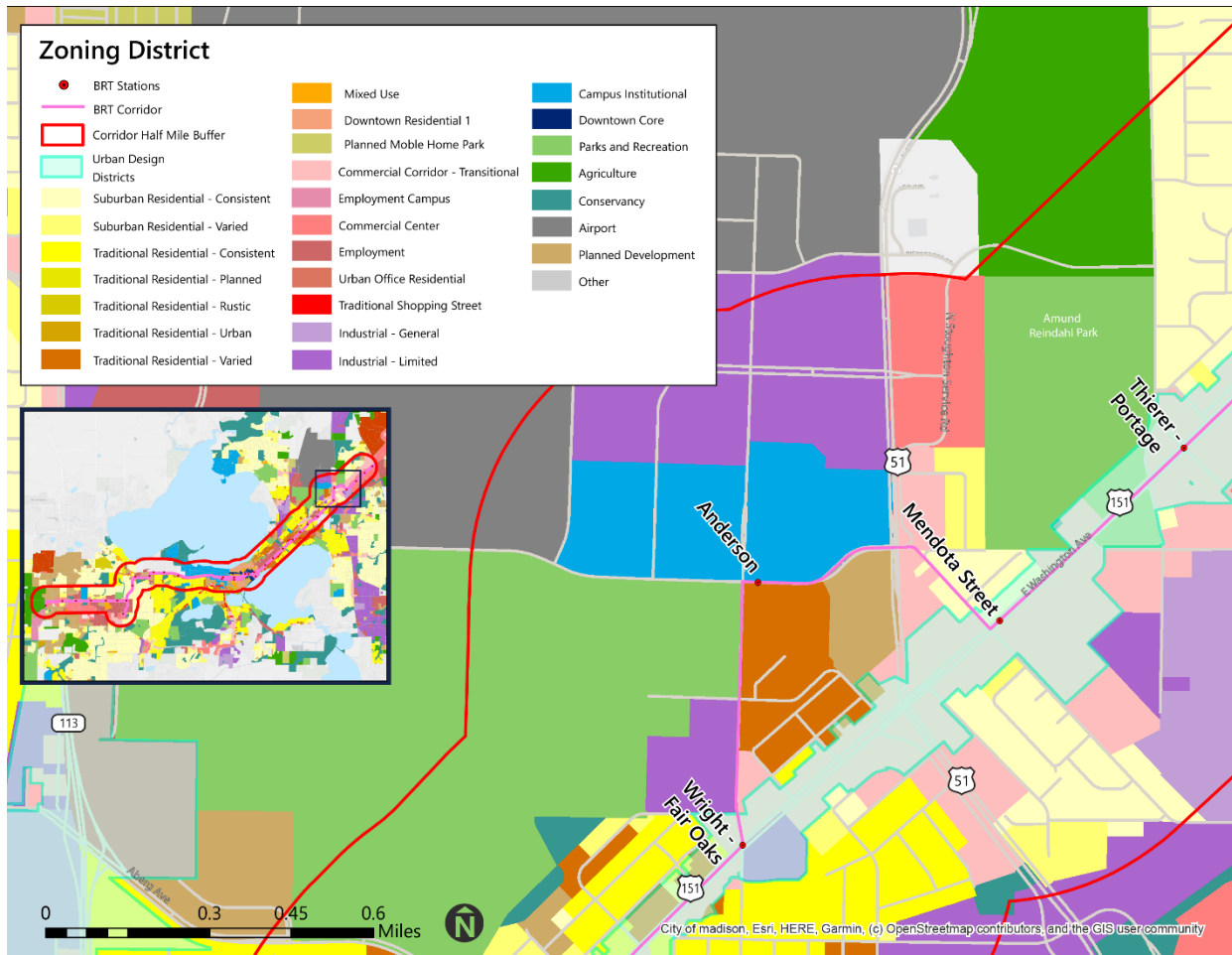
21 City of Madison, Town of Madison Attachment. Available at <https://www.cityofmadison.com/city-hall/town-of-madison>. Accessed March 2021.

22 Per agreement signed in 2005, the Town of Blooming Grove will dissolve by October 31, 2027. The land in the buffer is part of the town that will be annexed by the City of Madison. Available at <https://cityofmadison.com/pdf/Blooming%20Grove%20Cooperative%20Plan%20042006-final.pdf>. Accessed 22 November 2021.

along with the East Madison Community Center is also located here. The area northwest of Anderson Street station is used for parking for Madison Area Technical College facilities. There is commercial use-designated land to the north that is used for other campus facilities. The East-West BRT Project would run north-south on Wright Street between the planned Wright Street-Fair Oaks Avenue and Anderson Street stations. West of Wright Street, most land is designated for recreational use and is primarily used for Madison Area Technical College’s sport facilities. North and northeast of the Anderson Street station, land use is comprised of Madison Area Technical College facilities, manufacturing and industrial facilities, and commercial retail including restaurants. Overall, East-West BRT would serve this segment well based on the current land uses.

### 3.8.2. Zoning

Figure 23: Zoning for Wright Street, Anderson Street, and Mendota Street Segment

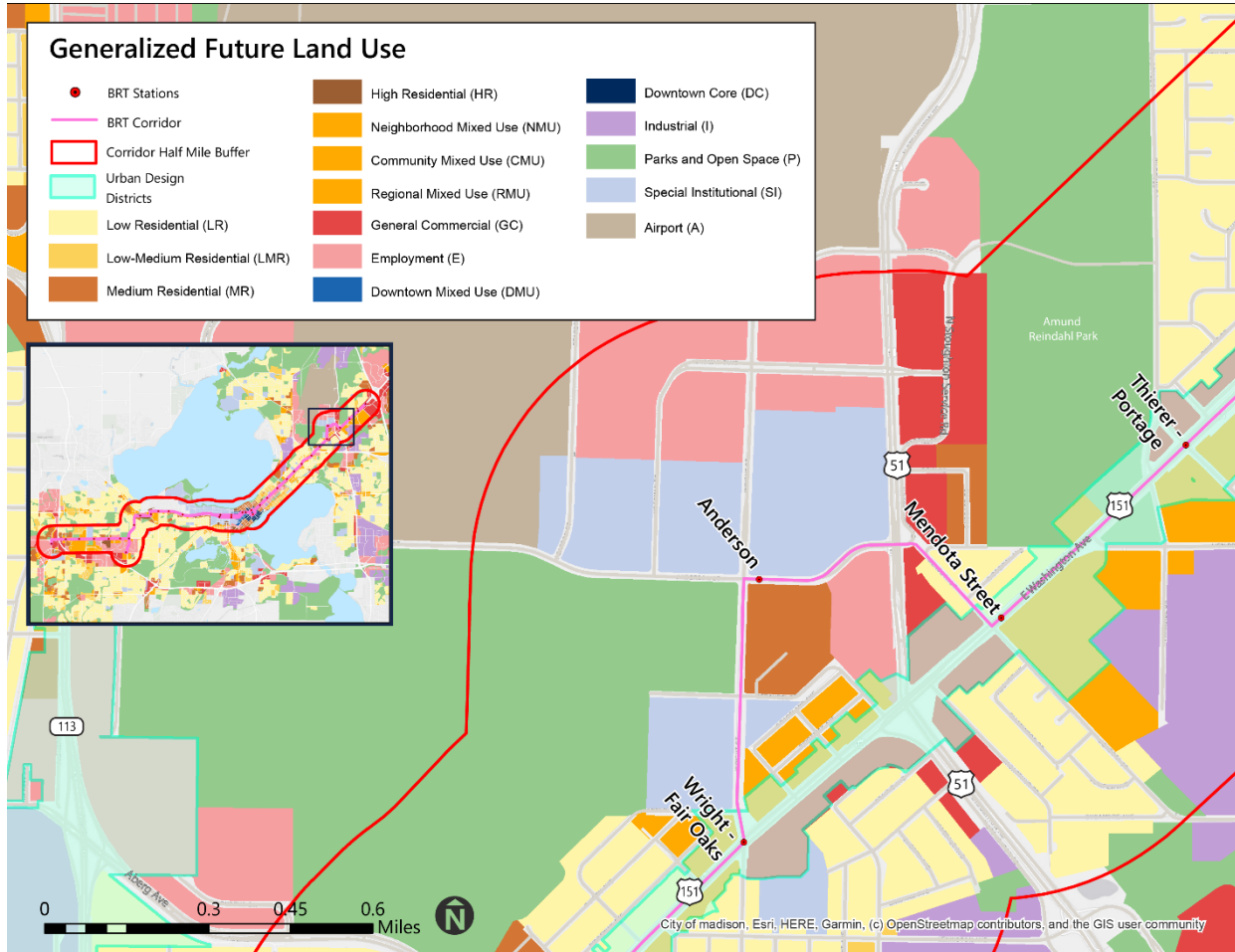


Zoning in this segment includes commercial and institutional zoning designations for Madison Area Technical College campus use, industrial zoning for manufacturing use, some commercial retail and food, and some small single- and multi-family use residential parcels southeast of the route. South of the route is primarily zoned for commercial and residential use. There are no parcels with mixed-use zoning designations in this segment. Most residential property is smaller single- and multi-family use.

- **Urban Design District (UDD):** Part of UDD Five is in this segment. The district was created for the purpose of guiding development along the eastern part of East Washington Avenue to ensure that businesses maintain the City’s desired aesthetic and increase property values for the neighborhood.

### 3.8.3. Future Land Use

Figure 24: Planned Land Use for Wright Street, Anderson Street, and Mendota Street Segment

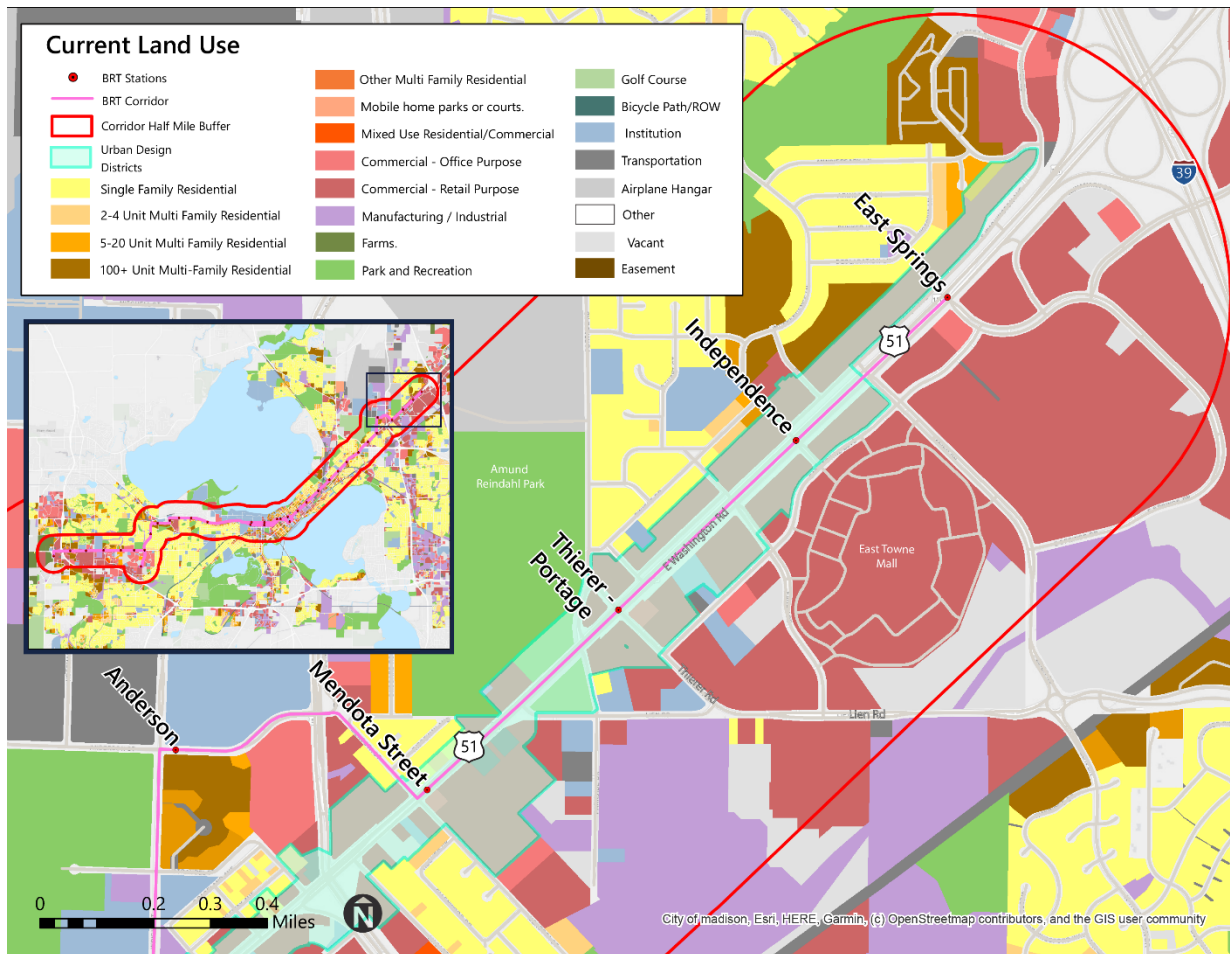


The generalized future land use shown in Figure 24 is largely consistent with current land use shown in Figure 22. This means that land use in this segment should remain conducive to the addition of East-West BRT service. The intersection of North Stoughton Road (Highway 51) and East Washington Avenue is considered a transitioning community activity center in the City of Madison's *Imagine Madison Comprehensive Plan*. The generalized future land use plan has primarily commercial, employment, mixed-use, and medium-density housing around the East-West BRT route. These uses and the presence of Madison Area Technical College would be supportive of the project because they draw commuters and visitors to the location.

### 3.9. East Washington Avenue East of Mendota Street

#### 3.9.1. Existing Land Use

Figure 25: 2020 Existing Land Use for East Washington Avenue East of Mendota Street



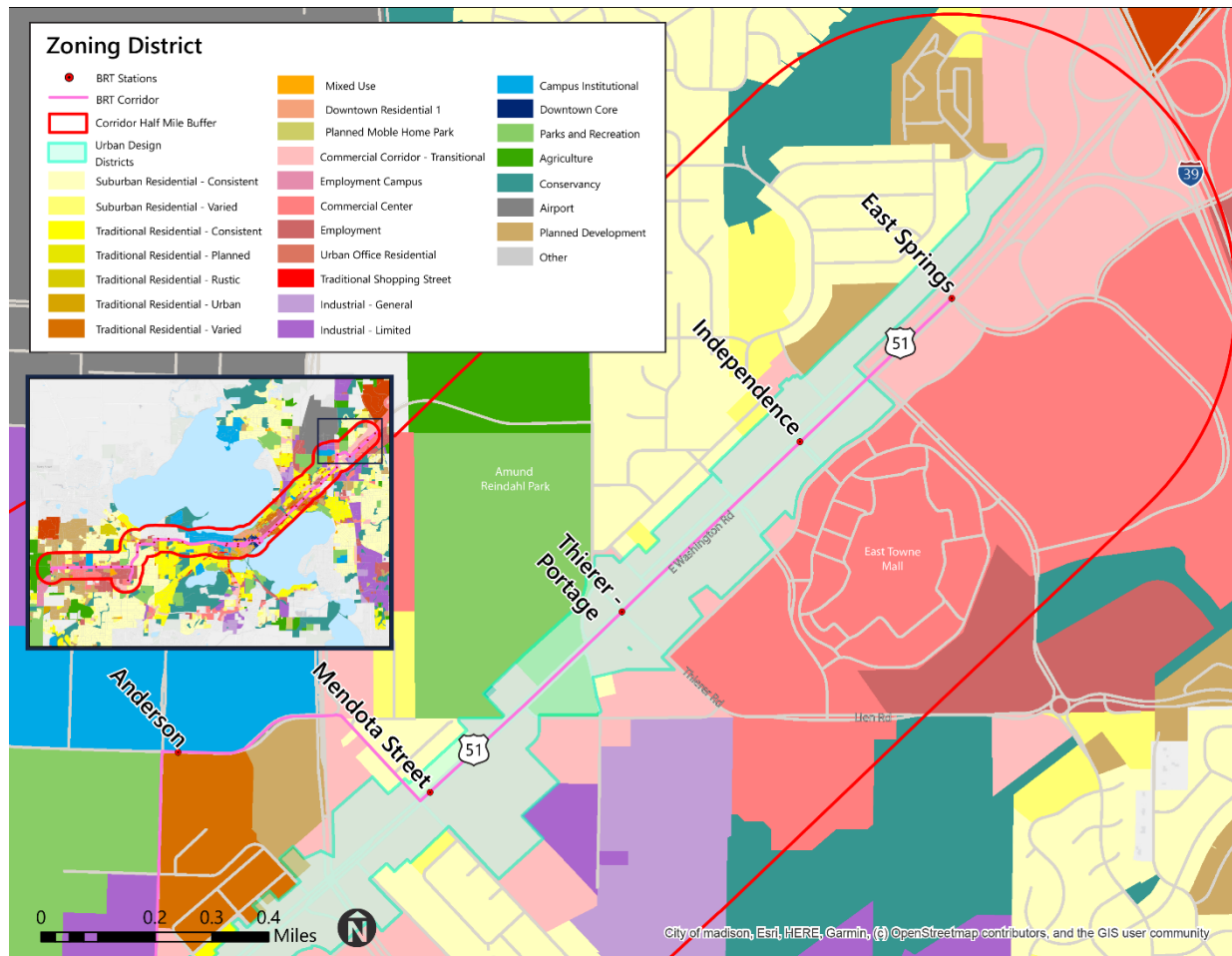
The final segment includes three stations: Thierer Road-Portage Avenue station, Independence Lane station, and East Springs Drive station. Each station is spaced about one-half mile apart. The study area around the first half of this segment (from Mendota Street station to Thierer-Portage Avenue station) consists of parkland on the north side of East Washington Avenue and a mix of uses to the south, including commercial retail for grocery stores, restaurants, and clothing stores. Other uses include manufacturing warehouses, institutional uses (churches), parking areas, and undevelopable land consisting of wetlands and floodplains. There is also limited single-family residential development in this section.

East of Thierer-Portage Avenue station, the north side of the corridor is lined with commercial use but is mostly residential further north. There are single-family homes and a few large multi-family housing complexes: Prescott Place Apartments, Cedar Ridge Apartments, and Stonebridge condominiums. There are a couple of parcels zoned for institutional use—primarily religious uses. Much of the area along the corridor is zoned for commercial use as well as most of the area near I-90 (Figure 25). The land is used for residential purposes past the eastern terminus to I-90. At that point, land is used for commercial purposes including retail, offices, and hotels along the corridor and the corner by the interchange with I-90. The south side of the corridor is used for commercial purposes including retail (shopping centers including the East Towne Mall), restaurants, some entertainment, and two hotels.

- **Urban Design District (UDD):** UDD Five continues along East Washington Avenue from Mendota Street to I-90. Its purpose was described in the last section.

### 3.9.2. Zoning

Figure 26: Zoning for East Washington Avenue East of Mendota Street

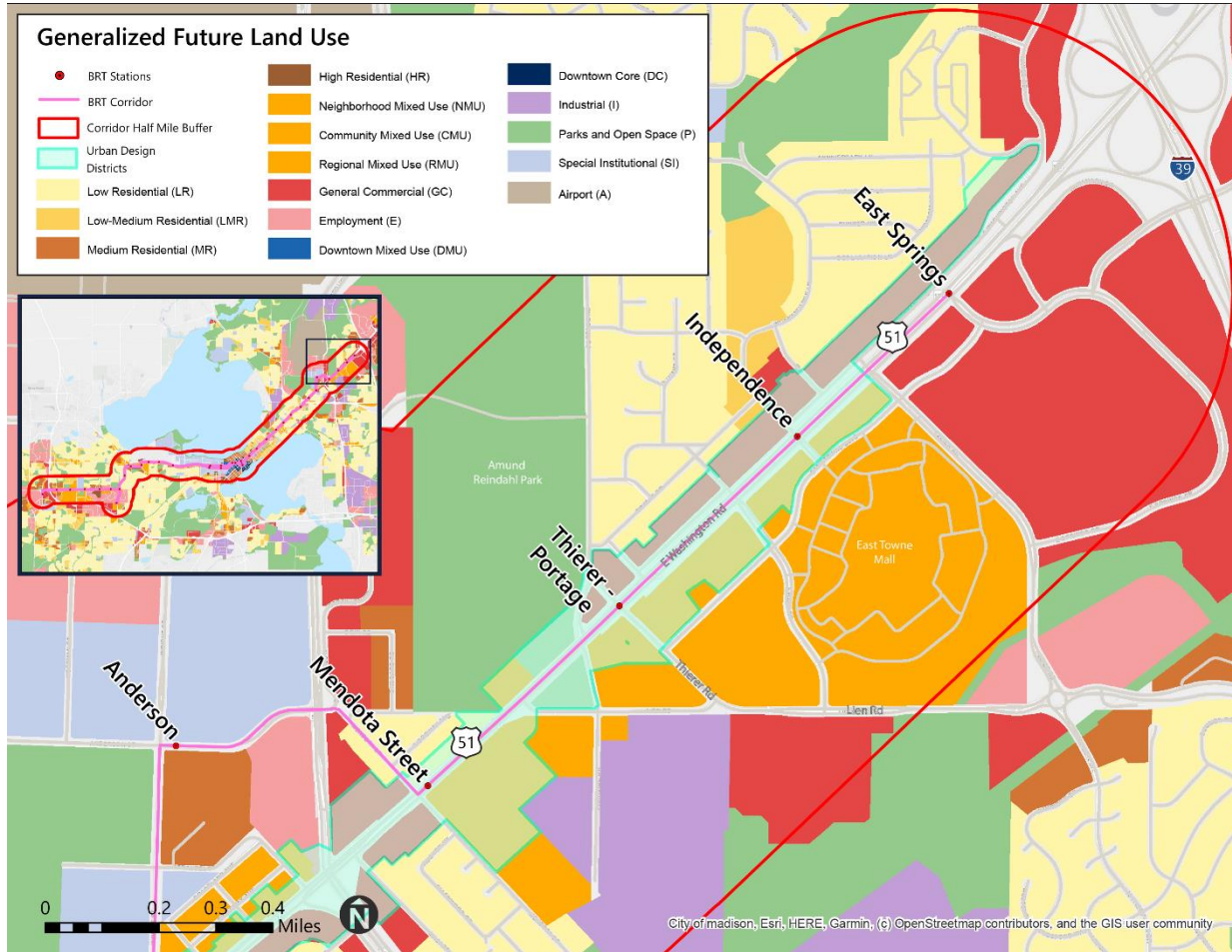


From Mendota Street station to Thierer Road-Portage Avenue station, land within the one-half mile buffer is zoned for recreational use, commercial use, industrial use south of East Washington Avenue, and some residential use north of Washington Avenue. The residential zones include 40-50 parcels at the corner of East Washington Avenue and Mendota Street designated for single-family residential use. There is also a large parcel north of Reindahl Park zoned for agricultural use that is used for agriculture and open land (Figure 26). The south side of East Washington Avenue is zoned for commercial and industrial use. There are three parcels near the corridor that are zoned for single-family residential use.

West of Thierer Road-Portage Avenue station, the north side of East Washington Avenue is mostly zoned for residential use except directly along East Washington Avenue and east of the East Springs station, where there is also zoning for commercial uses. The south side of this segment within the buffer is entirely zoned for commercial use.

### 3.9.3. Future Land Use

Figure 27: Planned Land Use for East Washington Avenue East of Mendota Street



The City’s generalized future land use for this segment includes continued designations for park space and a mixed commercial use and industrial use south of East Washington Avenue. This would allow for the vacant subdivided land to be developed when necessary.

The south side of the corridor which consists of East Towne Mall and other shopping centers is considered a regional transitioning center in the City of Madison’s comprehensive plan. The development of this area would be compatible with the addition of the project. At the end of the route, riders would be able to access the shopping center nearby or connect with local bus lines 23 and 26 which can take riders to destinations east of I-90 including the Sun Prairie Park-and-Ride.

## 3.10. Other Project Areas

### 3.10.1. Metro Satellite Maintenance Facility

The City of Madison is converting a former FedEx site at Hanson Road and North Stoughton Road into a bus garage called the Metro Satellite Maintenance Facility. The East-West BRT Project would add electric bus charging capabilities to the facility. The facility is located north of the corridor near the Dane County regional airport. The land surrounding the facility is dedicated to industrial, transportation, and agricultural use. The addition of electric vehicle charging infrastructure to the Metro Satellite Maintenance Facility would have no impact on existing and future land use plans or existing zoning.

### 3.10.2. Sun Prairie Park-and-Ride Electric Bus Charging Equipment

This East-West BRT Project includes the addition of electric bus charging equipment to the Sun Prairie Park-and-Ride. The equipment would be used for electric BRT buses that Metro Transit plans to add to the fleet. The current park-and-ride is in the City of Sun Prairie, and the land surrounding the facility is mainly used for suburban offices. The City of Sun Prairie's comprehensive plan includes goals for improving transit and connectivity to the City of Madison<sup>23</sup>. Improving transit facilities at the park-and-ride location is conducive with the city's transportation plans. Adding the charging equipment to the existing park-and-ride location would not have an impact on the surrounding land use and zoning for the City of Sun Prairie or the City of Madison.

## 4. Environmental Consequences

### 4.1. No Build Alternative

Under the No Build Alternative, the project would not be constructed and no land use or economic development benefits or impacts of the project would occur. The No Build Alternative would not be compatible with local comprehensive plans and regional policy, which call for supporting the development and implementation of transit improvements.

No construction phase impacts would occur under the No Build Alternative.

### 4.2. Build Alternative

#### 4.2.1. Operating Phase Impacts

Implementation of the project would be compatible with the local land use planning policies of the City of Madison, the Village of Shorewood Hills, and the University of Wisconsin's comprehensive plan.

#### 4.2.2. Construction Phase Impacts

Construction phase impacts would generally include:

- Road closures and detours resulting in traffic delays through residential neighborhoods
- Trail closures and detours
- Noise, dust, and visual impacts due to construction
- Temporary effects to land use caused by staging areas

These impacts do not pose compatibility issues with planning policy documents but are addressed under other topic areas (community cohesion, economic impacts, etc.) in the documented categorical exclusion.

#### 4.2.3. Indirect and Cumulative Effects

40 CFR 1508.8<sup>24</sup> defines effects:

*(a) Direct effects, which are caused by the action and occur at the same time and place.*

*(b) Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects*

---

<sup>23</sup> City of Sun Prairie, Comprehensive Plan 2019-2039. Available at <https://cityofsunprairie.com/DocumentCenter/View/9995/Chapter-8-Mobility-and-Transportation>. Accessed March 2021.

<sup>24</sup> 40 C.F.R. § 1508.8. Available at <https://www.law.cornell.edu/cfr/text/40/1508.8>. Accessed 22 November 2021.



*related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.*

Cumulative impacts result when the effects of an action are added to or interact with other effects in a particular place and within a particular time. It is the combination of these effects. For the East-West BRT Project, the cumulative effect of the burgeoning development environment that already exists in Madison, combined with the indirect growth-inducing effect of BRT, could accelerate current land use and socio-economic trends the city is experiencing.

The project could have indirect and cumulative effects in two areas. First, the provision of high-quality transit is likely to increase development investment, jobs, and property values throughout the project area. Then as a separate action from the East-West BRT Project, and mentioned in Section 3, the City of Madison is considering the implementation of TOD overlay zoning, which would allow for increased densities near BRT stations.

### **Potential Indirect and Cumulative Effects of BRT**

As mentioned in this document, East-West BRT is part of Madison's comprehensive plan. East-West BRT routing and station locations are currently being considered by some development proposals and by city commissions and boards involved in the approval process. These proposals and approvals are largely consistent with both the *Image Madison Comprehensive Plan* and individual area plans.

Indirect effects of BRT have been well studied. The following paragraphs summarize areas of effect.

#### ***Development and Investment***

A study from the Government Accountability Office (GAO)<sup>25</sup> sought to quantify the amount of private development investment along BRT corridors. Often BRT was found to foster investment in areas adjacent to the corridor. The Cleveland HealthLine attracted more than \$9.5 billion in public and private investment.<sup>26</sup> The Emerald Express BRT Lines in Eugene, Oregon attracted \$100 billion in investment in the first few years of operation. Conversely, the systems in Kansas City and Seattle - both of which are light BRT systems - have experienced less success in attracting development.

Studies by Perk and Currie found similar results. Perk remarks that "reported land development benefits with full-featured BRT are similar to those experienced along rail transit lines."<sup>27</sup> Currie noted that BRT has many similarities with rail that cause it to attract substantial investment, including performance, high frequency service, attractiveness to choice riders, scale dilution, and novelty.<sup>28</sup>

A substantial amount of redevelopment has occurred in Madison in areas that are well-served by local bus service. However, many of the easiest sites to redevelop have already seen projects, while redevelopment in outlying areas has lagged. BRT implementation has the potential to expand redevelopment to under-developed and under-valued portions of the corridor. Locations susceptible to this include portions of East Washington Avenue east of Milwaukee Street, Mineral Point Road west of South Yellowstone Drive, and Sheboygan Avenue.

---

25 Government Accountability Office. (2012). "Bus Rapid Transit: Projects Improve Transit Service and can Contribute to Economic Development". Available at <https://www.gao.gov/products/gao-12-811>. Accessed 22 November 2021.

26 About Cleveland HealthLine. Available at <http://www.riderta.com/healthline/about>. Accessed 16 September 2021.

27 Perk, Victoria and Catalá, Martin. (2009). "Land Use Impacts of Bus Rapid Transit: Effects of BRT Station Proximity on Property Values along the Pittsburgh Martin Luther King, Jr. East Busway". Available at [https://nbrti.org/wp-content/uploads/2017/05/Property-Value-Impacts-of-BRT\\_NBRTI.pdf](https://nbrti.org/wp-content/uploads/2017/05/Property-Value-Impacts-of-BRT_NBRTI.pdf). Accessed 22 November 2021.

28 Currie, Graham. (2006). "Bus Transit Oriented Development: Strengths and Challenges Relative to Rail". Available at <https://digitalcommons.usf.edu/jpt/vol9/iss4/1>. Accessed 22 November 2021.

Sheboygan Avenue is the north boundary of the Hill Farms Historic District, which could experience some of these redevelopment pressures.

### **Employment**

The City has almost 50 percent more jobs than residents in the labor force, and more job growth is expected. BRT can have effects on employment mix and distribution.

Studies of the effect of BRT on employment are mixed, depending on the level of adherence to BRT best practices. A study of the impact of BRT on Eugene, Oregon between 2004 and 2010 performed a “shift-share” analysis along the BRT system, which was established in 2007. Several industries made gains during this analysis period, including real estate, management, administration, education, health care, lodging, food service, retail, entertainment, and arts. This is notable because the City as a whole lost positions during this timeframe due to the Great Recession.

In a study of the Independence Avenue BRT corridor in Charlotte, North Carolina, the same analysis found differing results. The Charlotte BRT system is considered “light BRT,” and does not contain all of the features of BRT – specifically dedicated stations. In this study, only healthcare jobs were found to have increased within the corridor.<sup>29</sup>

Nelson and Ganning conducted a study of the job “shift-share” for 13 BRT systems in 10 municipalities.<sup>30</sup> The study examined the change in the number of jobs along the BRT corridors before and after the Great Recession across three wage categories – low, medium, and upper – in an effort to determine the impact of BRT on differing job classifications. On average, businesses located within a BRT corridor were found to produce far more jobs across all wage levels; however, these gains were not evenly distributed.

“Middle wage” jobs, which the authors identified as transportation, real estate, administration, education, health care and “upper wage” jobs, such as utilities, manufacturing, wholesaling, information, finance and information, professional, scientific, and management, were found to make significant gains over their pre-recession levels, at a time when their cities as a whole did not return to pre-recession levels. “Lower-wage” job such as retail, arts and entertainment, accommodation, and food service had gains that outpaced areas outside of the BRT corridor, but still fell short of pre-recession levels.

BRT corridor segments that most likely could be affected by shifting employment demographics include University Research Park on Mineral Point Road, the retail area in and around West Towne Mall, and East Washington Avenue commercial areas east of Milwaukee Street.

### **Property Value**

There are several studies that examine the impact of BRT on property values. The US Department of Transportation (USDOT) studied the impact of Pittsburgh’s Martin Luther King, Jr. BRT Corridor on the valuation of single-family homes within the transit shed. The author found a direct correlation between the value of homes and their proximity to BRT stations. If a home located 100 feet from a BRT station were to be moved 1,000 feet further from the station, it would lose approximately \$10,000 in value.<sup>31</sup> These findings were corroborated in a study of Eugene, Oregon’s Emerald Express BRT Line, which found that for every 100 meters (~325 feet) closer a home was to a BRT station, its value increased by \$1,128.

---

29 Matt Miller et al., “Do TODs Make a Difference?” (2014). Available at [https://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?article=1006&context=trec\\_reports](https://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?article=1006&context=trec_reports). Accessed 22 November 2021.

30 Nelson, Arthur C. and Ganning, Joanna. “National Study of BRT Development Outcomes”. NITC-RR-650. Available at [https://nitc.trec.pdx.edu/research/project/650/National\\_Study\\_of\\_BRT\\_Development\\_Outcomes](https://nitc.trec.pdx.edu/research/project/650/National_Study_of_BRT_Development_Outcomes). Accessed 22 November 2021.

31 Perk, Victoria and Catalá, Martin. “Land Use Impacts of Bus Rapid Transit: Effects of BRT Station Proximity on Property Values along the Pittsburgh Martin Luther King, Jr. East Busway”. Available at [https://nbrti.org/wp-content/uploads/2017/05/Property-Value-Impacts-of-BRT\\_NBRTI.pdf](https://nbrti.org/wp-content/uploads/2017/05/Property-Value-Impacts-of-BRT_NBRTI.pdf). Accessed 22 November 2021.

Property valuation increases are not limited to single-family homes, but extend to condominiums as well. A study of Boston’s Silver Line found that condominiums located within walking distance of the line retained their values better during the great recession.<sup>32</sup>

Increasing property values could benefit property owners but may have detrimental effects to tenants and renters. Areas most vulnerable to property value increases include Mineral Point Road west of South Yellowstone Drive, and East Washington Avenue east of First Street. The City has been increasingly proactive in assisting affordable housing projects in close proximity to areas well-served by existing transit and areas that are planned for BRT service.

### Potential Indirect and Cumulative Effects of Possible Transit Oriented Development Overlay

Transit Oriented Development (TOD) overlay zoning has been in Madison’s zoning code for almost a decade, yet it has not been implemented. The Land Use and Transportation chapter of Madison’s comprehensive plan (page 30) states:

- Strategy 5: Concentrate the highest intensity development along transit corridors, downtown, and at Activity Centers.
  - Action a: Implement Transit-Oriented Development (TOD) overlay zoning along BRT and other existing and planned high-frequency transit service corridors to create development intensity minimums, reduce parking requirements, and support transit use.

Madison’s current zoning code language (MGO 28.104)<sup>33</sup> states:

*Purpose: The TOD District is intended to support investment in and use of public transit and bicycle connections. It does this by fostering development that intensifies land use and economic value around transit stations and by promoting a mix of uses that will enhance the livability of station areas*

*Applicability: The TOD District is an overlay district that may be applied around an identified transit stop or station, as determined by a station area plan. Boundaries shall be as shown on the zoning map. Station area plan shall be prepared by planning staff, and approved by the Plan Commission and Common Council. The plan shall establish the standards for the overlay district.*

In general, the code prohibits certain types of auto- or low density-oriented uses within the overlay district, such as auto body shops, storage facilities, and car dealerships. It also sets minimum density requirements, such as number of stories and number of dwelling units per acre; eliminates minimum parking standards; and provides for other density incentives.

In 2021 Madison was awarded an FTA planning grant for \$290,000 to revise and implement the TOD overlay zoning ordinance. Changes currently being considered include:

- Replacing expected “Station Area Plans” with modifications to the base zoning district. (for example, increasing densities, reducing/eliminating parking requirements, etc.)
- Revise the applicability of the overlay to a specific distance from a BRT station, or the BRT route.

---

32 Perk, Victoria, Catalá, Martín, and Reader, Steven. “Land Use Impacts of Bus Rapid Transit: Phase II—Effects of BRT Station Proximity on Property Values along the Boston Silver Line Washington Street Corridor.” (2013). Available at [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA\\_Report\\_No\\_0022.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Report_No_0022.pdf). Accessed 22 November 2021.

33 Madison Code of Ordinances Chapter 28 Section 104. Available at [https://library.municode.com/wi/madison/codes/code\\_of\\_ordinances?nodeId=COORMAWIVOIICH20--31\\_CH28ZOCOOR\\_SUBCHAPTER\\_28HOVDI\\_28.104TRORDEOVDI](https://library.municode.com/wi/madison/codes/code_of_ordinances?nodeId=COORMAWIVOIICH20--31_CH28ZOCOOR_SUBCHAPTER_28HOVDI_28.104TRORDEOVDI). Accessed 22 November 2021.

- Consider excluding historic districts from the overlay.

The Plan Commission and Common Council will evaluate changes and implementation of the TOD in the next two years. If implemented, TOD would foster the densification of properties with access to BRT and discourage/prohibit low density and auto-oriented uses. The effects of this are likely to be most pronounced on Mineral Point Road west of South Yellowstone Drive and on East Washington Ave east of First Street.

## 5. Mitigation Measures

The Build Alternative would be compatible with adopted local land use planning documents. No related land use avoidance, minimization, or mitigation measures are recommended.

# **Attachment A:**

## City of Madison Growth Priority Areas

