

Environmental Assessment

Ann Arbor Intermodal Station

City of Ann Arbor, Washtenaw County, Michigan

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By the
The City of Ann Arbor, Michigan,
The Federal Railroad Administration, and
The Michigan Department of Transportation

September 2017

The following persons may be contacted for additional information concerning this document:

Eli Cooper
Transportation Program Manager
City of Ann Arbor
301 E. Huron St, 4th Floor
PO Box 8647
Ann Arbor, MI 48107
(734) 794-6430 ext. 43710

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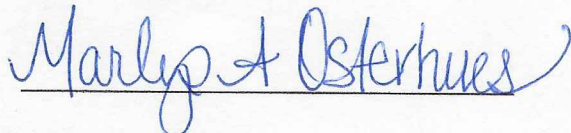
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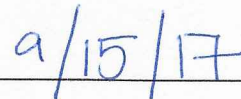
Lead Agency

Federal Railroad Administration

Approved:



Marlys Osterheus
Division Chief
Environmental and Corridor Planning
Federal Railroad Administration
1200 New Jersey Avenue SE
Washington, DC 20590



Date

The following person may be contacted for information on the Environmental Assessment

Eli Cooper
Transportation Program Manager
City of Ann Arbor
301 E. Huron Street, 4th Floor
PO Box 8647
Ann Arbor, MI 48107
(734) 794 – 6430 ext. 43710

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ANN ARBOR STATION

Environmental Assessment

Table of Contents

1.0	Purpose and Need of the Proposed Action.....	1
1.1	Description of the Proposed Action.....	1
1.2	Project Study Area	1
1.3	Project Background.....	3
1.4	Purpose of the Proposed Action	4
1.5	Need for the Proposed Action	5
	1.5.1 <i>Insufficient Quantity, Quality and Comfort Provided for Passengers by the Existing Station</i>	5
	1.5.2 <i>Inadequate Space for Intermodal Connectivity at the Existing Station</i>	6
	1.5.3 <i>Existing and Projected Future Passenger Demand</i>	10
	1.5.4 <i>Limited Integration of the Existing Station within Ann Arbor and Limited Access to City Neighborhoods and the Region.....</i>	14
1.6	Relationship to Other Transportation Planning Initiatives & On-going Projects.....	15
2.0	Build Alternatives	19
2.1	Build Alternatives Screening Process.....	19
2.2	Public Engagement	19
	2.2.1 <i>Phase I: Station Site Build Alternatives</i>	19
	2.2.2 <i>Phase II: Conceptual Site Design/Build Alternatives.....</i>	23
	2.2.3 <i>Design Criteria for Build Alternatives.....</i>	24
2.3	No Build Alternative.....	24
	2.3.1 <i>No Build Alternative.....</i>	24
2.4	Build Alternatives Considered	25
	2.4.1 <i>Build Alternatives 1A and 1B (Exhibits 2.2 and 2.3).....</i>	25
	2.4.2 <i>Build Alternatives 2A, 2B, and 2C (Exhibits 2.7, 2.8, and 2.9).....</i>	25
	2.4.3 <i>Build Alternative 3A, 3B, 3C, and 3D (Exhibits 2.10, 2.4, 2.5, and 2.6)....</i>	26
2.5	Build Alternatives Considered and Dismissed from Detailed Analysis	27
	2.5.1 <i>Build Alternatives 1A and 1B</i>	27
	2.5.2 <i>Build Alternatives 3B, 3C, and 3D</i>	30
2.6	Build Alternatives Carried Forward for Detailed Analysis in this EA.....	34
	2.6.1 <i>No Build Alternative.....</i>	34
	2.6.2 <i>Build Alternatives.....</i>	34
	2.6.3 <i>Phased Construction</i>	42
2.7	Preferred Alternative	48
3.0	Affected Environment and Environmental Consequences	50
3.1	Land Use, Zoning, and Property Acquisitions	50
	3.1.1 <i>Existing Land Use and Zoning</i>	50

3.1.2	<i>Property Acquisition</i>	56
3.2	Parks and Recreation Areas	57
3.3	Transportation	65
3.3.1	<i>Rail</i>	66
3.3.2	<i>Public Transit and Intercity Motorcoach Service</i>	67
3.3.3	<i>Motor Vehicle Traffic</i>	69
3.3.4	<i>Parking</i>	78
3.3.5	<i>Bicycle and Pedestrian</i>	79
3.4	Water Resources.....	82
3.4.1	<i>Floodplains</i>	82
3.4.2	<i>Rivers and Streams</i>	89
3.4.3	<i>Stormwater and Water Quality</i>	91
3.5	Threatened and Endangered Species	93
3.5.1	<i>Bald Eagle and Golden Eagle Protection Act</i>	101
3.6	Wetlands	101
3.7	Contaminated Sites and Hazardous Waste.....	103
3.8	Cultural Resources	106
3.9	Visual Resources	121
3.10	Socioeconomic Resources.....	131
3.10.1	<i>Community Facilities</i>	131
3.10.2	<i>Demographics</i>	133
3.10.3	<i>Economic Resources</i>	133
3.11	Environmental Justice	134
3.12	Noise	138
3.12.1	<i>Representative Receptors</i>	139
3.12.2	<i>Noise Impacts</i>	141
3.12.3	<i>Construction Noise Impact Analysis</i>	144
3.12.4	<i>Vibration</i>	145
3.13	Air Quality	149
3.13.1	<i>National Air Ambient Quality Standards</i>	149
3.13.2	<i>Mobile Source Air Toxics</i>	149
3.13.3	<i>Conformity</i>	151
3.13.4	<i>Greenhouse Gas</i>	152
3.13.5	<i>Impacts to Air Quality</i>	153
3.14	Energy Use	154
3.15	Safety	155
3.16	Barriers to Elderly and People with Disabilities	156
3.17	Utilities	157
3.18	Indirect and Cumulative Impacts	158
3.19	Summary	164
4.0	Section 4(f)/Section 6(f) Evaluation	167
4.1	Section 4(f).....	167
4.2	Section 6(f).....	167
4.3	Section 4(f) Resources	168

4.3.1	Methodology.....	168
4.3.2	Definition of Section 4(f) Uses.....	171
4.3.3	Temporary Occupancy Exception.....	171
4.3.4	De Minimis Impact Determination.....	172
4.4	Proposed Action.....	172
4.4.1	Project Purpose and Need.....	172
4.4.2	Build Alternatives Considered	173
4.5	Section 4(f) Properties	180
4.5.1	Parks, Recreation Areas, and Refuges	180
4.5.2	Broadway Park (3.8 acres).....	181
4.5.3	Wheeler Park (1.9 acres).....	183
4.5.4	Fuller Park (59.2 acres)	185
4.5.5	Border-to-Border/Iron Belle Trail.....	191
4.5.6	The Huron River Water Trail	194
4.5.7	Historic Section 4(f) Resources.....	196
4.5.8	Detroit Edison Energy Argo Station and Preliminary Use Determination 197	
4.5.9	Anson Brown Building and Preliminary Use Determination	198
4.5.10	Casey’s Tavern/Wood and Perrin and Preliminary Use Determination 198	
4.5.11	Michigan Central Railroad Depot/Gandy Dancer and Preliminary Use Determination.....	199
4.5.12	Old Fourth Ward Historic District and Preliminary Use Determination 200	
4.6	Division Street Historic District and Preliminary Use Determination	201
4.7	Summary	202
4.8	Section 6(f).....	202
4.8.1	Section 6(f) Property	203
4.8.2	Conversion of Section 6(f) Property	203
5.0	Coordination and Consultation	204
5.1	Agency, Tribal and Organizational Coordination	206
5.2	Public Meetings, Forums and Tours	208
6.0	List of Preparers	210
7.0	References.....	211

List of Tables

Table 1.1: Population Forecasts.....	12
Table 1.2: Employment Forecasts.....	13
Table 2.1: Phase I – Selection Criteria Evaluation Matrix	22
Table 2.2: Phase 1- 2025 Parking Needs.....	44
Table 3.1: Parks and Recreational Areas in the Vicinity of the Build Alternatives.....	58
Table 3.2: 2035 No Build Intersection Level-of-Service	71
Table 3.3: Build Alternatives 2A, 2B, and 2C Intersection Level-of-Service	73
Table 3.4: Build Alternatives 3A Intersection Level-of-Service	77
Table 3.5: Internal Pedestrian Circulation – No Build Alternative	79
Table 3.6: Internal Pedestrian Circulation - Build Alternatives 2A, 2B, and 2C	80
Table 3.7: Internal Pedestrian Circulation, Build Alternative 3A	82
Table 3.8: Water Quality and Floodplain Impacts for Build Alternatives	88
Table 3.9: Federal and State Threatened and Endangered Species Within one half Mile of Build Alternatives.....	93
Table 3.10: Previously-Recorded Aboveground Resources – Build Alternatives 2A, 2B, and 2C	111
Table 3.11: Build Alternative 2A Effects and Recommendations	116
Table 3.12: Build Alternative 2B Effects and Recommendations	117
Table 3.13: Build Alternative 2C Effects and Recommendations	120
Table 3.14: Population and Employment within ½ mile of Build Alternatives	133
Table 3.15: Environmental Justice Population Percentages near the Build Alternatives.....	137
Table 3.16: Representative Noise Receptor Locations	140
Table 3.17: Predicted Operational Noise Levels and Noise Impacts	143
Table 3.18: Predicted Construction Noise Level and Impacts	144
Table 3.19: Operation Vibration Impact Screening Distances (Bus Projects)	145
Table 3.20: Operational Vibration Impact Screening Assessment (distances in feet).....	146
Table 3.21: Vibration Annoyance Impact Criteria in Velocity Decibels (VdB).....	146
Table 3.22: Construction Vibration Annoyance Impact Assessment (levels VdB, distance in feet)	147
Table 3.23: Construction Vibration Damage Assessment (vibration in in./sec, distance in feet).....	148
Table 3.24: Present and Reasonably Foreseeable Future Projects – Funded (2018 – 2023).....	161
Table 3.25: Present and Reasonably Foreseeable Future Projects – Potential Cumulative Effects	162
Table 3.26: Historic Population Growth Ann Arbor, MI – 1860-2010.....	163
Table 3.27: Comparison of Environmental Factors of the Build Alternatives.....	165
Table 4.1: Section 4(f) Parks and Recreational Areas within the Study Area	181
Table 4.2: Summary of Section 4(f) Preliminary Determinations.....	202

List of Exhibits

Exhibit 1.1: Project Study Area	2
Exhibit 1.2: Ann Arbor Station Ridership	4
Exhibit 1.3: Existing Ann Arbor Amtrak Station and Amtrak Owned Property Site	7
Exhibit 1.4: Existing Transportation Connections at the Ann Arbor Amtrak Station.....	8
Exhibit 1.5: Population Density in Ann Arbor	12
Exhibit 2.1: Phase 1 Station Site Alternatives.....	20
Exhibit 2.2: Station Site Build Alternatives in Ann Arbor Advanced to Phase II	23
Exhibit 2.3: Alternative 1A	28

Exhibit 2.4: Alternative 1B29

Exhibit 2.5: Alternative 3B31

Exhibit 2.6: Alternative 3C32

Exhibit 2.7: Alternative 3D33

Exhibit 2.8: Alternative 2A37

Exhibit 2.9: Alternative 2B38

Exhibit 2.10: Alternative 2C39

Exhibit 2.11: Alternative 3A41

Exhibit 3.1: Zoning Designations in the vicinity of the Build Alternatives51

Exhibit 3.2: Parks and Recreation Areas near the Ann Arbor Intermodal Station Alternatives57

Exhibit 3.3: Broadway Park59

Exhibit 3.4: Wheeler Park61

Exhibit 3.5: Fuller Park63

Exhibit 3.6: Build Alternative 2A Flood Hazards and Stormwater Management Practices83

Exhibit 3.7: Build Alternative 2B Flood Hazards and Stormwater Management Practices84

Exhibit 3.8: Build Alternative 2C Flood Hazards and Stormwater Management Practices85

Exhibit 3.9: Build Alternative 3A Flood Hazards and Stormwater Management Practices86

Exhibit 3.10: Allen Creek: Reduced Floodplain Area Elevation (in feet):88

Exhibit 3.11: Areas of Potential Effect (APE) with Site Locations110

Exhibit 3.12: Visual Rendering of Structures for Build Alternative 2A129

Exhibit 3.13: Visual Rendering of Structures for Build Alternative 2B129

Exhibit 3.14: Visual Rendering of Structures for Build Alternative 2C130

Exhibit 3.15: Visual Rendering of Structures for Build Alternative 3A131

Exhibit 3.16: Community Facilities within a one half mile radius of Build Alternatives 2A, 2B, 2C, and 3A132

Exhibit 3.17: Minority Populations in the vicinity of Build Alternatives 2A, 2B, 2C, and 3A135

Exhibit 3.18: Low-income Households in the vicinity of Build Alternatives 2A, 2B, 2C, and 3A136

Exhibit 3.19: Representative Noise Receptor Locations141

Exhibit 3.20: FTA Noise Impact Criteria for Transit Projects142

Exhibit 4.1: Section 4(f) Resources in Study Area170

Exhibit 4.2: Build Alternative 2A175

Exhibit 4.3: Build Alternative 2B176

Exhibit 4.4: Build Alternative 2C177

Exhibit 4.5: Build Alternative 3A178

Exhibit 4.6: Broadway Park182

Exhibit 4.7: Wheeler Park184

Exhibit 4.8: Fuller Park186

Exhibit 4.9: Build Alternative 3A in Fuller Park188

1.0 Purpose and Need of the Proposed Action

1.1 Description of the Proposed Action

The City of Ann Arbor, MI, in partnership with the Michigan Department of Transportation (MDOT) proposes to construct a new intermodal station, platform, and parking within the City of Ann Arbor (the “Project”). This Project supports both the existing and planned expansion of the Amtrak intercity service between Detroit/Pontiac, MI and Chicago, IL. It also supports proposed regional commuter rail service between Detroit and Ann Arbor.

MDOT applied for and received from the Federal Railroad Administration (FRA) \$2.8 million in grant funding through the American Reinvestment and Recovery Act (ARRA), Pub. L. 111-5, in 2011 to complete the preliminary engineering and project level environmental documentation for a new intermodal station in Ann Arbor. Subsequently, MDOT sub-awarded this grant to the City of Ann Arbor for the completion of the work, with the City holding responsibility for managing the work, contracts and procurement. FRA is the lead Federal agency for compliance with the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 et seq. MDOT is the lead state agency. Other federal, state, regional and local transportation planning efforts and projects related to the station and intermodal connections in the Ann Arbor area are discussed in Section 1.6.

The City of Ann Arbor, in cooperation with MDOT and FRA, prepared this Environmental Assessment (EA). This EA evaluates the existing station location along with other Build Alternative sites in Ann Arbor, and assesses the environmental impacts of constructing and operating an intermodal station at each site along with the ability of the site to support current and future Intercity Passenger rail service, in addition to local and regional transit, pedestrian, and bicycle transportation.

1.2 Project Study Area

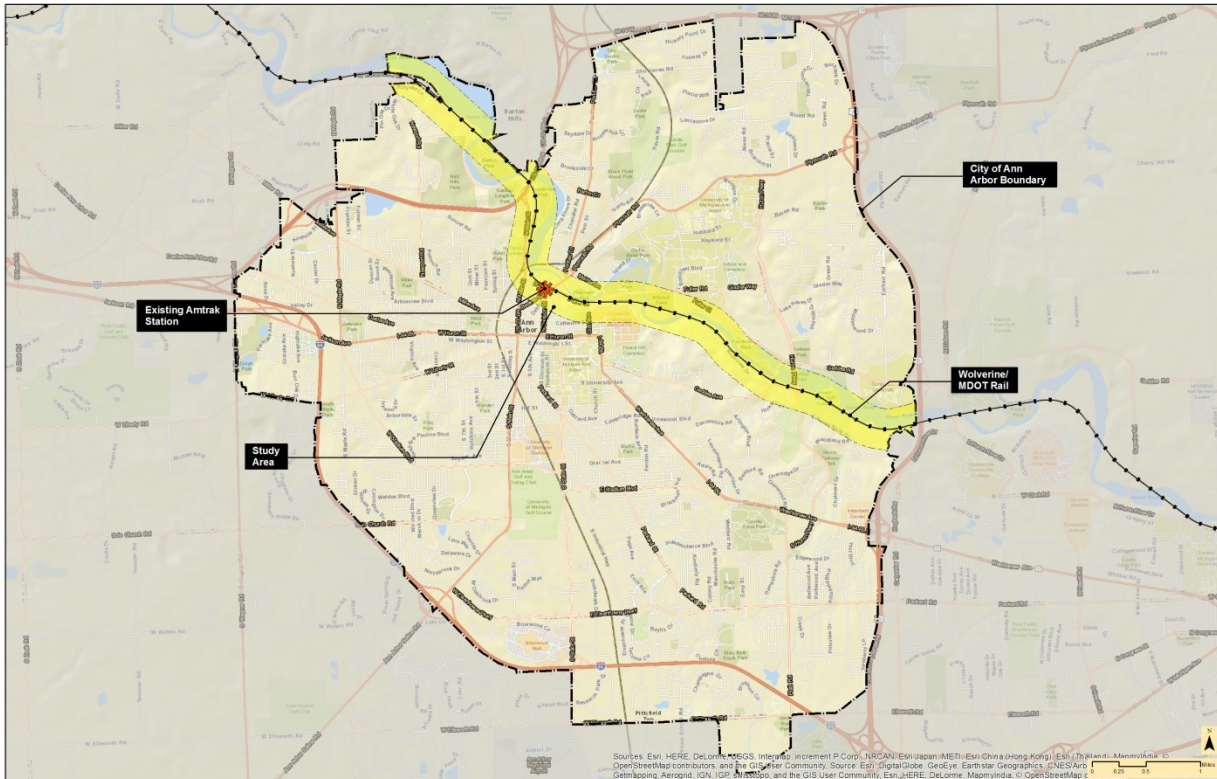
The Project study area is located in the City of Ann Arbor, and includes 0.25 mile on either side of the rail line owned by the State of Michigan and used by the Amtrak Wolverine Intercity Passenger rail service from where the City boundary on the northwest meets the rail line, southwest through the city to the city limits at the intersection of US Highway 23 and the rail line (see Exhibit 1.1). The City of Ann Arbor would own the new station.

The existing station is located at 325 Depot Street, northwest of the central Ann Arbor downtown area, the University of Michigan (U-M) Central Campus, and the U-M Medical Center.

The Huron River winds in and out of the project study area, along both sides of the rail line. Recreational destinations such as trails and parks, including playfields and a pool, are located along the Huron River banks throughout the Project study area. Also located in the project study area are city neighborhoods, local businesses, a hospital (U-M Medical Center), restaurants, community organizations (including a community art group), a golf course, and a racquet club.

Ann Arbor is a destination within the region for tourists, visitors, students, and workers. Major events and tourist attractions in Ann Arbor include U-M football games (105,317 attending on average per game in 2014¹), local festivals, and local art museums that bring in visitors to the Ann Arbor area. Ann Arbor is home to nationally recognized schools and medical facilities, such as U-M, and the U-M Medical Center, and anchor institution industries for the entire Midwest.

Exhibit 1.1: Project Study Area



Source: ESRI

Ann Arbor features bicycle- and pedestrian-friendly transportation options that are heavily used. The City of Ann Arbor promotes non-motorized transportation options and has adopted a non-motorized transportation plan² that includes future improvements for walking and bicycling. Meanwhile, vehicle parking in Ann Arbor is limited. These factors encourage walking and biking as transportation options within the community that serve as important connections to transit and rail transportation for local residents, workers and visitors alike. According to the 2013 update to the Ann Arbor non-motorized transportation plan, Ann Arbor has more than twice the trips taking place by walking and bicycling than the national average.

¹ <http://bentley.umich.edu/athdept/stadium/stadtext/mattend.htm#atttotal>

² City of Ann Arbor 2013 Non-Motorized Transportation Plan Update 2013, <http://www.a2gov.org/Documents/Ann%20Arbor%20NTP%20Update%202013.pdf>

1.3 Project Background

Ann Arbor has long been successfully served by passenger rail service. The existing Ann Arbor rail station opened in 1983 and is the busiest in the state in terms of Corridor Station Activity based on data collected by the Michigan Department of Transportation. The existing station has not kept pace with increased intercity passenger rail ridership. It has limited capacity to provide for increased rail service (both intercity and proposed commuter rail) and the station itself is insufficient to accommodate existing passenger volumes.

The existing station is undersized by current Amtrak design standards³ and is frequently unable to accommodate existing passenger volumes. Based on projected 2035 ridership the station would require 8,494 square feet (s.f.) in order to meet the Amtrak Station Program and Planning Guidelines (May 1, 2013). Only the waiting room size varies based on peak boarding ridership estimated at 147 in 2035, the other area sizes remain the same. Amtrak recommends a waiting room area based on 20 s.f. for 50% of the total peak boarding ridership and 10 s.f. for the remainder of the peak boarding ridership. This calculates to: Waiting room program area = $(20 \text{ s.f.} \times \frac{1}{2} \times 147) + (10 \text{ s.f.} \times \frac{1}{2} \times 147) = 2,205 \text{ s.f.}$

The existing station, which is owned and staffed by Amtrak, is 3,206 square feet, and includes two ticket windows, one electronic ticket kiosk, Americans with Disabilities Act (ADA) accessible three person restrooms, lacks Wi-Fi, and is not ADA accessible in all areas. The 60 seats available in the waiting area are usually overwhelmed by the typical train boarding loads of 80-120 passengers. There is no checked baggage service, no baggage storage, no baggage carts, and no lockers, but station agents will assist with baggage loading.

Parking for the station is owned by Amtrak. The 38 short-term spaces are managed and metered by the Ann Arbor Downtown Development Authority. The spaces are all immediately adjacent to the existing station. The 70 long-term spaces are unregulated and available at no charge, but are located across the tracks with no easy way to access the depot. Amtrak receives 40% of all short-term parking meter revenue. Overall, the existing station lacks convenient and adequate long-term parking and has no bicycle storage.

The seating capacity in the waiting area does not meet the Amtrak Station Program and Planning Guidelines (May 1, 2013). The number of passengers the station serves has increased by almost 70 percent in the past decade⁴ (See Exhibit 1.2). Despite the recent decline in ridership, related to construction of improvements in the corridor, the long term projections in ridership (boardings and alightings combined) at the Ann Arbor Station show a rise to 209,000 in 2035 with no increase in service (based on the Chicago to Detroit/Pontiac Passenger Rail Corridor Program, Tier I Draft Environmental Impact Statement, Appendix E: Ridership & Revenue Forecasts and Operating & Maintenance Costs, Rail

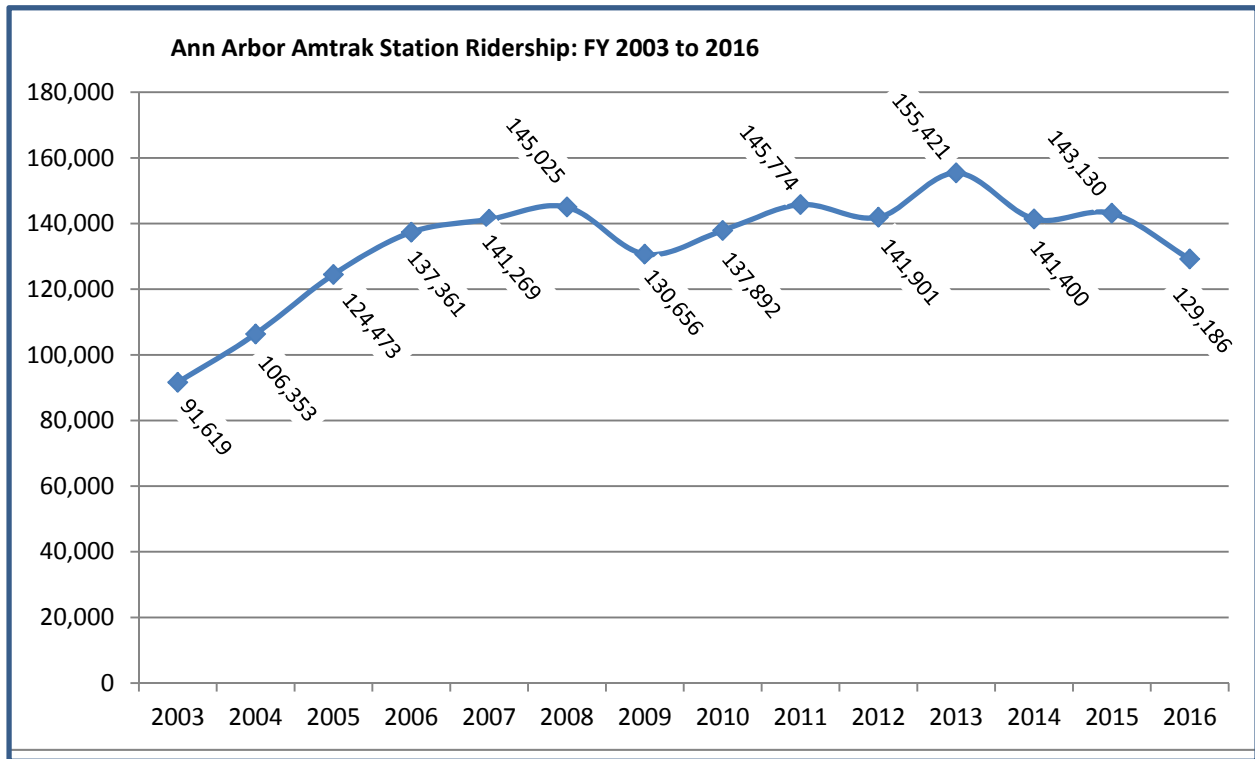
³ Amtrak Station Program and Planning Guidelines 2013,

http://www.nrvpassengerrail.org/resources/research/national/Amtrak_Station_Program_Planning_Guidelines.pdf

⁴ MDOT's Transportation Management System: Intermodal Management System

Demand Forecast Results, Base (Current Market Conditions) Annual Passenger Rail Station Volumes, Page E-84)⁵, the station’s inability to support intercity rail passengers will increase. Furthermore, intercity passenger rail service improvements operating between Chicago and Detroit/Pontiac are currently under consideration to provide shorter travel times, additional train frequencies to 10 daily roundtrips, improved reliability and connections for the service that could increase the number of passengers using the Ann Arbor Station to a projected 969,000 annual passengers in 2035⁶ with 10 daily roundtrips between Chicago and Detroit serving the station. Additionally, the Regional Transit Authority of Southeast Michigan is proposing commuter rail service serving Ann Arbor (Ann Arbor – Detroit Commuter Rail) which could add an additional 134,320 to 229,950 passengers per year⁷.

Exhibit 1.2: Ann Arbor Station Ridership⁸



1.4 Purpose of the Proposed Action

The purpose of the project is to provide an ADA compliant intermodal facility that will accommodate existing and future intercity passenger rail ridership; improve intermodal connectivity within the City of Ann Arbor and its neighboring communities, including accommodating proposed commuter rail in the

⁵http://www.michigan.gov/documents/mdot/Appendix_E_Ridership_and_Revenue_Forecasts_and_Operating_and_Maintenance_Costs_508972_7.pdf

⁶http://www.michigan.gov/mdot/0,4616,7-151-9621_11058_74869---,00.html

⁷ http://www.rtamichigan.org/wp-content/uploads/MichiganAve_Ridership_5.4.16_FINAL.pdf

⁸ MDOT’s Transportation Management System: Intermodal Management System

City of Ann Arbor; add ADA compliant parking; and improve the integration of the station within the City of Ann Arbor.

1.5 Need for the Proposed Action

The following elements contribute to the need for an intermodal station in Ann Arbor:

- Insufficient quantity, quality and comfort for passengers provided by the existing station
- Inadequate space for intermodal connectivity at the existing station
- Substantial existing and projected future passenger demand that is not being met by the existing station
- Limited Integration of the existing station within Ann Arbor and limited access to City neighborhoods and the region

1.5.1 Insufficient Quantity, Quality and Comfort Provided for Passengers by the Existing Station

The small station and waiting room size and lack of adequate seating in the station can result in passengers crowding inside the station or waiting outside on the platform in inclement weather including cold temperatures, wind, snow and ice storms. A 2006 ADA accessibility audit performed by Amtrak identified the following concerns:

- Insufficient number of handicapped spaces; recommend increasing number of handicapped spaces to satisfy required ratios and placing the spaces (un-metered) in short term parking area to remove any difficulty accessing station from long-term parking area.
- Recommend replacement of lavatory fixtures for ADA compliance.
- Recommend new door hardware.
- Recommend installation of Telecommunication Device for the Deaf (TDD) capable public payphone.
- Recommend signage package and AVPA (variable message signs)
- Install Amtrak emergency telephone on platform

The station also lacks messaging systems providing updated train arrival and departure information, Wi-Fi service, and food service.

MDOT is currently completing rehabilitation of the existing track by improving track conditions and signals between Dearborn and Kalamazoo including:

- Replacing ties (approximately 206,000) and surface lines;
- Track resurfacing;
- Renewing signals;
- Rail Replacement – approximately 100,000 linear feet;
- Switch tie replacement (approximately 3,600);
- Installation of the Positive Train Control (PTC);
- Installation of warning devices;
- Upgrade signals and train controls;

- Repair of grade crossings;
- Maintenance of existing ballast; and
- Placement of new ballast.

The Proposed Improvements allow for increased speeds up to 110 mph.

Meanwhile, the Illinois Department of Transportation (IDOT) is leading an effort to purchase modern locomotives and rail cars to replace the existing, outdated train equipment used by Amtrak for passenger rail service in Illinois, Missouri, Iowa, and Michigan. The upgraded equipment would include modern amenities such as Wi-Fi internet connections and food service, and would contribute to more reliable passenger rail service while providing an environment that will enhance the experience for all passengers, resulting in travel that is both enjoyable and competitive with air and auto travel. These efforts will enhance the quality and comfort for passengers while using the service, but the existing Ann Arbor station does not provide amenities at a similar level of quality.

1.5.2 Inadequate Space for Intermodal Connectivity at the Existing Station

The existing Ann Arbor station does not have adequate space to accommodate intermodal services (see Exhibit 1.3). The small size and awkward configuration of the site make auto, bicycle, pedestrian, and bus intermodal accommodations difficult as described below:

- **Parking**

Parking facilities at the existing station are inadequate during peak periods of rail traffic, do not function well, and may cause potential passengers to choose another mode of transportation due to the inconvenience. There are limited spaces available for long term parking which are located on the opposite side of the tracks and require passengers to walk a significant distance and down stairs to access the station. Additionally, existing traffic on Depot Street, immediately adjacent to the station, can act as a deterrent.

Long-term parking is located north of the station, on the opposite side of the railroad tracks from the station, and is owned by Amtrak. Stairs are provided for passengers to access Broadway Street, which passes over the rail line to the immediate east of the existing station via an overpass, providing grade-separated pedestrian access to the long-term parking lot (see Exhibit 1.3). However, this access to long-term parking is not ADA accessible, and can be physically difficult for passengers, particularly those traveling with luggage.

Long term parking is available at no charge and although posted for use by AMTRAK Patrons, others share the space including visitors to the river recreational area and hospital employees and visitors, leaving only about 50 percent of the parking spaces available for use by Amtrak passengers. This could be corrected through enforcement by the City of Ann Arbor or Amtrak. All available land for parking is owned by Amtrak and could be used for a parking structure to add capacity, but there would be traffic impacts to Broadway Street if

implemented Station agents report that although the lot is striped for use by 70 vehicles, at many times during these peak periods, 100 or more cars park in the area by utilizing unmarked open space around the edges of the lot. When this parking lot is overcrowded and space is limited, minor car accidents have been reported.

If additional parking is added in the north long term lot, traffic impacts would also need to be mitigated. Changes to Broadway Street to provide safe access to and from the parking area would likely include a northbound left turn lane, a southbound right turn lane, an installation of a traffic signal at the Broadway Street access drive, and mid-block pedestrian crossings. Depot Street would not see noticeable traffic increases from additional parking.

There are 38 short-term (four hour limit) parking spaces located in front of the station that largely function as a waiting area for dropping off, or picking up passengers based on interviews with Amtrak station employees. At the same time, due to the inadequate long-term parking supply, station agents report that some customers use the short-term parking for long-term, despite the resulting parking fines. Two ADA compliant parking spaces are available in the short-term parking area. These spaces are unmetered to allow for long-term parking but there is an insufficient amount available.

Exhibit 1.3: Existing Ann Arbor Amtrak Station and Amtrak Owned Property Site

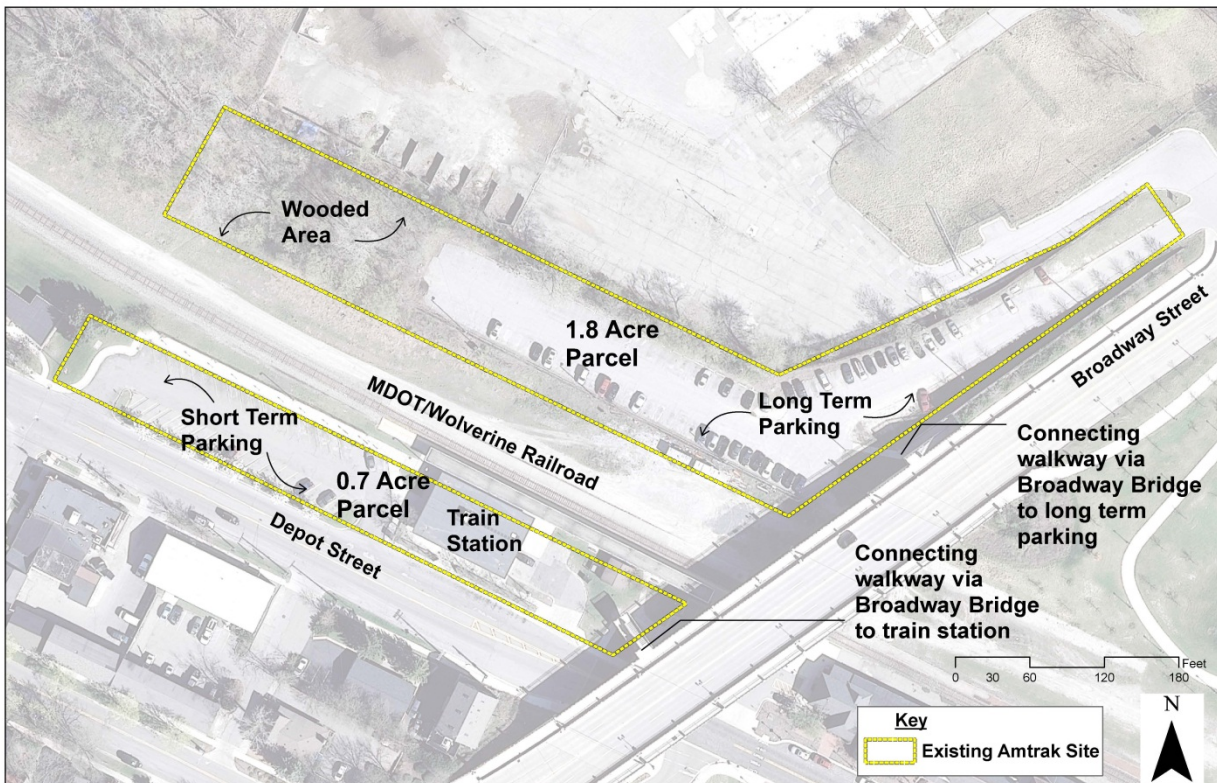
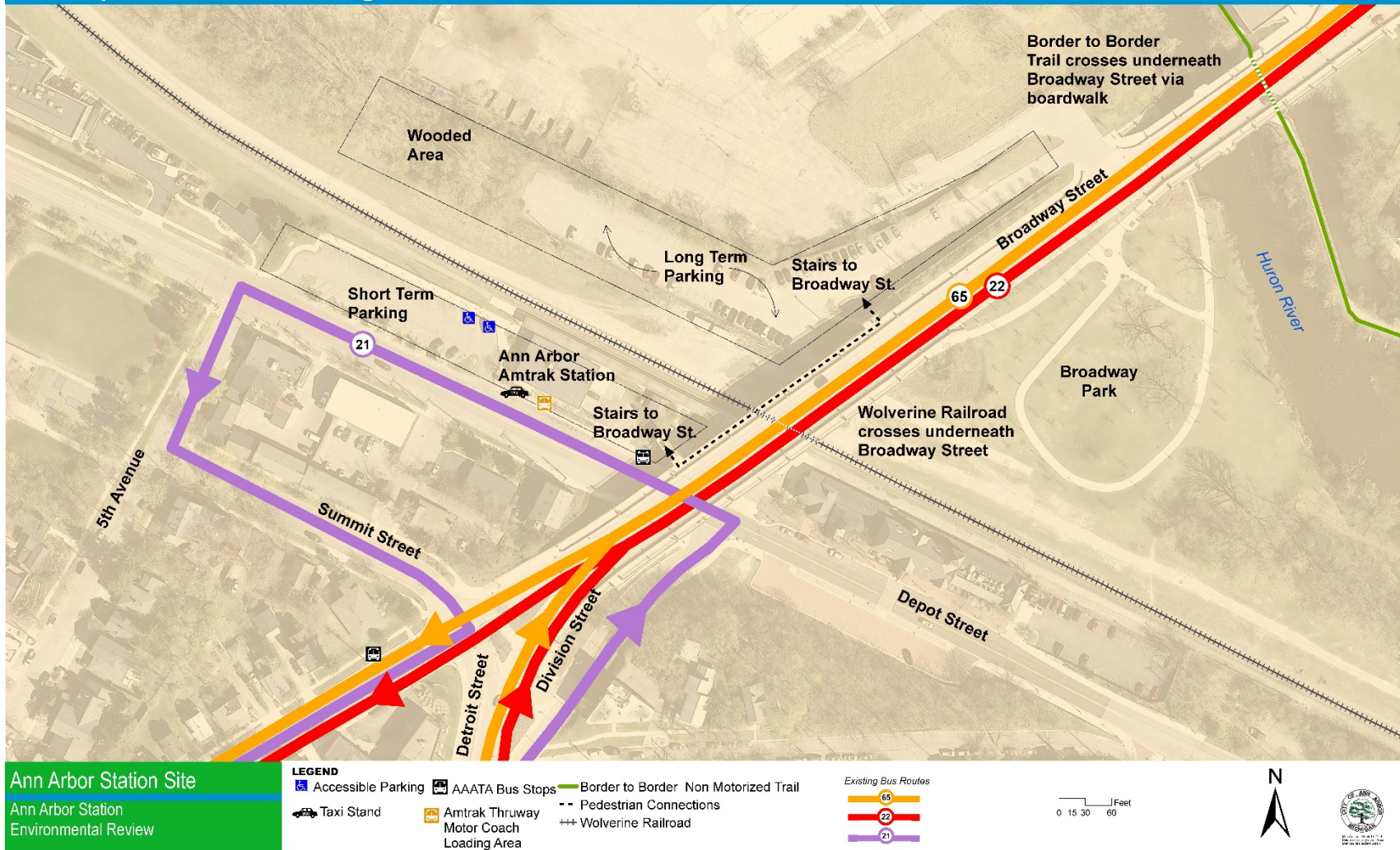


Exhibit 1.4: Existing Transportation Connections at the Ann Arbor Amtrak Station

transportation existing conditions



There is no dedicated passenger drop-off area at the existing station. As of November 2016, Greyhound buses have a dedicated loading and unloading space in the former taxi staging area in front of the station. Additionally, cars, taxis, buses, and airport and hotel shuttles use the short-term parking area as a de facto passenger drop-off area which causes vehicular and pedestrian conflicts, that is made worse when snow is present.

- **Vehicular and Transit Access**

Traffic congestion at peak hours affects entering and exiting vehicles at the existing station on Depot Street. The traffic analysis performed in July 2016 by AECOM for the City of Ann Arbor indicated significant congestion along Depot Street during the morning and afternoon peak-hours due to insufficient capacity at the Main Street/Depot Street intersection. The traffic volumes and congestion along Depot Street also create significant delays along the northbound Carey Street approach to Depot Street. This existing congestion results in delay for transit vehicles and customer access to the existing site.

There is no dedicated bus terminal and no bus bays at the existing Ann Arbor station, so Amtrak's thruway motor coach buses load and unload from Depot Street. These motor coaches provide throughway service to Toledo, Ohio for passengers to transfer to the Capital and Lakeshore Limited Routes. However, when there is no space on Depot Street for buses to park, they use the parking lot to load and unload. After unloading in the parking lot, they use require assistance to back out onto Depot Street because of the confined space in the parking lot, but with the removal of the Taxi Cab stand there is sufficient street space. Ann Arbor Area Transportation Authority (AAATA) operates Route 21 Amtrak – Depot that serves the Amtrak station at 325 Depot Street. Currently, the route operation is negatively impacted by the existing traffic congestion particularly in the morning and afternoon peak periods. See Exhibit 1.4.

Based on discussions with the AAATA the existing operation of Route 21 Amtrak – Depot which serves the Amtrak station at 325 Depot Street is negatively impacted by the existing traffic congestion particularly in the morning and afternoon peak periods. The concept plan being considered for all Build Alternatives at this location (see Exhibits 2.8, 2.9, 2.10) proposes that bus operations access the station primarily from Depot Street. AAATA mentioned that unless improvements are made to add capacity to Depot Street, introducing additional bus services is not feasible. Additionally, redirecting existing routes to the proposed station would be challenging due to surrounding residential neighborhoods that would be disrupted by rerouted buses to the south of the Depot Street. There are two other AAATA routes, route 65 and route 22, that operate in the vicinity of the existing station but are both routed along Broadway street which is elevated over the station area and thus do not provide much real access to the actual station.

- **Pedestrian and Bicycle Access**

Pedestrian and bicycle access is limited at the existing train station. The station is located away from the activity centers in Ann Arbor which does not encourage walking to and from the station. Downtown Ann Arbor, U-M, and the denser employment centers and residential neighborhoods that are located to the south and southwest are at a greater walking distance than one half mile--the national walking tolerance average to fixed guideway transit.⁹

Additionally, the Broadway Street Bridge may act as a barrier to pedestrians due to the elevation change that requires pedestrians to use the stairs to access Broadway Street.

The City of Ann Arbor has one of the highest bicycle mode shares in the country¹⁰, meaning the likelihood of a rail passenger biking to the station is higher in Ann Arbor than other cities. The City has nearly 100 miles of bike facilities including a new bike lane on Depot Street in front of the station. Therefore, bicycle access is an important mobility issue at the station. Bicycle parking is limited and was moved away from the station because bicycles locked to columns on the station platform have caused obstructions and mobility hazards. In March 2014, four bicycle hoops were installed at the station for secure bicycle storage away from the platform. This is the only dedicated bicycle storage at the existing station. Based on interviews with Amtrak station employees there are often bicycles locked to columns on the platform because there was insufficient parking in the designated area. Additionally, Ann Arbor has started a local bike share program that makes bikes more prevalent in the area and thus indicates further need for proper parking facilities.

The Border-to-Border (B2B) bicycle and pedestrian trail is located north of the train tracks and does not directly connect to the existing station. Access to the station from the trail requires the same movement as from the long-term parking area—taking the stairs at Broadway Street. Broadway Street is included as a bicycle path on the City of Ann Arbor Bikeway System Map.¹¹ This path is listed as a “Marginal Bike Route—good road route with problems at peak hours.”

1.5.3 Existing and Projected Future Passenger Demand

The existing Ann Arbor station is the busiest Amtrak station in Michigan.¹² The total number of passengers boarding or alighting at the Ann Arbor Amtrak station was 122, 534 in 2016.¹³ This

⁹ Transit Cooperative Research Program (2009). *Literature Review for Providing Access to Public Transportation Stations*. TCRP Web-Only Document 44, available at http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_webdoc_44.pdf

¹⁰ *Where We Ride: Analysis of Bicycling in American Cities*
http://bikeleague.org/sites/default/files/ACS_report_final_forweb_2.pdf

¹¹ <http://www.a2gov.org/departments/systems-planning/planning-areas/transportation/Documents/2015%20AA%20and%20Washtenaw%20County%20bike%20map.pdf>

¹² Amtrak State Fact Sheet, Fiscal Year 2016 – State of Michigan

¹³ MDOT’s Transportation Management System: Intermodal Management System

represents an increase of almost 40% over the previous decade and a half (versus total 2001 boardings and alightings of 87,346).¹⁴ Despite a recent decline in ridership from low gas prices, long term projections still indicate significant future growth. Annual ridership in the Wolverine corridor was 401,585 in 2016, down from 444, 319 in 2006.¹⁵

Even absent major improvements to the Wolverine service, annual intercity rail ridership at the station is projected to increase to 209,000 by 2035.¹⁶ If the improvements that are currently under consideration for the Wolverine service are implemented, including increasing the frequency of intercity passenger rail service beyond the current 3 daily round-trips, improving travel time by installing higher speed service, construction of new stations and purchasing new vehicles,¹⁷ ridership at the station could grow to up to 969,000 passengers, with ten daily round-trips per year by 2035. Additionally, the Regional Transit Authority of Southeast Michigan (RTA) is proposing commuter rail service linking Ann Arbor and Detroit along the same rail right of way (ROW). The service was included in the 2016 millage rate increase request that was largely supported in Washtenaw County but ultimately defeated by a small fraction region wide. As a statutory agency, the RTA has the right to seek another millage vote in 2018. Should the proposed commuter rail service be implemented, the RTA projects that an additional 143,320 to 229,950 passengers per year would use the station for work commute trips and other intra-metropolitan area travel. Combined intercity passenger rail and commuter rail passengers could result in nearly 1.5 million total passengers per year using the station in 2040.

During peak periods, the existing Amtrak station operates above its designed capacity for all arriving and departing passengers. The station is equipped with 60 seats in the waiting area, but a typical train boarding 80-120 passengers overwhelms the waiting area. Based on the trend in ridership, the existing station cannot support future Amtrak intercity passenger rail demand and could not handle further increases in passenger traffic resulting from future expansion of intercity passenger rail service and the possible introduction of commuter rail service.

The factors generating an increase in ridership are outlined below:

1. Population

Increasing population in Ann Arbor and Washtenaw County (see Table 1.1) contribute to growing ridership at the Ann Arbor Station. Population in Washtenaw County and the City of Ann Arbor is expected to grow at higher rates than the Southeast Michigan/Metropolitan Detroit region due to the recent growth in the health care and higher education economic sectors. The U-M and the U-M Health system have been consistently growing over the years and this expansion is one of the reasons why the rail ridership in Ann Arbor is growing faster than the rest of the region. In 2016, the total enrollment at

¹⁴ MDOT Rail Statistics (<http://mdotcf.state.mi.us/public/railstats/>)

¹⁵ MDOT State Rail Plan, 2011

¹⁶ http://greatlakesrail.org/~grtlakes/documents/PublicHearings/Appendix_E_Ridership_and_Revenue_Forecasts_and_Operating_and_Maintenance_Costs.pdf

¹⁷ MDOT State Rail Plan, 2011

the U-M was 43,710, which is an increase of nearly 1,300 since 2012.¹⁸ Additionally, the U-M hospital employs about 26,000 people, most of which work at the main hospital near Fuller Road.¹⁹ Because these institutions that generate employment continue to grow, so will the demand for passenger rail service.

Table 1.1: Population Forecasts

	2000	2010	2040	2000-2010 % change	2010-2040 % change
Southeast Michigan*	4,833,368	4,704,809	4,742,083	-2.7%	+0.8%
Washtenaw County	322,770	344,791	386,235	+6.8%	+12.0%
City of Ann Arbor	114,024	113,934	123,786	-0.1%	+8.6%

Source: Census 2000 / 2010 and SEMCOG 2040 Regional Forecast Report

*Wayne, St. Clair, Oakland, Macomb, Livingston, Monroe and Washtenaw Counties

Exhibit 1.5 presents Ann Arbor’s population density per square mile as of 2012, and demonstrates that the highest-density portions of Ann Arbor are directly south of the existing rail station near downtown Ann Arbor and the Central Campus of the U-M.

Exhibit 1.5: Population Density in Ann Arbor

¹⁸ University of Michigan Enrollment Reports – Fall 2016

¹⁹ <http://www.uofmhealth.org/about%20umhs/facts-figures>

	2010	2040	2010-2040 % change
Southeast Michigan*	2,484,251	2,786,082	+12.1%
Washtenaw County	236,676	285,655	+20.7%
City of Ann Arbor	120,588	144,899	+20.2%

Source: SEMCOG 2040 Regional Forecast Report

*Wayne, St. Clair, Oakland, Macomb, Livingston, Monroe and Washtenaw Counties

1.5.4 Limited Integration of the Existing Station within Ann Arbor and Limited Access to City Neighborhoods and the Region

While situated in a central location, the existing Ann Arbor Station is not currently integrated into the activity areas of the city. Broadway Street is a busy arterial roadway that extends above the station on a bridge, hiding the station below from the view of passers-by. Additionally, the non-descript, one-story brick station building does not provide visual cues that it is a transportation hub. The station lacks visibility and compelling design to serve as a gateway to the City of Ann Arbor. This lack of visibility and integration into the city can be detrimental²⁰ to potential riders’ transportation modal choices and resulting ridership.

Beyond the immediate station area, the existing Ann Arbor transportation network currently provides limited connectivity between the station, Ann Arbor activity areas, surrounding neighborhoods, and the wider region. The following transportation services and facilities provide existing and proposed connections between Ann Arbor and other origins and destinations of the station and surrounding communities.

- The AAATA provides public transportation to local destinations within Ann Arbor and Ypsilanti. The U-M also provides transit services to its various campuses. Transit connections to the existing Amtrak station, however, are limited. Currently only one AAATA transit route directly serves the Amtrak station: Route #21. This local shuttle route travels between the station area, downtown Ann Arbor and the Blake Transit Center (AAATA’s primary transit hub). It stops on Depot Street near the station and operates on half-hour weekday headways. AAATA Routes #22 and #65, provide more frequent service to the station area as they travel between downtown and northern Ann Arbor. However, access to these routes from the station is complicated. The routes pass above the station on the Broadway Street Bridge and the nearest stops are accessed via stairways, slopes, complicated roadway crossings, and indirect pathways. U-M transit routes do not connect with the Amtrak station.
- The Connector, a potential future high-capacity transit line, combines concepts developed by both the city and the University for improving transit access and mobility within Ann Arbor.

²⁰ TCRP Report 22: **The Role of Transit in Creating Livable Metropolitan Communities**

None of the alternative Connector routes currently under consideration have planned stops near the existing Amtrak station.

- Intercity motorcoach services, operated by Greyhound and MegaBus, are currently offered in Ann Arbor. AirRide also provides an express motorcoach service between Ann Arbor and Detroit Metro Airport. None of these services connect to the existing Amtrak station.
- Several roadways conjoin in the station area, though automobile access to the existing station is difficult because of significant commuter volumes on existing roadways and limited available parking. Another challenge is that multiple flights of stairs must be navigated between the station and its existing long-term parking area.
- The proposed Ann Arbor - Detroit Regional Rail, also known as East-West Commuter Rail, would operate on the Amtrak Wolverine intercity passenger rail corridor between Ann Arbor and Detroit; once implemented, it would utilize the Ann Arbor Amtrak station.

Transit services provided at the existing station are deficient and the immediate area lacks attractive, barrier-free ADA paths linking them with the station to allow pedestrians to safely access the station. Because of this limited transportation connectivity, the existing station does not enable passengers to efficiently connect to and from city neighborhoods, activity areas within the City of Ann Arbor and surrounding communities back to the station.

1.6 Relationship to Other Transportation Planning Initiatives & On-going Projects

Local planning initiatives describe a vision of the future transportation system within the City of Ann Arbor, including the importance of developing a more balanced, multi-modal transportation system as a strategy to accommodate expected growth in population and employment without severely impacting the transportation systems and associated quality of life. Transportation initiatives in the region include the following:

- *City of Ann Arbor: Transportation Master Plan Update (2009)* outlines a future transportation system where transit and non-motorized modes are prioritized in signature corridors (Plymouth-Fuller, State, Washtenaw, Jackson), with corresponding changes in land use policy to encourage concentration of growth around these same corridors. The plan includes a recommendation to explore the relocation of the existing Ann Arbor intercity passenger rail station, potentially to Fuller Road, and for the station to coordinate with future commuter rail plans as they develop. A key goal for the future local transit system is to provide the connectivity between regional transit services and clusters of employment growth. RELATIONSHIP: The Transportation Master Plan Update recommended exploring the relocation of the intercity passenger rail station.
- The University of Michigan is also planning for improved transit connectivity between its core campus areas to sustain its growth trajectory. As part of the *Medical Center Campus and East Medical Campus Master Plan Update (2005)*, the university is prioritizing transit access to the

existing core of medical facilities and has designated the Wall Street District (northwest of the existing Medical Campus across the Huron River and rail corridor) as having capacity for additional growth. The *North Campus Master Plan* (2008) outlines a high-capacity transit connection on Fuller Road between the North Campus, Medical Campus, and Central Campus that could serve as a connection to the future Ann Arbor Intermodal Station, depending on the preferred Build Alternative selected for the intermodal Station. RELATIONSHIP: The University of Michigan is planning a high capacity transit system that could connect with an intermodal station.

- *MDOT: Michigan State Rail Plan* – As part of Wolverine intercity passenger rail service improvements, MDOT included an Ann Arbor intermodal station in the MDOT State Rail Plan, listed as # 8 on MDOT’s Master List of Potential Rail Projects (2011).²¹ RELATIONSHIP: The MDOT State Rail Plan includes the Ann Arbor intermodal station as a potential project.
- *Midwest Regional Rail Initiative (MWRRI)* – The MWRRI is a group consisting of participants from several Midwestern states (Illinois, Wisconsin, Michigan, Indiana, Ohio, Minnesota, Iowa, Nebraska, and Missouri) working in partnership with the FRA and Amtrak to increase the level and quality of passenger rail service in the Midwest, emanating from Chicago. The MWRRI identified several corridors in the Midwest for improvements to intercity passenger rail, with the potential of implementing high-speed rail. The MWRRI recommended the Chicago to Detroit/Pontiac rail corridor program be studied for improvements and enhancements. RELATIONSHIP: The MWRRI includes adding additional intercity passenger rail service from Chicago to Detroit/Pontiac including Ann Arbor.
- *MDOT: Service NEPA Environmental Assessment for Kalamazoo to Dearborn Corridor Improvements (2011)*²²– The improvements include track rehabilitation, replacement of track ties, turnouts, ballast, curve modifications and installation of Incremental Train Control System (ITCS)²³ and Active Warning Systems at all crossings. These improvements will allow for faster trains on Amtrak’s Wolverine corridor of up to 79 mph from Pontiac to Ann Arbor, and up to 110 mph from Ann Arbor to Porter, Indiana. Other additions include train traffic control and signalization that will help alleviate freight and passenger train traffic conflicts and improve on-time performance of the train service. The enhancements currently being, or already are completed will provide faster intercity passenger rail service speeds and more reliable on-time performance for the Wolverine service that will benefit passengers heading to and from Ann

²¹ http://www.michigan.gov/documents/mdot/MDOT_MI_SRP_public_review_draft_2011-05-23_600dpi_353776_7.pdf

²² <https://www.fra.dot.gov/Page/P0399>

²³ Incremental Train Control System is a communication-based signaling system overlaid on an existing signal system. This is one class of Positive Train Control that was designed to prevent train collisions and overspeed derailments.

Ann Arbor. The FRA has issued a Finding of No Significant Impact (FONSI) for these improvements.²⁴
RELATIONSHIP: The Service NEPA Environmental Assessment for Kalamazoo to Dearborn Corridor Improvements promote faster intercity passenger rail service speeds and more reliable on-time performance for the Wolverine service that will benefit passengers heading to and from Ann Arbor.

FRA and MDOT: Chicago – Detroit/Pontiac Tier 1 Environmental Impact Statement (EIS²⁵)²⁶, Ongoing – The Michigan, Illinois and Indiana Departments of Transportation are working with FRA to prepare a Tier 1 EIS for the Chicago-Detroit/Pontiac Passenger Rail Corridor from Chicago, Illinois to Pontiac, Michigan. Ann Arbor will remain a stop on the Wolverine intercity passenger rail service. RELATIONSHIP: The improvements being considered in the Chicago – Detroit/Pontiac Tier 1 EIS may affect the future train frequency and future ridership, which would affect the number of passengers served in Ann Arbor.²⁷

- *SEMCOG: Ann Arbor - Detroit Regional Rail, also known as East-West Commuter Rail*²⁸ – The proposed 38-mile commuter rail service plan was originally developed by the SEMCOG and adopted by the RTA in their Regional Master Plan. The service would operate on the Wolverine intercity passenger rail corridor between Ann Arbor and Detroit and would potentially share use of the Ann Arbor station. In preparation of these future services the Southeast Michigan Commuter Rail Service (MITRAIN), 23 cars (6 cabs and 17 coaches) were refurbished to be used for this service, as well as the Washtenaw–Livingston Rail Line (WALLY) commuter rail service from Howell to Ann Arbor, and are currently being leased by MDOT. RELATIONSHIP: The *Ann Arbor - Detroit Regional Rail* would operate on the Wolverine intercity passenger rail corridor between Ann Arbor and Detroit and would potentially share use of the Ann Arbor station.
- *AAATA: WALLY, also known as the North-South Commuter Rail Line*,²⁹ is a proposed 27-mile long commuter rail service that would connect Ann Arbor and Howell, with several intermediate stops. The AAATA is investigating the service as a way to provide a transit option for travel between Howell and Ann Arbor, to ease traffic congestion in the US-23 corridor, and to promote sound economic development and job creation in the region. RELATIONSHIP: A preferred location for a station is just over a half mile from the existing Amtrak station.

²⁴ <https://www.fra.dot.gov/eLib/Details/L01352>

²⁵ <http://greatlakesrail.org/~grtlakes/index.php/site/tier1-draft-eis>

²⁶ <https://www.fra.dot.gov/Page/P0658>

²⁷ Ridership based on 3 roundtrips daily, taken from the Notice of Intent for the Tier 1 Environmental Impact Statement for the Chicago, IL, to Detroit-Pontiac, MI. (<http://www.fra.dot.gov/eLib/Details/L04635>)

²⁸ <http://www.semco.org/AADD.aspx>

²⁹ <http://www.theride.org/AboutUs/Initiatives/NorthSouthCommuterRail>

- *AAATA: The Ann Arbor Connector, Ongoing*³⁰ – The Connector project is an under-development plan to create a high-capacity transit line that combines the concepts developed by both the city and the university to improve transit access and mobility within Ann Arbor. The completed alternatives analysis process led by the AAATA, a primary strategy for the Connector would be to link up the high-density residential and employment zones in Downtown Ann Arbor, at the two campuses of University of Michigan, and the U-M and VA Hospitals with existing and future transportation gateways to the city, including park and ride lots and rail stations. RELATIONSHIP: The Ann Arbor Connector is a high capacity transit system that could connect with an intermodal station.
- *AAATA: Washtenaw County Transit Master Plan: A Transit Vision for Washtenaw County* — The AAATA released the Transit Master Plan in June 2011, which includes an enhanced Ann Arbor station for the RTA’s proposed Commuter Rail service between Ann Arbor and Detroit. The enhanced station would be an upgraded version of the existing Ann Arbor Amtrak Station. The enhanced station would provide a safe, attractive, and comfortable space for more services, access to additional transportation modes, and potential retail opportunities all co-located at the same location as the existing Amtrak station. RELATIONSHIP: The Washtenaw County Transit Master Plan includes an enhanced Ann Arbor station for the RTA’s proposed Commuter Rail service between Ann Arbor and Detroit
- *Washtenaw County: Huron River Greenway B2B Trail* – The B2B trail is a multi-agency, collaborative project to construct a multi-use trail traversing Washtenaw County, from Livingston County to Wayne County, along the Huron River. When completed, the 35-mile trail will permit non-motorized travel through the Huron River corridor. The current trail travels along the Huron River to the U-M Medical Campus, Fuller Park, Geddes Park, Washtenaw Community College, St. Joseph Mercy Hospital, Eastern Michigan, Ypsilanti neighborhoods and downtown. It will eventually connect to Ford Lake. RELATIONSHIP: This trail provides pedestrian and bicycle transportation within the project study area and potentially to Ann Arbor intermodal station locations.

³⁰ http://aaconnector.com/AAConnector_FinalSummaryReport_Web.pdf

2.0 Build Alternatives

This section of the EA discusses the Build Alternatives development process, evaluation of alternatives, and the identification of the Preferred Alternative. The process used to develop, evaluate, and eliminate potential Build Alternatives based on the purpose and need of the project is presented. This discussion includes how Build Alternatives were selected for detailed study, the reasons why some Build Alternatives were eliminated from consideration and describe how the alternatives meet the need for the project.

Build Alternatives were developed per the requirements of 23 CFR 771.111(f). The No Build Alternative serves as the benchmark against which the impacts of other alternatives can be compared and is considered a viable Build Alternative throughout the NEPA process. The effects of the Build Alternatives carried forward for detailed evaluation are presented in Chapter 3 (Existing Conditions and Environmental Consequences).

2.1 Build Alternatives Screening Process

The development and evaluation of Build Alternatives for the Ann Arbor Intermodal Station consisted of two phases: Phase I – Station Site Alternatives Analysis and Phase II - Conceptual Site Design/Build Alternatives. In each phase, Build Alternatives were evaluated based on the following criteria:

Convenient access to Downtown Ann Arbor and major activity centers

- Suitable land for station facilities
- Accessibility from existing roadways
- Public transit connection potential
- Minimize environmental impact

2.2 Public Engagement

In 2014 public meetings were held on March 19th, March 25th, June 18th, and September 19th, and in 2015 public meetings were held on May 13th and September 21st. The general public was invited to all meetings and each event corresponded to the various phases of analysis. Project newsletters, questionnaires, press releases, project fact sheets, site tours, social media and a project [website](#) were all developed as outreach materials for the project. (Additional information about opportunities for public involvement is provided in Section 4.0 of this EA. Details regarding the Build Alternatives eliminated from consideration and those carried forward for further analysis are included in the following sections.

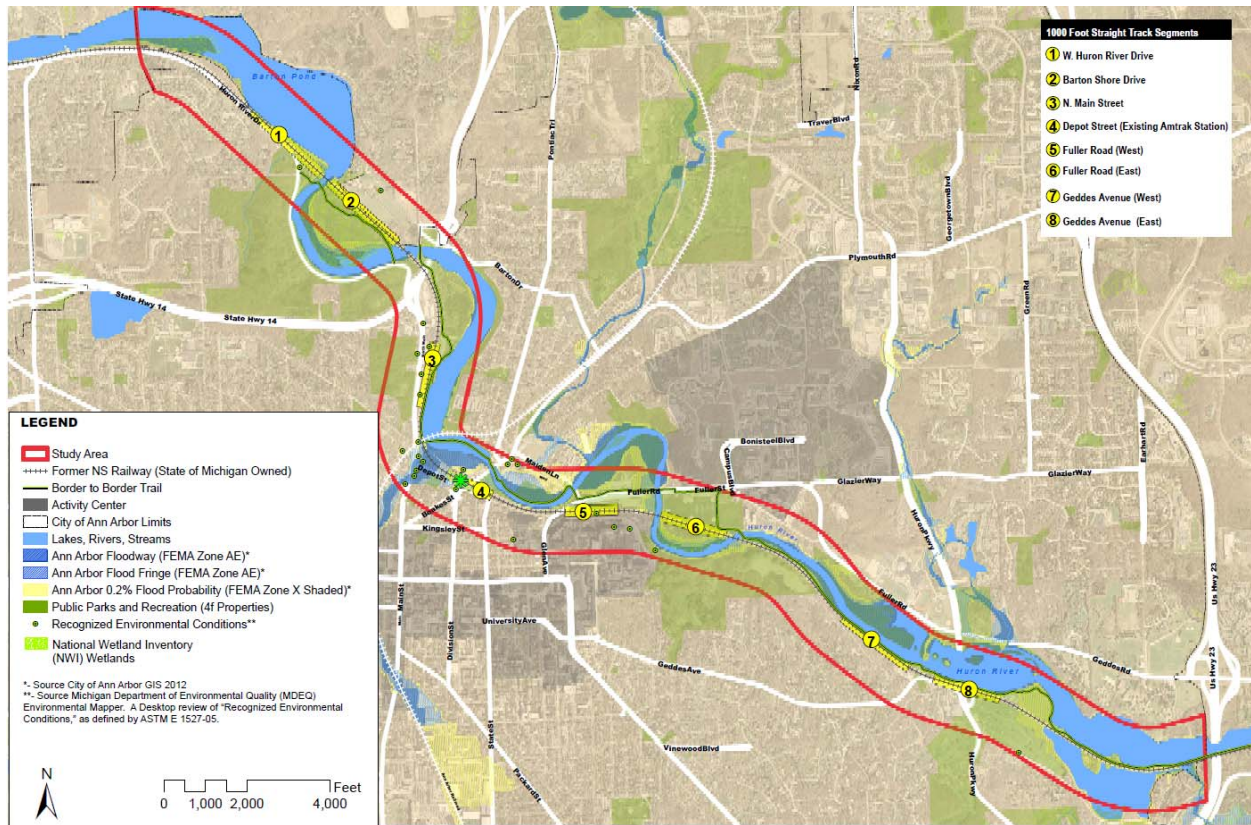
2.2.1 Phase I: Station Site Build Alternatives

The Ann Arbor Station—Phase I Alternatives Analysis (see Appendix A or on the [Ann Arbor Website](#) on the Ann Arbor Station page <http://www.a2gov.org/departments/systems-planning/planning-areas/transportation/Documents/Appendix%20A%20-%20Phase%20I%20Alternatives%20Analysis.pdf>) included an analysis of locations within the city along the rail tracks that consisted of 1,000 feet of straight track as potential general locations for the station. Potential station locations along the tracks

within the city limits were proposed near key employment and population centers including the U-M, which will contribute to increased ridership. Exhibit 2.1 indicates the location of U-M campuses near the Project study area. As part of this process, the City then identified eight site location alternatives within the City of Ann Arbor:

1. W. Huron River Drive
2. Barton Shore Drive
3. N. Main Street
4. Depot Street (existing Amtrak Station)
5. Fuller Road (West)
6. Fuller Road (East)
7. Geddes Avenue (West)
8. Geddes Avenue (East)

Exhibit 2.1: Phase 1 Station Site Alternatives



The City identified potential station site alternatives by analyzing track segments within the City of Ann Arbor that consisted of 1,000 feet of tangent (straight) track. MDOT, as the current owner of the railroad infrastructure within Ann Arbor, and the National Passenger Rail Corporation (Amtrak), as the intercity passenger rail operator on the line, determined the primary site selection criterion, which was that any new station or enhancements to the existing station should occur along a tangent section of track. Both

MDOT and Amtrak stipulated that the tangent track sections should be at least 1,000 feet long to support railroad operational needs.

Based on the Purpose and Need for the Project and public input, the Phase I station segment site selection criteria also stipulated that the potential sites should:

- Lie along the existing Amtrak railroad corridor within City of Ann Arbor limits;
- Provide convenient access to downtown Ann Arbor and major activity areas;
- Include enough land to accommodate all required site features (i.e., station design requirements);
- Allow convenient access to existing roadway networks;
- Support connections to public transit services and non-motorized transportation facilities; and
- Minimize impacts to environmental resources.

The City applied these site selection criteria to screen the initial eight (8) potential station sites with 1,000 feet of tangent track, which resulted in the elimination of five (5) station sites that did not meet the criteria. These station sites were eliminated based on their distance from downtown Ann Arbor and major activity centers, lack of existing transit service to the station sites, and the fact that each station would require using parkland to develop the station. The projects were scored and were awarded points between -2 (very poor performance of criteria) and 2 (excellent performance of criteria), as shown in Table 2-1.

Table 2.1: Phase I – Selection Criteria Evaluation Matrix

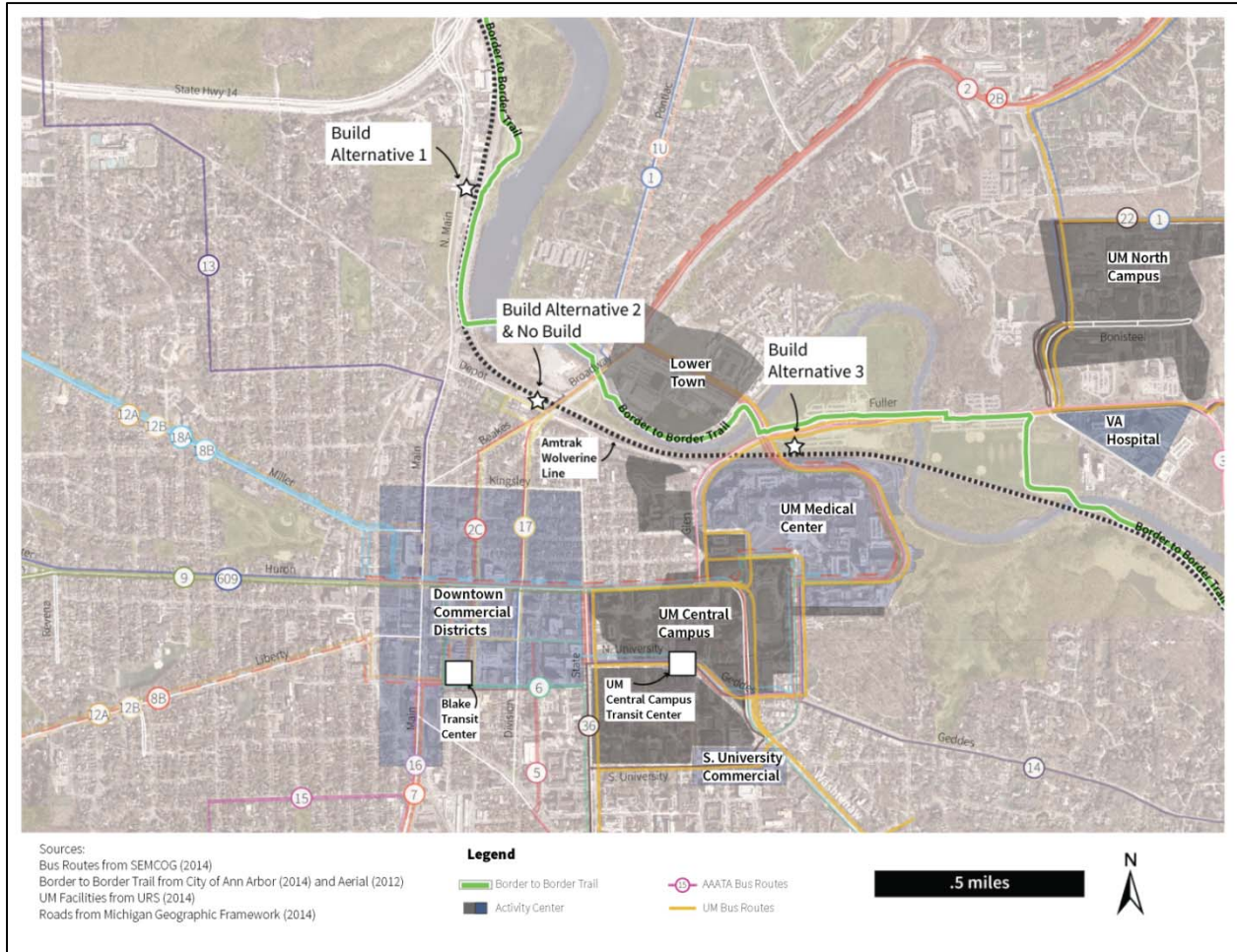
Station #	1	2	3	4	5	6	7	8
Name	W. Huron River Drive	Barton Shore Drive	N. Main Street*	Depot Street (Exist. Amtrak Station)*	Fuller Road (West)*	Fuller Road (East)	Geddes Avenue (West)	Geddes Avenue (East)
Convenient Access to Downtown Ann Arbor and Major Activity Centers	-2	-2	0	2	2	0	-2	-2
Suitable Land for Station Facilities	-2	-1	0	1	1	0	-2	0
Accessed by Existing Roadways	-1	-1	1	1	2	-1	-2	0
Public Transit Connection Potential	-1	-2	0	1	2	-1	-2	-1
Minimize Environmental Impacts	-2	-2	-1	1	1	-1	-2	-2
Phase 1 Score	-8	-8	0	6	8	-3	-10	-5

(2 = Excels according to criteria; 1 = Meets criteria; 0 = Neutral; -1 = Does not meet the criteria; -2 = Very poor performance according to criteria)

* Advanced for further consideration.

The City advanced the remaining three (3) potential station sites (Exhibit 2.1), North Main Street, Depot Street and Fuller Road, to Phase II of the Alternatives Analysis (see Appendix A, Phase I Alternatives Analysis Technical Memorandum).

Exhibit 2.2: Station Site Build Alternatives in Ann Arbor Advanced to Phase II



2.2.2 Phase II: Conceptual Site Design/Build Alternatives

For each of the three sites carried forward (North Main Street, Depot Street, and Fuller Road) into Phase II, a number of Station Conceptual Design Alternatives (build alternatives) were developed and evaluated (see Appendix B, Ann Arbor Intermodal Passenger Rail Station—Alternatives Analysis Phase II Report)

The conceptual design alternatives for each site were based on design criteria and included roadway access considerations, automobile parking, taxi stands, non-motorized connections including walkways and bicycle paths, vertical circulation elements, and transit interface facilities, including a transit center and bus bays to accommodate multimodal connection to the station. The build alternatives under consideration for a new Ann Arbor Intermodal station would be designed to be implemented in phases in order to handle these proposed future improvements in rail service and projected increases in ridership.

The City developed nine (9) conceptual Site Designs for the remaining three (3) station sites as shown in Exhibits 2.2 – 2.10.

Site Locations	N. Main Street	Depot Street	Fuller Road
Build Alternatives	1A, 1B	2A, 2B, 2C	3A, 3B, 3C, 3D

2.2.3 Design Criteria for Build Alternatives

To review consistency with the Purpose and Need and the reasonableness of these remaining Build Alternatives, the City developed with input from the community, the following Design Criteria to evaluate the Build Alternatives in the Ann Arbor Intermodal Passenger Rail Station—Alternatives Analysis Phase II Report :

- Location Within the Community – the area of the city where the station is located can play a large part in how the station is used and who uses it, especially as additional modes connect in:
 - Enhancement of Urban Areas
 - Potential for Multimodal Connectivity
- Density – proximity to population and employment densities can help drive ridership and increase its accessibility to higher volumes of potential users.
 - Population within ½ Mile
 - Employment within ½ Mile
- Accessibility – efficient access to the station by all transportation modes, and ease of access within the station are important to how the station is used.
 - Off-Site Traffic Infrastructure Improvements
 - Site Access Infrastructure Improvements
 - Internal Pedestrian Circulation
- Site Assessment – the specific factors of the site are important to the cost of constructing a new station
 - Environmental Factors
 - Floodplain
 - Hazardous Materials
 - Cultural/Historic Resources
 - Recreational Lands
 - Property Ownership

2.3 No Build Alternative

2.3.1 No Build Alternative

(NEPA and 40 CFR Parts 1500-1508 require that a "No Build Alternative" be evaluated throughout the EA. The No Build Alternative for this project entails continued use of the existing Ann Arbor Amtrak Station and the associated long-term parking lot located north of the railroad tracks with no additional improvements. The No Build Alternative includes continued maintenance for the existing Ann Arbor

Station to continue to serve as an intercity passenger rail station, but would not be modified from its existing condition.

2.4 Build Alternatives Considered

2.4.1 Build Alternatives 1A and 1B (Exhibits 2.2 and 2.3)

The City developed two design variations, Build Alternatives 1A and 1B, for station site 1, North Main Street, located approximately one mile northwest of downtown Ann Arbor, near the intersection of North Main Street and Lake Shore Drive (a private road) and near the B2B Trail. These Build Alternatives are located the same distance from the downtown area as the Fuller Road Build Alternatives but further away than the Depot Street location and further away from other activity centers than the other build alternatives, including the existing station. At this location, the tracks extend between two land uses: a light industrial zone lining North Main Street on the west, and Bandemer Park east of the railroad, which is city parkland. There are several properties that would make up the potential station site. Currently, there are six (6) buildings on the potential station site with associated businesses that would have to be acquired and potentially relocated. Public comments received regarding these alternatives suggested the potential for transit-oriented development at this site, but the area adjacent to the potential station site is built out and the full site is needed for the station in this site which would prevent any Transit Oriented Development (TOD). An easement by the private owner of the roadway has been granted along Lake Shore Drive for access to the park and includes the private crossing of the tracks. Using this site for a station would restrict vehicular access to the park by the public. Historically, this area included industrial access rail yard tracks. Artrain/Mid America Railcar Leasing LLC uses two remaining siding tracks to store vintage railroad cars here.

2.4.2 Build Alternatives 2A, 2B, and 2C (Exhibits 2.7, 2.8, and 2.9)

Build Alternatives 2A, 2B, and 2C are ADA compliant design variations at Site Alternative 2-Depot Street, which would be located near the existing Amtrak station where Broadway Street crosses Depot Street and the railroad tracks. The Depot Street site would be adjacent to a now mostly unused parcel of land owned by DTE Energy (DTE) that extends northward from the Amtrak long-term parking lot to the Huron River. Under Build Alternatives 2A, 2B and 2C, the existing Amtrak station building would be demolished.

The station building designs that were developed for all alternatives including Build Alternatives 2A, 2B, and 2C have been designed using Amtrak's Station Program and Planning Guide³¹ with 2,205 ft² identified for a waiting area, 930 ft² identified for public toilets, among other station operational spaces. Space needs for intercity bus operations was determined to be 590 ft² as defined by the Greyhound Station Program Requirements.³² In total, all Site Alternative 2 build alternatives for the station buildings would require 8,494 ft² of internal space to accommodate station operations, including intercity bus, and users.

³¹ Amtrak Station Program and Planning Guide, 2013,

³² Intercity bus space requirements were provided by Greyhound on 5/20/2014.

Under Build Alternatives 2A, 2B and 2C bus stop pullouts and a protected pedestrian crosswalk would be added along the Broadway Street Bridge above the tracks to accommodate bus routes that travel on this roadway which would be connected via sidewalk to the pedestrian overpass. The Broadway Street Bridge would be widened to additional lanes to accommodate traffic entering and exiting the proposed four to five-level, 1,131 – 1,170 space parking structure. Expanded and secure bicycle parking and storage, bicycle maintenance areas, storage lockers, café foods, and other bicycling conveniences such as bike service/repair stations would also be included as part of the parking structure for each Build Alternative. A parking structure, including stormwater mitigation, would be located north of the tracks and west of the Broadway Street Bridge. An additional elevator connecting to the Broadway Street Bridge's east sidewalk and/or a signalized pedestrian crossing of the Broadway Street Bridge roadway would be required to connect these bus stops to the station building and platforms. Taxis and passenger drop off/pick up would be provided within the parking structure or at curbside along Depot Street. Intercity bus, urban public transit and shuttle services would use the site of the existing Amtrak station building and the existing short-term parking lot west of the existing Amtrak station building. Build Alternatives 2A and 2C would likely require a traffic signal at the intersection of Depot and Carey Streets to allow access to the drop-off area under Broadway.

Traffic congestion on Depot Street and North Main Street is an existing condition that occurs in the morning and evening peak traffic hours. Roadway improvements would be required to address this existing condition; however, the City has not programmed these improvements for construction by the City because they are not feasible. North Main Street is an MDOT facility and Depot Street improvements would require right-of way that would impact private properties and other resources.

2.4.3 Build Alternative 3A, 3B, 3C, and 3D (Exhibits 2.10, 2.4, 2.5, and 2.6)

Build Alternative 3A would be located partly in the City of Ann Arbor's Fuller Park and partly within the adjacent MDOT railroad right-of-way. Build Alternative 3A was carried on because this Build Alternative, although it was located on existing parkland, it uses the least amount of parkland of the four build alternatives at the Fuller Road location. The majority of the improvements to the site are confined to an existing parking lot. Build Alternative 3A features a pedestrian bridge extending south that would connect from the station onto U-M property at grade with East Medical Center Drive, the bridge is part of the project as it provides access to the U-M Medical Center. Build Alternative 3A would be located immediately north of and downhill from the U-M Medical Center, below the Fuller Road and East Medical Center Drive bridges. Under Build Alternative 3A, a six (6)/Seven (7) story, 1320 space intermodal and parking structure, including storm water collection systems, would be placed where the existing Fuller Road Park parking lot is now located. Expanded and secure bicycle parking and storage, bicycle maintenance areas, storage lockers, café foods, and other bicycling conveniences would also be included as part of the parking structure for the Build Alternative. Build Alternative 3A will be fully ADA compliant.

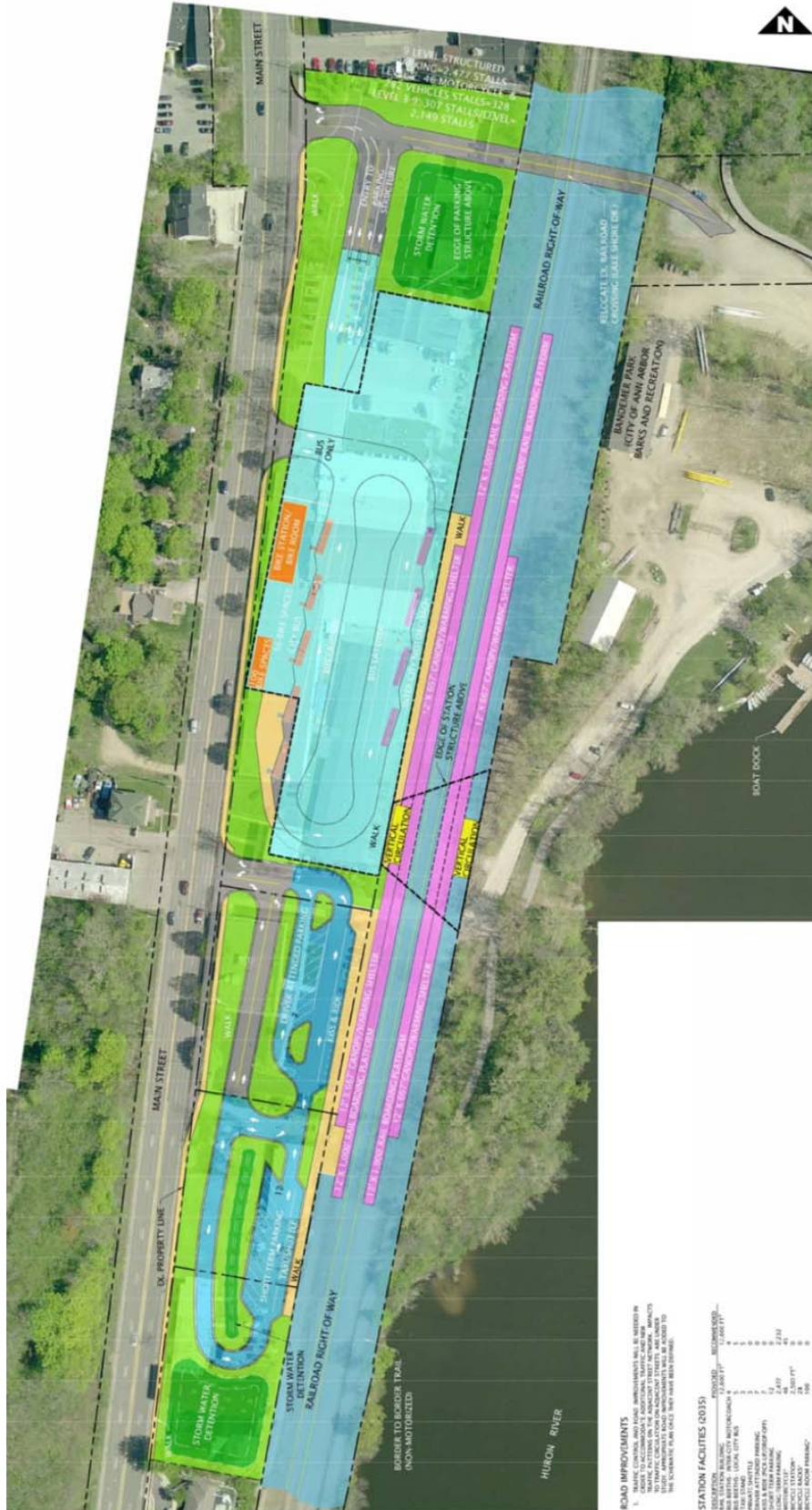
Build Alternatives 3B, 3C, and 3D were design variations at Site Alternative 3-Fuller Road. The site is located east of the Maiden Lane and Fuller Road intersection and would be located between Fuller Road and East Medical Center Drive. The site is adjacent to the U-M Medical Center and located one mile from the center of U-M's Central Campus, and is located north of the railroad tracks. It includes an existing surface parking lot that is located within Fuller Park, and is close to various University buildings, residential neighborhoods, and business districts.

The City assessed the amount of recreational lands that would be used by each Build Alternative using City of Ann Arbor Parks and property databases. Build Alternatives that would not use recreational land were ranked higher. A Screening Summary of the Build Alternatives is found on Page 42 under Section 6.5 of the Ann Arbor Intermodal Passenger Rail Station—Alternatives Analysis Phase II Report (Exhibit B)

2.5 Build Alternatives Considered and Dismissed from Detailed Analysis

2.5.1 Build Alternatives 1A and 1B

Build Alternatives 1A and 1B were dismissed because the prospect of acquiring several properties along the segment and relocating businesses would raise the capital and socioeconomic costs and leave little buildable land for station-oriented development; access and roadway conditions would create problems for vehicular and non-motorized access between the site and major activity areas; the site had limited potential for transit connections; and the site's environmental constraints were complex. (See Appendix A, pages 12-13). However, based on requests by stakeholders at the June 2014 Leadership Advisory Group, Community Work Group, and Public meetings, the City conducted a subsequent analysis. Two preliminary Build Alternatives were developed (called Concept Plan A and B or Build Alternatives 1A and 1B) and an Alternatives 1A and 1B technical memorandum was prepared. (See Appendix D). The analysis in the technical memorandum verified the initial recommendation to eliminate Build Alternatives 1A and 1B (North Main Street) from further consideration because the stakeholders desire to use the location for transit oriented development was limited because all available land was needed for the station.



ROAD IMPROVEMENTS
 1. CHANGING THE ROADWAY TO ACCOMMODATE THE STATION AND TO IMPROVE THE LOCAL STREET NETWORK.
 2. CHANGING THE ROADWAY TO ACCOMMODATE THE STATION AND TO IMPROVE THE LOCAL STREET NETWORK.
 3. CHANGING THE ROADWAY TO ACCOMMODATE THE STATION AND TO IMPROVE THE LOCAL STREET NETWORK.
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 9. CHANGING THE ROADWAY TO ACCOMMODATE THE STATION AND TO IMPROVE THE LOCAL STREET NETWORK.
 10. CHANGING THE ROADWAY TO ACCOMMODATE THE STATION AND TO IMPROVE THE LOCAL STREET NETWORK.

STATION FACILITIES (SQFT)

STATION FACILITY	PROPOSED	REVISIONS
RAIL BOARDING PLATFORM	4,000	4,000
RAILROAD RIGHT-OF-WAY	100,000	100,000
LONG TERM PARKING	100,000	100,000
STORM WATER RETENTION	100,000	100,000
WALKWAY	100,000	100,000
GRASSPACES	100,000	100,000
PAVEMENT	100,000	100,000
SIDWALK	100,000	100,000
RIGHT-OF-WAY	100,000	100,000
TOTAL	500,000	500,000

ANN ARBOR STATION ENVIRONMENTAL REVIEW DRAFT
ANN ARBOR, MICHIGAN
SEGMENT 3: N. Main Street
CONCEPT PLAN A

LEGEND

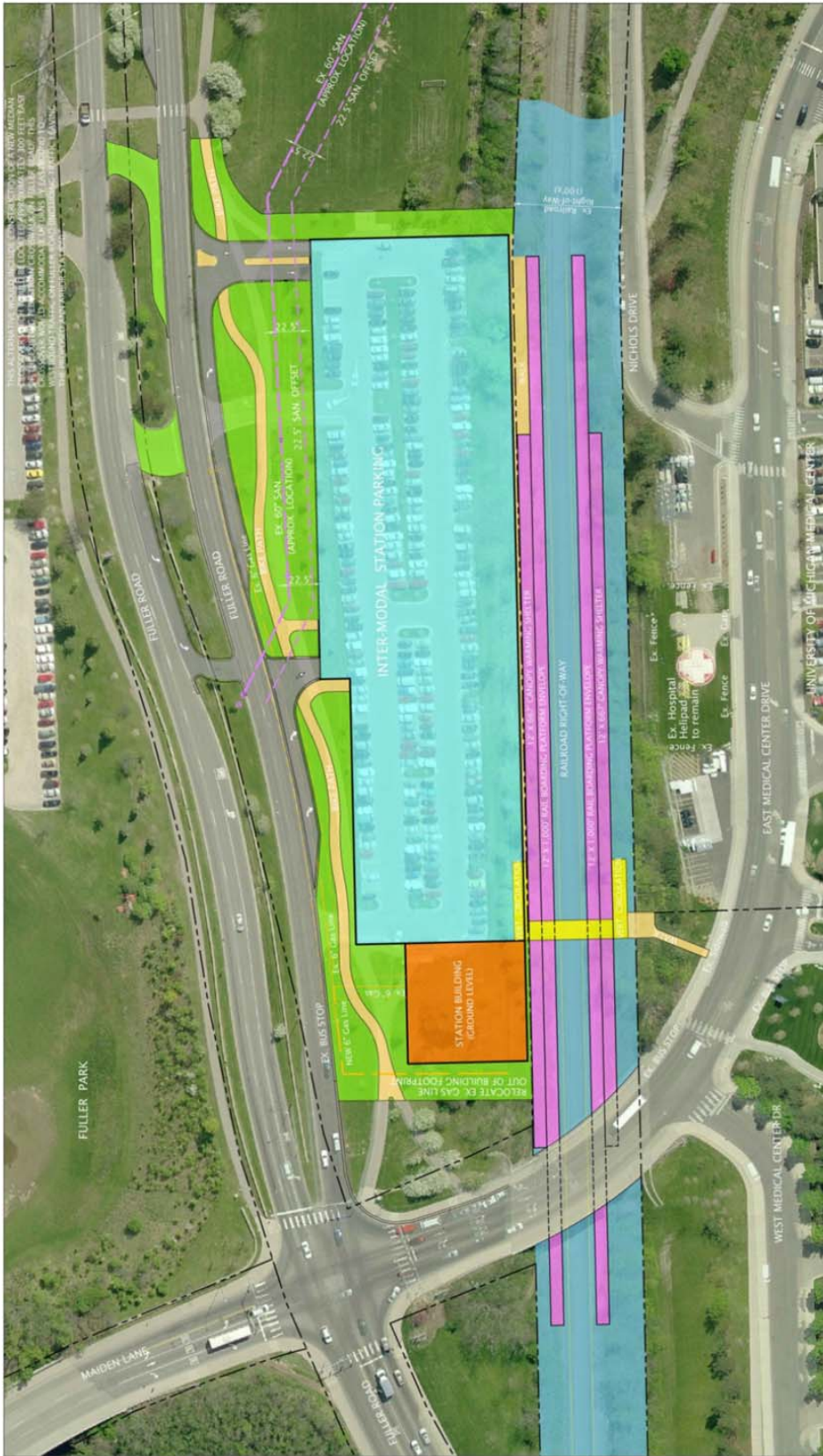
- Rail Station
- Rail Boarding Platform
- Pavement
- Long-Term Parking
- Greenspace
- Right-of-Way
- Sidewalk
- Vertical Circulation
- Inter-City Motorcoach
- City Bus
- Property Line (City of Ann Arbor GIS 2012)

SCALE: 1"=50'
 DATE: 8.06.14

Exhibit 2.3: Alternative 1A

2.5.2 Build Alternatives 3B, 3C, and 3D

Build Alternatives 3B, 3C, and 3D, are similar in design and would all require use of recreational land within Fuller Park, contrary to the City of Ann Arbor policy, and are therefore not considered to be reasonable in comparison to the reduced footprint of Build Alternative 3A, which limits use of Fuller Park to the parking lot. In addition, comments received from the public indicate a desire to avoid the use of recreational land. Therefore, the City eliminated Build Alternatives 3B, 3C, and 3D, from consideration due to their greater use of recreational lands (in excess of the existing parking lot) in Fuller Park, see Exhibit B, Ann Arbor Intermodal Passenger Rail Station—Alternatives Analysis Phase II Report, Sections 6.0 and 7.0 for further detail.



LEGEND

- Rail Station
- Railroad Right-of-Way
- Rail Boarding Platform
- Sidewalk
- Pavement
- Greenspace
- Long-Term Parking
- Vertical Circulation
- Existing Sanitary Sewer
- Existing Gas Line
- Ex. Gas Easment Line
- Sanitary Offset Line
- Property Line (City of Ann Arbor GIS 2012)

SCALE: 1"=40' DATE: 08.11.16

0 20 40 60 Feet

N

Exhibit 2.5: Alternative 3B



Exhibit 2.6: Alternative 3C

2.6 Build Alternatives Carried Forward for Detailed Analysis in this EA

2.6.1 No Build Alternative

The No Build Alternative for this Project entails continued use of the existing Ann Arbor Amtrak Station and the associated long-term parking lot located north of the railroad tracks with no additional improvements.

Ann Arbor Station would require ongoing maintenance to continue to serve as an intercity passenger rail station, but under the No Build Alternative it would not be modified from its existing state. A 2006 audit performed by Amtrak identified the following concerns:

- Insufficient number of handicapped spaces; recommend increasing number of handicapped spaces to satisfy required ratios and placing the spaces (un-metered) in short term parking area to remove any difficulty accessing station from long-term parking area. (Since been completed);
- Recommend replacement of lavatory fixtures for ADA compliance;
- Recommend new door hardware. (Since been completed);
- Recommend installation of Teletypewriter (TTY)/Telecommunication Device for the Deaf (TDD) capable public payphone. Since been completed but is often non-functioning;
- Recommend signage package and variable message signs; and
- Install Amtrak emergency telephone on platform.

The No Build Alternative does not provide the space, comfort, quality, accessibility, and intermodal options for the increase in daily round-trips and increased train speed on Amtrak Wolverine Rail Service and the projected increase in passengers expected in Ann Arbor. This alternative provides a baseline by which the environmental impacts of the Build Alternatives are compared in this EA.

2.6.2 Build Alternatives

For the two remaining potential site alternatives under consideration (Sites 2-Depot Street and 3-Fuller Road), four conceptual-build alternatives that meet the purpose and need and design criteria have been carried forward:

Alternative Site 2-Depot Street:

- Build Alternative 2A: Depot Street (elevated station above the tracks);
- Build Alternative 2B: Depot Street (ground level station building north of the tracks); and
- Build Alternative 2C: Depot Street (ground level station incorporating the former Michigan Central Depot).

Alternative Site 3-Fuller Road:

- Build Alternative 3A: Fuller Road (elevated station above the tracks with reduced footprint)

Build Alternative 2A

Under Build Alternative 2A, the station building would be constructed on Depot Street above the tracks on the west side of the Broadway Street Bridge, as shown in Exhibit 2.7. Pedestrian access would be provided directly from sidewalk along the west side of the Broadway Street Bridge. The station building would be constructed within the railroad right-of-way to provide passengers in the station building with equal distances to access both station platforms. The multi-level parking structure, located to the north

of the station building, would accommodate 870 parking spaces for inter-city passenger rail, 50 spaces for short-term parking, and an additional 250 parking spaces for commuter rail, if commuter rail would be implemented. Bicycle storage, a maintenance area, and cyclist amenities will also be located within the parking structure. The entrance to parking structure would be located off of Broadway Street at a signalized intersection. Transit connections for local bus service would be provided on the Broadway Street Bridge and off of Depot Street where nine bus bays would be located at the existing station site.

Under Build Alternative 2A, the existing Amtrak train platform would be reconstructed to accommodate current design specifications and longer train consists. A second platform would be constructed north of the tracks when a second track would be added consistent with future corridor development plans. A pedestrian bridge or concourse would connect to platforms on both sides of the tracks. Both platforms cannot be moved any farther west than the existing platform due to track curvature. The weather-protected concourse would pass above the tracks and would be integrated with or adjacent to the sidewalk on the west side of the Broadway Street Bridge. Elevators and stairwells would connect the concourse to the platform level on both sides of the tracks.

Build Alternative 2B

Under Build Alternative 2B, the station building would be constructed at ground level on west of the Broadway Street Bridge, directly north of the tracks, as shown in Exhibit 2.8. The weather-protected concourse above the tracks would attach directly to the station building. The multi-level parking structure, located to the west of the station building, would accommodate 870 parking spaces for inter-city passenger rail, 50 spaces for short-term parking, and an additional 250 parking spaces for commuter rail, if commuter rail would be implemented. Bicycle storage, a maintenance area, and cyclist amenities will also be located within the parking structure. The entrance to parking structure would be located off of Broadway Street at a signalized intersection. Transit connections for local bus service would be provided on the Broadway Street Bridge and off of Depot Street where nine bus bays would be located at the existing station site. Vertical circulation, such as stairs and elevators, would be located on the north and south side of the tracks and platforms. Build Alternative 2B would place the station building adjacent to a railroad platform on the north side of the tracks and across the tracks from the south platform. The platforms cannot be moved any farther west than the existing platform, due to track curvature.

Build Alternative 2C

Under Build Alternative 2C, the historic Michigan Central Depot located on Depot Street, which is currently occupied by the Gandy Dancer restaurant, would be acquired and rehabilitated for use as the station building, as shown in Exhibit 2.9. The Michigan Central Depot was constructed in 1886 and is listed on the National Register of Historic Places. It has been listed on the National Register of Historic Places since 1975, and included within the City of Ann Arbor's Division Street local historic district since 1976.³³ Since 1970 the building has housed the Gandy Dancer restaurant.

³³ Information provided by the City of Ann Arbor's historic preservation coordinator from City databases.

The multi-level parking structure, located to the west of the station building and the Broadway Street Bridge, would accommodate 870 parking spaces for inter-city passenger rail, 11 spaces for short-term parking, and an additional 250 parking spaces for commuter rail, if commuter rail would be implemented. Bicycle storage, a maintenance area, and cyclist amenities will also be located within the parking structure. The entrance to parking structure would be located off of Broadway Street. Thirty-nine short-term parking spaces would be provided on Depot Street, adjacent to the station building. Transit connections for local bus service would be provided on the Broadway Street Bridge and off of Depot Street where nine bus bays would be located, at the existing station site.

Building modifications and expansion would be required to adapt the interior of the Michigan Central Depot for station program requirements and to provide full ADA accessibility. The required space of 8,494 ft² for the station building would be accommodated within the Michigan Central Depot, and is large enough, in that it contains approximately 11,500 square feet of floor space. However, the division of space within the depot is not ideal for the Intermodal Station program. The depot contains a modest historic waiting room, but other rooms would need to function as satellite waiting areas. This raises functionality and security concerns. An initial assessment indicates that load bearing walls and architecturally significant features would prevent a simple combining of spaces to form a larger waiting room. A platform-level walkway would extend from the building under the Broadway Street Bridge to elevators, stairwells, and the pedestrian concourse on the west side of the Broadway Street Bridge. Under Build Alternative 2C, the station building would be adjacent to the north railroad platform and across the tracks from the south platform.

The existing Amtrak train platform would be reconstructed to accommodate current design specifications based on Amtrak design specifications and longer train consists. A second platform would be constructed north of the tracks when a second track would be added consistent with future corridor development plans being developed by the RTA. The corridor development plans include commuter rail from Detroit to Ann Arbor. The platforms cannot be moved any farther west than the existing platform, due to track curvature. A pedestrian bridge or concourse would connect to platforms on both sides of the tracks. The weather-protected concourse would pass above the tracks and would be integrated with or adjacent to the sidewalk on the west side of the Broadway Street Bridge. Elevators and stairwells would connect the concourse to the platform level on both sides of the tracks.



Exhibit 2.8: Alternative 2A



Exhibit 2.9: Alternative 2B



Exhibit 2.10: Alternative 2C

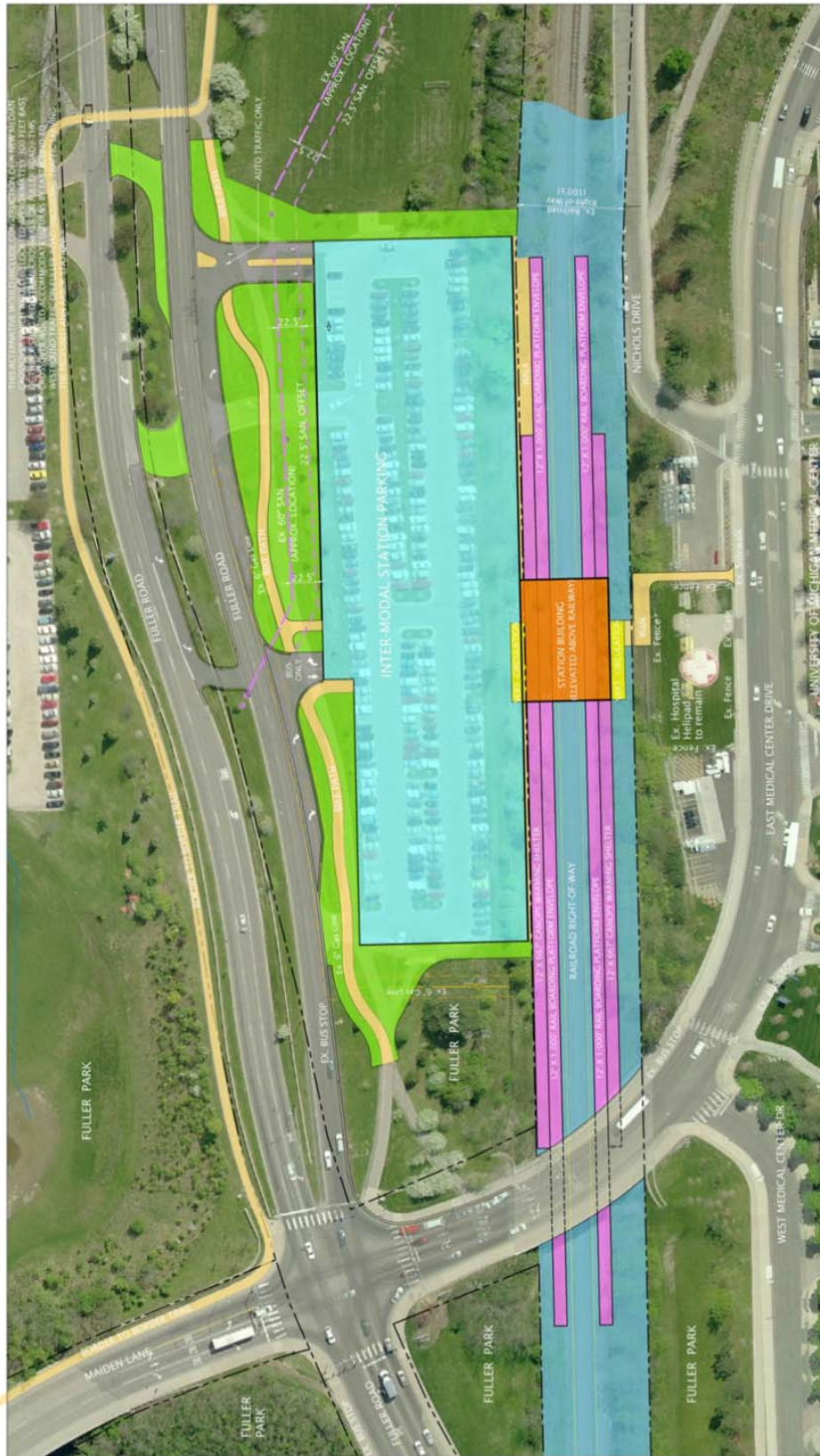
Build Alternative 3A

The Build Alternative 3A station building would be elevated above the tracks with other site facilities located within the area of the existing Fuller Road Park surface parking lot, with the exception of station access features, as shown in Exhibit 2.10. As mentioned for Site Alternative 2 build alternatives, the station building was designed using Amtrak's Station Program and Planning Guidelines³⁴ with 2,205 ft² identified for a waiting area, 930 ft² identified for public toilets, among other station operational spaces. Space needs within the station building for intercity bus operations were determined to be 590 ft² as defined by the Greyhound Station Program Requirements. In total, Build Alternative 3A would require 8,494 ft² of internal space to accommodate station operations and users. In addition, a multi-level intermodal operations and parking structure would accommodate Intermodal transit operations, 50 spaces of short-term parking, 870 long-term parking spaces for inter-city passenger rail, 150 spaces for parks users parking and an additional 250 day parking spaces for commuter rail, if commuter rail would be implemented for daily use. The site would also include storm water management and collection systems. Multi-modal access would be provided north of the tracks and along adjacent streets.

Bicycle and pedestrian access would be available via the bridge link from the station to the sidewalk at grade to East Medical Center Drive and to the Washtenaw County B2B Trail on the north side of Fuller Road across the street from the proposed station building.

The intersection of Fuller Road/East Medical Center Drive/Maiden Lane currently experiences traffic congestion in the peak hours. The City of Ann Arbor is in the process of developing a design solution for this intersection that is not part of this project. These improvements include the construction of a multilane roundabout as identified in the City's Capital Improvement Program, and are expected to take place prior to construction of the Ann Arbor Intermodal Station.

³⁴ Amtrak Station Program and Planning Guidelines, 2013



LEGEND

- Rail Station
- Rail Boarding Platform
- Railroad Right-of-Way
- Pavement
- Greenspace
- Sidewalk
- Long-Term Parking
- Vertical Circulation
- Existing Sanitary Sewer
- Existing Gas Line
- Ex. Gas Easment Line
- Sanitary Offset Line
- Property Line (City of Ann Arbor GIS 2012)

SCALE: 1"=40' DATE: 08.11.16

0 20 40 80 Feet

N

Exhibit 2.11: Alternative 3A

2.6.3 Phased Construction

The construction of the intermodal station is phased because the Michigan Department of Transportation is phasing the implementation of additional service from three (3) round trips/day currently to six (6) round trips/day in 2025 and 10 round trips/day in 2035.

Under Build Alternatives 2A, 2B, 2C and 3A, a phased approach for the construction of the station and station facilities would be implemented. The first phase of construction would serve the needs of the passenger volume through the year 2025 when MDOT plans that there³⁴ would be six (6) round trip trains to Chicago per day. The second phase of construction would include full build-out to serve the projected increase in ridership from 2026 through 2035.

Currently, Amtrak's Wolverine service provides 3 daily round-trips between Chicago and Pontiac. The increase in ridership resulting from an increase in service frequency from six round trips per day (2025) to 10 round trips per day (2035) is predicted³⁵ to have an impact on the station and station facilities and their capacity to sufficiently serve the station users.

Listed below are the station elements that were considered feasible to construct in phases.

Parking

The anticipated future demand for long-term intercity rail parking in Ann Arbor (year 2035 full build-out) is 870 parking stalls. Short-term parking needs are projected to require approximately 50 parking spaces, oriented either parallel to the curb in a queue lane or perpendicular. This includes 25 spaces for pick-up/drop-off, 10 taxis, and 10 private shuttles. Build Alternative 3A has short term parking spaces located within the garage, while short term parking for Build Alternatives 2A, 2B, and 2C is located adjacent to the proposed station. If commuter rail is implemented with use of the Ann Arbor Intermodal Station, an additional 250 parking spaces would be needed for the service which would be accommodated in the design of the garage.

In the first phase of construction, 435 long-term parking stalls and 50 short-term parking spaces would be constructed. Under Build Alternatives 2A, 2B, and 2C, a minimum of two levels of structured parking would be constructed during the first phase of construction. The structure would be designed in a way that would allow for future expansion horizontally, as well as in a way that would not require full closure during future construction. Each level of the initial parking deck would provide approximately 250 stalls, and would allow future construction of additional parking levels at full-buildout to increase the number of parking stalls.

³⁵ <https://www.fra.dot.gov/Page/P0658> Chicago – Detroit / Pontiac High Speed Rail Corridor Program Tier 1 Draft Environmental Impact Statement, U.S. Department of Transportation Federal Railroad Administration and Michigan Department of Transportation In partnership with Illinois Department of Transportation and Indiana Department of Transportation, September 2014. Appendix E Ridership and Revenue Forecasts and Operating and Maintenance Costs, Page A-45

Under Build Alternative 3A, the first level of the structure would be dedicated to vehicle circulation, short-term parking, and bus bays and some long-term parking. Additional bus bays and additional parking levels would be added (horizontally) onto the parking structure at full buildout. Refer to Table 2-1 for a summary of the required parking for Build Alternatives 2A, 2B, 2C and 3A in the first phase of construction.

Table 2.2: Phase 1- 2025 Parking Needs

Build Alternative	Long-Term Parking ¹		Short-Term Parking		
	Total Spaces	Estimated Total Levels of Structured Parking	Total Spaces	Location in Structured Parking	Surface Parking
2A	435	4 Levels	50	50	0
2B	435	5 Levels	50	50	0
2C	435	4 Levels	50	11	39
3A	585	5 ³ Levels	50	50	0

¹ The long-term parking spaces do not include an additional 250 parking spaces that would be required for commuter rail once the service is implemented.

² Long-term Parking Spaces for Build Alternative 3A assumes 150 Fuller Park users would be accommodated in the parking structure for evenings and on weekends, as they are today.

³ First level of structure is dedicated to vehicle circulation, bus bays, short-term parking, and some long-term parking.

Utilities

All required site utilities, including water, sewer, gas, electric, phone, cable, and fiber optic lines, would be constructed during the first phase of construction.

Transit

In the first phase of construction, four bus bays would be constructed under Build Alternatives 2A, 2B, and 2C and would be accessed from Depot Street. At full buildout, nine bus bays would be constructed. The bus bays under Build Alternatives 2A, 2B, and 2C, are adaptable to phasing and would be achieved by making modifications to the curb line and constructing additional pavement. Under Build Alternative 3A, four bus bays would be constructed during the first phase of construction; five more bus bays would be constructed at full buildout.

Station and Platform

In general, the station and platform sizes are based on peak ridership per train. The station and platform need only serve the peak number people boarding an individual train at any one time.

In phasing the construction of the station building, it may be practical to phase the waiting room area based on peak boarding ridership, but it may not be practical to phase support spaces such areas as toilet room, offices, mechanical, etc. For this reason, the area of the support spaces in the station would be fully built out in the first phase. Secondly, considering the minimal increase in the overall station size in the second phase, constructing a later addition for an elevated station over active train lines would not be an effective, economical approach. So for the two elevated station options (Build Alternatives 2A and 3A), construction phasing for the station size was not considered.

For the Michigan Central Station renovation option, Build Alternative 2C, the station size is a given quantity. To renovate a major portion of the station in the first phase and come back in the second phase to renovate the remainder is neither practical nor cost effective considering the minor scope of

interior renovation work under the second phase. Therefore, all of Alternate 2C would be renovated in the first phase of construction.

Only one track is necessary to serve the station for intercity passenger rail. The phased improvements will only accommodate intercity passenger rail. Future services, like commuter rail, may require additional tracks at the station. As a result, only one platform with related amenities (warming shelters, canopies) would be required. Each of the build alternatives would include one platform with amenities for the first phase, with the second platform constructed in the second phase, if needed. The second platform would accommodate future commuter service.

Roadway and Traffic

All traffic elements required by the City and MDOT for each of the build alternatives would be constructed in the first phase of construction in 2025 without any phasing. This would include the widening of the Broadway Street Bridge for Build Alternatives 2A, 2B and 2C, to accommodate increases in left and right turns into the parking structure, and to accommodate pull-off areas for buses on the bridge. The improvements identified regarding N. Main Street and Depot Street for Build Alternatives 2A, 2B, and 2C, and improvements to the Fuller Road/East Medical Center Drive/Maiden Lane intersection for Build Alternative 3A are needed to address existing congestion. The City of Ann Arbor has already programmed the construction of these improvements in 2020 prior to the construction of the proposed station.

Below is a list of the phasing of the elements that would be phased for each of the four Build Alternatives under consideration. The City of Ann Arbor has the project programmed for construction in 2018 and it is expected the Phase 1 construction would begin in that year.³⁶ Construction of Phase 2 is expected to begin when funding becomes available and full engineering design is completed.

Build Alternative 2A – Depot St. Elevated Station

A. Phase I

- Demolish existing station building, operations would be maintained in a temporary facility;
- Construct two-level parking structure to accommodate 435 long-term parking spaces, 50 short-term parking spaces, motorcycle parking, bicycle Parking, shared bicycle service and bicycle room in parking structure;
- Construct full build-out station above the tracks;
- Construct vertical circulation elements (elevators and stairs for pedestrians) on west side of the tracks;
- Construct entry to station from new bus drop off area on Broadway Street Bridge with protected crosswalks;

³⁶ <http://www.a2gov.org/departments/systems-planning/programs/Documents/CIPWebDcoument%20forPublicHearing.pdf>

- Construct one 800' platform with one warming shelter and 650' of canopy on the south side of the tracks;
- Install traffic signal at the Broadway Street/Site Driveway intersection;
- Construct new 250' northbound left-turn lane at the Broadway Street/Site Driveway intersection;
- Construct new 250' southbound right-turn lane at the Broadway Street/Site Driveway intersection; and
- Construct four (4) bus bays on Depot Street.

B. Phase II

- Construct five (5) additional bus bays to equal nine (9) bus bays on Depot Street
- If commuter rail is implemented:
 - Construct additional parking structure levels to accommodate 870 total long-term parking spaces, 50 short-term spaces, and an additional 250 spaces are needed (1,170 total); and
 - Construct second 800' platform with two warming shelters and 650' of canopy.

Build Alternative 2B – Depot St. at-grade Station

A. Phase I

- Demolish existing station building operations would be maintained in a temporary facility;
- Construct two-level parking structure to accommodate 435 long-term parking spaces, 50 short-term parking spaces, motorcycle parking, bicycle parking, shared bicycle service and bicycle room in parking structure;
- Construct ground-level station;
- Construct 800' platform on the north side of the tracks with one warming shelter and 650' of canopy;
- Construct vertical circulation elements on either side of the tracks with a pedestrian overpass along Broadway Street Bridge;
- Construct entry to station from new bus drop off area on Broadway Street Bridge;
- Install traffic signal at the Broadway Street/Site Driveway intersection;
- Construct 250' northbound left-turn lane at the Broadway Street/Site Driveway intersection;
- Construct 250' southbound right-turn lane at the Broadway Street/Site Driveway intersection; and
- Construct four (4) bus bays.

B. Phase II

- Construct five (5) additional bus bays to equal nine (9) bus bays;
- Add on to station due to increased peak train riders, approximately 435 square feet to the waiting area; and
- Construct additional parking structure levels to accommodate 870 long-term parking spaces and 50 short-term spaces.

If commuter rail is implemented:

- Construct second 800' platform on south side of the tracks with two warming shelters and 650' of canopy; and
- Construct an additional 250 spaces (1,170 total).

Build Alternative 2C – Depot St. Renovate Michigan Central Station

A. Phase I

- Demolish existing station building operations would be maintained in a temporary facility;
- Acquire and possibly relocate Gandy Dancer Restaurant;
- Construct two-level parking structure to accommodate 435 long-term parking spaces, and 11 short-term parking spaces, 39 short-term spaces in a surface parking lot, motorcycle parking, bicycle Parking, shared bicycle service and bicycle room in parking structure;
- Rehabilitate the existing Michigan Central Station to convert it back into a train station;
- Construct vertical circulation elements west of Broadway Street Bridge on either side of the tracks;
- Construct entry to station from new bus drop off area on Broadway Street Bridge;
- Construct one 800' platform with one warming shelter and 650' of canopy on the south side of the railroad tracks;
- Install traffic signal at the Broadway Street/Site Driveway intersection;
- Construct new 250' northbound left-turn lane at the Broadway Street/Site Driveway intersection;
- Construct new 250' southbound right-turn lane at the Broadway Street/Site Driveway intersection; and
- Construct four (4) bus bays.

B. Phase II

- Construct five (5) additional bus bays to equal nine (9) bus bays.

If commuter rail is implemented:

- Construct second 800' platform on south side of the tracks with two warming shelters and 650' of canopy; and

- Construct an additional 250 spaces (1,131 total).

Build Alternative 3A – Fuller Rd. Elevated Station

A. Phase I

- Construct station above the tracks;
- Construct five-level intermodal operations and parking structure to accommodate transit operations, 435 long-term parking spaces, 50 short-term parking spaces, 150 parks user parking spaces and motorcycle parking, bicycle parking, shared bicycle service and bicycle room in parking structure;
- Construct vertical circulation element on north side of the tracks
- Construct platform on the north side of the tracks with two warming shelters and 650' of canopy;
- Construct new 250' eastbound right-turn lane at the Fuller Road/West Site Driveway intersection;
- Construct new 250' eastbound right-turn lane at the Fuller Road/East Site Driveway intersection;
- Relocate and reconstruct the Fuller Road crossovers, including 250' left-turn bays at each crossover; and
- Construct four (4) bus bays.

B. Phase II

- Construct additional parking structure levels to accommodate 870 total long-term parking spaces, 50 short-term spaces, 150 parks user parking spaces; and
- Construct five (5) additional bus bays to equal nine (9) bus bays.

If commuter rail is implemented:

- Construct second 800' platform on south side of the tracks with two warming shelters and 650' of canopy;
- Construct vertical circulation elements (elevators and stairs for pedestrians) on south side of the tracks; and
- Construct an additional 250 spaces (1,320 total).

2.7 Preferred Alternative

This subsection presents the scoring of each Build Alternative carried forward and the identification of the Preferred Alternative.

Each of Build Alternatives described in Section 2.5 was screened based on the criteria described in Section 2.1. The Build Alternatives for each station site were then ranked sequentially based on their

relative performance under each criterion. The highest performing Build Alternative received a score of 1, with scores of 2, 3, etc. indicating progressively worse performance in comparison. Where Build Alternatives performed relatively equally, they received the same score and the next Build Alternative received the next ranking number (e.g. 1, 2, 2, 3). The rankings for all criteria were then aggregated to determine which Build Alternative(s) showed overall higher performance relative to the others within that station site. If a Build Alternative failed to reasonably meet any criterion based on the data and analysis available, it was eliminated from further consideration. A Screening Summary of the Build Alternatives is found on Page 42 under Section 6.5 of the Ann Arbor Intermodal Passenger Rail Station—Alternatives Analysis Phase II Report (Exhibit B)

Based on the analysis of potential impacts to the affected natural, human and physical environments, constructability and cost, and the evaluation of those impacts comparatively amongst the No-Build Alternative and the four Build Alternatives, the City has identified Build Alternative 3A as its Preferred Alternative.

The Preferred Alternative has been identified as an alternative that would fulfill the stated Purpose and Need, giving consideration to economic, environmental, technical and other factors. In determining its Preferred Alternative, the City considered the reasonable range of Build Alternatives and the No Build Alternative, and then analyzed and evaluated the Build Alternatives comparatively based on potential impacts to the affected natural, human, and physical environments; constructability; cost; and the potential to avoid, minimize, and mitigate impacts to resources.

As addressed in Section 3, Build Alternative 3A can be developed on property currently owned by the City of Ann Arbor and MDOT; thereby eliminating the need for additional property acquisitions as well as maintaining the taxable base in the area. Existing surface transportation network capacity immediately adjacent to this location can accommodate projected additional trips utilizing Build Alternative 3A. Build Alternative 3A currently provides connections to 9 transit routes (AAATA – 2 and U-M – 7). This location is outside of the floodplain and therefore no impacts will occur to the floodplain or any designated floodways. Build Alternative 3A will require the use of 3.2 acres of Fuller Park and will require review and comment by the City of Ann Arbor’s Parks Advisory Committee and the City of Ann Arbor Council’s approval. In addition, there are no floodplain or floodway impacts associated with Alternative 3A, and with the smallest development area it results in the lowest increase in impervious surfaces. Because Build Alternative 3A would be constructed on City-owned property, it also has the lowest construction cost among the Build Alternatives.

FRA and the City are seeking public comments on the City’s identified Preferred Alternative as part of the public review of this EA. FRA will consider all comments related to the document, Build Alternatives, impact analysis, draft 4(f) evaluation, and identification of the City’s Preferred Alternative prior to making a finding and issuing a Finding of No Significant Impact (FONSI). Following the issuance of a FONSI, the City will advance the Project to preliminary engineering, final design, and construction, contingent upon the availability of funds.

3.0 Affected Environment and Environmental Consequences

This section describes the resources within the vicinity of the proposed Ann Arbor Intermodal Station, including a discussion of beneficial or adverse impacts to resources under the No Build Alternative and the four Build Alternatives. Environmental consequences (or impacts) from the proposed alternatives are evaluated using the process established in the CEQ Regulations for implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR 1500-1508).

3.1 Land Use, Zoning, and Property Acquisitions

The following sections describe the existing land uses in the study area within a ½ mile of the Build Alternatives, property acquisitions, major environmental features, potential development effects of the Build Alternatives, and the consistency of the Build Alternatives with local plans.

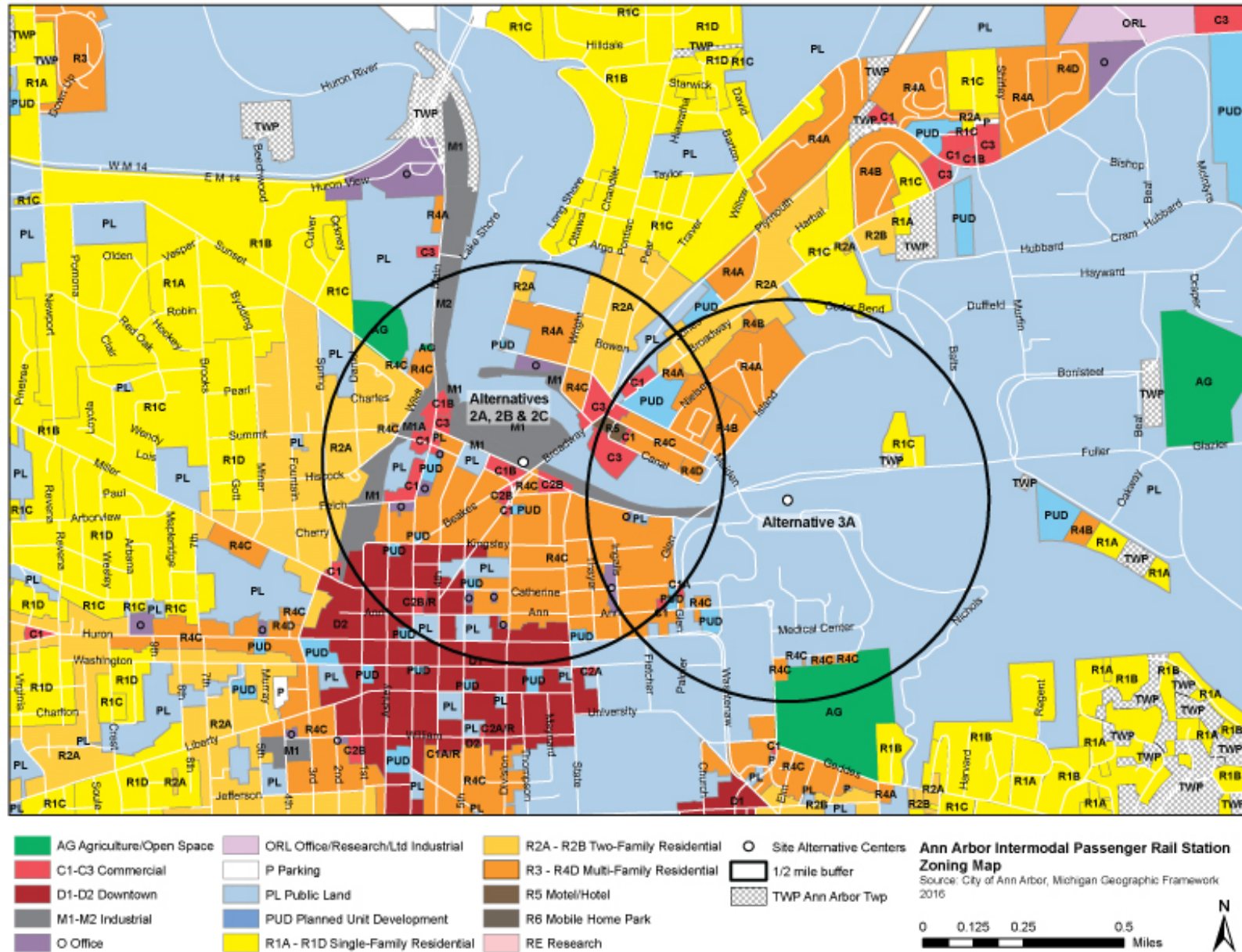
3.1.1 Existing Land Use and Zoning

Within one-half mile vicinity of the No Build Alternative and Build Alternatives 2A, 2B, and 2C parking and utility facilities are the majority land uses near Build Alternatives 2A and 2B, especially to the direct north. The current land use for Build Alternative 2C is a restaurant, while to the direct north of this alternative land use is categorized as recreation. Moving farther north of all three alternatives is the Huron River and scattered parkland, and a mixture of single and multi-family housing, commercial and institutional uses. To the east of these three alternatives, land use is primarily categorized as parkland and recreational, with additional utility facilities and office/medical land uses. The U-M Medical Center is just barely inside a half mile buffer around the existing station site to the southeast.

South of Build Alternatives 2A, 2B, and 2C is Downtown Ann Arbor and the U-M Main Campus. These areas are comprised of a significant amount of commercial, office and institutional land use. Residential land uses make up the majority of the remaining area. To the west of Build Alternatives 2A, 2B, and 2C, there is a node of commercial, office and governmental use at Main Street, followed by majority single-family land use further to the west.

Zoning at the site of the current station and the other Depot Street Build Alternatives is classified as M1 – Limited Industrial. North of the M1 zoning is Public Land, R4A, B and C - Multiple-Family Dwelling and C1 and C3 commercial. To the south of these Alternatives is additional Multiple-Family Dwelling, a handful of Planned Unit Developments, Office and commercial. Zoning designations in the areas of the Build Alternatives are shown in Exhibit 3.1.

Exhibit 3.1: Zoning Designations in the vicinity of the Build Alternatives



Within One-Half Mile Vicinity of Build Alternative 3A

The land use in the immediate surroundings of Build Alternative 3A is recreational to the north and east, and institutional to the south. To the west and northwest is a mixture of residential, transportation/communication/utilities, and some office, commercial and industrial uses.

The area surrounding Build Alternative 3A is largely zoned Public Land and characterized by greenspace.

Major Environmental Features

The sites for Build Alternatives 2A, 2B, 2C and 3A are in close proximity to the Huron River, which wraps around the northern and eastern sides of these areas. Build Alternatives 2A, 2B, and 2C are close to the Ann Arbor floodway and are within the floodplain. The floodway is to the north of the area of Build Alternative 3A, and this alternative is not within the floodplain.

Near the site of Build Alternatives 2A, 2B, and 2C, there are three recreation areas: Wheeler Park, Broadway Park and Riverside Park. Wheeler Park is a neighborhood park across the street from and very close to the existing station. Broadway Park is directly east of the existing station. Riverside Park parallels Broadway Park across the Huron River.

Near Build Alternative 3A to the north, east and southeast, is a concentration of city- and privately-owned open space. This area is home to the Nichols Arboretum, additional sections of the Huron River and a section of approximately seven acres of “Freshwater Forested/Shrub Wetland” which is home to low woody plants³⁷. Fuller Park to the north is a 60-acre recreation area with athletic fields and a pool. Fuller Park connects with Island Park and the Cedar Bend Nature Area.

Consistency with Land Use Plans and Policies

The following documents that comprise the City of Ann Arbor Master Plan Elements were reviewed for consistency with the Build Alternatives:

- Sustainability Framework (2013)

The City of Ann Arbor Sustainability Framework is the re-organization of over 20 existing plans that each incorporates some aspect of sustainability planning. The Framework includes 16 overarching goals, including “Transportation Options.” The Framework calls for providing access to more transportation choices, integrating land use and transportation systems and encouraging mass transit ridership. Build Alternatives 2A, 2B, 2C as well as the preferred alternative further the transportation goals set forth in the Framework.

- Master Plan: Land Use Element (2009)

The Land Use Element of the City of Ann Arbor Master Plan comprehensively plans for natural as well as built environment features throughout the City. Located in the City’s Central Area, the

³⁷ National Wetlands Inventory – V2 Surface Waters and Wetlands online mapping application. <https://www.fws.gov/wetlands/Data/Mapper.html> , accessed July 28th 2016; and estimated acreage from SEMCOG wetland GIS data layer, provided 2016.

preferred alternative avoids floodways, an area where the land use plan seeks to prohibit new building in order “to substantially reduce or eliminate impacts to flooding (p. 20).” The Land Use element also encourages the use of mass transit and non-motorized modes of transportation, which are furthered through the preferred alternative. While Build Alternatives 2A, 2B, and 2C are in the path of the floodway and floodplain, they do encourage mass transit and in part meet the spirit of this Plan.

- **Transportation Master Plan Update (2009)**

The City of Ann Arbor Transportation Master Plan Update outlines a future transportation system where transit and non-motorized modes are prioritized in signature corridors (Plymouth-Fuller, State, Washtenaw, Jackson), with corresponding changes in land use policy to encourage concentration of growth around these same corridors. The plan includes a recommendation to explore the relocation of the existing Ann Arbor intercity passenger rail station, potentially to Fuller Road, and for the station to coordinate with future commuter rail plans as they develop. A key goal for the future local transit system is to provide the connectivity between regional transit services and clusters of employment growth. The preferred alternative is consistent with this plan. Although the specific location of Build Alternatives 2A, 2B, and 2C are not given preference in this Plan in the way that Build Alternative 3A is, they do conform to the spirit of the recommendations in the document.

- **Parks and Recreation Open Space Plan (2011)**

The Ann Arbor Parks and Recreation Open Space Plan provides an inventory of existing parks and facilities and describes the relationship between the parks and recreation system and surrounding municipalities and recreation providers. The Plan identifies parks and recreation needs and deficiencies, and proposes major capital projects for existing and new parks. The document divides the City of Ann Arbor into four planning areas: West, Central, Northeast and South. An inventory of facilities and their needed improvements are discussed according to each planning area. A major concentration of park and trail assets is located within the areas around the Huron River. The plan specifically references the potential for a train station at Fuller Road, and suggests that if such a proposal move forward, it should include trail system connections, access for bicycles as well as bicycle parking. Mentioned amenities to accompany a potential Fuller Road station are non-motorized pathway connections and bike parking. Build Alternatives 2A, 2B, and 2C as well as the preferred alternative are consistent with this plan.

- **Natural Features Master Plan (2004)**

The Natural Features Master Plan outlines the vision and stewardship goals for Ann Arbor’s natural features, including water features, land forms, trees, plants and greenway linkages. The Plan contains many sections pertaining to the protection of floodplains and floodways that are relevant to this study. The document calls for reducing flooding occurrences by increasing floodplain and flood storage capacity along waterways and by insuring that there is no net loss of floodplain and flood storage capacity. Build Alternatives 2A, 2B, and 2C are in the path of the

floodway and floodplain and conflict with the recommendations provided in this Plan. In that the preferred alternative along Fuller Road avoids any floodplain or flood storage capacity impacts, it is consistent with this plan.

Additional City of Ann Arbor planning documents consulted for consistency review include:

- Flood Mitigation Plan (2007)

This Plan reviews the risk of flooding and vulnerability of the Ann Arbor community to floods. It makes general as well as watershed specific recommendations to mitigate risk. Like the Natural Features Master Plan, the Flood Mitigation Plan discourages new buildings in the floodway. Build Alternatives 2A, 2B, and 2C are in the path of the floodway and floodplain and conflict with the recommendations provided in this Plan. In that the preferred alternative along Fuller Road avoids any floodplain or flood storage capacity impacts, it is consistent with this plan.

- Climate Action Plan (2012)

At the core of the City of Ann Arbor Climate Action Plan is reducing local contributions to greenhouse gas emissions and climate change. The plan recommends targets and actions to achieve greenhouse gas reductions, grouped into under four main categories: Energy and Buildings, Land Use and Access, Resource Management and Community and Health. Within the Land Use and Access category, transportation interventions are discussed. Along with looking toward future, more fuel efficient vehicles, the plan posits that improving options for walking, biking, busing and other transport will contribute to the City's climate action goals. Build Alternatives 2A, 2B, 2C as well as the preferred alternative are consistent with this plan.

- North Main Street/ Huron River Corridor Vision for the Future Report (2013)

Resulting from a City Task Force of the same name, this Report makes recommendations for various sites along the Huron River, including the DTE site at Broadway Street near Build Alternatives 2A, 2B, and 2C. The Report recommends that the City of Ann Arbor initiate discussions with DTE and other relevant parties in order to remove the Compressed Natural Gas fueling station adjacent to the site. Potential solutions to redevelop the site listed in the Report included connecting Broadway Park to the south and the Border-to-Border Trail to the north with new non-motorized paths, and adding a new non-motorized bridge to connect the Argo Cascades and Livery to the DTE site. The proposed development for Build Alternatives 2A, 2B, and 2C along with the preferred alternative are consistent with this report.

- Huron River and Impoundment Management Plan (2009)

This Plan provides guidance for development in the area of the Broadway Street Bridge, encouraging limited development of a restaurant and/or other public-use facilities where the public congregates and can enjoy the river in the Broadway Street Bridge/Argo area, especially if it generates revenue for river planning and implementation. The proposed development for Build Alternatives 2A, 2B, and 2C along with the preferred alternative are consistent with this Plan.

Consistency with additional transportation plans and initiatives that affect this project is discussed in section 1.6 “Relationship to other Transportation Planning Initiatives.”

Nearly all the plans listed above emphasize the continued development and facilitation of walking, biking and mass transit infrastructure. The underlying rationale for focusing on non-automotive transportation vary by plan, ranging from stormwater management, quality of life, and equitable access to jobs and housing, neighborhood redevelopment, accommodation of future growth and the preservation of the natural environment among other reasons. In their aim to increase the usage and availability of mass transit, the current study and existing plans are aligned. The 2009 Transportation Plan Update additionally recommends integrating rail services with enhanced transit on Fuller Road.

The Land Use Plan makes numerous references to the protection of floodways, including recommending that for the DTE site in the Riverfront Area of Lower Town, which is near the parking location for Build Alternatives 2A, 2B, and 2C, that “...no new buildings should be allowed in the Huron River floodplain/floodway that negatively impact flood storage capacity (p. 49).” The Natural Features Plan and Flood Mitigation Plan also address maintaining the integrity of floodplains throughout the City. These issues are reviewed in more detail in section 3.7 Water Resources.

No Build Alternative

The No Build Alternative would not affect the existing land use nor would it result in zoning changes. The amount of developable land is low for the No Build Alternative, and it is not expected to trigger changes in land use or zoning in the area.

Build Alternatives 2A, 2B, and 2C

Build Alternatives 2A, 2B, and 2C contain some land use inconsistencies vis-a-vis existing plans and policies, due to their inclusion of new structures within a floodplain or floodway. Apart from general floodplain and floodway concerns, these alternatives do not present additional land use concerns. The amount of vacant land within a half mile radius is low for all Build Alternatives. The area of the Build Alternatives (2A, 2B, and 2C) is the site of the existing station and historic depot. The continued use of this area for passenger rail purposes would perpetuate the existing relationship of the site to its surroundings from a land use perspective. Build Alternatives 2A, 2B, and 2C are near to more vacant property than 3A, particularly the Amtrak and DTE Energy property north of the existing station. However, Build Alternatives 2A, 2B, and 2C also occupy a substantial amount of the developable portion of this vacant land.

Because the urban environment surrounding each station site is largely developed, the effect of any Build Alternative would likely be more substantial on existing than on potential new development. Build Alternatives 2A and 2B are well-located relative to the existing Lower Town commercial area on Broadway northeast of Swift Street. Due to its situation below-grade and without a direct link to Lower Town at street level via the Broadway Street Bridge, Build Alternative 2B would likely have a smaller effect because the redevelopment at these sites would maintain the existing land use. Build Alternative 2C is located along Depot Street and, therefore, would likely provide a slightly lesser effect on land use

and zoning in Lower Town than the other Build Alternative 2 locations. Overall, the differences are not substantial when comparing development around the Build Alternative 2 design options.

Build Alternative 3A

For Build Alternative 3A there are no potential land use concerns. Build Alternative 3A would introduce a new station and passenger activity at a site that is a city owned park (Fuller). To the north of the site are park facilities that include a waterslide; seven-lane, 50-meter lap pool; shallow area with ramp access; 12-foot-deep diving well; and open space. The existing site contains a 250 space existing parking lot that is leased to the U-M Medical Campus. To the south of the site is the U-M Medical Center. It is the largest single site development/employer in the county. Build Alternative 3A benefits from proximity to greater populations at existing development, including the U-M Medical Campus, which contains the highest density of employment in the City.

Build Alternative 3A is surrounded on the north by parkland, which is unlikely to be developed for other purposes. On the south, 3A is bounded by the U-M Medical Center, which is largely already developed, but which may have modest potential for redevelopment or additional development between the railroad and East Medical Center Drive, which is the site of parking lots, a driveway, and heliport facilities.

3.1.2 Property Acquisition

The existing station is constrained by the size of the property in order to accommodate parking needs and intermodal connections. The following section describes the property that would be required for the Build Alternatives.

No Build Alternative

The No Build Alternative would not require any property acquisition.

Build Alternative 2A, 2B, and 2C

For Build Alternatives 2A and 2B, the existing Amtrak station, the long-term parking area, and a portion of the adjacent DTE property to the north of the site would need to be acquired. For the multi-modal elements of the station, off of Depot Street, 0.72 acres would need to be acquired from Amtrak. For the station and parking structure north of the tracks, 1.78 acres would need to be acquired from Amtrak, and an additional 2.59 acres would have to be acquired from the DTE property for the parking structure. In total, 5.09 acres would need to be acquired for Build Alternatives 2A and 2B.

For Build Alternative 2C, the existing Amtrak station, the long-term parking area, a portion of the adjacent DTE property to the north of the site, and the Michigan Central Depot/Gandy Dancer Restaurant would need to be acquired. For the multi-modal elements of the station, off of Depot Street, 0.72 acres would need to be acquired from Amtrak. For the station and parking structure north of the tracks, 1.78 acres would have to be acquired from Amtrak, and 0.82 acres of land from the Depot building would have to be acquired. In total, 6.87 acres would need to be acquired for Build Alternative 2C. No residential displacements are anticipated but there would be displacement of the Gandy Dancer

Restaurant which would follow the Uniform Act Relocation Assistance and Real Property Acquisition Policies Act of 1970 and 49CFR24 Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally-assisted Programs

Build Alternative 3A

Build Alternative 3A is located within Fuller Park which is owned by the City of Ann Arbor. In order to construct Build Alternative 3A, a total of 4.7 acres will need to be acquired from Fuller Park.. However, no residential or business displacements are anticipated

3.2 Parks and Recreation Areas

There are five Parks and Recreation Areas within the vicinity of the Build Alternatives, as shown in Exhibit 3.2 and described in Table 3.1. Below is a description of those Parks and Recreational areas within the vicinity of the Build Alternatives.

Exhibit 3.2: Parks and Recreation Areas near the Ann Arbor Intermodal Station Alternatives

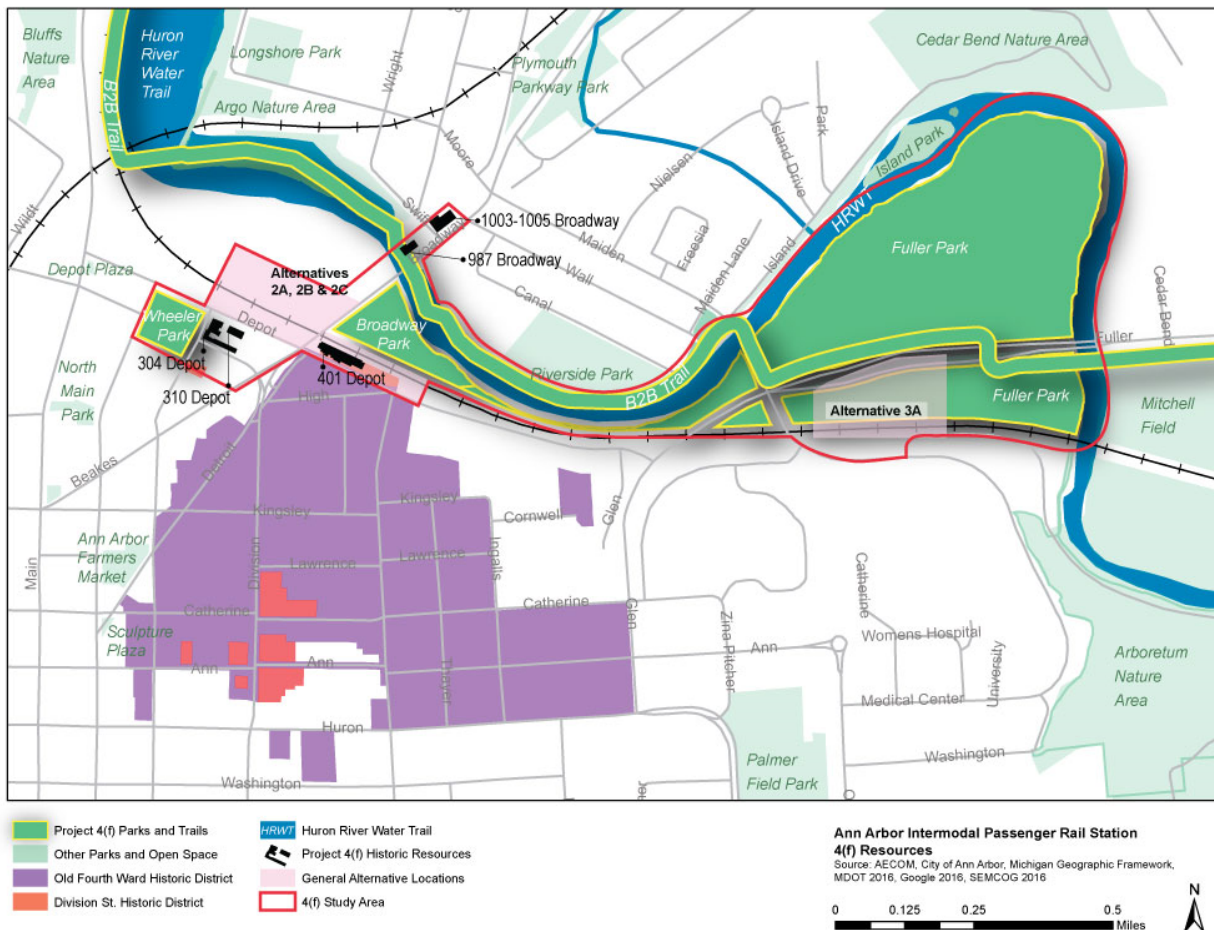


Table 3.1: Parks and Recreational Areas in the Vicinity of the Build Alternatives

Property Name	Owner	Description of Features	No Build	Build Alternatives 2A, 2B, and 2C	Build Alternative 3A
Broadway Park	City of Ann Arbor	Paved paths; benches; boardwalk; and riverfront area	<ul style="list-style-type: none"> No change in existing condition 	<ul style="list-style-type: none"> Adjacent to Build Alternatives 2A, 2B, and 2C 	<ul style="list-style-type: none"> 1,700 feet from Build Alternative 3A
Wheeler Park	City of Ann Arbor	Playground; restroom with water fountain; walking/running track; basketball court; plaza with benches; picnic shelter with picnic tables and grills; open field area; and paved path	<ul style="list-style-type: none"> No change in existing condition 	<ul style="list-style-type: none"> 75 feet from Build Alternatives 2A, 2B, and 2C 	<ul style="list-style-type: none"> 3,300 feet from Build Alternative 3A
Fuller Park	City of Ann Arbor	Outdoor pool and waterslide; soccer fields; commuter/recreation parking lot; wooded and open areas; riverfront area; unpaved trails, shared-use path; picnic shelters, picnic tables, and grills; and restrooms	<ul style="list-style-type: none"> No change in existing condition 	<ul style="list-style-type: none"> 250 feet from Build Alternatives 2A, 2B, and 2C 	<ul style="list-style-type: none"> In the footprint of Build Alternative 3A
B2B/Iron Belle Trail	City of Ann Arbor ¹	Off-road pedestrian and bicycle recreational trail	<ul style="list-style-type: none"> No change in existing condition 	<ul style="list-style-type: none"> In the footprint of Build Alternatives 2A, 2B, and 2C 	<ul style="list-style-type: none"> 30 feet from Build Alternative 3A
Huron River Water Trail	City of Ann Arbor ¹	Paddling recreational activities, including kayaking, canoeing and fishing	<ul style="list-style-type: none"> No change in existing condition 	<ul style="list-style-type: none"> In the footprint of Build Alternatives 2A, 2B, and 2C 	<ul style="list-style-type: none"> 400 feet from Build Alternative 3A

Notes:

¹ Within the city limits; trail extends outside of the city, and ownership of those portions are not included here.

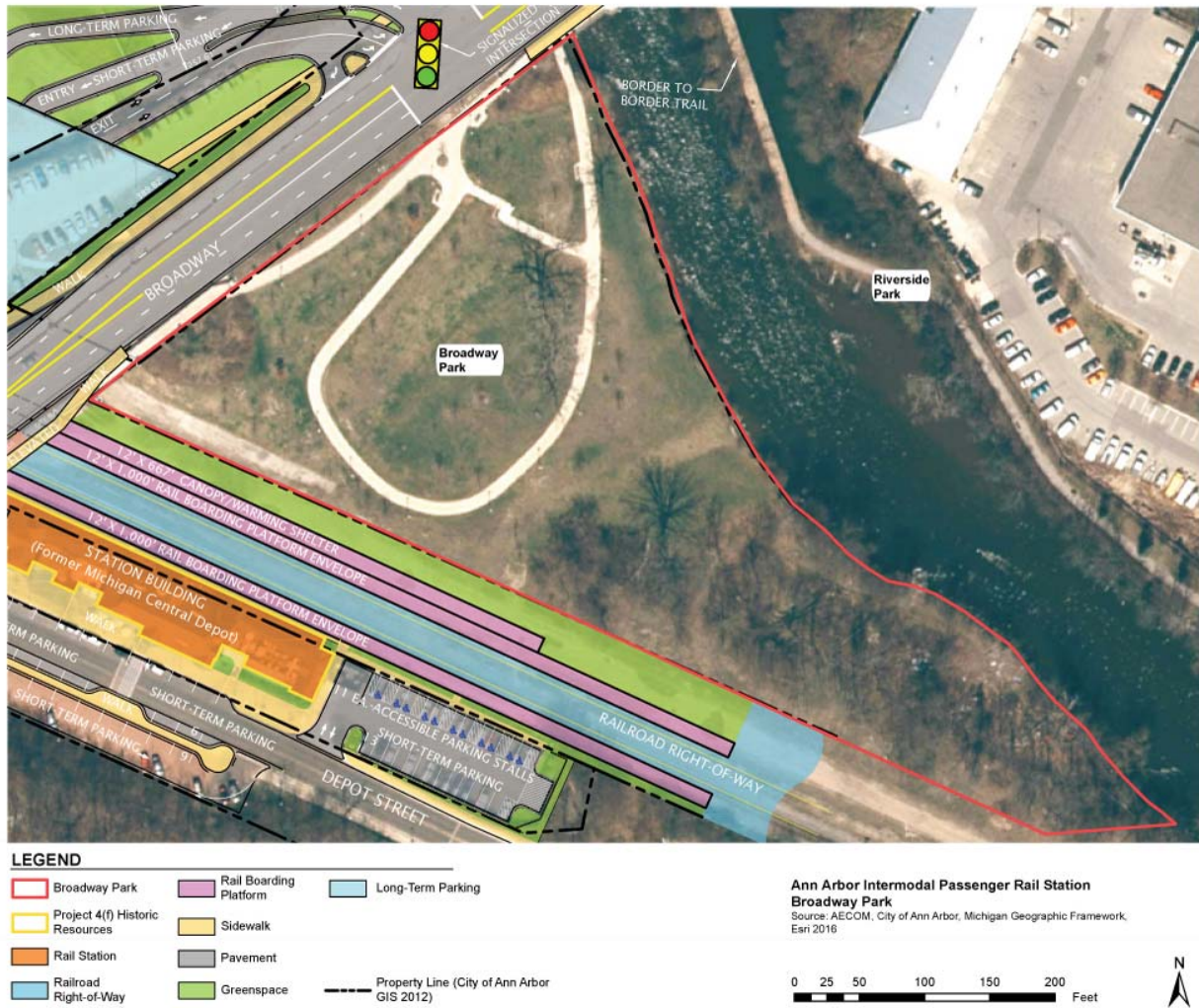
B2B = Border-to-Border

Source: City of Ann Arbor Parks and Recreation Department

Broadway Park (3.8 acres)

Broadway Park is located just north of the railroad right-of-way between the Michigan Central Depot/Gandy Dancer Restaurant and the Huron River, as shown on Exhibit 3.3. Sidewalks in Broadway Park provide paved pathway and riverfront access to the Huron River. The west sidewalk connects via a stairway parallel to the bridge. The east sidewalk widens into a shared-use path within the park. A river edge boardwalk passes beneath the bridge. The park contains passive recreation space, riverfront access, and some riparian forest. A fenced dog park opened in Broadway Park in October 2016.

Exhibit 3.3: Broadway Park



Broadway Park is located north of the railroad right-of-way, just north of the Michigan Central Depot on the Depot Street site. Build Alternative 3A would not affect Broadway Park.

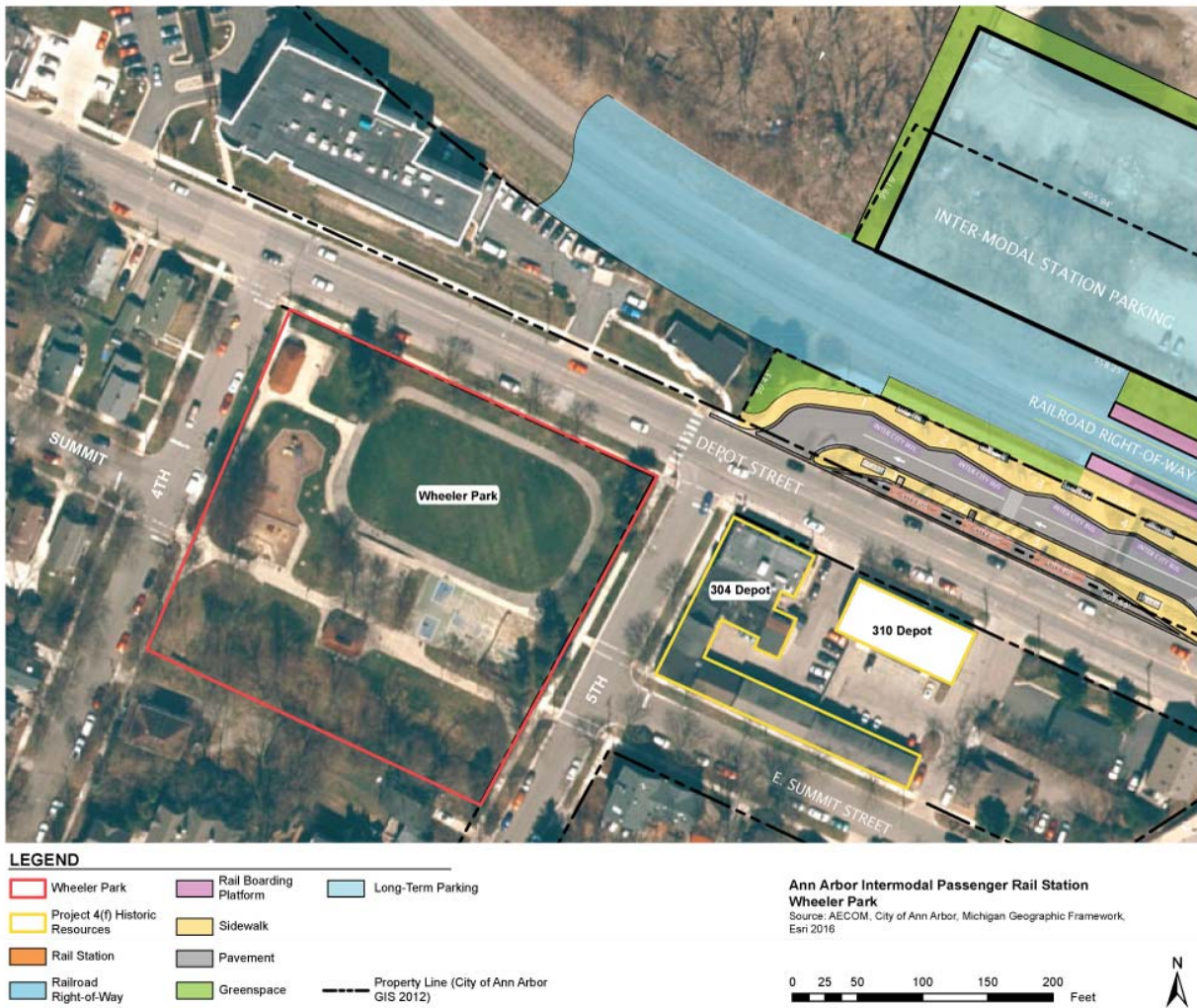
Under Build Alternatives 2A, 2B, and 2C, a platform would be installed adjacent to and north of the Michigan Central Depot, within the railroad right-of-way, adjacent to Broadway Park. Under Build

Alternatives 2A, 2B, and 2C, improvements to Broadway Street would be constructed on the western side of the roadway. No acquisition or temporary or permanent easements would be required from and no construction activities would occur within the park. Therefore, there would be no permanent or temporary use of this property under Build Alternatives 2A, 2B, and 2C.

Wheeler Park (1.9 acres)

Wheeler Park is located on the block between North 4th and 5th Avenues and Depot Street, across the street from the western end of the existing Ann Arbor Station, as shown in Exhibit 3.4. This small park, less than 2 acres in size, contains a dense concentration of facilities. Amenities at Wheeler Park include a playground, a restroom building with water fountain, a walking/running track, a basketball court, a plaza with benches, a picnic shelter with picnic tables and grills, and an open field area. There is no formal parking area, but street parking is available on the adjacent roadways.

Exhibit 3.4: Wheeler Park



Wheeler Park is located at the Depot Street site; therefore, Build Alternative 3A would not affect this park. Under Build Alternatives 2A, 2B, and 2C, the new station would be constructed and operated approximately 75 feet north of Wheeler Park. No acquisition or permanent or temporary easements would be required to implement Build Alternatives 2A, 2B, and 2C.

Fuller Park (59.2 acres)

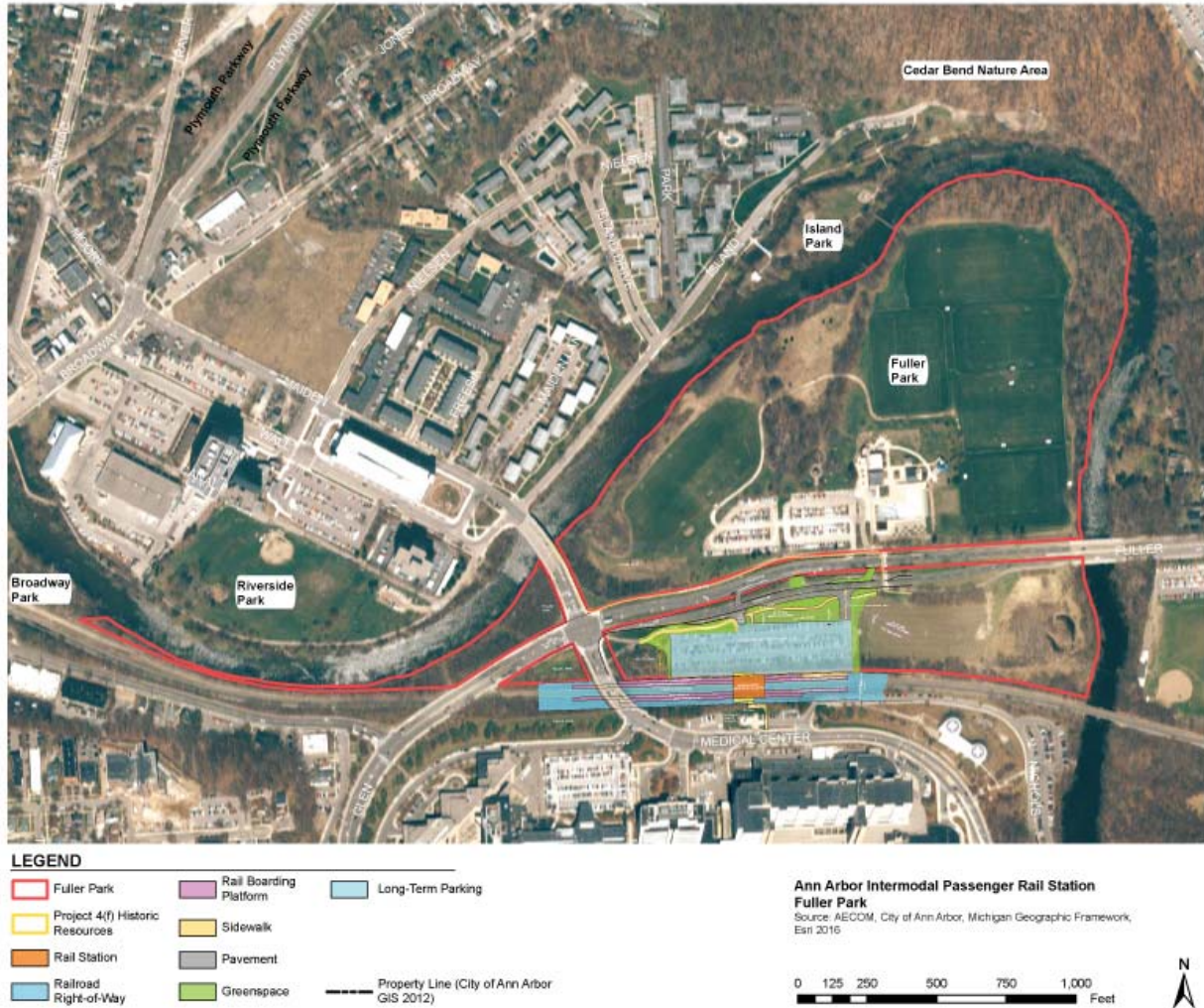
Fuller Park is a 59.2-acre park north of the railroad tracks and south of the Huron River in Ann Arbor (Exhibit 3.5). The park property is bound on the west, north, and east by the Huron River and associated wetlands and riparian forest areas. The park is divided by Fuller Road, a four-lane arterial. The B2B Trail crosses Fuller Park and is predominately north of Fuller Road; impacts on this resource are discussed separately, below.

North of Fuller Road, Fuller Park includes an outdoor pool and waterslide, multiple soccer fields, a large commuter/recreation parking lot, small wooded sections, open areas, unpaved trails, and a shared-use path. Amenities include seating, picnic shelters, picnic tables, grills, and restrooms. Fuller Park's aquatic facility is open daily from May 28 through Labor Day and hosts day camps in the summer, as well as occasional events. South of Fuller Road, Fuller Park includes an approximately 1.8 acre surface parking lot with approximately 250 parking spaces, a multi-use path, and a soccer field east of the parking lot. The surface parking lot serves both the U-M Medical Center and Fuller Park through a joint use agreement that permits U-M employees to use the lot during working hours and reserves the lot for park users in the evening and on weekends. The City's 2009 *Transportation Plan Update*³⁸ recommends integrating rail services with enhanced transit in Fuller Park, on the southern side of Fuller Road. The City's 2016 – 2020 *Parks and Recreation Open Space Plan*³⁹ (PROS Plan) references a previous plan to include an Intermodal Station in the park, but states that the City is evaluating Alternative locations for the station.

³⁸ City of Ann Arbor, The City of Ann Arbor Transportation Master Plan Update, May 2009. Available online at: http://www.a2gov.org/departments/systems-planning/planning-areas/transportation/Documents/2009_A2_Transportation_Plan_Update_Report.pdf. Accessed on October 12, 2016.

³⁹ City of Ann Arbor, Park and Recreation and Open Space Plan 2016 - 2020. Available online at: <http://www.a2gov.org/departments/Parks-Recreation/administrative/Documents/PROS%20Plan%202016.pdf>. Accessed on October 12, 2016.

Exhibit 3.5: Fuller Park



Build Alternatives 2A, 2B, and 2C would not occur at this site, and therefore would have no impact on Fuller Park. Build Alternative 3A is south of Fuller Road; there would be no permanent, temporary, or constructive use of Fuller Park on the northern side of Fuller Road.

Under Build Alternative 3A, approximately 4.7 acres (7.9 percent) of Fuller Park would experience permanent impacts from construction of the parking structure, redesigned driveways, added turn lanes, and stormwater infiltration trench. These areas would be permanently converted from a surface parking lot serving the park and the U-M Medical Center to an intermodal facility. The station building would be within the rail right-of-way immediately south of the park, above the tracks. The proposed multi-level intermodal facility and parking structure would be constructed in the location of the existing parking

area; this structure, along with station elements such as taxi stands and bus bays internal to the intermodal facility, would be constructed in the park property.

Border-to-Border Trail

The B2B Trail provides more than 24 miles of paved shared-use paths along the Huron River. In 2015, the B2B Trail was incorporated into the state-designated Iron Belle Trail. The Iron Belle Trail is a 1,273-mile biking and hiking route that traverses the western side of the Lower Peninsula and borders Lake Superior in the Upper Peninsula. The Iron Belle trail uses existing multi-use trails and follows U.S. Route 2, a designated national bicycling route in the Upper Peninsula.⁴⁰

The B2B/Iron Belle Trail is north of the Huron River, and crosses under Build Alternatives 2A, 2B, and 2C at the Depot Site. The trail is south of the river and crosses Fuller Road, in Fuller Park, approximately 30 feet from Build Alternative 3A. The B2B/Iron Belle Trail is expanding with assistance from the Washtenaw County Parks and Recreation Commission and other partners. The trail supports Huron River conservation efforts, provides opportunities for transportation and recreation, and is routed away from roads.⁴¹ The larger Iron Belle Trail also continues to be developed along the 1,273-mile route.

Build Alternatives 2A, 2B, and 2C cross the B2B/Iron Belle Trail north of the Huron River. No land from the trail would be permanently incorporated into a transportation feature under Build Alternatives 2A, 2B, and 2C. However, Build Alternatives 2A, 2B, and 2C would require construction on the Broadway Street Bridge over the B2B /Iron Belle Trail. This construction would require a temporary closure of an approximately 100-foot-long segment of the trail under the bridge, for the safety of trail users. During this temporary closure, trail traffic would have access to other segments of the trail, with detour access points at Swift Street and Wall Street. The temporary closure is anticipated to last up to 6 months during construction, less than the time needed for construction of Build Alternatives 2A, 2B, and 2C. Implementation of Build Alternatives 2A, 2B, and 2C would also require the closure of a staircase access point that leads to the trail on the north side of the Broadway Street Bridge east of the River; however access would be maintained from Swift Street, located just east of the current access point. This change in access would require up to 520 feet of additional travel, and would not require any additional street crossings, which would be a negligible impact to trail users.

The Huron River Water Trail

The Huron River Water Trail is a recreational trail that extends through several counties. The trail offers paddling recreational activities—including kayaking, canoeing, and fishing—on the Huron River within the study area. The nearest boat launches to the Build Alternatives is in Gallup Park, 1.6 miles from the Project area, and the Argo Canoe Livery—approximately 1,500 feet northwest of the Project.

⁴⁰ Michigan Department of Natural Resources. Available online at: http://www.michigan.gov/dnr/0,4570,7-153-10365_16839_71459---,00.html. Accessed on August 18, 2016.

⁴¹ eWashtenaw (Washtenaw County, Michigan). Available online at: http://www.ewashtenaw.org/government/departments/parks_recreation/greenways/greenway%20update . Accessed on September 6, 2016.

The Huron River Water Trail crosses underneath Build Alternatives 2A, 2B, and 2C at the Broadway Street Bridge and is approximately 400 feet north of Build Alternative 3A. Build Alternative 3A would not require land from this trail or result in a disruption of the use of or access to the trail. There would be no permanent or temporary use of this property from implementation of Build Alternative 3A.

No land from the trail would be permanently incorporated into a transportation feature under Build Alternatives 2A, 2B, and 2C. However, Build Alternatives 2A, 2B, and 2C would require construction on the Broadway Street Bridge over the Huron River Water Trail. This construction would require restricting recreation use from an approximately 250-foot-long segment of the river under the Broadway Street Bridge for the safety of the recreating public. During this temporary closure, boaters and other recreational users would have access to other segments of the over 100-mile-long trail, but the area under the Broadway Street Bridge would be blocked to the public. The temporary closure is anticipated to last up to 6 months during construction, less than the time needed for construction.

3.3 Transportation

This section discusses the impact of the Build Alternatives on the existing transportation system, including rail, bus, motor vehicle traffic, parking, and bicycle and pedestrian facilities. Transportation plans were also reviewed for consistency and relevance to the Build Alternatives.

Transportation impacts are considered for all transportation modes, including passenger and freight rail, private automobiles, bicycles, pedestrians, mass transit, intercity motorcoaches, taxi services and shuttles. Associated impacts and benefits are considered in local, regional, national, and international perspectives.⁴² The analysis includes:

- Rail;
- Potential for transit, non-motorized transportation and automobile access to the Build Alternatives;
- Impacts on traffic congestion (assuming that roadway mainline capacity would not be expanded for any of the Build Alternatives);
- Modifications that would be required for local intersections affected by traffic changes (mainline and intersections);
- Employment and residential population within one-half mile and how these influence non-motorized travel;⁴³ and
- Existing gaps in access to the non-motorized network with possible design solutions.

⁴² International considerations pertain to Southeast Michigan's proximity to Canada. For example, MDOT desires to re-establish passenger rail connections to Canada in the future. The Phase II analysis considered factors that would preclude future international passenger rail via Ann Arbor.⁴³ Using the national walking tolerance average of one-half mile to fixed guideway transit.⁴⁴ Intercity rail planning in the east-west passenger rail corridor through Ann Arbor are described in the Chicago – Detroit / Pontiac Passenger Rail Corridor Program. Tier 1 Draft EIS documents are available at <https://www.fra.dot.gov/Page/P0658>

⁴³ Using the national walking tolerance average of one-half mile to fixed guideway transit.⁴⁴ Intercity rail planning in the east-west passenger rail corridor through Ann Arbor are described in the Chicago – Detroit / Pontiac Passenger Rail Corridor Program. Tier 1 Draft EIS documents are available at <https://www.fra.dot.gov/Page/P0658>

3.3.1 Rail

Two railways traverse Ann Arbor: The Michigan Line and the Ann Arbor Railroad. Amtrak operates its Wolverine service on the Michigan Line with three daily round trips between Chicago, Detroit and Pontiac using the Ann Arbor Station. Norfolk Southern operates local freight service on the line in Ann Arbor, with one or two daily trains through the city. FRA and MDOT released a Draft Environmental Impact Statement in 2015 evaluating capital improvements in the passenger rail corridor between Chicago, Detroit and Pontiac that would enable higher speeds and more reliable operations, and would allow the state to increase passenger service on the line. MDOT has proposed three additional Chicago-Detroit / Pontiac round trips by 2025 and increasing to ten total round trips by 2035.⁴⁴ In August 2016, the Regional Transit Authority of Southeast Michigan approved a Master Transit Plan for Wayne, Macomb, Oakland and Washtenaw counties. The plan includes Regional Rail on the Michigan Line between Ann Arbor and Detroit. Regional Rail would serve existing and planned Amtrak stations in the corridor, including the selected Ann Arbor Station location, with eight daily round trips. As of this writing, it is not known when or if this service would commence. The Ann Arbor Railroad runs north to south through central Ann Arbor and crosses above the Michigan Line and the Huron River roughly 1,500 feet west of the existing Amtrak station. The AAATA is leading an effort for a proposed commuter rail service, the North-South Commuter Rail (former known as the WALLY), which would follow these tracks between downtown Ann Arbor and Howell, MI.

No Build Alternative

Under the No Build Alternative, a new Intermodal Station would not be constructed and the existing Amtrak station would continue to service intercity passenger rail service in Ann Arbor. As discussed in Section 1.5.1, the existing Ann Arbor Amtrak station is heavily used and during peak time does not have space in the waiting room and the parking areas to accommodate passenger volumes. Access to the station from the long-term parking areas is difficult as it requires climbing and descending the staircase to cross over tracks. Without facility enhancements, the existing station lacks amenities, including food service and wi-fi service that are planned for the Wolverine passenger rail service. As ridership grows, passengers would become even more constrained which has the potential to degrade the passenger experience. With the No Build Alternative, no construction would occur at the site, and therefore, there would be no disruption to freight or passenger rail services due to station construction.

Build Alternatives 2A, 2B, and 2C

Build Alternatives 2A and 2B would involve the construction of a new station that would include improvements such as adequate parking spaces, waiting areas and seating, wi-fi service, and food vendor service to support the projected number of passengers on the Wolverine Service. Build Alternative 2C would provide the same station amenities to support the Wolverine service as Build

⁴⁴ Intercity rail planning in the east-west passenger rail corridor through Ann Arbor are described in the Chicago – Detroit / Pontiac Passenger Rail Corridor Program. Tier 1 Draft EIS documents are available at <https://www.fra.dot.gov/Page/P0658>

Alternatives 2A and 2B, but construction would involve remodeling the interior spaces of the Michigan Central Depot/Gandy Dancer Restaurant rather than new station construction.

Build Alternative 2A would be an elevated station that would involve construction over the tracks, which may cause disruption to freight and passenger rail services during construction. Long-term, Build Alternative 2A would require maintenance that would also have the potential to disrupt freight and passenger rail services. All of the Build Alternative 2 options would involve the construction of platforms on both sides of the tracks which also have the potential to disrupt rail services. Station construction would be coordinated with the rail operators to minimize rail service disruption. In addition, Build Alternative 2A and 2B would require razing the existing station which would disrupt passengers as an alternative passenger waiting area would be required during construction. Under Build Alternative 2C the existing station would not be razed.

Build Alternative 3A

Similar to Build Alternatives 2A, 2B, and 2C, Build Alternative 3A would involve the construction of a new station that would include improvements such as adequate parking space, waiting areas and seating, Wi-Fi service, and food vendor service to support the projected number of passengers on the Wolverine Service.

Build Alternative 3A would be an elevated station that would involve the construction of platforms on both sides of the tracks as well as construction over the tracks, which may cause disruption to freight and passenger rail services during construction. Long-term, Build Alternative 3A would require maintenance that would also have the potential to disrupt freight and passenger rail services. Station construction would be coordinated with the rail operators to minimize rail service disruption. Build Alternative 3A would not involve disruption to Wolverine service passengers because the existing station would remain in service while Build Alternative 3A would be constructed.

3.3.2 Public Transit and Intercity Motorcoach Service

One AAATA transit bus route serves the existing station from downtown Ann Arbor on Depot Street, and two routes operate along the Broadway Street Bridge from downtown to north of the existing station. U-M Transit does not serve the existing station. AAATA and U-M Transit propose extending transit services to a new Intermodal Station. In addition to connecting Amtrak Thruway bus services which would serve the new station, Greyhound Lines has expressed interest in co-locating with a Build Alternative. Greyhound has minimal needs for bus pick up and drop off and can be accommodated in the proposed improvements.

No Build Alternative

The No Build Alternative maintains the existing public transit and intercity motorcoach interface at the station on Depot Street. Only one AAATA bus route connects to the station. Due to the vertical circulation barriers to Broadway Street, a lack of bus stops on the Broadway Street Bridge, existing congestion on Depot Street and no on-site transit and intercity bus facilities for loading and unloading

passengers, the No Build Alternative does not provide adequate public transit and intercity motorcoach services.

Build Alternatives 2A, 2B, and 2C

Alternatives 2A, 2B, and 2C are able to accommodate the required multimodal facilities and share similar constraints with respect to separation of modes. Due to topographical constraints, Alternatives 2A, 2B, and 2C require on-site automobile drop off/pick up and transit boarding locations to be on opposite sides of the tracks in order to achieve separate drive circulations for each. The transit boarding areas would be located along Depot Street, which is subject to recurring congestion, and on the Broadway Street Bridge.

Currently (2017) U-M transit does not serve the station area, making it difficult for University students to travel to and from their final destination. AAATA Routes 65, 21, and 22 serve the station area, but only Route 21 travels down Depot Street. Routes 65 and 22 travel along Broadway Street and do not provide direct access to the station area, as the stops are located off of the bridge and passengers would have to walk down stairs to reach the station area. All three routes operate on 30 minute frequencies. AAATA transit routes on Depot Street and Broadway Street carried 3,319 riders in 2010.⁴⁵

In order to develop transit access at the station for east-west bus routes on Broadway Street, bus stops would be constructed on the Broadway Street Bridge at the station. To minimize congestion, bus pullouts would be created on the bridge requiring the Broadway Street Bridge to be widened. Including these improvements to Build Alternatives 2A, 2B, and 2C would result in enhanced transit mobility via Broadway Street, but would include the cost of widening the Broadway Street Bridge.

Depot Street access would be impaired by recurring congestion at peak hours. Due to traffic congestion on Depot Street, the transit and passenger transportation services would have difficulty maneuvering from the bus bays on to Depot Street and operating transit connections on schedule to the station at peak hours.

Build Alternative 3A

This site has the highest concentration of existing bus service outside of downtown Ann Arbor and the U-M Central Campus based on the Southeast Michigan Council of Governments (2010) Regional weekday transit ridership, by route. Almost all U-M bus routes service this site, with ridership levels that are higher than the AAATA routes, SEMCOG's 2010 regional ridership estimates identified that roughly 32,767 U-M Transit riders use the routes that pass by the Build Alternative 3A site each weekday, while AAATA weekday transit ridership is 4,610.⁴⁶ RTA's planned Regional Rail and Ann Arbor-Ypsilanti Bus Rapid Transit (BRT) service are both proposed to connect to this area if a station is constructed on this site. The planned Regional Rail would connect to whichever site is constructed, but the planned BRT

⁴⁵ AAATA data provided by SEMCOG

⁴⁶ 2010 UM-Transit Ridership data and AAATA routes updated for comparison to 2016 routes, provided by SEMCOG.

would only have a reasonable connection to the Build Alternative 3A station area because of its proximity to major University facilities and the BRT's logical path to the Blake Transfer Center. A high-capacity transit service (*the Connector*) is being studied by the U-M, City, AAATA, and the Ann Arbor Downtown Development Authority, with a recommended route that includes Fuller Road at Build Alternative 3A. The Connector would link the area to downtown, U-M campuses, and other major activity areas. A stop is planned near this site; a Connector Stop is not planned near Build Alternatives 2A, 2B, and 2C.

3.3.3 Motor Vehicle Traffic

The City commissioned a traffic impact study (see Appendix C) to determine the impacts the alternatives would have on intersections surrounding the proposed station locations. The study evaluated peak-hour traffic conditions at 22 intersections in the study area, including the following 15 signalized intersections:

1. Main Street/Beakes Street/Kingsley Street
2. Main Street/Summit Street
3. Main Street/Depot Street
4. Broadway Street/Swift Street
5. Broadway Street/Plymouth Rd/Maiden Lane
6. Plymouth Road/Broadway Street
7. Plymouth Road/Barton Drive
8. Glen Avenue/Huron Street
9. Glen Avenue/Ann Street
10. Glen Avenue/Catherine Street
11. Glen Avenue /Fuller Road/Depot Street
12. Fuller Road/Maiden Lane/EMCD
13. Fuller Road/Cedar Bend Drive
14. Fuller Road/Bonisteel Boulevard
15. Pontiac Trail/Barton Drive

The following 7 unsignalized intersections were also evaluated:

1. Depot Street/Existing Site Access Drives
2. Depot Street/Carey Street
3. Division Street/Carey Street
4. Broadway Street/Beakes Street/Summit Street/Detroit Street
5. Broadway Street/Existing Site Access Drive
6. Fuller Road/Proposed East Site Access Drive
7. Fuller Road/Proposed West Site Access Drive

Ingress and egress lanes at the driveways for each Build Alternative were evaluated for compliance with City of Ann Arbor design standards and Michigan Department of Transportation Design Guidelines. Signal timings at the intersections were optimized based on the anticipated traffic volumes.

Traffic projected to be generated by the station site during the morning and afternoon peak-hours was assigned based on existing traffic patterns on studied roadways. The mode split for the future traffic is described for each Build Alternative later in this section. A capacity analysis was performed for the existing (2016), base year No Build (2035), and the future year (2035) conditions. In order to quantify intersection traffic operations, "Level-of-Service" (LOS) values were determined using the industry-standard *Synchro 9.0 software* package, which incorporates the methodology of the *Highway Capacity Manual*, published by the Transportation Research Board.

The term "Level-of-Service" denotes how well (or poorly) a traffic movement operates under given traffic demands, lane arrangements, and traffic controls. Each level is determined by the average amount of control delay per vehicle. Control delay is the total delay associated with stopping for a signal or stop sign, and includes four components; deceleration delay, stopped delay, queue move up time, and final acceleration delay.

LOS "A" indicates small average control delays (less than ten seconds per vehicle) whereas LOS "F" indicates longer delays and queues (over 50 seconds per vehicle at an unsignalized intersection, and over 80 seconds per vehicle at a signalized intersection). LOS "D" is typically considered acceptable peak-hour performance in an urban setting, and lower LOS values are tolerable for short time periods or during peak hours when heavier traffic volumes are expected.

No Build Alternative

For the No Build Alternative, a capacity analysis at the study area intersections was performed. Table 3.11 shows the results of the No Build Alternative capacity analysis. The 2035 No Build Alternative analysis indicated that all but one study area intersection operates at Level-of-Service "D" or better under the no build weekday morning and afternoon peak-hour conditions.

Depot Street is a two-lane, primary commuter route that experiences recurring congestion during the existing morning and afternoon peak-hours in the current year. This congestion is anticipated to continue for the 2035 No Build Alternative. While the overall LOS at the Main Street/Depot Street intersection is acceptable for the 2035 No Build Alternative, two high volume turning movements are anticipated to continue to operate at poor levels-of-service during the peak-hours as follows:

- The southbound left-turn movement from Main Street to Depot Street during the morning peak-hour is anticipated to operate over capacity at LOS "F". As the volume for the movement exceeds the capacity, the anticipated queuing will create additional delay along southbound Main Street as vehicles waiting to turn left exceed the available turn lane and spill back into the adjacent thru lane, blocking southbound thru traffic.

- The westbound right-turn movement during the afternoon peak-hour is anticipated to operate over capacity at LOS “E”. As the volume for the movement exceeds the capacity, the queue is anticipated to extend as far east as the existing station site creating delay for both automobile and bus traffic using the existing site.

Table 3.2: 2035 No Build Intersection Level-of-Service

Intersection or Intersection Approach	Base Year No Build (2035)				
	Morning Peak-hour		Afternoon Peak-hour		
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	
Signalized Intersections – Overall					
Main St/Beakes St/Kingsley St	C	29.7	D	41.7	
Main St/Summit St	C	23.2	B	10.9	
Main St/Depot St	C	24.4	C	20.6	
Broadway St/Swift St	C	30.0	B	17.4	
Broadway St/Plymouth Rd/Maiden Ln	B	16.0	C	30.3	
Plymouth Rd/Broadway St	A	3.9	A	8.8	
Plymouth Rd/Barton Dr	C	24.5	B	13.6	
Glen Ave/Huron St	C	23.8	C	26.3	
Glen Ave/Ann St	B	10.4	B	12.6	
Glen Ave/Catherine St	C	20.9	C	21.8	
Glen Ave/Fuller Rd/Depot St	B	17.3	B	19.8	
Fuller Rd/Maiden Ln/EMCD ¹	C	15.9	D	26.1	
Fuller Rd/Cedar Bend Dr	A	4.1	A	6.6	
Fuller Rd/Bonisteel Blvd	C	28.5	C	28.7	
Pontiac Trail/Barton Dr	C	24.3	C	22.0	
Two-Way STOP-Controlled Intersection Approaches					
Depot St/Carey St	Northbound	F	63.8	C	16.6
Division St/Carey St	Westbound	B	12.2	B	11.6
Broadway St/Beakes St/Summit St/Detroit St	Westbound	D	30.0	C	20.0

1. Assumes construction of roundabout by City of Ann Arbor

For the 2035 No Build Alternative, passengers being picked up and dropped off during the peak-hours are anticipated to experience delay along Depot Street with the arrival and departure of the trains. As the congestion along Depot Street will generally occur during the peak-hour, passengers utilizing off-peak trains will not be affected. A preliminary analysis performed along Depot Street indicated significant improvements would need to be implemented to address the anticipated 2035 No Build Alternative conditions as shown below, however these improvements are not included in the proposed project.

- Widening Main Street to accommodate dual southbound left-turn lanes at the Main Street/Depot Street intersection.
- Widening of Depot Street from Main Street to approximately 500 feet east of Main Street to a 5-lane section to accommodate dual westbound right-turn lanes and two eastbound lanes.
- Widening of Depot Street from approximately 150 feet west of the Broadway Street Bridge to State Street from the existing 2-lane section to a 3-lane section. The widening may require the Broadway Street Bridge over Depot Street to be lengthened.

The above Depot Street improvements were not considered to have been completed in the future year No Build or Build scenarios as the City is not considering plans to improve Depot Street at this time. Widening Depot Street and Main Street would be difficult for several reasons, including reconstructing an existing railroad bridge to accommodate the increased roadway width, right-of-way acquisition, and impacts to adjacent city park lands along Depot Street.

Based on interviews with the existing Amtrak station ticket agents, and as noted above, the No Build Alternative provides insufficient facilities for transit vehicles and customer access at drop-off / pick-up areas and the additional traffic at the station associated with projected ridership increases would only add to the existing congestion.

Under a No Build scenario, congestion at several nearby signals would be addressed through signal timing adjustments, however, the existing congestion along Main Street and Depot Street would remain. Facilities would not be available to accommodate transportation activity in the immediate vicinity of the station, resulting in additional Depot Street congestion that affects customer access, including transit, passenger drop-off / pick-up, intercity bus, and taxi services.

No construction impacts to motor vehicle traffic are anticipated for the 2035 No Build Alternative.

Build Alternatives 2A, 2B, and 2C

For traffic activity generated at the parking structure, Build Alternatives 2A, 2B, and 2C are projected to generate 297 new daily vehicle trips (195 entering trips, 102 exiting trips) in the future year (2035) weekday morning peak-hour. For the weekday afternoon peak-hour, they are projected to add 297 new vehicle trips (102 entering trips, 195 exiting trips) in the future year (2035). The projected vehicle trips were based on Amtrak ridership projections for 2035. The mode split accounts for a 10% multimodal reduction, 5% pedestrian reduction, and 10% vehicle occupancy reduction. The traffic impact study assumed one arriving and one departing train during the morning and evening peak-hours and provides additional detail regarding the projected vehicle trips. These vehicle trips were assigned to the proposed Broadway Street access drive and study intersections based on existing traffic volumes at the study area intersections and surrounding land uses.

Traffic modeling of area intersections and controlled approaches to compare the Base Year No Build (2035) with Future Year Build (2035) scenarios for Build Alternatives 2A, 2B, and 2C found only one change to morning peak-hour LOS rating (after assuming traffic countermeasures outlined the traffic impact study were implemented). The primary LOS change occurred at Main Street and Summit, improving from a "C" rating to a "B" rating. No changes in LOS were observed for afternoon peak-hour traffic for Build Alternatives 2A, 2B, and 2C.

Overall, the primary impacts of the above-mentioned additional vehicle trips include, but are not limited to:

- Requirement of a new signal at the Broadway driveway,
- Addition of northbound and southbound left and right-turn lanes at the Broadway approaches to the proposed driveway - necessitating widening two bridges,
- Construction of a mid-block crosswalk on Broadway,
- Congestion increases along Depot Street.

As part of the traffic impact study, left-turn and right-turn lane analyses were performed based on guidelines outlined in MDOT Traffic & Safety Notes 604A and 605A. These guidelines provide minimum traffic volume criteria that warrant consideration of left and right-turn lanes when met. The left-turn lane analysis revealed that a left-turn lane on northbound Broadway Street at the site driveway would be required. The construction of the left-turn lane would require the widening of the existing Broadway Street Bridge over Depot Street and the existing railroad tracks, which was incorporated into the conceptual design of Build Alternatives 2A, 2B, and 2C. The right-turn lane analysis revealed that a right-turn lane on southbound Broadway Street at the driveway would be required. The construction of the right-turn lane would require the widening of the existing Broadway Street Bridge over the Huron River, which was incorporated into the conceptual design of Build Alternatives 2A, 2B, and 2C. The left-turn and right-turn lanes would decrease the likelihood of rear-end type crashes at the proposed site driveway by allowing left- and right-turning traffic to exit the adjacent thru lane.

The future year (2035) capacity analysis revealed the Broadway Street access drive approach is anticipated to operate at LOS “F” under stop sign control during the morning and evening peak-hours with significant delay and long queues. Thus, the Build Alternatives include a traffic signal, as detailed in the traffic impact study, to maintain acceptable LOS at the site access drive. At other studied intersections, signal timing adjustments were made to accommodate anticipated traffic demand.

For Build Alternatives 2A, 2B, and 2C, a capacity analysis at the study area intersections was performed assuming the above roadway improvements were implemented as part of the project. Table 3.12 shows the results of the capacity analysis.

Table 3.3: Build Alternatives 2A, 2B, and 2C Intersection Level-of-Service

Intersection or Intersection Approach	Future Year (2035)			
	Morning Peak-hour		Afternoon Peak-hour	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Signalized Intersections – Overall				
Main St/Beakes St/Kingsley St	C	33.5	D	41.9
Main St/Summit St	B	16.1	B	10.9
Main St/Depot St	C	21.1	C	22.8
Broadway St/Swift St	C	30.8	B	17.4
Broadway St/Plymouth Rd/Maiden Ln	B	17.4	C	30.9
Plymouth Rd/Broadway St	A	3.3	A	8.5
Plymouth Rd/Barton Dr	C	24.4	B	13.5

Glen Ave/Huron St	C	24.3	C	26.7	
Glen Ave/Ann St	B	10.3	B	12.5	
Glen Ave/Catherine St	C	21.2	C	21.4	
Glen Ave/Fuller Rd/Depot St	B	19.6	B	20.0	
Fuller Rd/Maiden Ln/EMCD ¹	C	15.9	D	26.1	
Fuller Rd/Cedar Bend Dr	A	4.0	A	6.6	
Fuller Rd/Bonisteel Blvd	C	29.0	C	29.1	
Pontiac Trail/Barton Dr	C	25.7	C	23.3	
Broadway Street/Existing Station Site Driveway	A	4.7	A	7.5	
Two-Way STOP-Controlled Intersection Approaches					
Depot St/Carey St	Northbound	F	68.9	C	16.9
Division St/Carey St	Westbound	B	13.4	B	12.1
Broadway St/Beakes St/Summit St/Detroit St	Westbound	D	31.6	C	21.6

1. Assumes construction of roundabout by City of Ann Arbor

The Build Alternative 2A, 2B, and 2C capacity analysis indicated that all but one study area intersection would operate at Level-of-Service “D” or better under future year (2035) weekday morning and afternoon peak-hour conditions.

As with the No Build Alternative, two (2) movements at the Depot Street/Main Street intersection will continue to experience significant delay during both the morning and afternoon peak-hours. These poorly operating movements will have a significant impact on automobile and bus traffic for Build Alternatives 2A, 2B, and 2C as follows:

- The southbound left-turn movement from Main Street to Depot Street during the morning peak-hour is anticipated to continue to operate over capacity at LOS “F”. As the volume for the movement exceeds the capacity, the queue is anticipated to create additional delay along southbound Main Street as vehicles waiting to turn left exceed the available turn lane and spill back into the adjacent thru lane, blocking southbound thru traffic.
- The westbound right-turn movement during the afternoon peak-hour is anticipated to operate over capacity at LOS “F”. As the volume for the movement exceeds the capacity, the queue is anticipated to extend as far east as the proposed station site driveways creating additional delay for both automobile and bus traffic using the site.

Under Build Alternative 2C, additional congestion as detailed in the traffic study is expected on Depot Street because passenger drop-off/pick up would be located at the station entrance on Depot Street. This additional traffic increases the average delay for the poorly operating northbound Carey Street approach to Depot Street (LOS “F”) during the morning peak-hour. Bus and vehicular traffic utilizing the site driveways along Depot Street would also experience increased delay exiting the site due to the high traffic volumes along Depot Street. As northbound Carey Street operates poorly in existing conditions, no improvements to the intersection are included as part of the proposed project.

For Build Alternatives 2A, 2B, and 2C, motor vehicle traffic will be temporarily impacted by construction activities. Temporary lane closures will be required along Broadway Street for the construction of the

proposed left-turn and right-turn lanes at the site access driveway. Broadway Street may also need to be temporarily closed for the widening of the Broadway Street bridge.

Build Alternative 3A (Recommended Alternative)

For traffic activity generated at the parking structure, Build Alternative 3A is projected to generate 274 new daily vehicle trips (175 entering trips, 99 exiting trips) in the future year (2035) weekday morning peak-hour. During the future year (2035) weekday afternoon peak-hour, 274 new daily vehicle trips (99 entering trips, 175 exiting trips) would be generated. The projected vehicle trips were based on Amtrak ridership projections for 2035. The mode split accounts for a 10% multimodal reduction, 20% pedestrian reduction, and 10% vehicle occupancy reduction. The traffic impact study assumed one arriving and one departing train during the morning and evening peak-hours and provides additional detail regarding the projected vehicle trips. These vehicle trips were assigned to the proposed Build Alternative 3A driveways and study intersections based on existing traffic volumes at the study area intersections and surrounding land uses.

As part of the traffic impact study, a right-turn lane analysis was performed based on guidelines outlined in MDOT Traffic & Safety Note 604A. The right-turn lane analysis revealed that a right-turn lane on eastbound Fuller Road at the east site driveway would be required, which was incorporated into the conceptual design of Build Alternative 3A. It also revealed that the anticipated eastbound right-turn volume on Fuller Road at the bus only west site driveway would not meet the minimum traffic volumes as per MDOT design standards. As bus traffic generally makes turning movements at slower speeds, a right-turn lane would be recommended to avoid or mitigate congestion on Fuller Road at the west site driveway, which was incorporated into the conceptual design of Build Alternative 3A. The right-turn lanes at the site driveways would decrease the likelihood of rear-end type crashes at the proposed station driveways by allowing right-turning traffic to exit the adjacent thru lane. The existing Fuller Road crossovers would also be relocated, including a 250-foot left-turn bay at each crossover, which was incorporated into the conceptual design of Build Alternative 3A. The geometric layout of the crossovers was designed to MDOT and City of Ann Arbor standards and accommodate bus turning movements. Additional pavement opposing the crossovers to allow larger vehicles to make U-turn movements was also included in the conceptual design of Build Alternative 3A.

Under Build Alternative 3A, changes to the traffic signal timings at area intersections would be required, which was incorporated into the conceptual design of Build Alternative 3A. The intersection of Fuller Road/East Medical Center Drive/Maiden Lane experiences congestion during the peak-hours with the volume of traffic entering and exiting the U-M Medical Campus. The City is engaged with a high-priority design solution to address existing congestion at the intersection.⁴⁷ As the 2016-2021 City of Ann Arbor Capital Investment Plan (CIP) includes the reconstruction of this intersection as a roundabout, the traffic impact study assumed a roundabout would be constructed at the intersection for the future year (2035) analysis.

For Build Alternative 3A, a capacity analysis at the study area intersections was performed assuming the above roadway improvements were implemented as part of the project. Table 3.13 shows the results of the capacity analysis, which indicated that all but one study area intersection is anticipated to operate at

⁴⁷ This project received the highest total benefit score of all projects in the City's 2014-2019 Capital Improvements Plan.

Level-of-Service “D” or better under future year (2035) weekday morning and afternoon peak-hour conditions.

For Build Alternative 3A, motor vehicle traffic will be temporarily impacted by construction activities. Temporary lane closures will be required along Fuller Road for the construction of the proposed right-turn lanes at the site access driveways and the relocation of the median crossovers.

Table 3.4: Build Alternatives 3A Intersection Level-of-Service

Intersection or Intersection Approach	Future Year (2035)				
	Morning Peak-hour		Afternoon Peak-hour		
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	
Signalized Intersections – Overall					
Main St/Beakes St/Kingsley St	C	32.3	D	41.7	
Main St/Summit St	C	16.1	B	10.9	
Main St/Depot St	D	20.3	C	21.5	
Broadway St/Swift St	C	30.2	B	17.3	
Broadway St/Plymouth Rd/Maiden Ln	B	17.4	C	31.6	
Plymouth Rd/Broadway St	A	3.3	A	8.6	
Plymouth Rd/Barton Dr	C	24.5	B	14.1	
Glen Ave/Huron St	C	24.3	C	27.5	
Glen Ave/Ann St	B	10.2	B	12.3	
Glen Ave/Catherine St	C	21.5	C	21.6	
Glen Ave/Fuller Rd/Depot St	B	19.8	B	21.1	
Fuller Rd/Maiden Ln/EMCD ¹	C	15.9	D	26.1	
Fuller Rd/Cedar Bend Dr	A	4.0	A	6.6	
Fuller Rd/Bonisteel Blvd	C	29.1	C	29.3	
Pontiac Trail/Barton Dr	C	25.5	C	22.8	
Two-Way STOP-Controlled Intersection Approaches					
Depot St/Carey St	NB	F	75.1	C	17.6
Division St/Carey St	WB	B	12.2	B	11.6
Broadway St/Beakes St/Summit St/Detroit St	WB	D	30.0	C	20.0
Fuller Road/Proposed West Driveway	NB	A	9.0	A	10.0
	SB	B	10.5	B	12.2
Fuller Road/Fuller Pool Driveway	SB	B	12.4	B	13.2
Fuller Road/Proposed East Driveway	NB	B	10.0	B	12.1
Fuller Road/Proposed Crossover	NB	B	13.4	B	12.3

1. Assumes construction of roundabout by City of Ann Arbor

3.3.4 Parking

Amtrak's anticipated future demand for long-term intercity rail parking in Ann Arbor (year 2035) is roughly 870 spaces.⁴⁸ An access demand analysis identified a similar intercity rail parking demand. The access demand analysis considered:

- Station activity estimates from the Chicago-Detroit/Pontiac Tier 1 Draft EIS;
- Central Ann Arbor urban setting and transportation patterns;
- Non-motorized travel and travel modes to work and education in Ann Arbor (US Census American Community Survey (ACS), 2014);
- University of Michigan enrollment compared to the general population;
- Estimated origins and destinations of Ann Arbor riders in the Chicago-Detroit/Pontiac Tier 1 Draft EIS; and
- Directional travel between Ann Arbor and other line stations.

Short-term intercity rail parking needs were projected to require 50 parking spaces. This includes 25 spaces for pick-up/drop-off, 10 spaces for taxi service, and 10 for private shuttle (at 1.5 typical parking spaces per shuttle).

An additional 250 daily parking spaces are anticipated to be needed if the proposed commuter rail service between Ann Arbor and Detroit; however, the *Regional Transit Authority of Southeast Michigan* will be responsible for the additional spaces.

The existing surface parking lot within Fuller Park extends about 75 feet north and parallel to the tracks, and contains about 250 spaces. This lot serves both the U-M and Fuller Park through a joint use agreement that permits University employees to use the lot during working hours and reserves the lot for park users in the evening and on weekends. For Build Alternative 3A, a parking structure would be placed at the existing parking lot location and would accommodate the need for free parking for Fuller Park users after 4:00pm on the weekdays and on weekends by utilizing parking management practices at the parking structure.

No Build Alternative

The No Build Alternative would continue to use the existing parking arrangements at the existing station. Long-term parking customers would use any available capacity at the long-term lot and navigate the stairwells to access the station. Customers would seek arrangements at other parking facilities for additional parking due to anticipated increase in demand from increased ridership.

Build Alternatives 2A, 2B, and 2C

Build Alternatives 2A, 2B, and 2C all assume structured long-term parking, both to minimize the station footprint and because little land is available for surface parking. Each parking deck level would accommodate roughly between 275 – 384 parking spaces, depending on the configuration of the structure, which could be phased horizontally, as needed. This would provide sufficient capacity for

⁴⁸ Communication from Amtrak dated April 27, 2014.

short and long term parking at the parking structure. During construction the existing short and long term parking will be displaced and relocated temporarily.

Build Alternative 3A

Build Alternative 3A is anticipated to provide sufficient capacity for short and long term parking at the parking structure along with maintaining 150 spaces for park users. It is anticipated however that 150 parking spaces will be temporarily removed during construction. A temporary lot will be created to the east of the existing lot during the construction of the station and will be restored once the station is complete.

3.3.5 Bicycle and Pedestrian

This section describes non-motorized connectivity between the Build Alternatives and Ann Arbor activity centers. Internal pedestrian circulation measurements for the Build Alternatives are displayed in Tables 3.11, 3.12 and 3.13.

No Build Alternative

Existing barriers to non-motorized mobility at the station would remain. The most pronounced of these is the vertical circulation point between Depot Street and Broadway Street, which provides a stairwell only. Pedestrians and bicyclists coming to/from the station from/to the north, including those using the B2B Trail, would have to use the stairs from Broadway Street to Depot Street. In addition, the existing station provides only four bicycle hoops for secure bicycle storage. Amtrak Ticket Agents noted that bicyclists secure their bikes to a variety of fixed objects in the area, including fences and posts. These informally parked bikes sometimes cause obstructions and mobility hazards along the station platform. In addition, the internal site circulation for passengers between long-term parking and the existing platform requires use of the stairwells on both sides of the tracks with no direct alternate path. The lack of bicycle parking and the site circulation for passengers using the long term parking lot are not sufficient to accommodate increased ridership demand.

Table 3.5: Internal Pedestrian Circulation – No Build Alternative

No Build Alternative	Feet
Platform to Station	30
Parking to Station	720
Transit to Station	160
<i>On-Site Bus Bays near Depot Street</i>	<i>n/a</i>
<i>Broadway/Swift Stop</i>	<i>1,100</i>
<i>Beakes/Detroit Stop</i>	<i>680</i>
<i>Average Total</i>	<i>890</i>

Build Alternatives 2A, 2B, and 2C

These Build Alternatives offer benefits and minimal impacts to non-motorized circulation. Internal site circulation distances for Build Alternatives 2A, 2B, and 2C are displayed in Table 3.11.

Implementation of Build Alternatives 2A, 2B, and 2C would require the closure of a staircase access point that leads to the trail on the north side of the Broadway Street Bridge east of the River; however access would be maintained from Swift Street, located just east of the current access point. This change in access would require up to 520 feet of additional travel, and would not require any additional street crossings, which would be a negligible impact to trail users.

Elevators and other vertical circulation elements between the station platforms and Broadway Street Bridge walkways would provide for the grade change between Ann Arbor neighborhoods and the station and establish barrier-free paths. Elevators to the bridge would also create a barrier-free connection to the B2B/Iron Belle Trail via Broadway Street Bridge sidewalks. The pedestrian crossing on the Broadway Street Bridge, required for accessing transit bays along the bridge’s northbound lanes, would provide an additional traffic signal synchronized with the new traffic signal at the parking structure ingress/egress point.

Build Alternative 2A would have an elevated station and has the shortest cumulative internal pedestrian circulation distances of Build Alternatives 2A, 2B, and 2C. Pedestrians would access the station building from Broadway Street via the vertical circulation, elevators and stairways. Bicyclists would have bicycle parking, shared bicycle providers and a bicycle room within the Parking Structure. There is a bicycle path that leads to the parking structure from the Broadway Street Bridge. From Depot Street pedestrians and bicyclists could access Broadway Street the station via vertical circulation.

Build Alternative 2B would have a ground-level station building. This design would require that pedestrians and bicyclists entering the station from Depot Street would use the vertical circulation next to the Broadway Street Bridge to reach the station building and the bicycle parking area in the parking structure. The parking structure would also include shared bicycle providers and a bicycle room. Passengers traveling by bicycle from Broadway Street would travel to the parking structure via the designated bicycle path.

Build Alternative 2C would provide easier access to pedestrians on Depot Street. Bicyclists on Depot Street would use the elevator to access the Broadway Street Bridge to enter parking structure and bicycle parking area. A bicycle parking area would also be located below the Broadway Street Bridge. Pedestrians on Broadway Street would use vertical circulation to descend to Depot Street to arrive at the station building. Build Alternative 2C provides 39 short-term parking spaces on Depot Street and creates a complex internal pedestrian circulation pattern as passengers’ transition between the parking structure and a station building at opposite corners of the site. The parking structure in this Build Alternative would be located the farthest away and would involve the longest walk and use vertical circulation.

Table 3.6: Internal Pedestrian Circulation - Build Alternatives 2A, 2B, and 2C

Build Alternative 2A	Feet
WB Platform to Station	145
EB Platform to Station	145
Parking to Station	250

Transit to Station	
<i>On-Site Bus Bays near Depot Street</i>	490
<i>NW Broadway Street Bridge</i>	35
<i>SE Broadway Street Bridge</i>	100
<i>Average Total</i>	208.33
Build Alternative 2B	Feet
WB Platform to Station	115
EB Platform to Station	230
Parking to Station	260
Transit to Station	
<i>On-Site Bus Bays near Depot Street</i>	575
<i>NW Broadway Street Bridge</i>	110
<i>SE Broadway Street Bridge</i>	175
<i>Average total</i>	286.67
Build Alternative 2C	Feet
WB Platform to Station	430
EB Platform to Station	155
Parking to Station	670
Transit to Station	
<i>On-Site Bus Bays near Depot Street</i>	705
<i>NW Broadway Street Bridge</i>	305
<i>SE Broadway Street Bridge</i>	240
<i>SE Broadway Street Bridge (no SE elevator)</i>	360
<i>Average total</i>	402.5

Build Alternative 3A

Build Alternative 3A offers similar internal pedestrian circulation distances as under Build Alternatives 2A, 2B, and 2C, and the shortest cumulative distance. This Build Alternative offers benefits and no impacts to non-motorized circulation. Internal site circulation distances are displayed in Table 3.12.

Pedestrians and bicyclists would access the station site from either the multi-use path on the south side of Fuller Park or from the B2B Trail on the north side of Fuller Road and crossing over Fuller Road to the south at the pedestrian crossing east from the site. The multi-use path will follow a walkway through the first floor of the parking structure to the north platform and vertical circulation (stairs and elevators) to access the station itself and the south platform. This Build Alternative would provide vertical circulation between the Huron River Valley from the station to East Medical Center Drive via a bridge link from the station to the sidewalk at grade on East Medical Center Drive. Elevators and walkways within the U-M Medical Center would complete a barrier free path between the station, U-M Medical Center and Central U-M campus. Bicycle parking, shared bicycle providers and a bicycle room would be provided within the parking structure.

Under this Build Alternative, the tracks are located beneath an elevated station and the parking structure is located to the north of the station and tracks. Pedestrian access to the station will be direct where possible and avoid any up and down travel.

Table 3.7: Internal Pedestrian Circulation, Build Alternative 3A

Build Alternative 3A	Feet
WB Platform to Station	30
EB Platform to Station	30
Parking to Station	150
Transit to Station	
<i>NB Med Ctr</i>	300
<i>SB Med Ctr</i>	260
<i>On-Site Bus Bay Area Within Parking Deck</i>	190
<i>Average total</i>	250

3.4 Water Resources

The study area that was used to consider the effects to water resources from the Build Alternatives include the footprint and any adjacent water resources, most notably the Huron River.

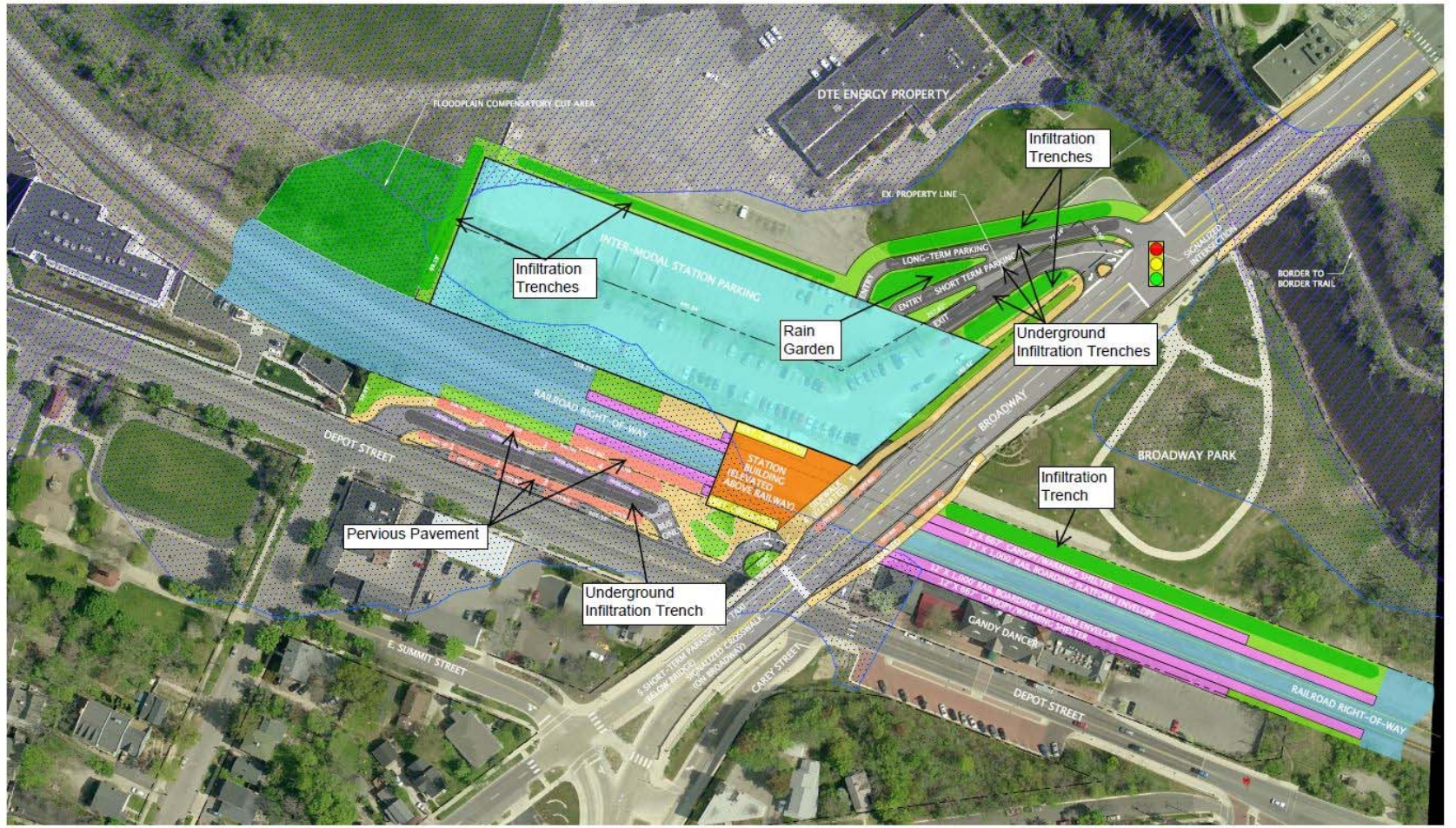
3.4.1 Floodplains

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps were used to define the floodplain at the sites. Regulatory floodplains were identified and assessed in accordance with Executive Order 11988: Floodplain Management, (FEMA, Flood Insurance Rate Map, Washtenaw County Michigan, Map Number 26161C0261E, April 2012). The National Flood Insurance Program determined the regulatory floodways, floodplains, and other flood hazard areas for Washtenaw County and the City of Ann Arbor. The Federal Emergency Management Agency regulates activities associated within these designated areas.

In addition to the regulatory floodplains, the Build Alternatives would be partially overlapping (Build Alternative 3A) or fully (Build Alternative 2A, 2B, and 2C) within dam break inundation areas. There are no regulatory requirements for these areas.

Exhibit 3.6 - Exhibit 3.9 illustrate the flood hazard areas in the vicinity of the Build Alternatives.

Exhibit 3.6: Build Alternative 2A Flood Hazards and Stormwater Management Practices



SCALE IN FEET
0 25 50 100
NORTH ^
SCALE: 1"=50'

LEGEND

Rail Station	Rail Boarding Platform	Pavement	Long-Term Parking	Bicycle Parking (below bridge)	Floodplain limits	Inter-City Motorcoach	Traffic Signal	Property Line*
Railroad Right-of-Way	Sidewalk	Greenspace	Vertical Circulation	Optional Storm Water Detention	Floodway limits	City Bus		

DATE: 10.27.16

*Source City of Ann Arbor GIS 2012

Exhibit 3.7: Build Alternative 2B Flood Hazards and Stormwater Management Practices



SCALE IN FEET
 50 0 25 10 100
 NORTH ^
 SCALE: 1" = 50'

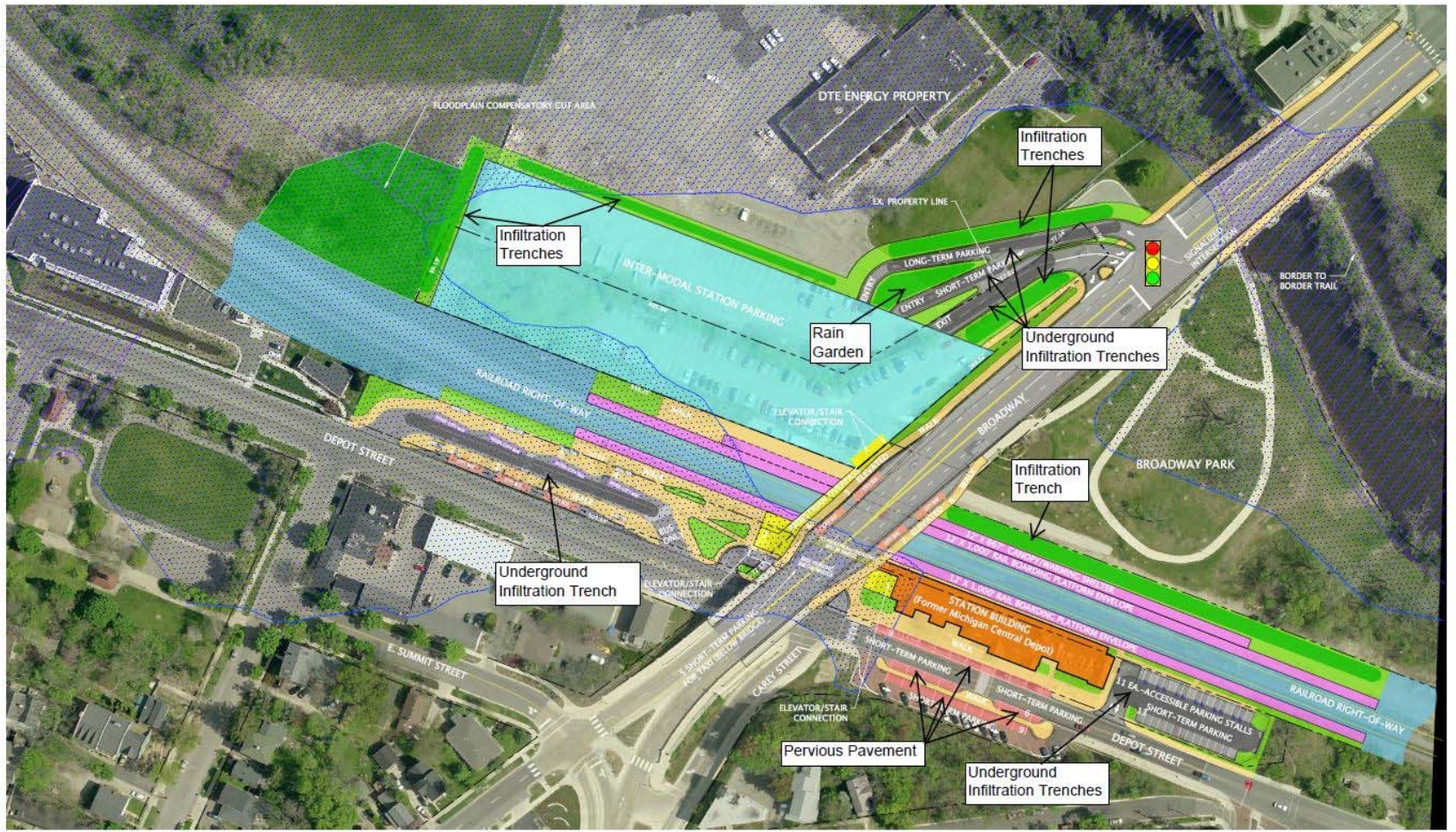
LEGEND

Rail Station	Rail Boarding Platform	Pavement	Long-Term Parking	Bicycle Parking (below bridge)	Floodplain limits	Inter-City Motorcoach	Property Line*
Railroad Right-of-Way	Sidewalk	Greenspace	Vertical Circulation	Optional Storm Water Detention	Floodway limits	City Bus	Traffic Signal

DATE: 10.27.16

*Source City of Ann Arbor GIS 2012

Exhibit 3.8: Build Alternative 2C Flood Hazards and Stormwater Management Practices



LEGEND

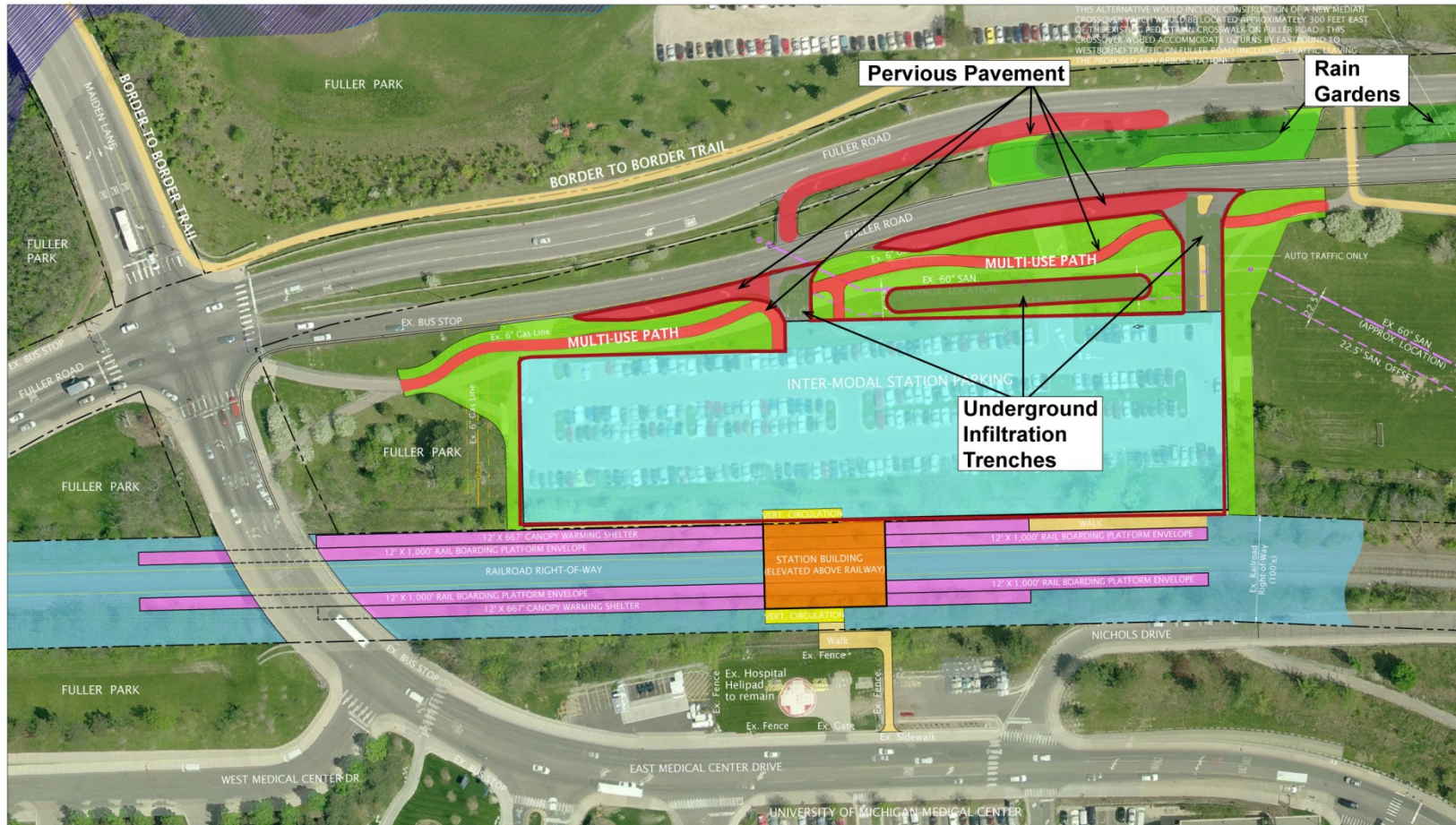
 Rail Station	 Rail Boarding Platform	 Pavement	 Long-Term Parking	 Bicycle Parking (below bridge)	 Floodplain limits	 Inter-City Motorcoach	 Property Line*
 Railroad Right-of-Way	 Sidewalk	 Greenspace	 Vertical Circulation	 Optional Storm Water Detention	 Floodway limits	 City Bus	 Traffic Signal

NORTH ^
SCALE: 1"=50'

DATE: 10.27.16

*Source: City of Ann Arbor GIS 2012

Exhibit 3.9: Build Alternative 3A Flood Hazards and Stormwater Management Practices



LEGEND

Rail Station	Rail Boarding Platform	Pavement	Long-Term Parking	Sanitary Offset Line	Property Line (City of Ann Arbor GIS 2012)
Railroad Right-of-Way	Sidewalk	Greenspace	Vertical Circulation	Existing Sanitary Sewer	Floodplain Limits
				Existing Gas Line	Park Impacts
				Ex. Gas Easment Line	

SCALE: 1"=40'



DATE: 08.11.16



No Build Alternative

The No Build Alternative would not create new adverse effects to the floodplain or floodway. The existing site for Build Alternatives 2A, 2B, and 2C is developed within the floodplain and floodway for Huron River, and within the floodplain for Allen Creek. The City of Ann Arbor is in the process of designing flood mitigation measures for Allen Creek, which lies immediately west of the Depot Street site. These measures would consist of improving the flood conveyance under the existing railroad tracks. Based on a technical memorandum to the City,⁴⁹ the flood extents associated with Allen Creek would be reduced from a flood elevation of 779.5 ft. to 773 ft. with mitigation (Exhibit 3.10), which would remove most of the Depot Street site from the Allen Creek floodplain. These improvements to Allen Creek are anticipated to occur in 2018.

Build Alternatives 2A, 2B, and 2C

Build Alternatives 2A, 2B, and 2C would be near the Huron River and within the regulated floodway and 100-year floodplain, as defined by Part 31 of the Michigan Natural Resources and Environmental Protection Act. Minor impacts to the floodplains would occur, and mitigation via compensatory storage, would be required per Part 31 of Natural Resources and Environmental Protection Act for any fill within the floodplain, see Table 3.8. A compensatory storage allows for the storage of floodwater to offset the loss of flood storage capacity due to development in a floodplain. Compensatory storage will help prevent flood damage to the potential station building.

A small portion of the proposed development under Build Alternatives 2A, 2B, and 2C would occur within the floodway. Modeling of the Huron River floodway during preliminary engineering would insure no harmful interference, such as rise in flood elevation or diversion of flows that result in adverse impacts to adjacent properties. The City of Ann Arbor has developed a calibrated hydrologic and hydraulic model for the Huron River to account for climate changes and modern precipitation events. This model would be used for evaluation of impacts during the preliminary engineering phase. Additionally, to ensure resiliency, floodplain impacts have been evaluated based on the 500-year floodplain (0.2 percent annual chance) extents (or limits of flooding) as this is anticipated to be equivalent to the future 100-year (1 percent annual chance) floodplain.

All proposed structures developed within the floodplain and floodway would be required to either have a finished floor elevation at least 1 foot above the 1 percent annual chance flood elevation or the structure to be flood-proofed to the same elevation. Table 3.8 provides estimates of impacts to the floodplain and floodway for each Build Alternative. It is anticipated that mitigation for floodplain and floodway impacts can be managed onsite with compensatory storage (defined above).

⁴⁹ Allen Creek Technical Memorandum, http://www.a2gov.org/departments/systems-planning/planning-areas/water-resources/Documents/2013-1216_FINAL_REPORT.pdf (OHM 2013)

Table 3.8: Water Quality and Floodplain Impacts for Build Alternatives

	No Build	Build			Build
		Alt 2A	Alt 2B	Alt 2C	Alt 3A
Area of Development (acres)	N/A	7.99	8.29	9.44	4.73
Existing Impervious Area (acres)	N/A	4.09	4.09	5.33	2.74
Existing Percent Impervious	N/A	51%	49%	56%	42%
Proposed Impervious Area (acres) ¹	N/A	6.30	6.10	7.40	4.80
Proposed Percent Impervious	N/A	79%	74%	78%	75%
500-yr Floodplain impacts (acres)	N/A	4.30	4.59	4.43	0
Floodway impacts (acres)	N/A	0.15	0.35	0.16	0
Infiltration volume requirement (ft ³)	N/A	21,849	19,947	23,732	15,552
Compensatory Storage (acres)	N/A	0.60	0.60	0.60	0

Note: Floodplain impacts include previously developed area.

Note: Retention volume for Depot Street site would likely not be required

¹ See Section 3.7.4 for further detail

Additionally, under Build Alternatives 2A, 2B, and 2C, the Broadway Street Bridge would be widened. If the expansion of the bridge and its substructures (piers and abutments) were to exceed 24 feet, hydraulic analysis would be required to ensure no harmful interference to the floodplain or floodway. The City would seek to minimize impacts as the bridge design is refined during preliminary engineering.

The City of Ann Arbor is in the process of designing flood mitigation measures for Allen Creek, which lies immediately west of the Depot Street site. These measures would consist of improving the flood conveyance under the existing railroad tracks. Based on a technical memorandum to the City,^{50,51} the flood extents associated with Allen Creek would be reduced from a flood elevation of 779.5 feet to 773 feet with mitigation (Exhibit 3.10), which would remove most of the Depot Street site from the Allen Creek floodplain. If the Allen Creek project were completed prior to the Station construction, compensatory mitigation requirements would be reduced. If not, appropriate mitigation would need to be completed with the Station construction.

Because Build Alternatives 2A, 2B, and 2C would be located within a dam inundation area, the City would consult with its emergency management staff along with County staff prior to completing final design to ensure community emergency action plans appropriately account for the new development.

Exhibit 3.10: Allen Creek: Reduced Floodplain Area Elevation (in feet):

⁵⁰ Allen Creek Technical Memorandum, http://www.a2gov.org/departments/systems-planning/planning-areas/water-resources/Documents/2013-1216_FINAL_REPORT.pdf

⁵¹ OHM, 2013



Source: OHM Advisors, 2013

Build Alternative 3A

Build Alternative 3A would not be located within regulated floodplains or flood hazard areas. No impacts to floodplains and floodways would occur under Build Alternative 3A.

3.4.2 Rivers and Streams

Water resources in the study area include the main branch of the Huron River watershed from Barton Pond to Dixboro Dam.⁵² Through the study area, the river is primarily slow-moving and lake-like due to the presence of several dams. This 8.5-river-miles section of the Huron River flows east to west and includes the following features:

Dams:

- Barton Dam, Argo Dam and Dixboro Dam

Impoundments behind each of the dams:

- Barton Pond, Argo Pond and Geddes Pond, comprising approximately 8 miles of the study area

Boat launches:

- Barton Park, Bandamer Park, Argo Launch, Island Park, Gallup Park (3) Launches

⁵² U.S. Geological Survey [USGS] Hydrologic Unit [HU] 0409005

Major creeks that enter the Huron River within or near the study area:

- Boyden Creek, Honey Creek, Allen Drain, Traver Creek, Millers Creek, and Mallets Creek

The designated uses that apply to the Huron River are:

- Agriculture
- Industrial water supply
- Public water supply
- Navigation
- Warmwater fishery
- Other indigenous aquatic life and wildlife
- Partial body contact recreation
- Total body contact recreation between May 1 and October 31

The only available designated use that is not applicable to this section of the Huron River is “cold water fishery.”

Specific impairments to the Huron River in the study area include warm water fishery and public water supply limitations in Barton Pond due to high levels of Polychlorinated Biphenyl (PCB). Habitat deterioration in Mallets Creek has led to impairment of its warm water fishery and other indigenous aquatic life and wildlife. Partial or total body contact is impaired in the Huron River between the Argo and Geddes Dams, and in a section of Honey Creek due to periodic high pathogen counts.

Segments listed as impaired with scheduled or completed Total Maximum Daily Loads are:

- Huron River from Geddes Pond Dam to Argo Dam and Allen Creek impaired for pathogens
- Mallets Creek impaired for poor fish and macroinvertebrate community
- Honey Creek impaired for pathogens
- Huron River impaired for fish consumption (PCB)

No Build Alternative

The No Build Alternative would not create new adverse effects to rivers and streams. It does not directly abut to or encroach on the Huron River or its tributaries. As such, there are no direct impacts to the river. However, because the sites are developed there are indirect impacts associated with stormwater runoff and pollutant loads. These indirect impacts are quantified and discussed further in Section 3.18.

Build Alternatives 2A, 2B, and 2C

The current site for Build Alternatives 2A, 2B, and 2C is developed and the proposed uses would not directly affect the Huron River because it is not encroaching on the river, but indirect impacts, such as increased pollutant loads and runoff volume, may occur from stormwater runoff. Water quality and runoff volume measures are being proposed to mitigate any future stormwater related impacts to the Huron River. Refer to Section 3.18 for detailed discussion of the proposed measures. Therefore, with the implementation of mitigation measures, no additional impacts to rivers and streams are anticipated from Build Alternatives 2A, 2B, and 2C.

Build Alternative 3A

The current site for Build Alternative 3A is developed and the proposed uses would not directly affect the Huron River because it is not encroaching on the river, but indirect impacts, such as increased pollutant loads and runoff volume, may occur from stormwater runoff. Water quality and runoff volume measures, such as structural and non-structural Best Management Practices (BMPs), are being proposed to mitigate any future stormwater related impacts to the Huron River. Refer to Section 3.18 for detailed discussion of the proposed measures. Therefore, with the implementation of mitigation measures, no additional impacts to rivers and streams are anticipated from Build Alternative 3A.

3.4.3 Stormwater and Water Quality

During site development or redevelopment, changes in site characteristics, such as slope and surface material (impervious versus pervious), can have impacts to the storm water runoff volume, peak flow rate, and water quality. Increases in slope and impervious cover reduce opportunity for infiltration, which results in increased runoff volume and peak flows. This change in surface condition also increases the opportunity for introducing pollutants, as well as increasing the capacity of the runoff to carry those pollutants.

Assessment of the site development impacts are based on the City of Ann Arbor and Washtenaw County stormwater regulations. These regulations require the treatment of the first flush, or first 1 inch of rainfall and the detention of up to the 100-year storm event with a discharge no to exceed 0.15 cubic feet per second (cfs) per acre from upland areas (non-floodplain) to nearby waterbodies. All BMPs (detention basin, infiltration trenches, rain gardens, and pervious pavement) were conceptually designed to meet these standards. Below is a description of the proposed changes and the anticipated mitigation options.

No Build Alternative

The No Build Alternative would result in no new impact to stormwater and water quality. Because the site is developed, they produce increased runoff compared with undeveloped sites. Additionally, they would likely contribute pollutants typical to parking lots (sediments and hydrocarbons). There are currently (2017) no known BMPs at the Depot Street site. The Fuller Street site does drain to an existing detention basin, to the east, that controls peak flows.

Build Alternatives 2A, 2B, and 2C

Under all of the Build Alternatives, the Intermodal Station would increase the total amount of impervious surface within the Depot Street site, which would in turn create an increase in stormwater runoff, as shown in Table 3.10. The Build Alternatives would be constructed on a previously developed site in an urbanized area. The existing land use at Depot Street is predominately parking lots. Temporary impacts from stormwater and sedimentation would occur during the construction period. These impacts would be mitigated by erosion control measures such as silt fencing and temporary detention basins to reduce sedimentation as required by the City of Ann Arbor and Washtenaw County. The project will require a Soil Erosion and Sedimentation Control permit from the County and as part of the zoning process will be required to meet Ann Arbor stormwater requirements.

Under Build Alternative 2A, the amount of impervious surface area at the site would increase by 28%, from 4.09 acres to 6.30 acres. Under Build Alternative 2B, the amount of impervious surface area at the site would increase by 25%, from 4.09 acres to 6.10 acres. Under Build Alternative 2C, the amount of impervious surface area at the site would increase by 22%, from 5.33 acres to 7.40 acres. Due to the close proximity of the Depot Street site to the Huron River, flood discharge mitigation (e.g. managing peak flow rates discharged from the site) may be waived from permit and design requirements if the time to peak flooding for the site is significantly different from that of the river for flood events. This permit would be granted as part of the review and approval of the project by the City and County. Water quality and channel protection requirements are included in the conceptual design and would need to be incorporated into the permit application and final design. City and County approved BMPs include infiltration trenches, pervious pavement, and rain gardens reflected in the conceptual design illustrated in Exhibit 3.6 - Exhibit 3.8. These would satisfy water quality and channel protection requirements on-site by treating stormwater runoff and reducing runoff volume.

The City has suggested there is the potential that groundwater may be contaminated in the vicinity of the project site related to nearby contaminated sites (see Section 3.16 for more information regarding contaminated sites). Therefore, infiltration measures may not be feasible; excess detention storage (120 percent of design storage) could be provided in lieu of infiltration. Based on the volume requirements presented in Table 3.10, stormwater management requirements could be addressed on-site under Build Alternatives 2A, 2B, and 2C using City and County approved BMPs listed above. With the implementation of these BMPs, storm water runoff volume and water quality impacts would be mitigated.

Build Alternative 3A

Under Build Alternative 3A, the amount of impervious surface area would increase by 33%, from 2.74 acres to 4.80 acres. The existing site is serviced by a storm water detention basin further to the east. This facility would continue to be utilized to manage peak flows from the site, while additional on-site BMPs, potentially including detention basins, infiltration trenches, pervious pavement, bio retention basins/swales, subsurface infiltration systems, and green roofs, would be used to address increased water quality and runoff volume needs. These measures would be in addition to the existing stormwater management facility servicing the site to collectively meet the water quality, channel protection, and flood discharge requirements. Additionally, temporary impacts from stormwater and sedimentation would occur during the construction period.

Erosion and sedimentation caused by construction activities would affect drainage patterns and water quality. In accordance with the City of Ann Arbor and Washtenaw County soil erosion control requirements, an erosion control plan would be developed and implemented prior to construction. The plan would incorporate measures to control nonpoint source impacts as recommended in the Michigan Nonpoint Source Best Management Practices Manual (2015). These best practices include, but are not limited to the use of: berms, dikes, silt barriers, catch basins, seeding and mulching, and conforming to proper clean-up practices.

3.5 Threatened and Endangered Species

The U.S. Endangered Species Act (ESA) of 1973, as amended, provides protections for species listed as threatened or endangered in the ESA. “Threatened” means that a species is likely to become endangered in the foreseeable future. “Endangered” means that a species is in danger of extinction throughout all or a significant portion of its range. The U.S. Fish and Wildlife Service (USFWS) has primary responsibility for identifying federal threatened and endangered species and for administering protection of these species.

Part 365, “Endangered Species Protection,” of Michigan Act 451 (Public Acts of 1994, as amended) has similar definitions of threatened and endangered species listed by the State of Michigan.

The Michigan Natural Features Inventory (MNFI) collects, analyzes, and communicates information about rare and declining plants and animals native to Michigan. MNFI provided a “rare species review”⁵³ for the Build Alternatives and nearby areas. MNFI’s rare species review includes the known presence of state and federal-listed threatened and endangered species in the study area. The MNFI rare species review identified 33 species: 28 state listed species and 6 federally listed species (one species is both federally and state listed) documented to occur within approximately one mile of the Build Alternatives.

The USFWS county list of federally-protected species in Washtenaw County was also reviewed⁵⁴. This list identified 7 species, including 4 endangered species, 2 threatened species, and 1 proposed threatened species.

Typical habitat information for the 33 threatened and endangered species was obtained from the USFWS, MNFI and the University of Michigan herbarium’s *Michigan Flora Online*.⁵⁵ “Critical habitat” is defined in the Endangered Species Act as specific geographic areas that are essential for conservation of a threatened or endangered species and that may require special management and protection. Critical habitat is designated by the USFWS. There is no designated critical habitat in the study area (Table 3.9).

Table 3.9 identifies the state-listed species identified within approximately one mile of the Build Alternative sites, federally-listed species from Washtenaw County and habitat for these species.

Table 3.9: Federal and State Threatened and Endangered Species Within one half Mile of Build Alternatives

⁵³ Michigan Natural Features Inventory, 2016. Rare Species Review.

⁵⁴ USFWS, 2016. County Lists. www.fws.gov/midwest/endangeredlist/cty.

⁵⁵ Reznicek, A. A., E. G. Voss, & B. S. Walters, 2011. Flora Online. University of Michigan herbarium. <http://michiganflora.net/species.aspx?id=2613>

Species	Common Name	Type	Status	Habitat	Habitat Present?
<i>Noturus stigmosus</i>	Northern madtom	Fish	State endangered	Streams, rivers and lakes (3)	No
<i>Falco peregrinus</i>	Peregrine falcon	Bird	State endangered	Cliffs and buildings, bridges	Yes (nest at University of Michigan Hospital)
<i>Myotis septentrionalis</i>	Northern long-eared bat	Mammal	Federal threatened	Upland forests (2). Critical habitat "not prudent" (USFWS, 2017a)	Yes (summer)
<i>Myotis sodalis</i>	Indiana bat	Mammal	Federal and state endangered	Stream corridors with riparian woods, woodlots within three miles of streams (2). Critical habitat: Caves in IL, IN and MO. (USFWS 2017b)	Yes (summer)
<i>Cryptotis parva</i>	North American least shrew	Mammal	State threatened	Dry upland meadows with dense coverage of grasses and forbs, marshy areas, fencerows, and woodland edges. (3)	No
<i>Clonophis kirtlandii</i>	Kirtland's snake	Reptile	State endangered	Open wetlands such as wet prairies, prairie fens, wet meadows and marshes, along the edges of forested wetlands and floodplains (3)	No
<i>Sistrurus catenatus catenatus</i>	Eastern Massasauga	Reptile	Federal threatened	Shallow wetlands and adjacent uplands (2)	No
<i>Euphyes dukesi</i>	Dukes' skipper	Insect	State threatened	Forested swamps and brushy wetlands with sedges; shady freshwater swamps; roadside ditches; small openings with dappled sunlight in dense stands of <i>Carex lacustris</i> and buttonbush wetlands. (3)	No
<i>Neonympha mitchellii mitchellii</i>	Mitchell's satyr	Insect	Federal endangered	Fens (1). Critical habitat: "designation not prudent" 56 Federal Register 189:28827.	No
<i>Oarisma poweshiek</i>	Poweshiek skipperling	Insect	Federal endangered	Wet prairie and fens (1). Critical habitat not final; 9 sites under consideration in Michigan, nearest site is approx. 20 miles NW (USFWS, www.fws.gov/midwest/endangered/insects/dask/finalch.html)	No
<i>Alismidonta viridis</i>	Slippershell mussel	Mollusc	State threatened	Creeks and headwaters of rivers in sand or gravel substrates; occasionally in larger rivers and lakes and in mud substrates (3)	No
<i>Cyclonaias tuberculata</i>	Purple Wartyback	Mollusc	State threatened	Gravel substrate in mainstem streams (3)	No

Species	Common Name	Type	Status	Habitat	Habitat Present?
<i>Epioblasma triquetra</i>	Snuffbox mussel	Mollusc	Federal endangered	Sand, gravel, or cobble substrates in swift small and medium-sized rivers (3). Critical habitat "not determinable (77 Federal Register 30:8664)	No
<i>Gastrocopta holzingeri</i>	Lambda Snaggletooth Snail	Mollusc	State endangered	Calcareous wooded cliffs, lakeplain wet-mesic and wet prairie, limestone cobble shores (3)	No
<i>Lampsilis fasciola</i>	Wavy-rayed Lampmussel	Mollusc	State threatened	Small-medium sized shallow streams, in and near riffles with good current; medium rivers. Prefers sand and/or gravel (3)	No
<i>Aristolochia serpentaria</i>	Virginia snakeroot	Plant	State threatened	Dry-mesic forests above streams or wetlands; also at margins of floodplain forests at the bases of terrace slopes and in rich mesic woods (3)	No
<i>Asclepias purpurascens</i>	Purple milkweed	Plant	State threatened	Dry savanna (especially oak)and thickets; shores, prairies (1)	No
<i>Carex lupuliformis</i>	False hop sedge	Plant	State threatened	Swales, marshes, swamps, borders of vernal pools and wet depressions in forests (1)	No
<i>Chelone obliqua</i>	Red/Pink/Rose Turtlehead	Plant	State endangered	Moist ground along streams, ponds lakes, swamps, fens, moist fields and meadows, wet shores, marshes, thickets (1)	No
<i>Cyprpedium candidum</i>	White lady's slipper	Plant	State threatened	Fens, wet prairies (1)	No
<i>Dichanthelium leibergii</i>	Leiberg's panic grass	Plant	State threatened	Dry to wet prairies and prairie-like places (1)	No
<i>Eupatorium sessilifolium</i>	Upland Boneset	Plant	State threatened	Bogs, swales, meadows	No
<i>Galearis spectabilis</i>	Showy orchis	Plant	State threatened	Moist rich hardwoods, often along streams and around seeps. (1)	No
<i>Gentiana flavida</i>	Cream/Yellow gentian	Plant	State endangered	Dry or moist prairies and oak woodlands (3)	No
<i>Gentiana puberulenta</i>	Downy gentian	Plant	State endangered	Sandy, seasonally wet to dry areas. (1)	No
<i>Gentianella quinquefolia</i>	Stiff gentian	Plant	State threatened	Stream and river banks, marshy meadows; bluffs and forested hillsides (1)	No
<i>Hydrastis canadensis</i>	Goldenseal	Plant	State threatened	Rich deciduous forests, oak hickory forests (1)	No
<i>Linum virginianum</i>	Woodland flax	Plant	State threatened	Open oak forests, upland woods, dry and mesic lakeside and riparian forests (3)	No
<i>Morus rubra</i>	Red mulberry	Plant	State threatened	Floodplains, river bottoms and swamps (1)	No

Species	Common Name	Type	Status	Habitat	Habitat Present?
<i>Muhlenbergia richardsonis</i>	Mat muhly	Plant	State threatened	Fens, sedge meadows, seepy, calcareous shores, openings in cedar swamps. (1)	No
<i>Panax quinquefolius</i>	American ginseng	Plant	State threatened	Rich swampy hardwoods, especially slopes or ravines (1)	No
<i>Platanthera leucophaea</i>	Prairie white fringed orchid, Eastern prairie fringed orchid	Plant	Federal threatened	Mesic to wet prairies and meadows (1)	No
<i>Silphium laciniatum</i>	Compassplant	Plant	State threatened	Railroad rights-of-way and depauperate prairies (1)	No

Sources:

- (1) Reznicek, A. A., E. G. Voss, & B. S. Walters, 2011. *Flora Online*. University of Michigan Herbarium. <http://michiganflora.net/species>.
- (2) U. S. Fish and Wildlife Service, 2016. *Species Information*. <https://www.fws.gov/midwest/endangered>.
- (3) Michigan Natural Features Inventory, 2007. *Rare Species Explorer*. <http://mnfi.msu.edu/explorer>. Accessed July 28, 2016.

Surveys were conducted on July 25 and 26, 2016, for the presence of typical habitat for state- and federally-listed threatened or endangered species. Natural plant communities described in *A Field Guide to the Natural Communities of Michigan*⁵⁶ was used to help identify suitable habitat.

Peregrine falcons (*Falco peregrinus*), a state-endangered species that is also protected under the Migratory Bird Treaty Act, recently nested in a nest box on the U-M Medical Center, which is located near Build Alternative 3A⁵⁷. Peregrine falcons use a wide range of habitats, including human-modified landscapes, and are most susceptible to the loss or modification of specific nesting sites. Falcon nest sites are usually found on cliffs overlooking expansive openings or on buildings, bridges and towers. Falcons in urban areas feed primarily on pigeons, starlings and doves⁵⁸.

No Build Alternative

The No Build Alternative would not impact threatened or endangered species.

Build Alternatives 2A, 2B, and 2C

The footprints of Build Alternatives 2A and 2B are occupied by developed areas, such as the existing Amtrak station, passenger loading areas, railroad tracks, a gravel road adjacent to the tracks, and sidewalks. There is a separate, vacant building with lawn and landscaped areas to the west of the parking area on Depot Street. Small areas by the Amtrak station are landscaped.

The footprint of Build Alternative 2C is similar to that for Build Alternatives 2A and 2B, with the addition of the Michigan Central Depot. The Michigan Central Depot site, now the Gandy Dancer restaurant, is

⁵⁶ Cohen, Joshua G. Michael A. Kost, Bradford S. Slaughter and Dennis A. Albert, 2015. *A field Guide to the Natural Communities of Michigan*. Michigan State University Press, East Lansing, MI.

⁵⁷ Broekhuizen, 2016. Four falcon chicks named from suggestions in online content. *University Record*, June 1, 2016. http://www.michigan.gov/dnr/0,4570,7-153-10370_12145_12202-32592--,00.html.

⁵⁸ Monfils, M. J. 2007. Special animal abstract for *Falco peregrinus* (peregrine falcon). Michigan Natural Features Inventory, Lansing, MI.

covered with buildings or pavement, except for some small landscaped areas. There are no natural plant communities present⁵⁹.

The sites for Build Alternatives 2A, 2B, and 2C are highly disturbed urban areas with no natural plant communities present⁶⁰. The vegetation consists of colonizing and invasive species characteristic of disturbed areas such as eastern cottonwood, box elder, Tartarian honeysuckle, and Amur honeysuckle. There is a disturbed wooded fencerow between the existing long term parking lot north of the tracks and the DTE Energy property; this area has smaller trees, shrubs and a single large black willow. There is also a disturbed woodlot west of the long-term parking lot with some larger trees, including eastern cottonwood and a single sycamore.

Table 3.9 summarizes the typical habitat requirements for each state and federally-listed species, and available critical habitat information for federally-listed species. Critical habitat for the federally-listed species is not present at these sites. AECOM determined that typical habitat is not present for any of the federal or state-listed species at the sites for Build Alternatives 2A, 2B, and 2C, with the exception of the two bat species, and the peregrine falcon.

Northern long-eared bats (*Myotis septentrionalis*) hibernate in caves and mines and swarm in surrounding wooded areas in autumn, and may roost under bridges, in tree cavities, or under shaggy bark. The U.S. Fish and Wildlife Service determined it was “not prudent” to designate critical habitat for the northern long-eared bat.⁶¹ There are no caves or mines in the study area, but upland wooded areas and bridges are present that may be spring and summer roosting habitat.⁶²

Indiana bats (*Myotis sodalis*) also hibernate in caves and mines. Critical habitat for Indiana bats includes caves in Illinois, Indiana and Missouri.⁶³ The summer habitat includes small to medium river and stream corridors with well-developed riparian woods; woodlots within one to three miles of small to medium rivers and streams; and upland forests. Indiana bats roost in trees with shaggy bark and cavities. The Huron River is near, but not adjacent to, Build Alternatives 2A, 2B, and 2C and may provide stream corridor habitat for Indiana bats. Summer habitat for the Indiana bat may be present in the narrow wooded strip between the parking lot and the railroad and the small woodlot west of the existing long-term parking lot. The shaggy bark and cavities on some trees in this area may provide roosting and maternity habitat for Indiana bats.

⁵⁹ Cohen, Joshua G. Michael A. Kost, Bradford S. Slaughter and Dennis A. Albert, 2015. A field Guide to the Natural Communities of Michigan. Michigan State University Press, East Lansing, MI.

⁶⁰ Cohen, *et al.*, 2015

⁶¹ U.S. Fish and Wildlife Service, 2017. Northern Long-Eared Bat (*Myotis septentrionalis*) Status: Threatened with 4(d) Rule. Critical Habitat Determination Not Prudent. www.fws.gov/Midwest/Endangered/mammals/nleb, accessed January 17, 2017.

⁶² As defined by the U.S. Fish and Wildlife Service, 2017. Northern Long-Eared Bat (*Myotis septentrionalis*) Status: Threatened with 4(d) Rule. Critical Habitat Determination Not Prudent. www.fws.gov/Midwest/Endangered/mammals/nleb, accessed January 17, 2017.

⁶³ U.S. Fish and Wildlife Service, 2017. Indiana Bat (*Myotis sodalis*) www.fws.gov/Midwest/Endangered/mammals/nelb/intex.html, accessed January 17, 2017.

The Federal Railroad Administration (FRA), Federal Highway Administration (FHWA), Federal Transit Administration (FTA) and the USFWS developed a *Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat* (Programmatic Consultation).⁶⁴ The City evaluated the potential impact of Build Alternatives on these bats and identified avoidance and mitigation measures for lighting, tree removal and bridge work specified in the Programmatic Consultation.

The avoidance and minimization measures identified in the Programmatic Consultation for lighting are:

- Direct temporary lighting away from suitable habitat during the active season; and
- Use downward facing, full cut-off lens lights, and direct lighting away from suitable habitat when installing new or replacing existing permanent lights.

The avoidance and minimization measures for tree removal are:

- Avoid tree removal in excess of what is required to implement the project safely;
- Apply time of year restrictions for tree removal when bats are not likely to be present;
- Ensure tree removal is limited to that specified in project plans;
- Do not cut down documented Indiana bat or northern long-eared bat roosts or trees within 0.25 miles of roosts or documented foraging habitat at any time of year;

The avoidance and minimization measures for bridge repair, retrofit, maintenance, and/or rehabilitation are:

- Perform any bridge repair, retrofit, maintenance, and/or rehabilitation work during the winter hibernation period;
- If construction activity is planned during the active season, perform a bridge assessment for presence of bats;
- If bridge assessment for bats suggests presence of bats, ensure activity would not disturb bats; and

If bridge assessment for bats suggests presence of a small number (5 or fewer) of bats, conduct bridge repair, retrofit, maintenance and/or rehabilitation work outside of pup season (July 1 through July 31) and keep the light localized in the evening when bats are feeding, starting one hour after sunset and ending one hour before daylight, excluding the hours between 10 p.m. and midnight.

The City of Ann Arbor consulted with the USFWS using the *Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat Project Submittal Form*⁶⁵. The USFWS response stated the Build Alternatives 2A, 2B, and 2C “may proceed under the range-wide programmatic consultation and

⁶⁴ *Federal Highway Administration, Federal Railroad Administration, Federal Transit Administration and U.S. Fish and Wildlife Service, 2016. User's Guide for the Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat.*

⁶⁵ Federal Highway Administration, et. al., May 2016.

assume concurrence with the “not likely to adversely affect” determination made by the Service in the BO” [Biological Order]⁶⁶.

Build Alternatives 2A, 2B, and 2C are not likely to adversely affect the peregrine falcons because the falcon nest at the U-M Medical Center will not be directly affected and indirect effects are unlikely. The Build Alternatives will not affect the abundance of pigeons, doves and starlings, which are the primary prey of falcons in urban areas. There will be an increase in traffic and noise associated with these Build Alternatives. Research that addresses the tolerance of peregrine falcons to noise in urban environments was not available. The presence of these peregrine falcons in an urban area (there is also a helicopter landing nearby) is evidence that these falcons are tolerant of noise and traffic. Falcons are also present in other large cities such as Detroit, Grand Rapids and Chicago, which is evidence that falcons can tolerate urban conditions, including noise. The increased noise and traffic associated with the Build Alternatives 2A, 2B, and 2C are not likely to have any impact on the falcons.

FRA is continuing consultation with USFWS regarding the presence of federally-listed threatened and endangered species at Build Alternatives 2A, 2B, and 2C.

Build Alternative 3A

Most of the footprint for Build Alternative 3A is occupied by lawns, a soccer field and a large parking lot. There is a narrow wooded area on the south side of the site between the parking lot and the railroad right-of-way.

Build Alternative 3A is a highly disturbed urban area with no natural plant communities.⁶⁷ The wooded area includes invasive species such as Buckthorn, White Mulberry, Tartarian Honeysuckle and Amur Honeysuckle. There are also some native trees including Box Elder, Black Walnut, Sugar Maple and Scots Pine. There is a small wooded area on the west side with Walnut, Scots Pine and Box Elder trees.

Table 3.9 summarizes the typical habitat requirements for each state- and federally-listed species, and available critical habitat information for federally-listed species. Critical habitat for the federally-listed species is not present at this site. AECOM determined that typical habitat is not present for any of the federal or state-listed species at the site for Build Alternatives 3A, with the exception of the two bat species, and the peregrine falcon.

Summer roosting and forage habitat for the northern long-eared bat may be present. Summer habitat for the Indiana bat may be present. The summer habitat for both bat species is present only in the narrow-wooded strip between the parking lot and the railroad.

⁶⁶ U.S. Fish and Wildlife Service, 2016. Bat Programmatic Consultations for Ann Arbor. Email from Chris Mensing, USFWS East Lansing MI Field Office, to Glenn Hendrix, AECOM (December 16, 2016).

⁶⁷ As described in Cohen, *et al.*, 2015

The Programmatic Consultation⁶⁸ was used to evaluate potential impact of Build Alternative 3A on Indiana and northern long-eared and to identify avoidance and mitigation measures. The City evaluated the potential impact of Build Alternatives on these bats and identified avoidance and mitigation measures for lighting, tree removal and bridge work specified in the Programmatic Consultation.

The avoidance and minimization measures for lighting are:

- Direct temporary lighting away from suitable habitat during the active season; and
- Use downward facing, full cut-off lens lights, and direct lighting away from suitable habitat when installing new or replacing existing permanent lights.

The avoidance and minimization measures for tree removal are:

- Avoid tree removal in excess of what is required to implement the project safely;
- Apply time of year restrictions for tree removal when bats are not likely to be present;
- Ensure tree removal is limited to that specified in project plans; and
- Do not cut down documented Indiana bat or northern long-eared bat roosts or trees within 0.25 miles of roosts or documented foraging habitat at any time of year;

The City of Ann Arbor consulted with the USFWS using the *Range-wide Programmatic Consultation for Indiana Bat and Northern Long-Eared bat Project Submittal Form*⁶⁹. The USFWS response stated the Build Alternatives 2A, 2B, and 2C “may proceed under the range-wide programmatic consultation and assume concurrence with the “not likely to adversely affect” determination made by the Service in the BO” [Biological Order]⁷⁰.

Build Alternative 3A is not likely to adversely affect the peregrine falcons because the falcon nest at the U-M Medical Center will not be directly affected and indirect effects are unlikely. The Build Alternatives will not affect the abundance of pigeons, doves and starlings, which are the primary prey of falcons in urban areas. There will be an increase in traffic and noise associated with these Build Alternatives. AECOM did not locate research that addresses tolerance of peregrine falcons to noise in urban environments. The presence of these peregrine falcons at the hospital (there is also a helicopter landing nearby) is evidence that these falcons are tolerant of noise and traffic. Falcons are also present in other large cities such as Detroit, Grand Rapids and Chicago. The increased noise and traffic associated with Build Alternative 3A are not likely to have any impact on the falcons.

FRA is continuing consultation with USFWS regarding the presence of federally-listed threatened and endangered species at Build Alternatives 3A.

⁶⁸ Federal Highway Administration, Federal Railroad Administration, Federal Transit Administration and U.S. Fish and Wildlife Service, 2016. *User's Guide for the Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat*.

⁶⁹ Federal Highway Administration, et. al., May 2016.

⁷⁰ U.S. Fish and Wildlife Service, 2016. Bat Programmatic Consultations for Ann Arbor. Email from Chris Mensing, USFWS East Lansing MI Field Office, to Glenn Hendrix, AECOM (December 16, 2016).

3.5.1 Bald Eagle and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act prohibits anyone without a permit from “taking” Bald Eagles. The act defines “take” as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.” This act does not require consultation with the USFWS. Bald Eagles have been seen at Barton Pond, an impoundment of the Huron River approximately 1.5 miles from Build Alternatives 2A, 2B, and 2C and two miles from the Build Alternative 3A.⁷¹ The Michigan Breeding Bird Atlas⁷² did not report eagles or eagle nesting sites near the study area.

Golden Eagles are uncommon in Michigan during the winter non-breeding season, and Michigan is not in the breeding range of Golden Eagles.⁷³ Bald Eagles breed near coasts, lakes and large rivers. Nests are typically in trees that rise above the surrounding forest or trees at the edge of a stand or an opening⁷⁴. This nesting habitat does not exist at the Build Alternative sites. Eagle nests were not observed at the Build Alternative sites in the summer of 2016.

No Build Alternative

The No Build Alternative would not impact bald eagles.

Build Alternatives 2A, 2B, and 2C

The footprints of Build Alternatives 2A and 2B are occupied by developed areas, such as the existing Amtrak station, passenger loading areas, railroad tracks, a gravel road adjacent to the tracks, and sidewalks. The few large trees are not located next to the river and do not rise above the canopy. Therefore, these sites do not provide good nesting habitat for Bald Eagles.

The footprint for Build Alternative 2C is similar to that for Build Alternatives 2A and 2B, with the addition of the Michigan Central Depot/Gandy Dancer Restaurant. The few large trees are not located next to the river and do not rise above the canopy. Therefore, this site does not provide suitable nesting habitat for Bald Eagles.

Build Alternative 3A

The trees within and adjacent to the footprint of Build Alternative 3A are not adjacent to a large body of water and do not rise above the canopy of other trees. Therefore, the site does not provide good nesting habitat for Bald Eagles.

3.6 Wetlands

Wetlands are defined in the U.S. Army Corps of Engineers *Wetlands Delineation Manual* as “those areas that are inundated or saturated by the surface or groundwater at a frequency and duration sufficient to

⁷¹ Huron River Watershed Council, 2006. Bald Eagle. Huron River Report, Spring 2006.

⁷² Kalamazoo Nature Center, 2011. The Second Michigan Breeding Bird Atlas. Kalamazoo Nature Center, Kalamazoo Michigan. Access online at: www.mibirdatlas.org.

⁷³ Cornell Lab of Ornithology, 2016. Golden Eagle. Access online at www.allaboutbirds.org

⁷⁴ Postupalsky, S., 2011. Bald Eagle (*Haliaeetus leucocephalus*). In A.T. Chartier, J.J. Baldy, and J.M. Brenneman, editors. The Second Michigan Breeding Bird Atlas. Kalamazoo Nature Center, Kalamazoo Michigan. Access online at: www.mibirdatlas.org.

support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.”⁷⁵ The State of Michigan has a similar definition of wetlands.⁷⁶

Executive Order 11990, *Protection of Wetlands*, requires federal agencies to avoid to the extent practicable short and long-term impacts associated with the destruction or modification of wetlands. The Executive Order further states that where wetlands cannot be avoided, the proposed action must include all practical measures to minimize harm to wetlands. Sections 404 of the Clean Water Act and Part 303 – Wetlands Protection – of Michigan Act 451 have similar requirements for avoiding or minimizing wetland impacts and mitigating wetland impacts that cannot be avoided.

Surveys were conducted on July 25, 2016, to determine the presence of wetlands using the methods from the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest*.⁷⁷ Under normal conditions, the hydrology, vegetation and soil characteristics of wetlands must be present for an area to meet the definition of wetlands. The inspection included the full “footprint” of the Build Alternatives.

No Build Alternative

The No Build Alternative would not impact wetlands.

Build Alternatives 2A, 2B, and 2C

Build Alternatives 2A and 2B would have similar footprints. There are no wetlands located at or adjacent to Build Alternatives 2A or 2B. There is a single large black willow growing at the toe of the slope on the north edge of the existing long-term parking lot. Black willow is a wetland plant; however, there were no wetland hydrology indicators or other wetland vegetation. Wetland hydrology indicators are identified by the U.S. Army Corps of Engineers⁷⁸ and include surface water, high water table, saturated soil, water marks, sediment deposits, drift deposits, algal mats, iron deposits, inundation visible on aerial imagery, sparsely vegetated depressions, water stained leaves, aquatic fauna, aquatic plants, surface soil cracks or drainage patterns. Build Alternatives 2A and 2B would not impact wetlands because wetlands are not present.

The footprint for Build Alternative 2C is similar to that for Build Alternatives 2A and 2B, with the addition of the historic depot. There are no wetlands located at or adjacent to Build Alternative 2C. Build Alternative 2C would not impact wetlands because wetlands are not present.

⁷⁵ U.S. Army Corps of Engineers, 1987

⁷⁶ Part 303 – Wetlands Protection – of Michigan Act 451, Public Acts of 1994, as amended

⁷⁷ U.S. Army Corps of Engineers, 2010

⁷⁸ U.S. Army Corps of Engineers, 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region*. ERDC/EL TR-10-16.

Build Alternative 3A

There are no wetlands present or adjacent to Build Alternative 3A. Build Alternative 3A would not impact wetlands because wetlands are not present.

3.7 Contaminated Sites and Hazardous Waste

A review of regulatory database information from Environmental Data Research (EDR) and an initial site visit to the area (June 13, 2014) was completed to determine the presence or likely presence of contaminated sites or hazardous substances near potential station locations. DLZ performed a visual reconnaissance of the study segments. Individual site access was not obtained for the visual reconnaissance; therefore, visual inspection of each segment was conducted from public roads, sidewalks, parking lots, and right-of-ways. The site reconnaissance did not involve a detailed survey of each property, nor did it include any sampling.

Databases reviewed for this analysis include the following:

- **ERNS:** Emergency Response Notification System
- **US BROWNFIELDS:** The EPA's listing of Brownfield properties from the Cleanups in My Community program
- **MI SHWS:** State Hazardous Waste Sites records
- **MI LUST:** Leaking Underground Storage Tank Incident Reports
- **MI SPILLS:** Environmental pollution emergencies reported to the Department of Environmental Quality
- **MI BROWNFIELDS:** Brownfields and UST field Site Database
- **MI BEA:** A BEA is a document that new or prospective property owners/operations disclose to the DEQ identifying the property as a facility pursuant to Part 201 and Part 213
- **EDR Proprietary Record EDR MGP:** The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants compiled by EDR researchers
- **EDR Proprietary Record EDR US Historical Auto Stat:** Listings of potential gas station/filling station/service station sites collected by EDR researchers from selected national business directories
- **EDR Proprietary Record EDR US Historical Cleaners:** Listings of potential dry cleaner sites collected by EDR researchers from selected national business directories

Based on the records and databases reviewed, the sites that are most likely to present possible environmental issues associated with the development of the proposed location were documented. These sites are adjacent to or nearby the proposed sites, and have documented contamination that is not completely remediated, or has not been addressed, or information is not readily available regarding the status of the site. Appendix D contains the Ann Arbor Station Sites of Environmental Concern memo (DLZ, 7/31/14) and a full list of these sites.

No Build Alternative

The No Build Alternative would not impact known contaminated or hazardous waste sites.

Build Alternatives 2A, 2B, and 2C

Build Alternatives 2A, 2B, and 2C are located in an area where several sites were identified in the environmental databases. These sites could present potential environmental concerns with the development of these Build Alternatives. Of particular note is the former DTE Gas Company Broadway Street Manufactured Gas Plant which was located at 841 Broadway Street. A portion of the DTE property would need to be acquired as right-of-way for construction of these Build Alternatives. Review of the October 2013 Section 7A Compliance Analysis and Due Care Plan for the DTE site (prepared by TRC and included in Appendix D) indicates the following:

- Constituents of concern (COCs) have been detected in soil and groundwater over a significant portion of the site, concentrated in the eastern portion of the property where the manufactured gas operations occurred, at concentrations above the Michigan Department of Environmental Quality (MDEQ) Part 201 Nonresidential Generic Cleanup Criteria (NRGC) and include: volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), metals, ammonia, and cyanide. In addition, many of the same COCs have been found within shallow sediment samples collected from the Huron River immediately adjacent to the site. In 2012 portions of the site were excavated to remove source areas impacts, but exceedances above applicable criteria remain.
- VOCs in soil exceed groundwater surface water interface protection (GSIP) criteria and nonresidential soil volatilization to indoor air inhalation criteria (SVIIC) and are limited to the Eastern Parcel.
- PAHs in soil exceed nonresidential SVIIC and/or nonresidential ambient air infinite source volatile soil inhalation criteria (AAVSIC), and direct contact.
- Metals in soil indicate that there are some scattered exceedances of the Part 201 default background metals levels in soil at the site (Appendix D).. Based on investigations performed by DTE and their consultants, there were five exceedances documented for silver and 23 exceedances documented for arsenic
- Available cyanide concentrations exceed the current calculated site-specific GSIP criterion. There is a significant amount of purifier waste on the Western Parcel and in limited areas on the Eastern Parcel.
- Nitrogen as ammonia exceeds the calculated site-specific GSIP criterion southeast of the former ammonia cisterns/tanks.

The Station Sites of Concern Memo identifies 24 sites that are adjacent or nearby properties which may present environmental problems with the development of the track segment. The following sites have potential environmental issues:

- Former Department of Public Works (DPW) Yard – 721 N Main St
- Ann Arbor Bearing Mfg Co – 815 Wildt St
- Sheffield Pharmaceuticals – 912 N Main St
- Clark Store #2121 – 1019 Broadway St
- DTE Broadway Station – 841 Broadway St
- Lowertown Development Group – 923 Maiden Lane
- 110 Depot St
- N Main & Depot St, Argo Dam
- Main and Summit – 800 N Main St
- Washtenaw Drain Com – 841 Broadway St
- Lowertown Development Group – 120 Broadway
- Ann Arbor Bearing & Mfg Co – 815 Wildt St

- 924 – 936 N Main St
- 990 Broadway St
- 923 Maiden Lane
- American Suzuki Motor Corp – 1012
Pontiac Trail
- 1120 Broadway St
- Ann Arbor Gas Co – Broadway St
- 906 N Main St
- 907 N Main St
- 1026 Broadway St
- 1031 Broadway St
- 927 Maiden Lane
- 1100 Broadway St

The properties listed above that would be directly impacted by Build Alternatives 2A, 2B, and 2C are the DTE Broadway Station, Washtenaw County Drain Commission, Ann Arbor Gas Co as they are located directly adjacent to the station property.

Considering the above information, the most likely potential environmental impacts for Build Alternatives 2A, 2B, and 2C may include:

- Contaminated soil and/or groundwater which may need to be managed and properly disposed during construction activities, or possibly remediated. According to the DTE Due Care Plan, a large area of dense, non-aqueous phase liquid (DNAPL) is located on the former DTE site and extends from the Huron River to the existing Amtrak parking area. The expanded parking areas in Build Alternatives 2A, 2B, and 2C would be constructed in this area of contaminated soil/groundwater.
- Vapor migration issues which could require vapor barriers, and/or passive or active vapor collection systems.
- Engineering and/or institutional controls.

Additional investigation activities may be required during the design phase in proposed construction areas that occur near known areas of concern. There are many factors that could influence the need for and type of mitigation that could be required. These include the specific locations/nature of construction activities, detailed information regarding the proposed facility design, contaminant concentrations/depths, locations and nature of proposed human activities, additional site characterizations, regulatory agency input/guidance, and geologic conditions. Until additional investigations are undertaken during the design process, it is not possible to define the type of mitigation measures that would be appropriate. In general terms, it is likely that mitigation measures could fall into one of three broad categories: (1) no action required/monitoring only; (2) containment on site; or (3) off-site disposal.

Build Alternative 3A

For Alternative 3A there are no potential contaminated or hazardous waste site concerns since there is no known contamination present at or adjacent to this parcel.

3.8 Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, requires that Federal agencies consider the effects on historic resources from federal undertakings, which includes both architectural and archaeological resources. Historic properties, as defined in 36 CFR 800.16(1)(i), are any prehistoric or historic districts, sites, buildings, structures, or objects that are 50 years old or older which are either listed in or eligible for the National Register of Historic Places (NRHP).

A cultural resources literature review and field reconnaissance survey was completed by AECOM on behalf of MDOT, and the City of Ann Arbor between July and August 2016, to investigate the presence of known archaeological and architectural resources within the Area of Potential Effect (APE). The APE for

cultural resources is the area within which the project may affect cultural resources. The APE, as defined in the Code of Federal Regulations 36 CFR 800.16(d), is the “geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if such properties exist. The delineation of the Project APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.” For archaeology or below ground work, the APE includes any areas of ground disturbance. For above ground work, the APE includes the built environment visible from the project. The direct APE for the Build Alternatives, correspondent with the footprint, measures a contiguous 13.28 acres (5.37 hectares) in size, while the Build Alternative 3A APE encompasses 26.49 acres (10.72 hectares). The indirect APE for aboveground resources takes into account natural environment and current infrastructure in the area of Build Alternatives 2A, 2B, and 2C. As there are no aboveground resources in the direct or indirect APE for Build Alternative 3A, a viewshed analysis was not undertaken. The existing Michigan Central Railroad (MCRR) and Amtrak stations are located in a lower lying area and below grade from the urban areas of Ann Arbor thus preventing intrusions into the viewshed to the south. Additionally, mature trees along the ridge above Depot Street prevent viewshed intrusions to the Old Fourth Ward Historic District located along High Street. Views to the north, east, and west are taken under consideration during the viewshed analysis, as the topography of the area is at-grade with Build Alternatives 2A, 2B, and 2C.

The west side of the Broadway Street Bridge is characterized as commercial/industrial in nature. South of Depot Street and west of the Broadway Street Bridge is an urban section of Ann Arbor. The urban section contains a residential area located on narrow lots, which contain mature trees, further reducing any intrusions into the viewshed. A modern, multi-story building has been constructed at 201 Depot Street. As this area is historically commercial/industrial, new construction associated with Build Alternatives 2A, 2B, and 2C will not introduce new elements into the viewshed along Depot Street. The viewshed of the south-facing resources along East Summit Street will be screened from the proposed changes by the topography of the land and mature trees.

Looking southeast from the Argo Station and Broadway Street Bridge is Broadway Park, the MCRR is within the viewshed but is situated below the grade of Broadway Street. The topography of the land on the north side of the Huron River and west of the bridge rises from the river so that intrusions into the viewshed from the north side of the bridge will be minimal. Further a floodwall that consists of a dirt berm is located north of the MCRR and south of the Huron River in Broadway Park.

Archaeological Resources

The archival research does not indicate the presence of inventoried archaeological resources within the proposed APE for any of the Build Alternatives, although four archaeological sites were identified during a 1979-1980 survey within 500 feet of Build Alternative 3A, and have likely been destroyed by modern development (as indicated in a 2009 archaeological report). All four of these resources have been previously determined by the Michigan State Historic Preservation Office (MSHPO) to be not eligible for the NRHP. However, based on a review of the available mapping and Project-related information, the portions of the Build Alternatives situated within mown lawns and parking lots likely contained historic-era structures and occupations. The available data does not, however, provide information sufficient to

conclude that these portions of the Build Alternatives do not contain any intact pre-modern (prehistoric and/or historic) archaeological deposits.

The potential therefore exists for ground-disturbing activities to encounter intact, *in situ* archaeological deposits or features as a result of construction. Further, the Michigan DOT deep-test model, which stratifies the state into areas of increased sensitivity for deeply buried cultural deposits, indicates a high potential for deeply-buried cultural deposits within portions of each Build Alternative. MSHPO has indicated this data suggests that consideration of potential impacts to archaeological resources should be carried out on any accessible areas of proposed ground disturbance (which would likely include mown lawns and modern parking lots) within the selected Build Alternative. This would need to be accomplished through archaeological field reconnaissance prior to construction, involving a desktop analysis, coring, and (potentially) backhoe trenching by an archaeologist and a geomorphologist. The MSHPO, in correspondence dated January 30, 2017, commented that "...it is unlikely that intact archaeological deposits exist at a depth that is accessible through shovel testing. Both of the Build Alternative locations have been subject to disturbance, perhaps even extensive disturbance. Machine trenching would be the most efficient and effective means of evaluating that potential. Coring could be used as a prelude to machine trenching can focus efforts on areas of greater potential for intact deposits."

The MSHPO further indicated that monitoring during construction would not be necessary. Based on these comments, the selected Build Alternative will require the development of a research design and desktop analysis, to potentially focus investigations on the portions of the Project construction footprint which display the highest potential for containing intact cultural deposits. The results of core sampling would also be integrated into this desktop analysis. Based upon the MSHPO and MDOT review and confirmation of the desktop analysis and core sampling results, mechanical trenching could then be considered, targeting any areas defined in the research design as displaying the potential for intact subterranean cultural resources. Construction would also include the implementation of an Unanticipated Discovery Plan should any intact archaeological deposits or features be encountered. The potential for an adverse effect cannot be determined until further study and testing is conducted for the selected Build Alternative. MSHPO is requesting further consultation as part of the Section 106 process, and the results of the research design, desktop analysis and any field data (core sampling and/or mechanical trenching) can be memorialized in a Memorandum of Agreement (if necessary).

Architectural Resources

The data collected for architectural resources indicated the presence of 35 aboveground buildings and/or historic districts that had been inventoried by the MSHPO within a one-mile radius of the Project. Seven of the previously surveyed resources are located within the direct APE of the Build Alternatives 2A, 2B, and 2C and shown in Table 3.10 below, which includes the status of the listed in or eligible for NRHP historic resource. One of the seven previously identified resources, the Wood Barn, was determined to be not eligible by the MSHPO January 30, 2017; the resource was not included in the effects assessment. During the site visit to the Build Alternatives location in July 2016, no new

aboveground resources were identified in the direct or indirect APE that had not been inventoried previously with the MSHPO.

There were no aboveground historic resources identified through literature review or field observations for Build Alternative 3A, either within the APE or the surrounding viewshed. Fuller Park, on the north and south side of Fuller Road was established prior to 1930 and improved in the 1930s. The area around and contained within Fuller Park was not analyzed as a historic feature or historic landscape. A historic or designed landscape must have significance as one of the NRHP designed historic landscape types and retain integrity of location, design intent, setting, materials, workmanship, feeling, and association, and meet NRHP Criteria. The addition of a surface parking area since the park was established diminishes the integrity of the park as a historic landscape in all aspects of integrity mentioned previously. Due to these changes, Fuller Park is no longer recognized as a historic feature or historic landscape.

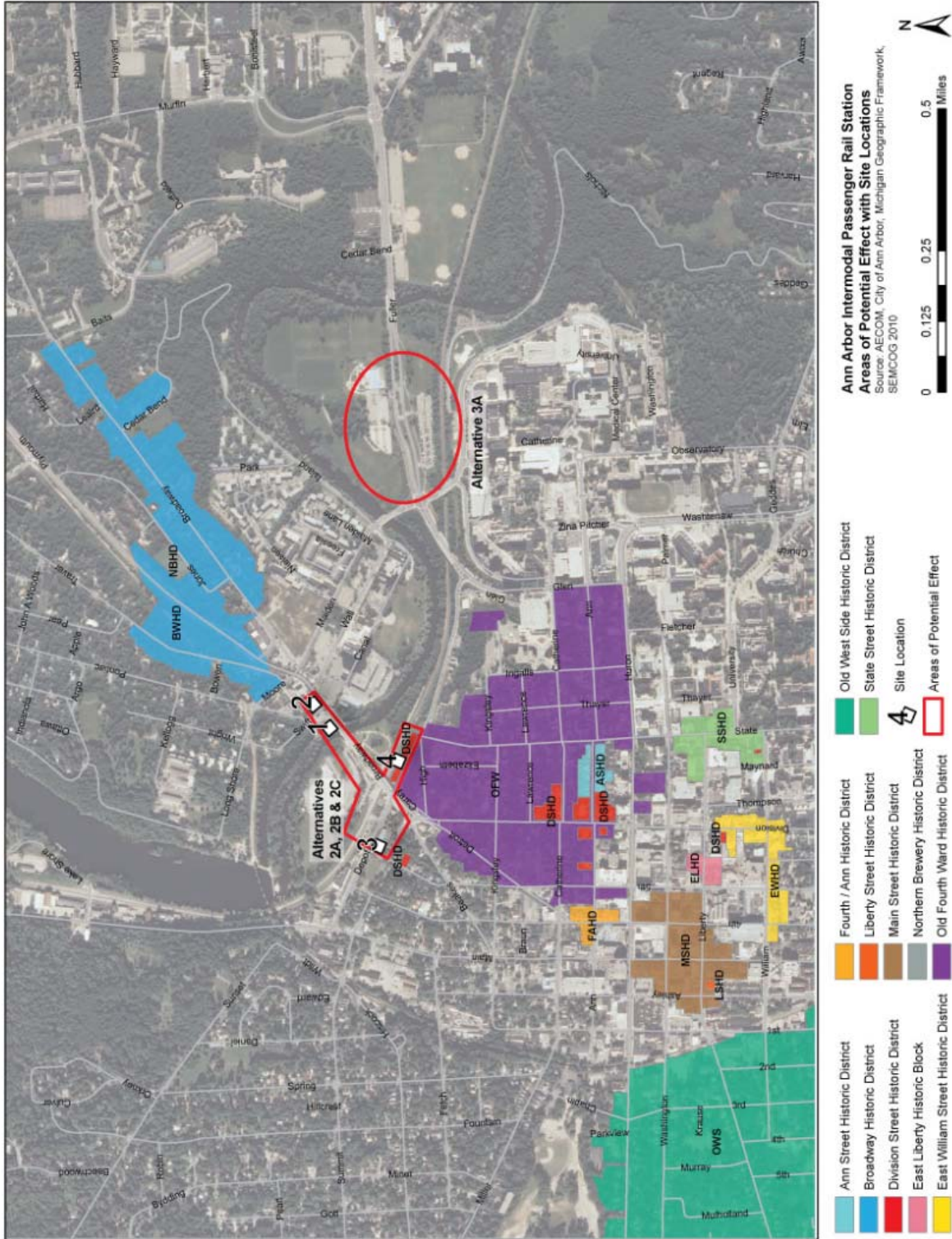


Exhibit 3.11: Areas of Potential Effect (APE) with Site Locations

Table 3.10: Previously-Recorded Aboveground Resources – Build Alternatives 2A, 2B, and 2C

Map ID/ Resource #	Name	Address	DOC	Status
1	Detroit Edison Energy Argo Station	987 Broadway Street	1928	Individually eligible for listing in NRHP (MSHPO letter 3/21/1997 and included in Broadway Street Bridge Environmental Assessment/Programmatic 4(f) Evaluation, April 1997).
2	Anson Brown Building	1003-1005 Broadway Street	1832	Individually eligible for listing in NRHP (MSHPO letter 3/21/1997 and included in Broadway Street Bridge Environmental Assessment/Programmatic 4(f) Evaluation, April 1997).
3	Casey's Tavern/ Wood and Perrin	304-310 Depot Street	1901	Individually eligible for listing in NRHP (MSHPO letter 3/21/1997 and included in Broadway Street Bridge Environmental Assessment/Programmatic 4(f) Evaluation, April 1997).
4	Michigan Central Railroad Station/ Gandy Dancer	401 Depot Street	1886	Individually listed in the NRHP (Local site number 339, listed July 26, 1974) and within the locally-listed historic district. (City of Ann Arbor Planning/Historic Preservation website)
5	Wood Barn	320 Depot Street	N/A	Individual property that was not listed in or eligible for the NRHP prior to the Broadway Street Bridge Environmental Assessment. MSHPO determined site to be significant to the character of the area by letter dated 3/21/1997 and included in the Broadway Street Bridge Environmental Assessment/Programmatic 4(f) Evaluation, April 1997. Determined not eligible by MSHPO, January 30, 2017.
6	Old Fourth Ward Historic District	Ann Arbor, Michigan	Various	Old Fourth Ward Historic District was adopted by the City of Ann Arbor in 1983 and further amended in 1984 and 1989 as a locally-listed historic district. (City of Ann Arbor Planning/Historic Preservation website) The locally-listed historic district is recognized by the MSHPO as eligible for the NRHP as a historic district. ¹
7	Division Street Historic District	Ann Arbor, Michigan	Various	The Division Street Historic District was adopted in 1973 and further amended in 1976 by the City of Ann Arbor as a locally-listed historic district. (City of Ann Arbor Planning/Historic Preservation website)

Map ID/ Resource #	Name	Address	DOC	Status
				The locally-listed historic district is recognized by the MSHPO as eligible for the NRHP as a historic district. ¹

Source: Ann Arbor Intermodal Station Preliminary Cultural Assessment, November 2016



Plate 1: Looking northwest toward Depot Street; MCRR to the right with the Broadway Street Bridge in the background



Plate 2: Looking northwest toward the MCRR westernmost ancillary building and the Broadway Street Bridge from Depot Street parking area



Plate 3: Looking east toward the south elevation of the Amtrak Station along Depot Street; Broadway Street Bridge in the background



Plate 4: Looking east toward Depot Street and Broadway Street Bridge from the Amtrak Station



Plate 5: Looking southwest toward the Broadway Park and MCRR from the north side of Huron River

No Build

The No Build Alternative would not impact known cultural resources.

Build Alternatives 2A, 2B, and 2C

Build Alternative 2A would not directly or indirectly affect any of the previously identified resources that have been determined eligible for or listed in the NRHP, as noted in Table 3.10

Build Alternative 2A would involve the construction of a station building above the existing railroad tracks on the west side of the Broadway Street Bridge. Pedestrian access would be provided directly from the sidewalk along the east and west side of the Broadway Street Bridge. The station building would remain within the railroad right-of-way. This would provide passengers in the station building with equal distances to access both station platforms. Pedestrian access and bus pull-off areas require an extension of the Broadway Street Bridge by approximately 25 feet on the east and west sides from approximately Depot Street to the entrance of the current Amtrak Station, south of the Huron River. The existing sidewalk /walking trail in Broadway Park will remain in the current location with existing dimensions. Additionally, the sidewalk located adjacent to Argo Station would be relocated closer to the resource and change the access to the B2B Trail along the river. The extension will eliminate an existing stairway, which leads from the northwest portion of the sidewalk on the bridge to the B2B Trail owned by the City of Ann Arbor. A multi-story parking structure would be constructed on the north side of the tracks and west side of the Broadway Street Bridge. The parking structure would rise slightly above the current level of the bridge to accommodate access.

The platforms and warming shelter/windbreaks will be constructed on the north and south sides of railroad tracks, which will be erected with a material that is consistent with the Secretary of Interior's Standards for Rehabilitation. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

A portion of the original platform area, on the north elevation of the building, was enclosed during the renovation of the station into a restaurant. The enclosure incorporated the historic canopy into the design of the restaurant. Although the location of the platforms/warming stations will be placed so as not to impede the view from inside the MCRR, the platforms and warming stations are consistent with the function of the historic property and will not introduce new elements into the viewshed or diminish the integrity of location, design, materials, workmanship, feeling, or association for which the property was NRHP listed. This Build Alternative will therefore not present an indirect adverse effect to either the MCRR or the Division Street Historic District

Table 3.11 below shows the effect assessments for each Resource from Build Alternative 2A.

Table 3.11: Build Alternative 2A Effects and Recommendations

Resource		Effects Assessment		
Resource #	Name/ Type	Direct	Indirect	Effects Recommendation
1	Detroit Edison/Argo Station	No	No	No Adverse
2	Anson Brown Building	No	No	No Adverse
3	Casey's Tavern/Wood & Perrin	No	No	No Adverse
4	Michigan Central Station	No	No	No Adverse
6	Old Fourth Ward Historic District	No	No	No Adverse
7	Division Street Historic District	No	No	No Adverse

Build Alternative 2B would not have a direct or indirect effect on Aboveground Resources 1-4, 6 and 7 as noted in Table3.12.

Build Alternative 2B requires the station building to be constructed west of the Broadway Street Bridge, at ground level, north of the tracks. The placement of the station building would be closely coordinated with the specific needs for on-site intermodal facilities. The concourse above the tracks would attach directly to the station building.

Pedestrian access and bus pull-off areas would be provided by existing sidewalks on the Broadway Street Bridge, however this requires an extension of the Broadway Street Bridge by approximately 25 feet on the east and west sides from approximately Depot Street to the entrance of the current Amtrak Station, south of the Huron River. The existing sidewalk/walking trail in Broadway Park will remain in the current location with existing dimensions. Additionally, the sidewalk located adjacent to Argo Station would be relocated closer to the resource and change the access to the B2B Trail along the river. The extension will eliminate an existing stairway, which leads from the southeast portion of the sidewalk on the bridge to the B2B Trail owned by the City of Ann Arbor. A multi-story parking structure would be constructed on the north side of the tracks and west side of the Broadway Street Bridge. The parking structure would rise slightly above the current level of the bridge to accommodate access.

The bridge would be expanded to the east and west approximately 25-feet which would move the bridge structure closer to the MCRR, a contributing element of the Division Street Historic District, and over the NRHP-listed boundaries. The intrusion into the viewshed of the MCRR would not diminish the aspects of integrity for which the MCRR was NRHP-listed, or cause an indirect effect to the NRHP-listed resource. As the MCRR is a contributing element of the Division Street District, there will be no direct

effect. The extension of the sidewalk on the east side of the bridge will result in an indirect no adverse effect to the MCRR and Division Street Historic District.

This Build Alternative would place the station building adjacent to one railroad platform and across the tracks from the other platform. Platforms and covered passenger waiting shelters will be located on the north and south sides of the existing railroad tracks. The platforms on the south side of the tracks adjacent to the MCRR/Gandy Dancer will be constructed in a manner not to impede the viewshed of the restaurant patrons. The platforms and warming stations will be erected with a material that is consistent with the Secretary of Interior’s Standards for Rehabilitation. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment. The location of the platforms/warming stations will be placed so as not to impede the view from inside the MCRR. The platforms and warming stations, consistent with the function of the historic property, will not introduce new elements into the viewshed or diminish the integrity of location, design, materials, workmanship, feeling, or association for which the property was NRHP listed, and therefore not pose an indirect adverse effect to the MCRR and Division Street Historic District.

Table 3.12: Build Alternative 2B Effects and Recommendations

Resource		Effects Assessment		
Resource #	Name/ Type	Direct	Indirect	Effects Recommendation
1	Detroit Edison/Argo Station	No	No	No Adverse
2	Anson Brown Building	No	No	No Adverse
3	Casey’s Tavern/Wood & Perrin	No	No	No Adverse
4	Michigan Central Station	No	No	No Adverse
6	Old Fourth Ward Historic District	No	No	No Adverse
7	Division Street Historic District	No	No	No Adverse

Build Alternatives 2A and 2B result in a finding of No Adverse Effect to Aboveground Resource 1-4, 6 and 7 identified historic resources within the APE of the Project. This finding was presented to the MSHPO by letter dated [redacted] (36 CFR 800.5(b)). The MSHPO concurred in their [redacted] correspondence. Therefore, Build Alternatives 2A and 2B would not impact Aboveground Resource 1-4, 6, and 7, directly or indirectly, as noted in Table 3.11 and 3.12.

Build Alternative 2C would not directly or indirectly affect Resources 1-3 and 6 listed in the identified resources, Table 3.13. This Build Alternative will have a direct adverse effect on the MCRR, which is individually listed in the NRHP, and the Division Street Historic District (Aboveground Resources 4 and 7, respectively). The brick pavers contained within Depot Street are a contributing element of the Division Street Historic District but will not be disturbed.

Under Build Alternative 2C, the NRHP-listed MCRR would be acquired and rehabilitated for re-use as the station building. Although acquisition in itself is not adverse to a historic resource, the changes made to the historic resource that are not consistent with the Secretary of the Interior (SOI) Standards are adverse to historic resources. Building modifications and expansion would be required to adapt the interior and exterior of the MCRR for station program requirements and to provide full ADA accessibility.

The interior of the building has been partitioned for restaurant purposes. The changes to the interior made when the MCRR became a restaurant included a new interior balcony and a service wing added at the west end. The research did not indicate when the original features such as the ticket office, light fixtures, front door, and wall decorations were removed or replaced. Under the proposed conceptual design, new infill construction would be required to meet the program needs of the Project. This new construction would incorporate the main station building and the westernmost and easternmost ancillary buildings into the design - creating one building. A new elevator/stair facility would be attached on the west elevation of the ancillary building. Minimization and mitigation would be required to reduce the loss of property by lessening the impact of the effect for Build Alternative 2C. Secretary of Interior's Standards for Rehabilitation provides concepts concerning the maintenance, repairing, and replacing historic materials, and defining new additions and alterations. Further, a Historic Structures Report should be completed during the Preliminary Engineering Phase to identify significant features of the MCRR.

A platform-level walkway would extend from the MCRR building under the Broadway Street Bridge to elevators, stairwells, and the pedestrian concourse on the east and west side of the Broadway Street Bridge and on the south side of the existing rail lines. A platform-level walkway would be constructed on the north side of the existing rail lines. The historic station as the new station building would be adjacent to one railroad platform and across the tracks from the other platform. The platforms would require warming stations for pedestrian use. The platforms and warming stations will be erected with a material that is consistent with the SOI Standards. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment. Thus creating a change to the original viewshed of the platforms that are historically consistent with the function of the historic property in those locations.

Pedestrian access and bus pull-off areas would require the extension of the Broadway Street Bridge approximately 25-feet on the east and west sides of the bridge from approximately Depot Street to the Huron River. The extension of the walkway on the east side of the bridge will accommodate pedestrian access and bus pull offs area and accommodate elevator/stairs, which will be attached to the west side of the MCRR westernmost ancillary building. The extension on the north side of the Broadway Street Bridge would accommodate additional roadway for a turn-lane. The turn-lane would allow traffic access

to the parking garage. These additional features would extend the existing bridge and sidewalks further west near the boundary of the Detroit Edison/Argo Station property. The extension would change the access of an existing stairway, which leads from the northwest portion of the sidewalk on the bridge to the B2B Trail.

The MCRR is located within the boundaries of the Division Street Historic District. The identity of a district results from the interrelationship of its resources, which can convey a visual sense of the overall historic environment or be an arrangement of historically or functionally related properties. Each element of a district contributes or expresses that interrelationship. As the MCRR and brick pavers are contributing elements to the historic district, any impact to the individual resources within the district boundaries would impact the district. As the MCRR is a contributing element of the Division Street Historic District, the change in the mass and form of the MCRR will cause an adverse effect to the historic district. Build Alternative 2C will therefore result in a direct adverse effect to the Division Street Historic District.

Build Alternative 2C will result in a No Adverse Effect to Resource 1-3 and 6. This finding was presented to the MSHPO by letter dated [REDACTED] (36 CFR 800.5(b)). The MSHPO concurred in their [REDACTED] correspondence.

Build Alternative 2C would result in a direct Adverse Effect to both the MCRR and Division Street Historic District within the APE of the Project (Resources 4 and 7, respectively). The direct adverse effect on historic properties (36 CFR 800.5(ii)) includes alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of ADA access. These changes would need to be consistent with the SOI Standards (36 CFR part 68) and applicable guidelines in order to minimize and mitigate the impacts to the historic resource. The MCRR would be modified and expanded to adapt the interior and exterior for station program requirements and to provide ADA accessibility. The renovation to the interior and new construction to the exterior of the MCRR will diminish the character-defining features of the building for which it was NRHP-listed, thereby losing the architectural features of the building. The west elevation of the main station will be hidden by new construction, thereby losing window patterns and door openings that have been previously exposed. The west ancillary building will be surrounded on three elevations, thus diminishing the mass and form of the original design. New platforms/warming stations, historically consistent with the function of the historic property in those locations, will not introduce new visual intrusions into the viewshed. The addition of the nearby platforms and warming stations would not impact the property's integrity of location, design, materials, workmanship, feeling, or association.

This finding was presented to the MSHPO by letter dated [REDACTED] (36 CFR 800.5(1)). The MSHPO concurred in their [REDACTED] correspondence. Therefore, Build Alternative 2C would impact known architectural resources

Table 3.13: Build Alternative 2C Effects and Recommendations

Resource		Effects Assessment		
Resource #	Name/ Type	Direct	Indirect	Effects Recommendation
1	Detroit Edison/Argo Station	No	No	No Adverse
2	Anson Brown Building	No	No	No Adverse
3	Casey's Tavern/Wood & Perrin	No	No	No Adverse
4	Michigan Central Railroad Station	Yes	No	Adverse
6	Old Fourth Ward	No	No	No Adverse
7	Division Street Historic District	Yes	No	Adverse

Build Alternative 3A

There are no historic resources located within the APE Build Alternative 3A. Build Alternative 3A would construct a station building above the tracks with other site facilities located within the area of the existing surface parking lot, with the exception of station access features. Access would be provided on-site north of the tracks and along adjacent streets. Station parking would be provided in a structure. Fuller Park was not recommended eligible for the NRHP as a historic feature or historic landscape due to lack of significance and loss of integrity.

Build Alternative 3A results in a finding of No Effect to identified historic resources within the APE of the Project. This finding was presented to the MSHPO by letter dated [REDACTED] (36 CFR 800.5(1)). The MSHPO concurred in their [REDACTED] correspondence. Therefore, Build Alternative 3A would not impact known architectural resources.

Mitigation

Mitigation of historic resources usually entails measures that have been designed to preserve the historic integrity of the aboveground resource and that have been agreed upon by the responsible parties, in accordance with the regulations implementing Section 106 of the National Historic Preservation Act (36 CFR 800). Minimization and mitigation measures would be required for Build Alternative 2C. The acquisition and rehabilitation of the historic building results in an adverse effect to the MCRR. As the MCRR is a contributing element of the Division Street Historic District, the change in the mass and form of the MCRR will cause an adverse effect to the Division Street Historic District. The *Secretary of Interior's Standards* provides concepts concerning the maintenance, repairing, and replacing historic materials, and defining new additions and alterations. The standards offer four approaches to the treatment of buildings including preservation, rehabilitation, restoration, and reconstruction. In restoring the MCRR to its original use, the guidance provided in the *Secretary of Interior's Standard for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating,*

Restoring, & Reconstruction and the Secretary of Interior's Standards for Rehabilitation & Illustrated Guidelines for Rehabilitating Historic Buildings. Rehabilitation as defined by the SOI Standards is defined as,

“the process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic, architectural, and cultural values.”⁷⁹

These standards should be adhered to in order to ensure the best possible methods for rehabilitation including:

- Minimal change to or loss of distinctive materials, features, spaces and spatial relationships; along with retention and preservation of those features;
- No change will recognize a false sense of historical development;
- Changes that acquire historic significance in the own right will be retained and preserved;
- Deteriorated historic features should be repaired rather than replaced;
- Chemical treatments will use the gentlest methods possible to reduce the damage to historic materials;
- Archaeological resources will be preserved in place and protected, if resources exist; and
- New additions, exterior alterations, or related new construction will not destroy the historic materials, features and spatial relationships that characterize the property or will be constructed in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

The SOI Standards should be elaborated upon in the form of a Historic Structures Report, to be prepared concurrent with the preliminary engineering for Build Alternative 2C in order to provide a comprehensive list of significant features. The information gathered during this survey should be analyzed to assist in the Project design for Build Alternative 2C. This report should follow the guidance provided by the National Park Service, including *The Preparation and Use of Historic Structures Report* (Preservation Brief 43). These steps outlined in the SOI Standards will avoid, minimize, or mitigate the adverse effect to the historic resources by recognizing the significant features and historic materials of the affected resource.

3.9 Visual Resources

The visual effect of the Build Alternatives is considered for adjacent properties, parks and recreational areas, and historic resources that would have a view of the Build Alternatives. Depot Street in Ann Arbor is characterized by a mix of recreation, office, residential, commercial, vacant and transportation/communication/utilities land uses. The Michigan Central Depot/Gandy Dancer Restaurant is located just southeast of the Broadway Street Bridge. The Michigan Central Depot is a two-

⁷⁹ National Park Service, Secretary of Interior Standards for Rehabilitation, <https://www.nps.gov/tps/standards/rehabilitation/rehab/stand.htm> (Accessed May 2017)

and-one-half story rectangular Richardsonian Romanesque building. A gable-on-hip roof that is broken by various parapeted cross-gables and eyelid dormers tops the walls of variegated stone. The east end of the building features cross-gables and a hipped-roof square tower. Two ancillary buildings constructed in the Romanesque style are located to the east and west of the building.

East of the Michigan Central Depot/Gandy Dancer Restaurant, Depot Street transitions into Fuller Road, which is a four-lane divided arterial with a 20 – 30 foot grassy median. Fuller Road is surrounded on both sides by recreation land use. Office space and a multi-level hospital and parking ramp are visible from the road. A surface parking lot and multi-use path exist within Fuller Park at the Build Alternative 3A site on the south side of Fuller Road. On the north side of Fuller Road, Fuller Park contains soccer fields, playgrounds, swimming pools and parking areas.

Exhibit 3.12 - Exhibit 3.15 are visual renderings that show the general placement and changes to the viewshed under the Build Alternatives. The details of the station façade would be developed during the final design phase.

No Build Alternative

The No Build Alternative would not affect visual resources.

Build Alternatives 2A, 2B, and 2C

Under Build Alternatives 2A, 2B, and 2C, a multi-level parking garage would be accessed from the Broadway Street Bridge, which is a four-lane bridge passing over Depot Street. The bridge would be widened approximately 25-feet under Build Alternatives 2A, 2B, and 2C. The parking structure off of the Broadway Street Bridge would be above the existing height of the bridge for all the Build Alternatives.

The topography of the area from the north bank of the Huron River transitions from the river valley with the elevation increasing toward the existing Amtrak station. The view from the north bank of the river and the B2B Trail to Build Alternatives 2A, 2B, and 2C would be unchanged in the summer months as the leaves from tree-lined Huron River would block the view of the Build Alternatives. However, during the winter months, looking uphill toward the parking structure and through the tree branches, the highest level of the parking ramp and station structure for all Build Alternatives would be visible, but consistent with other visible developments in the viewshed.



Plate 6: Looking south toward the Amtrak Station from the Broadway Street Bridge; stairs to B2B Trail visible along the bridge

Looking southeast from the Broadway Street Bridge is Broadway Park. The MCRR is within the viewshed but is situated below the grade of Broadway Street. The topography of the land on the north side of the Huron River and west of the bridge rises from the river so that intrusions into the viewshed from the north side of the bridge will be minimal.



Plate 7: Looking southeast toward MCRR and Broadway Park from Broadway Street Bridge

The MCRR/Gandy Dancer Restaurant is located on the south side of the Huron River and Depot Street and is grade separated from Broadway Street and the Broadway Street Bridge. The viewshed directly south of the MCRR and east of the Broadway Street Bridge contains mature trees between Depot Street and Old Fourth Ward Historic District located on High Street. This urban section contains residences, facing south along High Street, that are located on narrow lots and are surrounded by mature trees, reducing viewshed intrusions. The viewshed to the north of the MCRR and east of the Broadway Street Bridge contains Broadway Park. A floodwall that consists of a dirt berm and located in Broadway Park is north of the MCRR station and will prevent any viewshed intrusions. For Build Alternative 2C, the Broadway Street Bridge on the west side of the MCRR/Gandy Dancer Restaurant will prevent any viewshed intrusions from the resource to the new facilities.



Plate 8: Looking toward the northwest; Broadway Street Bridge to the left, MCRR to the right



Plate 9: Looking toward the southeast from Depot Street; Old Fourth Ward Historic District above the tree line

The viewshed of the historic resource, Casey's Tavern/Wood and Perrin, on the west side of the Broadway Street Bridge -have been diminished due to modern commercial structures that have been developed on Depot Street. South of Casey's Tavern/Wood and Perrin and west of the Broadway Street Bridge is an urban section of Ann Arbor. The urban section contains a residential area located on narrow lots, which contain mature trees, further reducing any intrusions into the viewshed. A modern, multi-story building has been constructed at 201 Depot Street. As this area is historically commercial/industrial, new construction associated with Build Alternatives 2A, 2B, and 2C will not introduce new elements into the viewshed along Depot Street. The viewshed of the south-facing resources along East Summit Street will be screened from the proposed changes by the topography of the land and mature trees.



Plate 10: Looking southwest toward Casey's Tavern/Wood and Perrin from the current Amtrak Station

The proposed intermodal facility under Build Alternative 2A would include an elevated station that would be visible from the Broadway Street Bridge where the entrance to the multi-level parking garage would be located. On Depot Street below the Broadway Street Bridge, the station would be visible on the west side of the Broadway Street Bridge, but the Broadway Street Bridge would block the view to the west from the MCRR and Broadway Park, thereby, preventing any intrusions into the viewshed from the MCRR/Gandy Dancer Restaurant to the new facilities.



Plate 11: Looking east toward the Broadway Street Bridge from the current Amtrak Station entrance along Depot Street

Under Build Alternative 2B, the station would be at ground level on the north side of the railroad tracks from Depot Street. The MCRR/Gandy Dancer Restaurant is located east and below grade of the Broadway Street Bridge. The bridge will prevent any intrusions into the viewshed from the Michigan Central Depot/Gandy Dancer Restaurant to the new intermodal facility. The viewshed of the historic resource, Casey's Tavern/Wood and Perrin on the west side of the bridge has been diminished due to modern commercial structures that have been developed on Depot Street. The introduction of the new facilities will not further diminish the viewshed of the resources.



Plate 12: Looking south toward the current Amtrak Station and parking area from the current entrance off of Broadway Street Bridge

Under Build Alternative 2C, the MCRR/Gandy Dancer Restaurant would be re-adapted to its original use as a train station. The exterior of the building would have new infill construction between the main depot and both ancillary buildings. On Depot Street below the Broadway Street Bridge the station would be visible from the east, but the Broadway Street Bridge Structure would block the view of the station from the historic resource, Casey's Tavern/Wood and Perrin, on the west, as it is today (See Exhibit 3.14).

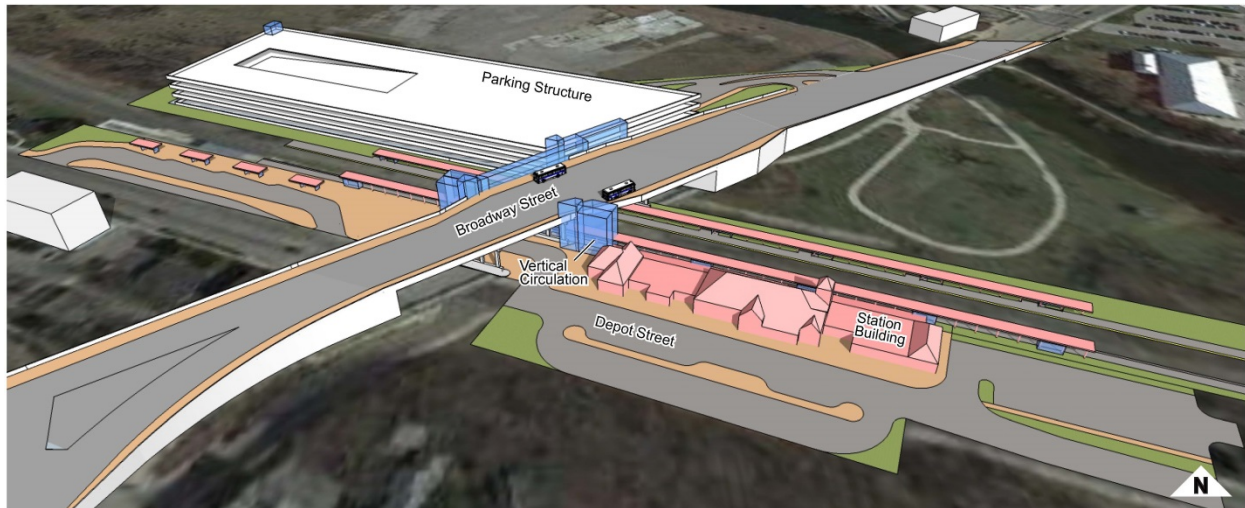
Exhibit 3.12: Visual Rendering of Structures for Build Alternative 2A



Exhibit 3.13: Visual Rendering of Structures for Build Alternative 2B



Exhibit 3.14: Visual Rendering of Structures for Build Alternative 2C

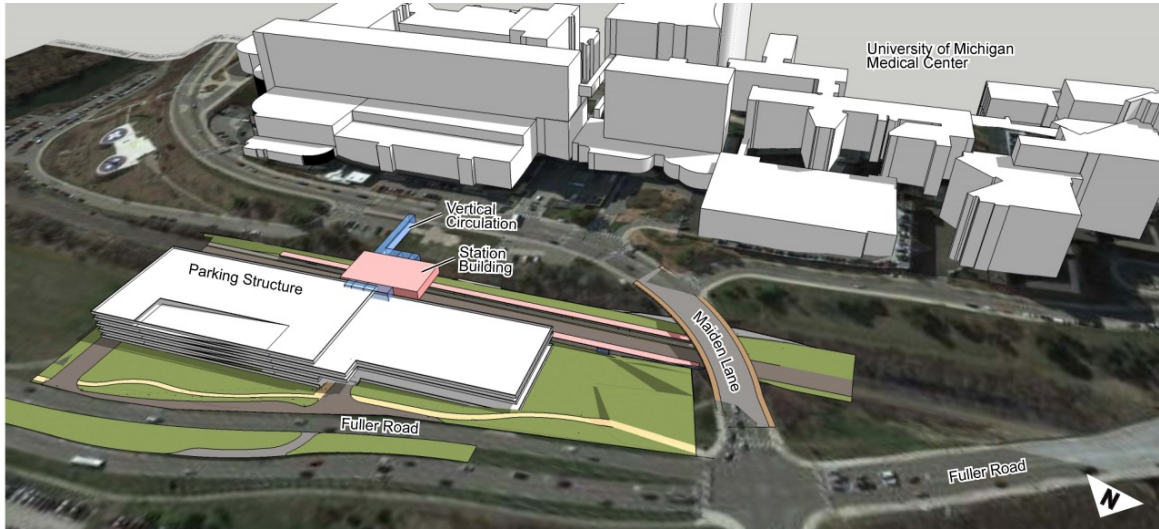


Build Alternative 3A

The parking garage under Build Alternative 3A would modify the visual character of the site. The site contains a surface parking lot and a multi-use path. The land to the south of Fuller Park is higher in elevation than that of Fuller Park and the current railroad right-of-way. Fuller Road divides Fuller Park into a northern section and southern sections. Fuller Road runs east to west and intersects with Maiden Lane west of Fuller Park. Maiden Lane slopes up to Medical Center Drive, south of Fuller Park. The U-M Medical Center, south of Fuller Park, is separated from the viewshed of the park by a vegetative slope. This slope prevents any visual intrusion from the U-M Medical Center looking north. The current viewshed of Fuller Park that is located on the north side of Fuller Road would be altered with the parking garage and station. Although the parking garage would be contained on the existing parking lot in Fuller Park, the overall visual character of the area would be altered to the east, west, and north.

The parking structure under Build Alternative 3A would modify the vertical visual character of the site. The site is currently (2017) developed with a surface parking lot while the current view shed already includes a tall vertical structure for the U-M Medical Center visible above Fuller Park. (See Exhibit 3.15). Build Alternative 3A would include a multi-level parking ramp and elevated station that would add to the visual character of the site. Presently there is somewhat of a visual break gap between the park and the hospital complex on the other side of the train tracks created by the vegetated slope. The station and the parking structure would be consistent with the overall character of the current vertical visual aesthetic due to the existence of the hospital complex above the current railroad tracks. Although the vertical parking structure would be closer to Fuller Road, Fuller Park and the swimming pool on the North side of Fuller Road, the view from the swimming pool and park area looking south has been compromised by the University of Michigan Hospital that rises above the tree line in Fuller Park.

Exhibit 3.15: Visual Rendering of Structures for Build Alternative 3A



3.10 Socioeconomic Resources

3.10.1 Community Facilities

Community facilities were catalogued through a desktop review of the following resources within roughly a half mile radius of Build Alternatives 2A, 2B, 2C, and 3A:

- Schools (3)
- Childcare Centers (2)
- Places of Worship (7)
- Cemeteries (3)
- Community Centers / Social Services (2)
- Farmers Market (1)
- Municipal Services (Fire, Police, City Administrative Offices, Courts) (4)
- Performance and Cultural Venues (5)
- Museums (2)
- Medical / Emergency Services (1)

Exhibit 3.16 illustrates the community facilities that fall within a half mile radius from Build Alternatives 2A, 2B, 2C, and 3A. The majority of community facilities are concentrated toward the Downtown area, moving south and southwest of Build Alternatives 2A, 2B, and 2C. Due to the location of Build Alternative 3A between the U-M Medical Center and Fuller Park, there are few general community facilities other than the dominant uses.

No Build Alternative

The No Build Alternative would not impact known community facilities.

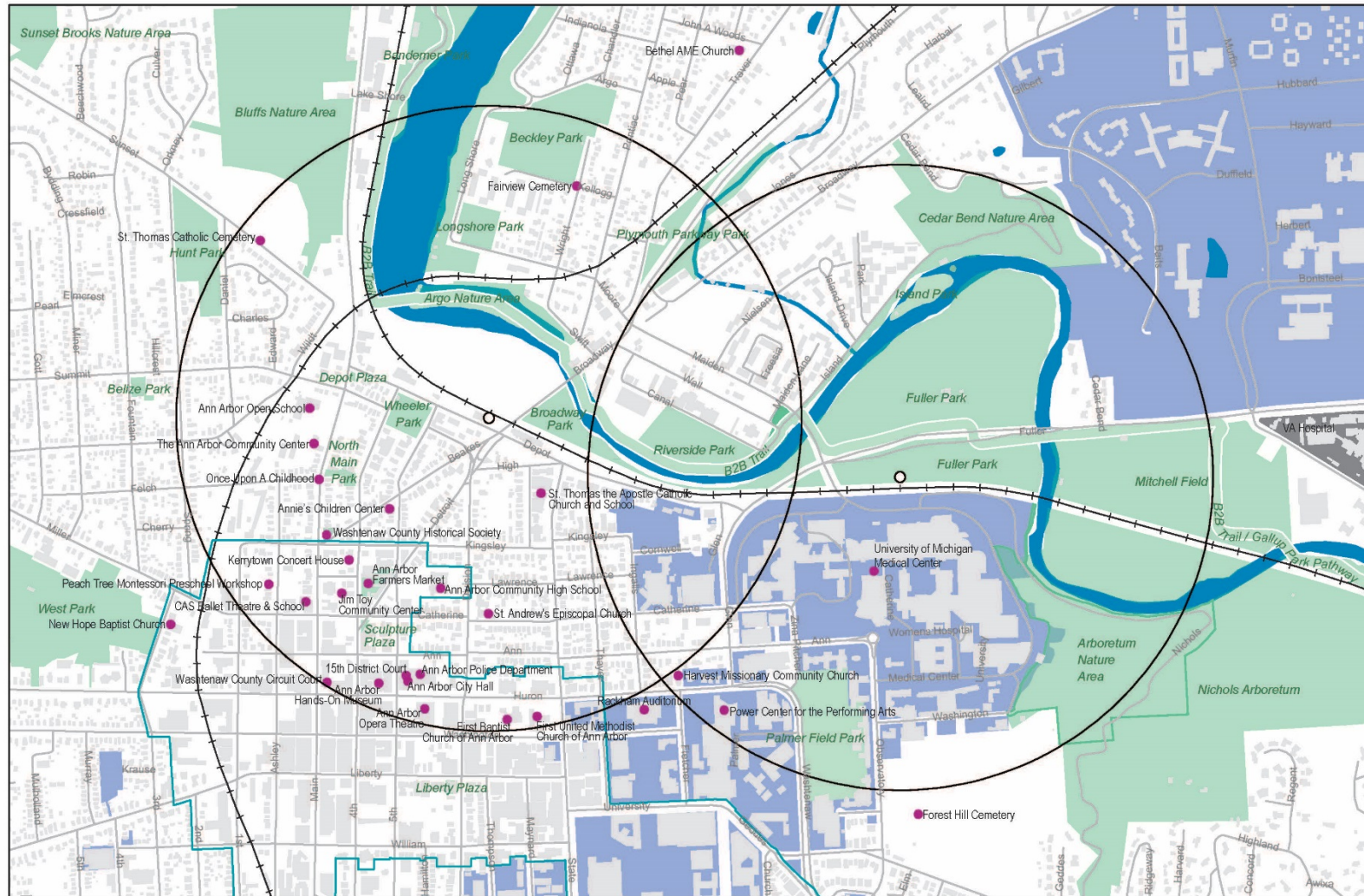
Build Alternatives 2A, 2B, and 2C

Build Alternatives 2A, 2B, and 2C do not present any concerns or impacts to community facilities.

Build Alternative 3A

Build Alternative 3A does not present any concerns or impacts to community facilities.

Exhibit 3.16: Community Facilities within a one half mile radius of Build Alternatives 2A, 2B, 2C, and 3A



- Parks
- Lakes and Rivers
- U of M Campuses
- VA Hospital
- Downtown Development Authority Boundary
- 1/2 mile buffer
- Site Alternative Centers
- Community Facility

**Ann Arbor Intermodal Passenger Rail Station
Community Facilities**

Source: AECOM, City of Ann Arbor, Michigan Geographic Framework, MDOT 2016, Google 2016, SEMCOG 2016



3.10.2 Demographics

Build Alternatives 2A, 2B, and 2C

In 2010, there were 5,275 residents and 11,080 jobs within one-half mile of Build Alternatives 2A, 2B, and 2C (see Table 3.14).⁸⁰ The U-M Central Campus and U-M Medical Campus are within one mile, while other activity centers are farther from the Build Alternative.

Build Alternative 3A

In 2010, 5,327 residents lived and 17,231 jobs were located within one-half mile of Build Alternative 3A (see Table 3.14). Most of this employment is at the adjacent U-M Medical Campus, which has the highest concentration of jobs in Washtenaw County. This Build Alternative is located about one mile from the center of downtown Ann Arbor and farther from other activity centers.

Table 3.14: Population and Employment within ½ mile of Build Alternatives

Build Alternative	Population within 1/2 mile	Employment within 1/2 mile	Total
No Build			
2A, 2B, 2C	5,275	11,080	16,355
3A	5,327	17,231	22,558

3.10.3 Economic Resources

The current expectation is that the City of Ann Arbor would own the station and own and operate the parking facilities. Amtrak and Greyhound would occupy and operate the station. MDOT owns the railroad infrastructure and controls the railroad right-of-way.

Build Alternatives 2A, 2B, and 2C require acquisition or use of private property and would be built primarily on property owned by Amtrak, which also owns the existing station building. These Build Alternatives would also require acquisition or use of some adjacent land owned by DTE Energy which is vacant. In addition, Build Alternative 2C would require acquisition of the historic Depot building housing the Gandy Dancer restaurant. Acquiring the Gandy Dancer restaurant would result in possible employment and income losses for current employees, as well as the loss of taxable property. Both are an impact to economic resources in Ann Arbor.

Build Alternative 3A is adjacent to the U-M Medical Center, the second largest employer in Ann Arbor, and within one half mile of the U-M North Campus. Downtown Ann Arbor is within one half mile of Build Alternatives 2A, 2B, and 2C.

⁸⁰ Population data provided by Washtenaw Area Transportation Study (WATS), gathered at the Transportation Analysis Zone (TAZ) level for 2010. Employment data provided by SEMCOG at the TAZ level for 2010.

3.11 Environmental Justice

Executive Order (EO) 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations - was issued by President William J. Clinton in 1994. Its purpose is to focus federal attention on the environmental and human health effects of federal actions on minority and low-income populations with the goal of achieving environmental protection for all communities.

The EO directs federal agencies to identify and address the disproportionately high and adverse human health or environmental effects of their actions on minority and low-income populations, to the greatest extent practicable and permitted by law. The order also directs each agency to develop a strategy for implementing environmental justice. The order is also intended to promote nondiscrimination in federal programs that affect human health and the environment, as well as provide minority and low-income communities' access to public information and public participation.

There are three fundamental environmental justice principles:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

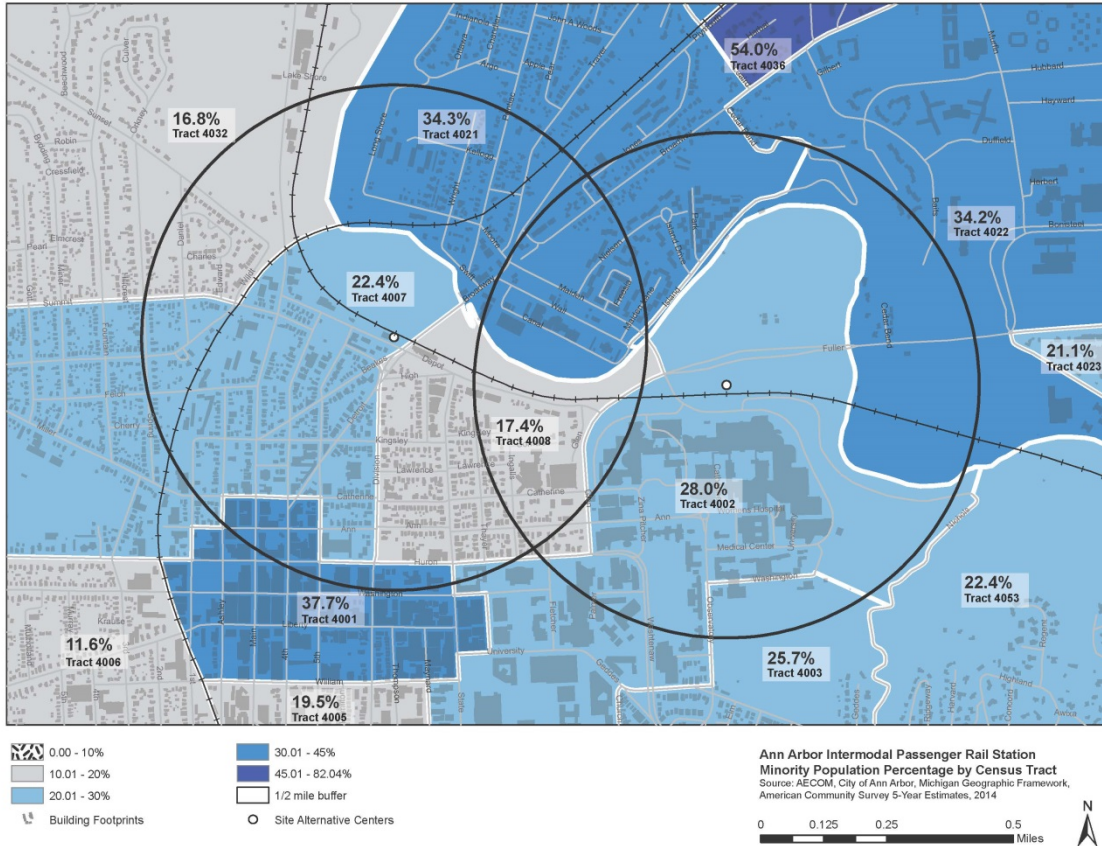
In addition to compliance with EO 12898, any proposed federal project must comply with the provisions of Title VI of the Civil Rights Act of 1964, as amended by Title VIII of the Civil Rights Act of 1968. Title VI of the 1964 Civil Rights Act provides that no person will, on the grounds of race, color, religion, sex, national origin, marital status, disability, or family composition be excluded from participation in, be denied the benefits of, or be otherwise subject to discrimination under any program of the federal, state, or local government. Title VIII of the 1968 Civil Rights Act guarantees each person equal opportunity to housing.

Five-Year ACS census tract data (2014) was reviewed to determine the presence of minority and low-income populations within the vicinity of the Build Alternatives. Transit-dependent households were also analyzed to provide additional context, as these households often intersect with other environmental justice populations. The following summarizes the composition of these populations in the area of each of the Build Alternatives.

Minority Population

The minority population for the City of Ann Arbor is 27.6% according to 2014 ACS 5-year estimates. The minority population for the combined half mile around Build Alternatives 2A, 2B, 2C, and 3A is 26.1%, which is slightly less than the city-wide percentage. The minority population for the half mile area around Build Alternative 3A is 27.5% - slightly higher than the equivalent figure of 23.3% for Build Alternatives 2A, 2B, and 2C as shown on Exhibit 3.17.

Exhibit 3.17: Minority Populations in the vicinity of Build Alternatives 2A, 2B, 2C, and 3A

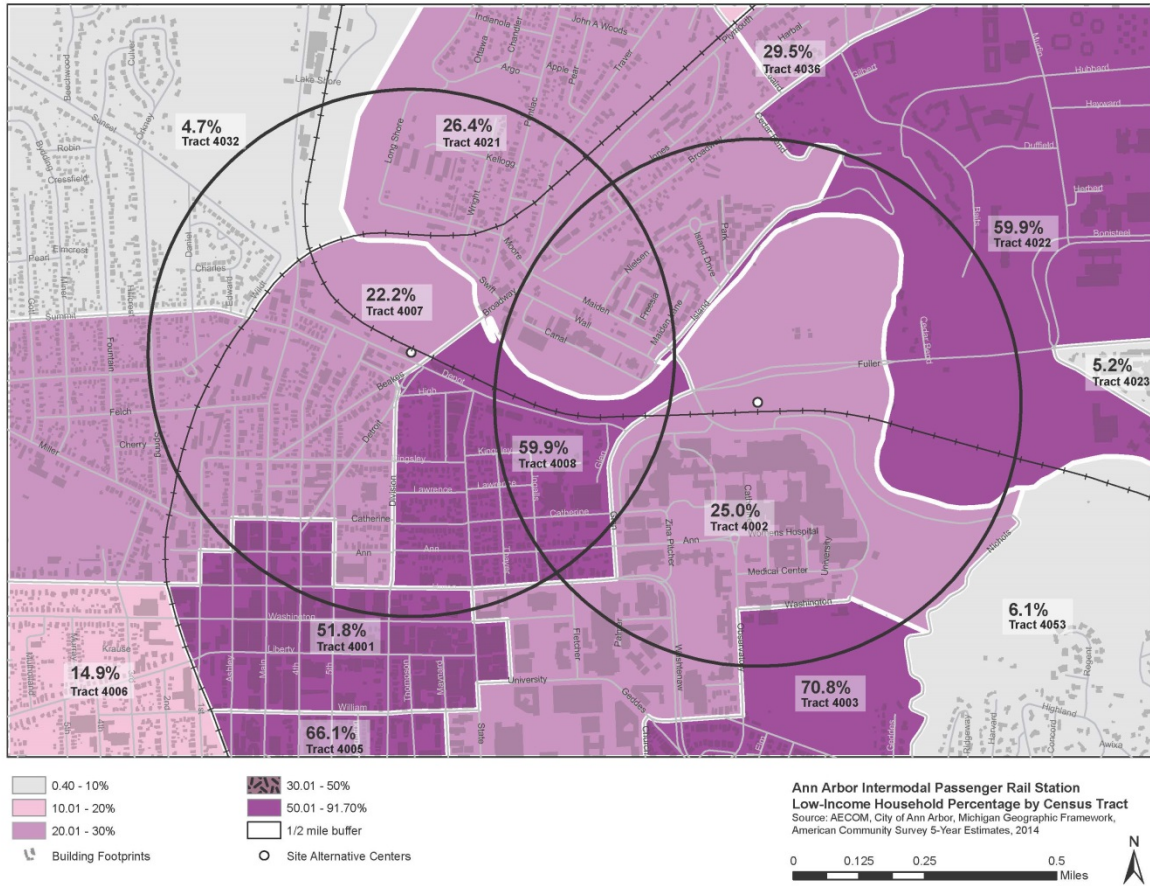


The highest minority census tract within a half mile Build Alternatives 2A, 2B, and 2C (Tract 4001) is inside the Downtown Development Authority boundaries, largely south of Huron Street in the downtown Main Street corridor. The second highest minority population census tracts within a half mile (Tracts 4021 and 4022) are north of both Build Alternative areas, following just above and outside of the footprint of the Huron River. The portion of the easternmost census tract (Tract 4023) within a half mile of Build Alternative 3A is nearly absent of any residential buildings, making it likely that the remainder of Tract 4023, outside of the buffer, is weighting the percentage. The tract (Tract 4021) that lies north and between the two Build Alternatives north of the Huron River does contain residential properties within a half mile footprint, and at 34.3% minority population for the entire tract, is higher than the city-wide percentage.

Low-Income Population

The low-income population for the City of Ann Arbor is 22.6% according to 2014 ACS 5-year estimates. The low-income population for the combined half mile buffers around Build Alternatives 2A, 2B, 2C, and 3A is 42.9%, which is almost double the city-wide percentage. The low-income population for the half mile area around Build Alternative 3A is 51.4% - higher than the equivalent figure of 40.6% for Build Alternatives 2A, 2B, and 2C, as shown on Exhibit 3.18.

Exhibit 3.18: Low-income Households in the vicinity of Build Alternatives 2A, 2B, 2C, and 3A



However, the most concentrated low-income census tract (Tract 4003) in the footprint of the half mile area is to the south of the U-M Medical Center, south of Washington Heights Street, and the majority of the census tract captured belongs to the Forest Hill Cemetery property. The only residential structure captured in the area is for the Ronald McDonald House Charities of Ann Arbor, which provides temporary lodging for families with children undergoing medical treatment. Based on this information, it is unlikely that the low-income population associated with this census tract is generated from within the buffer.

The second most concentrated low-income population census tract (Tract 4008) is located between Build Alternatives 2A, 2B, 2C, and 3A, below the Huron River between Division and Glen. The portion of this tract within the half mile area does contain a significant amount of housing. A third concentrated low-income tract (Tract 4022) is to the east and northeast of Build Alternative 3A. The portion of this census tract within the Build Alternative 3A buffer is likewise nearly absent of any residential buildings, making it likely that the remainder of the tract is weighting the percentage

Table 3.15: Environmental Justice Population Percentages near the Build Alternatives

EJ Measure	City-wide	No Build Alternative	Combined 1/2 mile buffer around Build Alternatives*	Build Alternatives 2A, 2B, & 2C 1/2 mile buffer	Build Alternative 3A 1/2 mile buffer
Minority Population	27.6%		26.1%	23.3%	27.5%
Low-Income Population	22.6%		42.9%	40.6%	51.4%

*Excludes buffer overlap between Build Alternatives 2 and 3

Source: AECOM, City of Ann Arbor, ACS 5-Year Estimates 2014, Michigan Geographic Framework

Location of Impact

Having established the presence of significant environmental justice populations within the project area, direction from the US Department of Transportation (USDOT) Order 5610.2(a) may be applied to assess whether the environmental impacts are likely to fall disproportionately on those populations within the community.

No Build Alternative

The No Build Alternative would present no changes to community character and would not present disproportionately high or adverse effects to area EJ populations.

Build Alternatives 2A, 2B, and 2C

As noted in Table 3.14 low income populations are present in the vicinity of Build Alternatives 2A, 2B, and 2C at a higher percentage than city-wide averages and minority populations are present at a slightly lower percentage. There are no commercial or private property acquisitions anticipated that would adversely impact these populations, however the removal of the Gandy Dancer may cause temporary impacts to entry level workers but these positions are likely to be replaced with redevelopment opportunities in the station area. Four (4) representative noise receptor locations were identified as part of the noise analysis (Section 3.2) within project area of Build Alternatives 2A, 2B, and 2C. As noted in Section 3.2, predicted operational and construction noise levels are not anticipated to result in noise impacts or the need for noise abatement measures.

Adverse impacts are not expected to affect these or other residents because Build Alternatives 2A, 2B, and 2C would be constructed at the site of either the existing or historic depot. Access to the existing Amtrak and Wolverine rail will be maintained as well as access to local and intercity bus service during construction activities for these Build Alternatives.

Low-income households in particular may be more likely to use public transportation; the addition of new transportation connections at the new Intermodal Station, along with the increase in Amtrak Wolverine service is expected to provide a benefit to environmental justice populations.

Build Alternative 3A

As noted in Table 3.15 low income populations are present in the vicinity of Build Alternative 3A at a higher percentage than city-wide average and minority populations are present at a slightly lower percentage. There are no commercial or private property acquisitions under Build Alternative 3A that would adversely impact these populations. Four (4) representative noise receptor locations were identified as part of the noise analysis (Section 3.2) within project area of Build Alternative 3A. As noted in Section 3.2, predicted operational and construction noise levels are not anticipated to result in noise impacts or the need for noise abatement measures.

Low-income and minority populations are present in the vicinity of Build Alternative 3A. Adverse impacts are not expected to affect these or other residents because this Build Alternative would be constructed in the footprint of an existing parking lot. Construction activities are not anticipated to conflict with access and/or operations of accessible public transportation modes. Low-income households in particular may be more likely to use public transportation; the addition of new transportation connections at the new Intermodal Station, along with the increase in Amtrak Wolverine service is expected to provide a benefit to environmental justice populations.

Conclusion

Based on the analysis of Build Alternatives 2A, 2B, 2C and 3A, no disproportionately adverse impacts are anticipated for either low-income or minority populations in the study area. Both proposed sites utilize developed areas (Existing Station and Fuller Park) and will not result in the dislocation of any minority owned business and/or residences. Operational and construction related noise impacts are not anticipated to exceed abatement criteria but will be further mitigated through adherence to the City of Ann Arbor's ordinance restricting nighttime construction activities. Access to existing public transportation services and non-motorized modes of transportation will be maintained during construction. Access to future public transportation will be improved with added capacity at the proposed station.

3.12 Noise

The FRA noise policy relies on the Federal Transit Administration (FTA) guidance covering intra-city and commuter rail projects. This noise analysis analyzes noise generated by the construction and operation of the Build Alternatives, assessing noise impacts and, where appropriate, recommending noise abatement options to mitigate noise impacts.⁸¹

The FTA General Noise Assessment includes the following general steps:

⁸¹ Operational and construction noise impacts for the Build Alternatives have been assessed in accordance with the FTA's Transit Noise and Vibration Assessment manual from May 2006, Chapter 5, General Noise Assessment.

1. Identify representative noise-sensitive land uses (representative receptors) where noise impacts could potentially occur;
2. Determine existing noise exposure at representative receptors (preferably from noise measurements);
3. Predict project noise exposure at representative receptors using FTA methodology;
4. Assess impacts by comparing existing and project noise levels to FTA noise impact criteria;
5. Where noise impacts are predicted to exist, discuss appropriate noise mitigation options; and,
6. Assess potential construction noise impacts⁸².

3.12.1 Representative Receptors

A conservative initial noise impact screening distance of approximately 550 feet was identified from FTA methods for a Park and Ride facilities and associated access roads (distance measured from the approximate center of the proposed parking facility to the closest part of the receptor parcel). Within the screening distance a total of eight representative receptor locations that were selected to assess potential noise impacts near Build Alternatives 2A, 2B, 2C, and 3A, as shown in Table 3.16 below (also shown in Exhibit 3.19). These receptor locations were selected to be representative of other similar land uses in the study area, and generally are the closest to the Build Alternatives and hence most likely impacted by Project related noise exposure. These locations were used for both existing exposure noise measurements and estimates of future Project noise exposure.

⁸² Ibid, Chapter 12

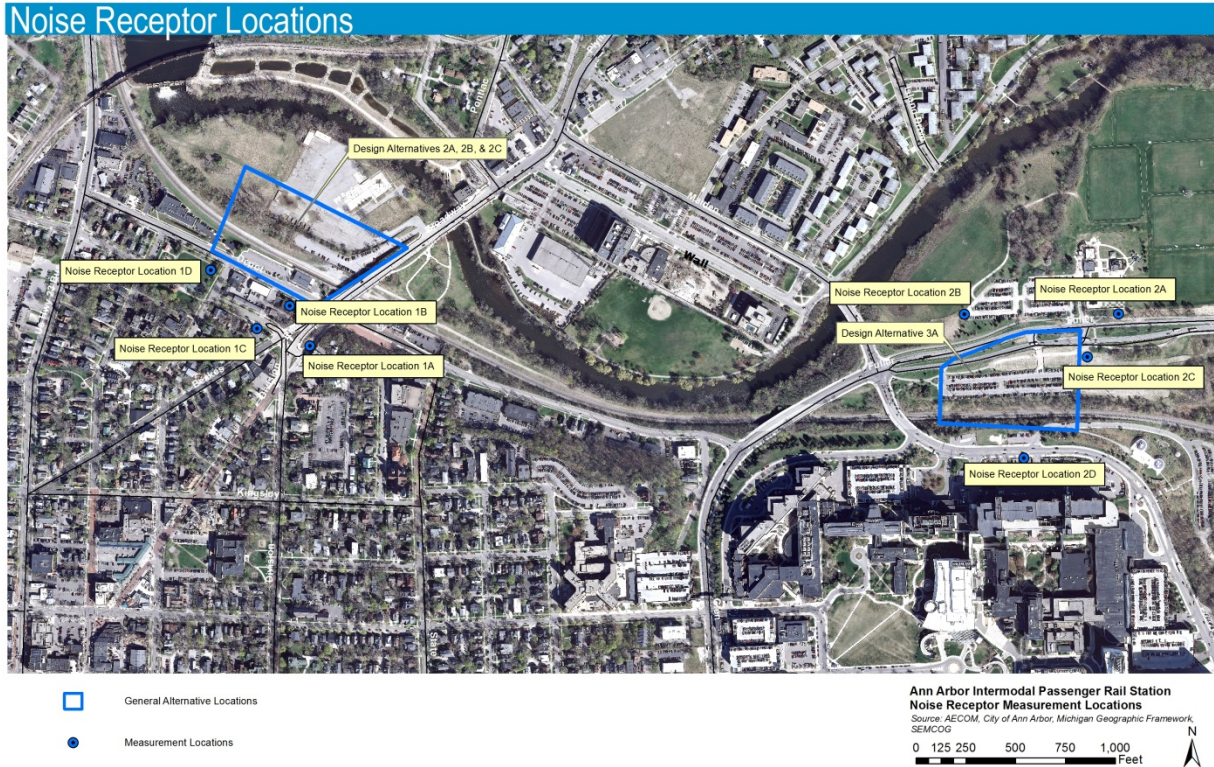
Table 3.16: Representative Noise Receptor Locations

Noise Receptor ID	Build Alternative Site Location	Location	Land Use	Dist. to Site (ft.)
1A	2A, 2B, 2C	411 High Street (rear)	multifamily residence	475
1B	2A, 2B, 2C	320 Depot Street	multifamily residence	300
1C	2A, 2B, 2C	324 Summit Street	single family residence	500
1D	2A, 2B, 2C	Wheeler Park, 200-block Depot Street	park/playground	500
2A	3A	Fuller Park South (south of Fuller Rd)	park/sports field area	400
2B	3A	Fuller Park East (north of Fuller Rd)	park/public swimming pool	500
2C	3A	Fuller Park Pool (north of Fuller Rd)	park/sports field area	550
2D	3A	University of Michigan Medical Center, E. Medical Center Dr	Hospital exterior façade, (no external use areas)	450

Source: Ann Arbor Intermodal Passenger Rail Station, Noise and Vibration Analysis, September 2016, pg 4

Noise receptors 1A, 1B, 1C, 1D are the closest residential land uses and a small public park near Build Alternatives 2A, 2B, and 2C. Near the existing Amtrak Station on Depot Street, noise receptors 2A, 2B, and 2C are all park/sports facility areas in proximity to the Build Alternative 3A just south of Fuller Road. Noise receptor 2D is an exterior façade location of the side of the Medical Center that faces the project. Exterior areas assessed for noise impacts typically include exterior dining or meeting areas, benches, break areas, etc. However, no such exterior use areas were identified with an exposure to the study area. In addition to the representative receptor location 1D at Wheeler Park on Depot Street for Build Alternatives 2A, 2B, and 2C, Broadway Park is located at a similar distance to the east. Broadway Park has fewer park enhancements (a pathway, park benches, a dog park, and no parking), is visually blocked and acoustically shielded from Build Alternatives 2A, 2B, and 2C by the Broadway Street Bridge, and is subject to existing station and train acoustics. Therefore, Wheeler Park was selected as the representative receptor within the study area.

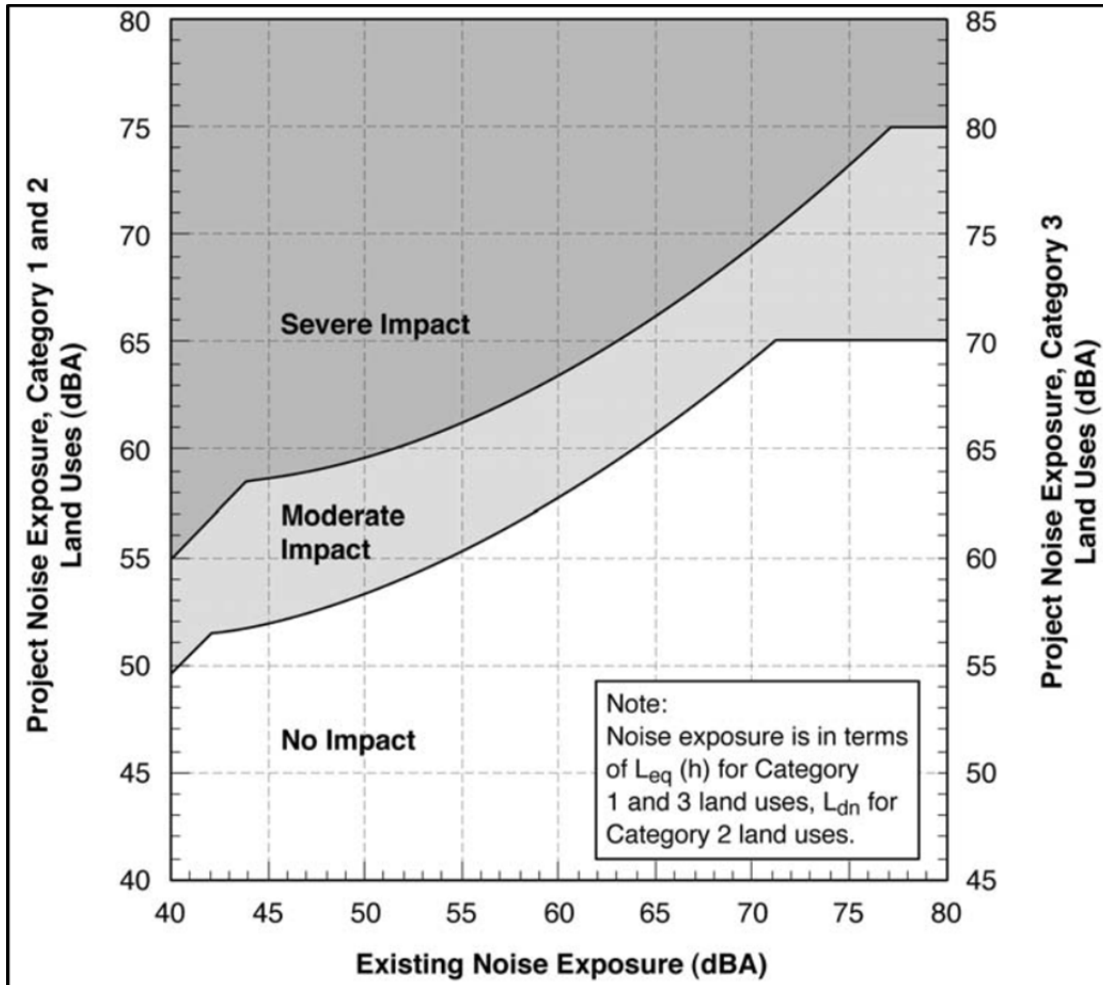
Exhibit 3.19: Representative Noise Receptor Locations



3.12.2 Noise Impacts

The FTA transit noise impact criteria are shown graphically in Table 3.21. The FTA Criteria are not based upon an absolute noise impact level, but rather a sliding scale for “Moderate” or “Severe” impact of the project noise exposure dependent upon the existing (pre-project) noise exposure. For example, for a residential land use (Category 2, residential), if the existing (pre-project) noise exposure at that location was determined to be 60 A-weighted decibels Day-Night Noise Level (dBA Ldn), then no impact would be assessed for predicted project only noise exposure of less than 58 dBA Ldn, a moderate impact would be assessed for project noise exposure of between 58-63 dBA Ldn, and for a severe impact, project noise exposure greater than 63 dBA Ldn.

Exhibit 3.20: FTA Noise Impact Criteria for Transit Projects



Source: FTA Transit Noise and Vibration Impact Assessment, May 2006, Figure 3-1

Table 3.17 identifies the operational noise impact evaluation for the representative noise receptors as defined in Table 3.16. The table identifies for each receptor, the related Build Alternative, the FTA Land Use Category (for defining the appropriate impact assessment metric), the measured existing (pre-project) noise exposure level, the moderate and severe noise impact thresholds (from Table 3.21), the predicted future project-only noise level (Project noise is typically operational noise from the proposed project only, in this case noise from new parking structures or project-related increase in road traffic, not including existing noise exposure level), the total combined existing plus future project-only noise levels, the future increase over existing level, and the assessed noise impact. The impact for each receptor and Build Alternative is assessed by comparing the future project level to the moderate and severe impact criteria. If the project level exceeds the moderate or severe impact level for that receptor then an impact is identified. In this case, while the future total noise level (existing plus future project-only noise) did exceed the existing noise level by a small amount at a few locations (primarily associated with Build Alternative 3A), in no instance did the future project level exceed either moderate or severe impact level criteria, so no operational noise impacts were identified in accordance with FTA guidance.

All noise levels in Table 3.17 are expressed as A-weighted decibels, or dBA. Decibels are a logarithmic value and do not add or subtract arithmetically. For example, for noise receptor 1D in Table 3.16, the combination of the existing level of 59 dBA and the project level of 54 dBA would be:

$$59 \text{ dBA} + 54 \text{ dBA} = 10 \times \text{Log}[(10^{(59/10)} + 10^{(54/10)})] = 60 \text{ dBA}.$$

Table 3.17: Predicted Operational Noise Levels and Noise Impacts

Noise Receptor	FTA Category	Existing Level (dBA)	Impact Criteria Moderate/Severe (dBA)	Project Level (dBA)	Total (dB)	Increase (dBA)	Impact?
No Build Alternative							
n/a							
Build Alternative 2A Results							
1A	2	66	62/67	48	66	0	No
1B	2	66	62/67	53	66	0	No
1C	2	66	62/67	53	66	0	No
1D	3	59	63/68	54	60	1	No
Build Alternative 2B Results							
1A	2	66	62/67	48	66	0	No
1B	2	66	62/67	53	66	0	No
1C	2	66	62/67	53	66	0	No
1D	3	59	63/68	54	60	1	No
Build Alternative 2C Results							
1A	2	66	62/67	48	66	0	No
1B	2	66	62/67	53	66	0	No
1C	2	66	62/67	53	66	0	No
1D	3	59	63/68	54	60	1	No
Build Alternative 3A Results							
2A	3	60	63/68	54	61	1	No
2B	3	53	60/65	54	56	3	No
2C	3	61	64/69	55	62	1	No
2D	2	63	60/65	59	65	2	No

Note: Metrics for sound levels are L_{dn} for FTA Category 2, Residential and Hospital (1A, 1B, 1C, 2D) and L_{day} for FTA Category 3, Institutional Day Use (1D, 2A, 2B, 2C). All values in table are rounded to closest dBA

Source: Ann Arbor Intermodal Passenger Rail Station, Noise and Vibration Analysis, September 2016, pg 10

A member of the public who attended the September 2015 public meeting expressed concerns regarding possible acoustical reflections or reverberation due to helicopter operations at the helipad directly between the proposed station for Build Alternative 3A and the U-M Medical Center, which are separated by a distance of approximately 300 feet. However, this smaller, older helipad serves only as an emergency backup to the U-M Medical Center’s newer, main dual-pad heliport located approximately 750 feet to the east; therefore, it is rarely used. As a result, any acoustical reflections or reverberation associated with the infrequent and short-term use of this helipad would not result in a significant increase to the 24-hour L_{dn} value at this location (Receptor Location 2D).

3.12.3 Construction Noise Impact Analysis

Analysis of Project construction noise is also required as part of the FTA noise analysis (as discussed in the FTA guidance manual, Chapter 12). For a General Noise Assessment it is recommended to estimate the noise level from the two noisiest pieces of equipment, assuming that they would both operate non-stop, at full power, at the same time and from the geographic center of the site. Under these conditions, the analysis compares the resulting predicted level impact criteria which are identified by FTA as 90 dBA for daytime periods (7 am to 10 pm) and 80 dBA for nighttime periods (10 pm to 7 am), 1-hour equivalent level for residential receptors (which is the most restrictive).

The predicted construction noise level and resulting noise levels at the identified receptors for the Build Alternatives are provided in Table 3.18 below.

Table 3.18: Predicted Construction Noise Level and Impacts

Receptor Information			Predicted Level (L_{eq} , dBA) and Impact		
ID	Land Use	Distance to Site (feet)	Level at Receptor	Daytime Impact	Nighttime Impact
1A	Residential	475	81	No	Yes
1B	Residential	300	85	No	Yes
1C	Residential	500	81	No	Yes
1D	Park	500	81	No	Yes
2A	Park	400	83	No	Yes
2B	Park	500	81	No	Yes
2C	Park	550	80	No	Yes
2D	Hospital	450	82	No	Yes

Source: Ann Arbor Intermodal Passenger Rail Station, Noise and Vibration Analysis, September 2016, pg 12

Note: impacts would only occur if construction activity is done at night, which would be in violation of city ordinance.

As shown above, and following FTA recommended construction impact noise analysis, the combined sound level from a typical pile driver and mobile crane would not generate noise impacts at the identified receptor locations, assuming that all such construction activity would be limited to daytime periods as required by the City’s Noise Ordinance (Chapter 119, Section 9:363, prohibiting noisy construction activity between 8:00 pm and 7:00 am). If the pile-driving activity were restricted to the daytime period, which would be typical for a construction project of this type and is required by city ordinance, there would not be a noise impact for the construction of the Build Alternatives.

No Build Alternative

Under the No Build Alternative, there would be no project-related change in operations and no construction activity would take place and therefore no additional operational or construction-related noise would be generated. Therefore, no noise impacts would exist.

Build Alternatives

As shown in Table 3.17, operational noise levels at noise receptors near the Build Alternatives would either not increase or would increase between one and three decibels, which would not result in a noise

impact. As shown in Table 3.18, no noise impacts would occur during the construction of the Build Alternatives so long as construction activities were limited to daytime periods only in accordance with the City Noise Ordinance. Therefore, no noise mitigation would be required for construction or operation of the Build Alternatives.

3.12.4 Vibration

Operations of rail equipment and facilities can sometimes generate vibrations that can cause annoyance or disruption of human activities or the operation of vibration-sensitive equipment. Chapter 9, Vibration Screening Procedures, of the FTA Transit Noise and Vibration Impact Assessment Manual (FTA Manual) provides a screening procedure for operational vibration impact to determine if a more detailed analysis is required. The FTA screening distance for vibration impact assessment is reported below in Table 3.19 (reference Table 3.16 for land use category descriptions). Since the Project does not include any new rail operational activity, the only FTA project type that would apply would be “Bus Projects” since new bus activity could result from the intermodal portion of the Build Alternatives.

Table 3.19: Operation Vibration Impact Screening Distances (Bus Projects)

Type of project/Land Use Category	Screening Distance from right-of-way (ROW) or Property Line (feet)		
	Category 1	Category 2	Category 3
Bus Projects	100	50	NA

Source: FTA Table 9-2

Land Use Category 3 (Institutional Land with primarily daytime use) additionally does not have a defined screening distance. Ground borne vibration impacts are assessed only for areas within buildings (since it is the vibratory motion of the building and its contents that are the primary concern for annoyance, process interference or damage). Outdoor use areas such as parks (receptors 1D, 2A, 2B, 2C) are not considered for vibration impacts. The same representative receptor locations used for the noise impact analysis (Table 3.16) were used for the operational vibration screening analysis (since they were selected due to their proximity to the noise/vibration source), as presented below in Table 3.20.

Table 3.20: Operational Vibration Impact Screening Assessment (distances in feet)

Receptor	Land Use	Receptor Category	Screening Distance	Closest Project Road	Roadway Distance	Impact?
1A	MFR ⁸³ , High S	2	50	Broadway	200	No
1B	MFR, Depot St	2	50	Broadway	100	No
1C	SFR ⁸⁴ , Summit St	2	50	Broadway	100	No
1D	Park on Depot	3	NA	Depot	50	No
2A	Fuller Park South	3	NA	Fuller	200	No
2B	Fuller Park North	3	NA	Fuller	150	No
2C	Fuller Park Pool	3	NA	Fuller	100	No
2D	Med. Center (exterior)	1	100	Fuller	500	No

Source: Ann Arbor Intermodal Passenger Rail Station, Noise and Vibration Analysis, September 2016, pg 13

Table 3.20 indicates that the representative receptor distance to the nearest project roadway is outside of the identified impact screening distance. Therefore, no operational vibration impacts are identified during operation of the Build Alternatives.

Construction Vibration Impact Analysis

There are two types of potential vibration impact that can result from construction activity: annoyance and damage. These are assessed using different criteria and vibration metrics, as discussed separately, in the subsections below.

Construction Vibration Annoyance Impact Analysis

Construction vibration annoyance impacts are assessed using the same impact criteria for operational vibration provided in Chapter 8 of the FTA Manual (Vibration Impact Criteria), which is summarized in Table 3.21, below.

Table 3.21: Vibration Annoyance Impact Criteria in Velocity Decibels (VdB)

Land Use Category	Ground-Borne Vibration Impact Level (VdB)		
	Frequent	Occasional	Infrequent
Category 1 (Vibration sensitive operations)	65	65	65
Category 2 (Residential)	72	75	80
Category 3 (Institutional, daytime use)	75	78	83

Source: FTA Table 8-1

The terms used to describe the frequency of events (frequent, occasional, infrequent) referenced in the table are generally applied to train events as appropriate (greater than 70 events per day is “frequent,” less than 30 is “infrequent”). However, construction activity, while generally considered temporary in nature, would usually be considered “frequent” in the table above (since construction vibration sources, such as pile driving, can operate for long and continuous periods of the day in some cases). The

⁸³ MFR = Multi-Family Residence

⁸⁴ SFR = Single-Family Residence

methodology for predicting construction vibrations is provided in Chapter 12 of the FTA Manual. The construction vibration impact assessment is presented in Table 3.22, below. This table assesses impacts for three different construction equipment types.

Table 3.22: Construction Vibration Annoyance Impact Assessment (levels VdB, distance in feet)

Rec.	Land Use	Category	Impact Level	Source Distance	Pile Driver	Vibratory Roller	Dozer/Hoe Ram	Impact?
1A	MFR, High St	2	72	475	65.6	55.6	48.6	No
1B	MFR, Depot St	2	72	300	71.6	61.6	54.6	No
1C	SFR, Summit St	2	72	500	65.0	55.0	48.0	No
1D	Park on Depot	3	NA	500	65.0	55.0	48.0	NA
2A	Fuller Park South	3	NA	400	67.9	57.9	50.9	NA
2B	Fuller Park West	3	NA	500	65.0	55.0	48.0	NA
2C	Fuller Park Pool	3	NA	550	63.7	53.7	46.7	NA
2D	Medical. Center (exterior facade)	1	65	450	66.3	56.3	49.3	Pile driver only

Source: Ann Arbor Intermodal Passenger Rail Station, Noise and Vibration Analysis, September 2016, pg 15

As indicated in Table 3.22, there is one potential impact associated with pile driving activity at the Medical Center for Build Alternative 3A with a predicted vibration level of 66.3 VdB at the nearest exterior façade of the building relative to an impact level of 65 VdB. It is important to note that the U-M Medical Center was classified as land use Category 1, as a building where vibrations could interfere with interior operations, rather than just “annoyance.” For a hospital or medical center, typical vibration sensitive activities and equipment could include surgical suites, laboratories, microscopes, X-ray and MRI equipment. The degree to which pile driving would actually interrupt or interfere with these vibration sensitive uses would depend on a wide number of factors including intervening soil characteristics, building foundation and structural design, vibration-sensitive equipment installation and supports/pedestals, actual distance from vibration source beyond exterior façade, and other factors.

Some conceptual mitigating strategies for the potential pile driving impact could include the following:

- Pre-auger or pre-trench the pile holes to loosen the ground
- Use a nylon or rubber pile cap cushion on top of the piles
- Use a vibratory pile driver instead of an impact pile driver
- Use a different system altogether such as slurry walls or a hydraulic pile pusher
- Restrict the time of day when pile driving operations can occur
- Coordinate with Hospital staff to arrange construction windows when pile driving can take place so as not to interfere with vibration-sensitive activities
- Conduct vibration monitoring during periods with pile driving to determine actual vibration levels at the vibration-sensitive activities

Any of the above methods would serve to mitigate the generation of vibration levels that could interfere with interior operations.

Construction Vibration Damage Impact Analysis

Potential building damage as a result of construction activity is addressed in Chapter 12 of the FTA Manual. The construction vibration damage impact assessment is presented in Table 3.23, below. This table assesses impacts for the three different construction equipment types.

Table 3.23: Construction Vibration Damage Assessment (vibration in in./sec, distance in feet)

Rec.	Land Use	Bldg. Cat.	Damage Criteria	Source Distance	Pile Driver	Vibratory Roller	Dozer/Hoe Ram	Impact?
1A	MFR ⁸⁵ , High St	III	0.2	475	0.008	0.003	0.001	No
1B	MFR, Depot St	III	0.2	300	0.015	0.005	0.002	No
1C	SFR ⁸⁶ , Summit St	III	0.2	500	0.007	0.002	0.001	No
1D	Park on Depot	NA	NA	500	0.007	0.002	0.001	NA
2A	Fuller Park South	NA	NA	400	0.010	0.003	0.001	NA
2B	Fuller Park West	NA	NA	500	0.007	0.002	0.001	NA
2C	Fuller Park Pool	NA	NA	550	0.006	0.002	0.001	NA
2D	Medical Center (exterior facade)	I	0.5	450	0.008	0.003	0.001	No

Source: Ann Arbor Intermodal Passenger Rail Station, Noise and Vibration Analysis, September 2016, pg 16

No Build Alternative

Under the No Build Alternative, no station improvements would be built and there would be no project-related construction or operational vibrations, and no mitigation would be required.

Build Alternatives 2A, 2B, 2C

For Build Alternatives 2A, 2B, and 2C, Table 3.20 indicates that no operational vibration annoyance impacts would occur and Table 3.22 indicates that no construction vibration annoyance impact would occur. Table 3.23 demonstrates that none of the predicted vibration values are within an order of magnitude of the identified damage criteria. No vibration-induced building damage would occur.

Build Alternative 3A

For Build Alternative 3A, Table 3.20 indicates that no operational vibration annoyance impacts would occur.

As noted in Table 3.22, there is one potential construction vibration impact (interfering with internal operations) associated with pile driving activity during construction under Build Alternative 3A at the U-M Medical Center. Mitigation strategies are suggested above. Any of the suggested mitigation measures would effectively reduce or eliminate the potential construction vibration impact of interfering with interior operations and would be coordinated with the U-M Medical Center to implement most appropriate mitigation measure.

⁸⁵ MFR = Multi-Family Residence

⁸⁶ SFR = Single-Family Residence

Table 3.23 demonstrates that none of the predicted vibration values are within an order of magnitude of the identified damage criteria. No vibration-induced building damage would occur.

3.13 Air Quality

Impacts to air quality are evaluated for transportation projects in accordance with the Clean Air Act of 1970 and the Clean Air Act Amendments of 1990, which identified pollutants that are considered harmful to the environment and to human health. The Air Quality study area extends beyond the project area as air quality status is reported as county, state or regional. There are several ways in which the four Build Alternatives and the No Build Alternative for the Ann Arbor Intermodal Station have been evaluated in terms of their effect on air quality. These are described in the sections below.

3.13.1 National Air Ambient Quality Standards

The Clean Air Act includes National Air Ambient Quality Standards that are established for the following pollutants:

- Carbon Monoxide (CO)
- Lead (Pb)
- Nitrogen Dioxide (NO₂)
- Ozone (O₃)
- Particulate matter (PM₁₀ – levels of 10 microns and smaller, and PM_{2.5} – levels of 2.5 microns and smaller)
- Sulfur Dioxide (SO₂)

According to the Michigan Department of Environmental Quality (MDEQ SIP 2016)⁸⁷, all of the state of Michigan is in attainment for the following pollutants:

- Ozone (O₃)
- Carbon Monoxide (CO)
- Nitrogen Dioxide (NO₂)
- Coarse Particulate Matter (PM₁₀)
- Annual and 24-hour Fine Particulate Matter (PM_{2.5})

In addition, Washtenaw County is in attainment for sulfur dioxide (SO₂) and lead (Pb).

3.13.2 Mobile Source Air Toxics

The Clean Air Act Amendments of 1990 address the need to control toxic emissions from transportation sources. The Environmental Protection Agency first issued its Mobile Source Air Toxics (MSAT) Rule in 2001, which identified 21 mobile source air toxic compounds as being hazardous air pollutants requiring regulation. Mobile source air toxic compounds identified as having the greatest influence on health

⁸⁷ Source: MDEQ Air Quality Division, http://www.michigan.gov/deq/0,4561,7-135-3310_70940---,00.html, accessed July 18, 2016

included benzene, 1,3-butadiene, formaldehyde, acrolein, acetaldehyde, and diesel particulate matter (DPM).

In order to determine the level of mobile source air toxic analysis required, a tiered approach with three categories has been established, and is dependent on specific project circumstances:

1. No analysis for projects with no potential for meaningful mobile source air toxic effects;
2. Qualitative analysis for projects with low potential mobile source air toxic effects; or
3. Quantitative analysis to differentiate alternatives for projects with higher potential mobile source air toxic effects.

The types of projects in the “no potential for meaningful MSAT effects” category include:

- Projects qualifying as a categorical exclusion under 23 CFR 771.117(c) (subject to consideration whether unusual circumstances exist under 23 CFR 771.117(b));
- Projects exempt under the Clean Air Act conformity rule under 40 CFR 93.126; or
- Other projects with no meaningful impacts on traffic volumes or vehicle mix.

Based on the results of the Traffic Impact Study (see Appendix C and summarized in Section 3.3.3 above) neither Build Alternative is anticipated to have a meaningful impact on the existing traffic volumes or vehicle mix; therefore impacts from mobile source air toxic effects are not anticipated.

The Build Alternatives would increase vehicle trips at the station by approximately 275 – 300 morning and evening peak-hour vehicle trips (see Section 3.10.3 Motor Vehicle Traffic for more information). The Build Alternatives include bus bays for 4 inter-city buses, but the anticipated level of bus operations would not have a meaningful impact on the vehicle mix in the area around the station. There would be an increase in the number vehicles parked at the Build Alternative sites and associated concentration of vehicle starts. However, since the additional traffic volume and vehicle parking under the Build Alternatives would be diverted from other roadways, highways and parking facilities in the region, these traffic and parking changes and vehicle starts would not impact air quality or mobile source air toxins in the county or region (see Section 3.9.3 Transportation for more information).

The existing roadway network on Broadway Street can accommodate the increase in traffic resulting from the projected ridership at the Ann Arbor Intermodal Station. An additional traffic signal would be required on Broadway at the parking ramp driveway for Build Alternatives 2A, 2B, and 2C. Widening the Broadway Street Bridge to accommodate bus pull-outs and right and left turn lanes is necessary to meet MDOT traffic and safety guidelines. Based on the Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, October 18, 2016, a project can be considered to have no meaningful potential MSAT effects if the project has no meaningful impacts on traffic volumes or vehicle mix.

The existing roadway network surrounding Build Alternative 3A on Fuller Road can accommodate the increase in traffic resulting from the projected ridership at the Ann Arbor Intermodal Station with the inclusion of planned City capacity improvements at Fuller Road. Minor geometric improvements such as turn lanes at the site driveways would be required along Fuller Road to meet MDOT traffic and safety guidelines. Based on the Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, October 18, 2016, a project can be considered to have no meaningful potential MSAT effects if the project has no meaningful impacts on traffic volumes or vehicle mix.

3.13.3 Conformity

The Clean Air Act requires transportation projects using federal funds from the FRA determine that those transportation activities are consistent with air quality goals under General Conformity. The General Conformity requirement (40 C.F.R. Part 93, subpart B) is intended to prevent the air quality impacts of a proposed federal project from causing or contributing to new violations of the air quality standards, exacerbate existing violations, or interfering with the purpose of the applicable implementation plan. General Conformity applies to transportation plans, Transportation Improvement Programs (TIPs), and federally funded or approved projects in areas that do not meet or previously have not met air quality standards for carbon monoxide, particulate matter, or nitrogen dioxide. These areas are known as "nonattainment areas" or "maintenance areas," respectively.

Actions by some federal agencies could involve transportation-related projects such that a portion of the emissions caused by the action would be subject to the requirements of the Transportation Conformity Regulations and the remainder by the General Conformity Regulations. For example:

- The local mass transit authority seeks approval to operate a commuter rail service over leased tracks owned or controlled by a federal agency. The agency can exclude any emissions that were included in the transportation planning process.

The SEMCOG is responsible for developing a four-year Transportation Improvement Program document by working with city and county transportation agencies, local transit operators, and state transportation officials. The metropolitan planning process requires development of a local long-range transportation plan. All regional significant projects must be identified and have financial constraint demonstrated and air quality conforming requirements met to be implemented within the 20-year period of the Metropolitan Planning Organization long range plan. This planning process is used to identify needs and prioritize projects within the metropolitan area boundaries. The SEMCOG Transportation Improvement Programs is incorporated by reference into the State Transportation Improvement Plan (STIP).

The Ann Arbor Intermodal Station Project was included in the Washtenaw Area Transportation Study (WATS) 2011 Transportation Improvement Program, as well as in the following transportation plans:

- The City of Ann Arbor's FY2017 – 2022 CAPITAL IMPROVEMENTS PLAN (TR-AT-14-01 Ann Arbor Station NEPA/PE)

- SEMCOG's 2040 Regional Transportation Plan Illustrative Project List in the 2017 (design)
- Michigan State Rail Plan – As part of the Amtrak Wolverine intercity passenger rail service, an Ann Arbor Intermodal Station was included in the MDOT State Rail Plan, listed as # 8 on MDOT's Master List of Potential Rail Projects for 2011
- The City of Ann Arbor's adopted 2009 Transportation Plan Update

As noted previously, the State of Michigan is in attainment for: O₃, CO, NO₂, PM₁₀, PM_{2.5}, and Washtenaw County is in attainment for Pb and SO₂; therefore, an air quality conformity analysis is not required for the Project.

3.13.4 Greenhouse Gas

The consideration of the use of Greenhouse Gases is considered on a global scale since the effects of Greenhouse Gas contribute to global climate change as the gas can get trapped in the earth's atmosphere and cause a "greenhouse" warming effect to the earth. For the Ann Arbor Intermodal Station, the increase in Greenhouse Gas production would be attributed to the energy and fuel it would require to power the station for electricity and heating uses.

The City of Ann Arbor is dedicated to constructing sustainable and energy-efficient buildings which consume less energy to operate. Under the City's Climate and Energy goals listed in their Sustainability Framework,⁸⁸ they have committed to using 30% renewable energy for municipal operations, which would include Greenhouse Gas production for the Ann Arbor Intermodal Station.

Increased vehicle or bus trips within the city, region, or the state to the Intermodal Station would be trips that would be diverted from other modes or regional destinations and would not cause an increase in Greenhouse Gas production.

No Build Alternative

The No Build Alternative would not impact the Greenhouse Gases produced for the existing station, outside of additional trains, because the station would remain in operation under the No Build Alternative.

Build Alternatives 2A, 2B, and 2C

Under Build Alternatives 2A, 2B, and 2C, the station would be larger than the existing station, and requiring more energy to operate which would result in an increased production of Greenhouse Gases, even with the offset of the use of renewable energy sources to operate the station. While the station

⁸⁸ <http://www.a2gov.org/departments/systems-planning/planning-areas/climate-sustainability/sustainability/Pages/SustainabilityFramework.aspx>

size would increase compared to the existing station, the City's commitment to sustainability and using 30% renewable energy sources would minimize the energy usage required for the operation of the station.

Considering the historic features of the Michigan Central Depot found in Build Alternative 2C, such as old, less energy efficient windows and doors, it may be difficult to achieve energy-efficiency savings for the operation of the station. Alternative energy options, such as solar panels, and energy use-reduction methods such as green roofs may not be appropriate for Build Alternative 2C because the aesthetics of these energy saving processes may affect the historic character of the station.

Build Alternative 3A

Under Build Alternative 3A, Greenhouse Gas would also be generated from operations of the station. While the station size would increase compared to the existing station, the City's commitment to sustainability and using 30% renewable energy sources would mitigate some of the energy usage required for the operation of the station. Alternative 3A has more connections to local bus services, so more riders could travel to the station by bus than by vehicle, potentially further decreasing the production of Greenhouse Gases with this alternative in comparison with the existing station.

3.13.5 Impacts to Air Quality

No Build Alternative

The No Build would not impact air quality. However, with the No Build Alternative, the current station and parking area cannot accommodate the number of passengers that are expected to use the Wolverine service in the future—969,000 passengers per year by 2035 and would not provide efficient intermodal connections to the station. Therefore, air quality benefits associated with increased use of passenger rail over private vehicles would be diminished.

Build Alternatives

Based on the air quality attainment status of the study area, the Project has been included in the TIP and STIP and has been considered in terms of air quality. These plans accommodate projected increases in population and employment in Ann Arbor and the region. Therefore, additional trips generated/attracted by the Build Alternatives have been built into the regional air quality assessment. Many of the additional vehicle trips associated with the Project are from regional travel that would be diverted from other roadways, highways and parking facilities in the region and would not result in an increase in on-road emission of criteria air pollutants, and would not affect the attainment status for air quality. The projected increases in rail ridership that the station would support would replace some single occupancy vehicle trips in the regional travel and would not worsen overall air quality for the region as reflected in a modal shift in the regional traffic model.

Construction activities are anticipated to cause short-term air quality impacts in the form of dust from earthwork and unpaved roads. These impacts will be minimized by adherence to applicable state and local regulations and best management practices defined by the Michigan DOT.

3.14 Energy Use

The City of Ann Arbor does not have specific policy related energy efficiency, but under the City's Climate and Energy goals listed in its Sustainability Framework,⁸⁹ and listed below, has committed to using 30% renewable energy for municipal operations, including for the Ann Arbor Intermodal Station.

- Weatherize existing housing stock
- Build or renovate energy efficient affordable housing
- Office incentives for energy audits and implementation of identified energy conservation measures
- Promote the use of efficient lighting technologies for both outdoor and indoor applications
- Provide incentives to commercial building owners to install motion sensing light switches and automated thermostats
- Promote conversion to green roofs for commercial and industrial buildings
- Promote the use of reflective roofs in the commercial and industrial sectors
- Provide incentives to builders to exceed state energy codes in their renovations and new construction
- Use Property Assessed Clean Energy (PACE) to finance commercial building energy improvements
- Expand and enforce current city ordinance that requires landlords to provide energy budgets to tenants
- Strengthen housing code energy standards for rental properties
- Implement a Residential Energy Conservation Ordinance with required upgrades
- Strengthen energy code for new and renovated buildings at the state and local level

It is anticipated that energy resources would be required to construct and operate the station. The following section discusses how each of the Build Alternatives under consideration may impact energy resources.

No Build Alternative

The No Build Alternative would use the existing station, as is, without the benefits of reconstruction with more sustainable materials and construction methods, leading to a higher level of energy efficiency for day-to-day operations. Construction, equipment and materials used in the existing station are not within the City's Sustainability Framework and no current plans exist to renovate the station. The No Build Alternative is likely to have an adverse impact on energy resources.

⁸⁹ <http://www.a2gov.org/departments/systems-planning/planning-areas/climate-sustainability/sustainability/Pages/SustainabilityFramework.aspx>

Build Alternatives 2A, 2B, and 2C

Under Build Alternatives 2A and 2B, energy would be required to operate the station. While the station size would increase compared to the existing station, the City's commitment to sustainability and using 30% renewable energy sources would mitigate some of the energy required for the operation of the station. Unlike the No Build Alternative, Build Alternatives 2A, 2B, and 2C will benefit from the City's commitments, improved building materials and construction methods.

Considering the historic features of the Michigan Central Depot/Gandy Dancer Restaurant in Build Alternative 2C, such as windows and doors, it may be more difficult for the City to attain the same energy-efficiency savings for the operation of the station as with the construction of a new station, and the City's renewable energy goal would be difficult to achieve considering the sources such as solar panels and energy use-reduction methods such as green roofs may affect the historic character of the station.

Build Alternative 3A

Under Build Alternative 3A, energy would be required to operate the station. While the station size would increase compared to the existing station, the City's commitment to sustainability and using 30% renewable energy sources would mitigate some of the energy usage required for the operation of the station. Build Alternative 3A, because it is located on Fuller Road, has more connections to existing local bus services, so more riders could travel to the station by bus than by motor vehicle, further increasing the energy efficiency of this alternative as over the existing. More U-M and AAATA buses travel along Fuller Road than Depot Street, which will provide rail passengers with more options for last mile connections.

Unlike the No Build Alternative, Build Alternative 3A will benefit from the City's commitments as part of the it's Sustainability Framework. Commitments include improved building materials and construction methods as stated above as part of the City's Sustainability Framework.

3.15 Safety

Safety is a consideration with all the Build Alternatives. All station elements would adhere to the requirements set forth in the Americans with Disabilities Act, which addresses safe access for those with limited mobility. Following these requirements, removes mobility barriers and creates a safer environment for all. In addition, the improvements to the station for all Build Alternatives including level-boarding from platforms onto passenger rail cars, so there would be inherently fewer tripping hazards once removing the steps which are used to board trains today. As of 2015 the station has a level boarding, 48" above top of rail shuttle platform.

No Build Alternative

Under current conditions and the No Build Alternative, there is not a safe and convenient way to get to the other side of the railroad tracks other than climbing the stairs and crossing over the Broadway Street Bridge. Pedestrians often trespass by crossing over the tracks of the active railroad. In addition, the current station parking area is isolated and hidden from passers-by, which can cause safety concerns.

Three to four car break-ins a year have been reported at the existing parking area. The No Build Alternative would provide no improvement to health and safety.

Build Alternatives 2A, 2B, and 2C

Build Alternatives 2A, 2B, and 2C would address the safety issue of pedestrians' crossing over the active railroad by providing walkways over the tracks with elevator access. The long-term parking lot would be replaced with Build Alternatives 2A, 2B, and 2C with a lighted and more active parking structure with buses, drop-off areas, and more vehicles serving the station.

Build Alternative 3A

Like Alternatives 2A, 2B, and 2C, Build Alternative 3A also addresses the existing safety concern of pedestrians crossing active tracks, by including elevated walkways with elevator access. Vertical circulation would allow passengers and other pedestrians to cross and navigate the slope south of the tracks. These circulation routes could provide a safe and legal Alternative to trackway trespassing. A station entrance would connect to sidewalks and crosswalks leading to the U-M Medical Campus hospitals.

3.16 Barriers to Elderly and People with Disabilities

As described in the Purpose and Need, the current Ann Arbor station requires long term parking lot users to access the station by first ascending stairs to reach the Broadway Street Bridge, then walking along the bridge over the tracks, and descending stairs back to Depot Street. There is limited (2 spaces) handicapped parking available near the station, but the location of the long-term parking lot is a barrier to access the station and service for persons with mobility issues, with or without luggage.

No Build Alternative

Under the No Build Alternative, these barriers to older adults and people with disabilities would not change; however, the demand for parking will increase as the ridership increases, which would potentially worsen the difficulties in long term parking and may further increase in the need for parking for people with disabilities at the station. As of 2015 the station has a level boarding, 48" above top of rail shuttle platform; the intent was that the operable portion of the shuttle platform is built like a cartridge and removable for repair and relocation. The ramps and surrounding platform are precast sections that could be relocated if similar grades exist elsewhere.

Build Alternatives 2A, 2B, and 2C

Build Alternative 2A includes an elevated station on Depot Street that would provide elevator service for passengers to access both sides of the tracks, including elevator service from the parking facility near the northern platform, up to the station, and down to the southern platform. Build Alternative 2B would be a ground-level station that provides vertical circulation over the tracks to both the north and south platforms via an elevator and walkway. Build Alternative 2C would include an elevator with a walkway over the tracks on the Broadway Street Bridge that connects the parking area and platforms to the station on Depot Street.

Build Alternatives 2A, 2B, and 2C would provide benefits to older adults and persons with disabilities compared to the No Build Alternative by providing level-boarding from platforms onto passenger rail cars for all rail services using the station. Level-boarding would provide easy, roll-on access for luggage, wheelchairs and walkers. In addition, station and pedestrian elements for Build Alternatives 2A, 2B, and 2C would be designed in accordance with the Americans with Disabilities Act of 1990.

Build Alternative 3A

Build Alternative 3A would include an elevated station on Fuller Road that would provide elevator service from the parking ramp for passengers to access the station and platforms on the north and south sides of the tracks. In addition, an accessible, elevated walkway would be provided to East Medical Center Drive from the station. Build Alternative 3A would provide benefits to older adults and persons with disabilities by providing level-boarding from platforms onto passenger rail cars for all rail services using the station. Level-boarding would provide easy, roll-on access for luggage, wheelchairs and walkers. In addition, station and pedestrian elements for Build Alternatives 3A would be designed in accordance with the Americans with Disabilities Act of 1990.

3.17 Utilities

The Build Alternatives include on-site storm water detention and utilities for all station elements, as well as avoidance of existing major utilities. Existing utilities were mapped and evaluated. The following sections describe affected utilities.

No Build Alternative:

The No Build Alternative results in no adverse impacts to existing utilities.

Build Alternatives 2A, 2 B, and 2C

For Build Alternatives 2A, 2B, and 2C, electric, lighting and other utilities on the Broadway Street Bridge would be relocated as the bridge would be widened to create bus pullouts. All existing utilities would be relocated; therefore, no adverse impacts to utilities would result.

Build Alternative 3A

There are two major utilities in the vicinity of Build Alternative 3A. A 6-inch gas main runs north-south along the western portion of the site. Build Alternative 3A avoids the line with building structures other than train platforms and the line is not relocated for this Build Alternative.

Overhead power lines run the length of the site between the existing parking lot and the railroad right-of-way. For Build Alternative 3A, these lines would be relocated—either underground or to a new aerial alignment. Build Alternative 3A avoids the offset of a newly relocated 60-inch sewer line on the site.

3.18 Indirect and Cumulative Impacts

FRA and other federal agencies' responsibility to address and consider indirect and cumulative impacts in the NEPA process was established in the CEQ Regulations for implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR 1500-1508).

Indirect Impacts

Indirect impacts are future consequences to the environment at or in the vicinity of a project that are directly associated with the implementation of a Build Alternative. The CEQ defines indirect impacts as those that are "caused by an action and are later in time or farther removed in distance, but are still reasonably foreseeable." (40 CFR § 1508.8). Indirect impacts may include growth in population or development due to changes in land use, increased population and employment density, and effects on air, water, or other natural systems.

Indirect impacts differ from direct impacts in that they are indirect or induced changes that result in changed patterns of social and economic activities. Direct impacts are directly related to the construction or implementation of the proposed action. For example, a direct impact of constructing a new train station would be the land use changes at the facility site. A secondary impact of a new train station could be increased rail ridership or investment in adjacent property to increase transit oriented development opportunities. Indirect impacts are usually determined by local land-use policies, development objectives, and the physical location of the proposed action. Indirect impacts can be either adverse or beneficial.

No Build Alternative

The No Build Alternative would not result in any secondary impacts; no changes would be made to induce growth or change land use.

Build Alternatives 2A, 2B, and 2C

Each of the three Build Alternatives located along Depot Street would have many of the same indirect impacts. These Build Alternatives may accelerate land use changes in the adjacent and surrounding areas, such as the redevelopment of the DTE property north of the station area and potential redevelopment of underutilized⁹⁰ and vacant properties around the station. Most of the land near the station is occupied, but the construction of a train station could increase the likelihood of small scale, infill type⁹¹ Transit-Oriented Development, such as residential or office development, in the Lower Town area, and the vacant DTE property. The development of the DTE property would be a benefit to the City and the Huron River since the contaminated sites would be required to be remediated prior to development. The land uses near these Build Alternatives may also shift in the future to be more compatible with additional transit opportunities that arise from the new station and may provide

⁹⁰ structure present but business or residence abandoned or at significant level of disrepair

⁹¹ the use of land within a built-up area for further construction, especially as part of a community redevelopment or growth management program or as part of smart growth

enhanced mobility opportunities for transit dependent populations adjacent the proposed Build Alternative locations

The addition of a new train station at Build Alternatives 2A, 2B, or 2C may also have other indirect effects. If train ridership increases, the local businesses near the station may see a boost in business from additional people in the area. Potential new development and more activity may make the area more desirable and raise property values and tax revenue for the city as well. However, increased property values may cause some displacement of lower income residents, especially renters, pushing them farther away from necessary transit services.

Build Alternatives 2A, 2B, and 2C have the potential to increase Ann Arbor's transit use, especially if additional services are introduced at the site. A new bus loading area is included in the plans for each Build Alternative at this location, and has the potential to increase transit ridership both to and from the station, as well providing a more visible place for nearby residents to board. Improved access to transit modes serving the station could provide additional opportunities for households without automobile access to work, visit, or live in Ann Arbor, thus increasing socioeconomic diversity.

Previously identified roadway improvements (see Section 3.10.1) would be needed for Depot Street to be able to handle traffic during the peak hours. The City has identified the following improvements that are needed to alleviate the existing condition on Depot Street in the peak hours if Build Alternatives 2A, 2B, or 2C were the Preferred Alternative⁹²:

- Widening Main Street to accommodate dual southbound left-turn lanes at the Main Street/Depot Street intersection;
- Widening of Depot Street from Main Street to approximately 500 feet east of Main Street to a 5-lane section to accommodate dual westbound right-turn lanes and two eastbound lanes; and
- Widening of Depot Street from approximately 150 feet west of the Broadway Street Bridge to State Street from the existing 2-lane section to a 3-lane section. The widening may require the Broadway Street Bridge over Depot Street to be lengthened.

Finally, there is potential for Build Alternatives 2A, 2B, and 2C to continue to spur employment and residential growth in the City of Ann Arbor and the surrounding area. Ann Arbor has been rapidly growing in recent years and continues to do so. With improved transit access to the city, Ann Arbor could become even more attractive to companies and workers that value amenities like rail transit.

In addition to the impacts mentioned above, Build Alternative 2A has additional indirect impacts that may differ from the other Build Alternatives. Build Alternative 2A has an elevated station building with an entrance on the Broadway Street Bridge. This would allow easier access from both sides of the railroad tracks for bicyclists and pedestrians and could encourage more passengers to travel to the station by bicycle or on foot. Since the station would be elevated above the railway, it should be much

⁹² These listed improvement are not currently (2017) on the City of Ann Arbor's Transportation Improvement Plan

more visible than the other Build Alternatives. A prominent location on a busy thoroughfare like Broadway Street may encourage more frequent use of rail transit, and spur development around the area.

Build Alternative 2C would return the train station to the historic location on Depot Street just east of Broadway Street. The building is occupied by a local restaurant, the Gandy Dancer, which has been in the depot since 1970. The historic depot is well known in the community and could be an attraction for some potential passengers. Removing the Gandy Dancer from the building for a new train station would be a loss of a restaurant option for residents and others in the area, which could affect the potential for new development near the station. The relocation of the train station to the historic depot could also go unnoticed by some in the community as it has been there for 130 years and may not provide the same excitement as a new building. Finally, the removal of a nearly 50 year old business may tarnish the reputation of the station and discourage use.

Build Alternative 3A

Build Alternative 3A is located east of Maiden Lane and west of Mitchell Field. Most of the land surrounding Alternative 3A is either completely developed or is city owned park land. The adjacent land use would make it difficult for nearby transit oriented development to occur. However, there is some vacant and underutilized land located along Maiden Lane, approximately one half mile north of Build Alternative 3A, where development could potentially happen. Transit service that utilizes the station may help benefit the U-M Medical Center's workforce by giving employees an additional travel option to work. The same is true for the U-M buildings north of the station on Maiden Lane and Wall Street. As rail travel increases, it is feasible that demand for parking at these offices would decrease and the University could use the parking lots to for new buildings or other uses.

Finally, there is potential for Build Alternative 3A to continue to spur employment and residential growth in the City of Ann Arbor and the surrounding area. Ann Arbor has been rapidly growing in recent years and continues to do so. With improved intercity passenger rail access to the city, Ann Arbor could become even more attractive to companies and the talented workforce that values amenities like rail transit. Their proximity to the U-M Medical Center and VA Hospital could lead to additional growth for the two hospitals. The university owns approximately 3,200 acres of property within the Ann Arbor area and continues to redevelop and intensification around the medical center.

Build Alternative 3A is located north of the existing tracks, between East Medical Center Drive and Fuller Road. This location would provide convenient transportation to the U-M Medical Center and may encourage employees and visitors of the hospital to use transit service at this station. The station would have a direct bicycle and pedestrian connection to the station building from Fuller Road and could increase the number of people who travel to the station using non-motorized transportation.

Cumulative Impacts

Cumulative effects consist of an assessment of the total effect to the environment which results from the incremental impact of the proposed action when added to other past, present, and reasonably

foreseeable future actions regardless of which agency undertakes other actions. Cumulative impacts can result from small actions taking place over time or large one-time actions. The analysis of cumulative impacts considers the total effects of direct and indirect impacts from federal, non-federal, public, and private actions on the quality or quantity of a resource.

The intent of the cumulative impact analysis is to determine the size and significance, both positive and negative, of the cumulative impacts and the contribution of the proposed action to the total effect. Table 3.24 summarizes projects within the project area considered present or within the reasonably foreseeable future. Projects within the study that were funded and part of an adopted plan were considered present and reasonably foreseeable future projects.

Table 3.24: Present and Reasonably Foreseeable Future Projects – Funded (2018 – 2023)
(Costs in Thousands)

Project	Type	2018	2019	2020	2021	2022	2023
Ann Street (First to Main)	Bike lanes				\$210		
Broadway Street (Plymouth to Plymouth)	Sidewalk and water quality improvements			\$1,300			
Moore Street, Swift Street and Pontiac Street	Bike lanes, street parking and road diet				\$410		
State Street (Washington to S. University)	Resurfacing and sanitary main improvements		\$775	\$1,000			
Zina Pitcher Place/Catherine Street (Ann to Glen)	Reconstruction and water main improvements			\$280			
Detroit Street	Convert brick to concrete					\$220	\$2,780
Fifth Avenue (Kingsley to Catherine)	Historic brick paver replacement and drainage improvements	\$2,250					
Fuller Road/Maiden Lane/East Medical Center Drive	Intersection improvement (roundabout)		\$500	\$3,895			
North University (State to Fletcher)	Resurfacing and bike lanes				\$380		
State Street (Kingsley to Fuller/Depot)	Sidewalk improvements and in-line stormwater retention						\$750
Allen Creek Railroad Berm Opening Project	Drainage improvements	\$4,300					

Source: City of Ann Arbor Approved FY 2018 – FY 2023 Capital Improvements Plan (2017)

Table 3.25 summarizes the potential cumulative effect from each of the projects identified as present and reasonably foreseeable future projects.

Table 3.25: Present and Reasonably Foreseeable Future Projects – Potential Cumulative Effects

Project	Type	Potential Cumulative Effect
Ann Street (First to Main)	Bike lanes	<ul style="list-style-type: none"> Improved localized non-motorized mobility
Broadway Street (Plymouth to Plymouth)	Sidewalk and water quality improvements	<ul style="list-style-type: none"> Improved localized non-motorized mobility Improved surface water quality Temporary traffic disruption during construction Temporary daytime construction noise
Moore Street, Swift Street and Pontiac Street	Bike lanes, street parking and road diet	<ul style="list-style-type: none"> Improved localized non-motorized mobility Temporary traffic disruption during construction Temporary daytime construction noise
State Street (Washington to S. University)	Resurfacing and sanitary main improvements	<ul style="list-style-type: none"> Improved safety conditions with improved pavement conditions Improved sanitary sewer capacity Temporary traffic disruption during construction Temporary daytime construction noise
Zina Pitcher Place/Catherine Street (Ann to Glen)	Reconstruction and water main improvements	<ul style="list-style-type: none"> Improved potable water capacity Temporary traffic disruption during construction Temporary daytime construction noise
Detroit Street	Convert brick to concrete	<ul style="list-style-type: none"> Improved safety conditions with improved pavement conditions Temporary traffic disruption during construction Temporary daytime construction noise
Fifth Avenue (Kingsley to Catherine)	Historic brick paver replacement and drainage improvements	<ul style="list-style-type: none"> Improved safety conditions with paver replacement Update of historic resource Improved drainage Temporary traffic disruption during construction Temporary daytime construction noise
Fuller Road/Maiden Lane/East Medical Center Drive	Intersection improvement (roundabout)	<ul style="list-style-type: none"> Improved safety conditions with intersection to roundabout conversion Temporary traffic disruption during construction Temporary daytime construction noise
North University (State to Fletcher)	Resurfacing and bike lanes	<ul style="list-style-type: none"> Improved localized non-motorized mobility Improved surface water quality Temporary traffic disruption during

		<ul style="list-style-type: none"> construction • Temporary daytime construction noise
State Street (Kingsley to Fuller/Depot)	Sidewalk improvements and in-line stormwater retention	<ul style="list-style-type: none"> • Improved localized non-motorized mobility • Improved safety conditions with improved pavement conditions • Temporary traffic disruption during construction • Temporary daytime construction noise
Allen Creek Railroad Berm Opening Project	Drainage improvements	<ul style="list-style-type: none"> • Improved drainage capacity • Temporary daytime construction noise

Current and projected area population growth

As of the 2010 US Census the City of Ann Arbor had a population of 113,934 which grew to 120,782 in 2016, or at an annual rate of approximately 6.0%. Table 3.26 summarizes the historic population growth in Ann Arbor from 1860 to 2010.

Table 3.26: Historic Population Growth Ann Arbor, MI – 1860-2010

Year	Population	Percentage growth over previous
1860	5,097	-
1870	7,363	44.5%
1880	8,061	9.5%
1890	9,431	17.0%
1900	14,509	53.8%
1910	14,817	2.1%
1920	19,516	31.7%
1930	26,944	38.1%
1940	29,815	10.7%
1950	48,215	61.8%
1960	67,340	39.6%
1970	100,035	48.6%
1980	107,969	7.9%
1990	109,592	1.5%
2000	114,024	4.0%
2010	113,934	-0.1%
Est. 2016	120,782	6.0%

Source: Michigan State Census, US Census

The entire study area is within the urbanized and built-out section of the City of Ann Arbor with little available open land for new development but ample opportunities for infill and brownfield redevelopment. Generally, population growth has historically trended to the suburbs but similar to recent nationwide trends populations are return to the urban core of cities. Annual population growth is anticipated to remain in the 2% to 4% range over the next 5 to 10 years

No Build Alternative

There would be no cumulative impacts if the No Build Alternative were implemented.

Build Alternatives 2A, 2B, and 2C

Build Alternatives 2A, 2B, and 2C would have beneficial contributions to the cumulative impacts of other projects in the City of Ann Arbor, Washtenaw County, and the State of Michigan as discussed in Section 1.6 Relationship to Other Transportation Planning Initiatives and Table 3.25 above. Motorized and non-motorized local and regional mobility will be enhanced. Based on project population growth rates in the study area it is anticipated that these improvements will accommodate future growth and development.

Build Alternatives 2A, 2B, and 2C, along Depot Street, would be built within the floodplain of the Huron River. The City of Ann Arbor is proceeding with Allen Creek Railroad Berm Opening Project that will improve the drainage capacity for Allen Creek crossing under the railroad. This improvement will greatly reduce the flood elevations and floodplain extents (or area) in the project vicinity for Allen Creek. Refer to section 3.7.1 for more detail. The flood elevations and floodplain extents for the Huron River will not be impacted by this project.

Build Alternative 3A

Build Alternative 3A would also have beneficial contributions to the cumulative impacts of other projects in the City of Ann Arbor, Washtenaw County, and the State of Michigan as discussed in Section 1.6 Relationship to Other Transportation Planning Initiatives and Table 3.25 above. Motorized and non-motorized local and regional mobility will be enhanced. Based on project population growth rates in the study area it is anticipated that these improvements will accommodate future growth and development.

Changes in land use patterns, population density and growth rate are projected to occur in the study area regardless of this Project. Additionally, transportation and other infrastructure projects within the study area will occur outside of the construction of this project. In this case, all Build Alternatives are in established commercial/business/employment districts in areas planned for revitalization and growth. Therefore, the proposed action provides a net benefit.

3.19 Summary

Table 3.27 provides a comparative matrix for the Build Alternatives and differentiating environmental factors:

Table 3.27: Comparison of Environmental Factors of the Build Alternatives

Resources	No Build	Build Alternative 2A	Build Alternative 2B	Build Alternative 2C	Build Alternative 3A
Transportation	Parking more restricted as ridership increases, few transit connections	Provides less potential for public transit modes. Requires widening of the Broadway Street Bridge.	Provides less potential for public transit modes. Requires widening of the Broadway Street Bridge.	Provides less potential for public transit modes. Requires widening of the Broadway Street Bridge.	Provides the most connections of the Alternatives (7 U-M transit routes and 2 AAATA transit routes)
Property Acquisition	N/A	Requires 2.5 acres of property from Amtrak for the existing station site, and 2.59 acres from DTE for the Parking structure.	Requires 2.5 acres of property from Amtrak for the existing station site, and 2.59 acres from DTE for the Parking structure.	Requires 2.5 acres of property from Amtrak for the existing station site, and 2.59 acres from DTE for the Parking structure, and .82 acres of land owned by the Gandy Dancer Restaurant.	No property required. The City of Ann Arbor owns Fuller Park; The land would shift from Parkland to a Transportation use.
4(f) Resources (Recreational and Historic)	N/A	N/A	N/A	Adverse effects to the Michigan Central Depot and the Division Street Historic District	<i>De Minimis</i> impact of Fuller Park
Floodplains	N/A	Floodplain and Floodway Impacts (require mitigation)	Floodplain and Floodway Impacts (require mitigation)	Floodplain and Floodway Impacts (require mitigation)	No Floodplains Present
Contaminated Sites	N/A	24 Contaminated Sites Present	24 Contaminated Sites Present	24 Contaminated Sites Present	No Contaminated Sites Present
Noise	N/A	No Noise Impacts	No Noise Impacts	No Noise Impacts	No Noise Impacts

Development Potential	Development may occur in Lower Town and on the DTE site On-site development potential.	Best Development Potential in Lower Town and at the DTE site. On-site development potential.	Best Development Potential in Lower Town and at the DTE site. On-site development potential.	Best Development Potential in Lower Town and at the DTE site. On-site development potential.	Less Development Potential than in Lower Town, but further from proposed station site. On-site development potential. Development would need to be vertical on top of station.
Cost	N/A	\$94,123,256	\$97,099,586	\$98,061,886	\$81,030,692

4.0 Section 4(f)/Section 6(f) Evaluation

The City of Ann Arbor, Michigan (the City), in partnership with the MDOT proposes to construct an intermodal rail station in the City of Ann Arbor. The Ann Arbor Intermodal Station Project (Project) would support the existing Amtrak intercity passenger rail service between Detroit, Michigan, and Chicago, Illinois; the planned Midwest High Speed Rail service between Detroit/Pontiac and Chicago; and the future proposed regional commuter rail service between Ann Arbor and Detroit.

This evaluation includes a description of the Section 4(f) methodology, the proposed action, the Section 4(f) properties in the study area, and the build alternatives' potential "use" of Section 4(f) properties. This evaluation also addresses the Project's potential impacts on Section 6(f) properties. This document will inform the selection of a preferred alternative for the Project, because Section 4(f) is one of the environmental factors the FRA considers in evaluating and documenting a project's impacts.

4.1 Section 4(f)

Projects that may receive federal funding and/or discretionary approvals from the USDOT must demonstrate compliance with Section 4(f) of the Department of Transportation Act of 1966 (23 [U.S.C. § 138 and 49 U.S.C. § 303). A Section 4(f) evaluation has been prepared because the City or MDOT may seek future federal financial assistance from the FRA (an operating administration with USDOT) to construct the proposed Project.

Section 4(f) protects publicly owned parks, recreation areas, and wildlife/waterfowl refuges. Section 4(f) also protects historic sites of national, state, or local significance on public or private land that are potentially eligible for listing or are listed on the NRHP. If a project "uses" a Section 4(f) property and a finding of *de minimis* impact (generally defined as an impact that will not adversely affect the characteristics of a property that qualifies it for protection under Section 4(f); refer to 4.1.4 Section 4(f) De Minimis Impact Determination, below, for a more detailed discussion of *de minimis* impacts and requirements) is not made, FRA can approve the use of that property only if the agency finds that (1) there is no feasible and prudent avoidance alternative to the use of the Section 4(f) property, and (2) all possible planning to minimize harm to the Section 4(f) property has been incorporated into the Build Alternative.

The FRA's *Procedures for Considering Environmental Impacts* (64 Federal Register [FR] 28545, Section 12, May 26, 1999 and 78 FR 2713, January 14, 2013) outline the Section 4(f) process for FRA environmental documents. The FRA also looks for additional guidance to the Federal Highway Administration (FHWA) Section 4(f) regulation, codified at 23 (C.F.R. Part 774, and the FHWA's Section 4(f) Policy Paper (July 2012).

4.2 Section 6(f)

The purpose of the Land and Water Conservation Fund (LWCF) Act is to assist in preserving, developing, and ensuring accessibility to outdoor recreation resources and in strengthening the health and vitality of the citizens of the United States by providing funds, planning, acquisition, and development of facilities. Recreation facilities awarded such funds are subject to the provisions of the LWCF Act. Section 6(f) of

the LWCF Act (36 U.S.C. § 59) prohibits property acquired under the LWCF from being converted to uses other than public outdoor recreation without the approval of the Department of Interior. Once an area has been funded with LWCF assistance, it is maintained for public recreation use unless the U.S. National Park Service approves a substitution property of reasonably equivalent usefulness and location, and of at least equal fair market value.

4.3 Section 4(f) Resources

4.3.1 Methodology

23 U.S.C. § 138 and 49 U.S.C. § 303, which were originally enacted as Section 4(f) of the USDOT Act of 1966, protect publicly owned parks, recreation areas, wildlife and/or waterfowl refuges, as well as significant historic sites and certain historic archaeological sites, whether publicly or privately owned.

Section 4(f) requirements apply to all transportation projects that receive funding or require other approvals by the USDOT. As a USDOT agency, the FRA must comply with Section 4(f). FRA cannot approve a transportation project that uses a Section 4(f) property unless FRA determines that:

- there is no feasible and prudent avoidance alternative to the use of land from the Section 4(f) property; and the action includes all possible planning to minimize harm to the property resulting from such use; or
- The use of the Section 4(f) property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) committed to by the applicant would have a *de minimis* impact on the property.

If there is both the use of a Section 4(f) property that has not been determined to be *de minimis* and FRA determines that there is no prudent and feasible alternative, the Project must include all possible planning to minimize harm to the site, which includes all reasonable measures to minimize harm or mitigate impacts (49 U.S.C. 303[c] [2]).

After making a Section 4(f) determination and identifying the reasonable measures to minimize harm, if there is more than one Build Alternative that would result in the use of a Section 4(f) property, FRA compares the Build Alternatives to determine which alternative has the potential to cause the least overall harm. FRA determines the least overall harm by considering the following factors:⁹³

- the ability to mitigate adverse impacts on each Section 4(f) property (including any measures that result in benefits to the property);
- the relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection;
- the relative significance of each Section 4(f) property;

⁹³ USDOT, FHA, Section 4(f) Policy Paper, July 20, 2012. Available online at: <https://www.environment.fhwa.dot.gov/4f/4fpolicy.asp>. Accessed October 12, 2016.

- the views of the official(s) with jurisdiction over each Section 4(f) property;
- the degree to which each Build Alternative meets the purpose and need for the Project;
- after reasonable mitigation, the magnitude of any adverse impacts on resources not protected by Section 4(f); and
- Substantial differences in costs among the Build Alternatives.

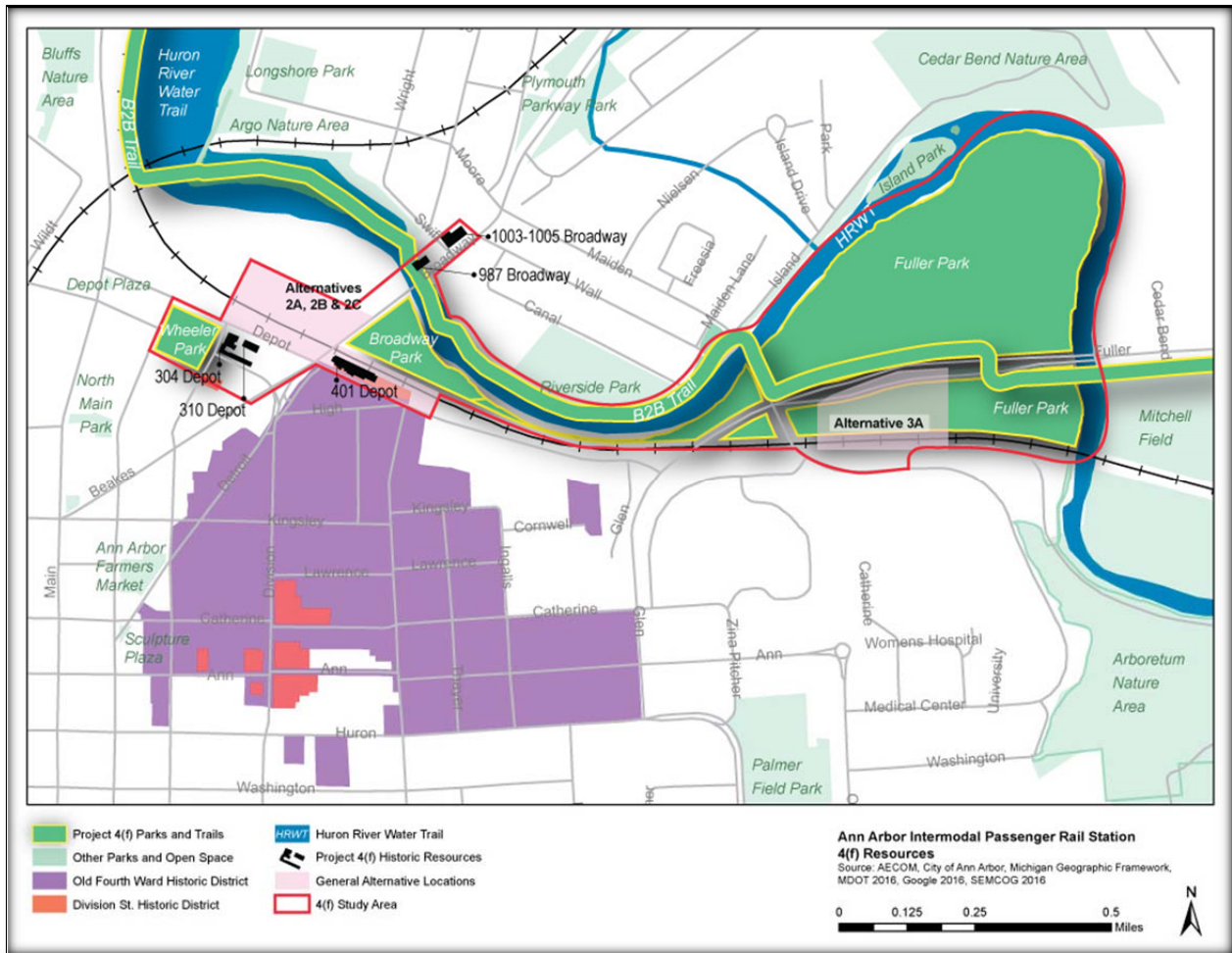
This Section 4(f) evaluation documents potential uses of property protected by Section 4(f). The evaluation included the following steps:

- FRA identified the Section 4(f) study area by assessing the potential geographic area of direct effects and proximity impacts to Section 4(f) properties (including impacts on access, noise levels, and visual intrusion), as shown on Figure 4.1. Because the Project could be a federal undertaking, it has also been evaluated for compliance with Section 106 of the NHPA. The NHPA's implementing regulations at 36 C.F.R. § 800.4(a) (1) require the lead Federal agency to establish an APE. The APE is the geographic area within which an undertaking may directly or indirectly alter the character-defining features of a historic property or archaeological resource, which makes the property potentially eligible for the NRHP;⁹⁴ refer to Chapter 3 of this EA for additional information.⁹⁵ Therefore, for historic properties the APE is congruent with the Section 4(f) study area and informs the assessment of use of Section 4(f) historic properties.

⁹⁴ Section 4(f) use of archeological resources occurs at sites that are on or eligible for the NRHP and that warrant preservation in place. A use does not occur if the importance from the archeological resource is data recovery.

⁹⁵ Section 4(f) and Section 106 are similar in that they both mandate consideration of historic properties and archaeological sites in the planning of a federal undertaking. Section 4(f) applies to the use or occupancy of certain historic properties; Section 106 involves an assessment of adverse effects of an action on historic properties. The Section 106 process is integral to the Section 4(f) process when historic properties are involved, but the Section 4(f) process is not central to the Section 106 process.

Exhibit 4.1: Section 4(f) Resources in Study Area



- FRA identified Section 4(f) properties in or adjacent to the Build Alternatives, or potentially affected by the Build Alternatives (see Figure 4.1. This identification was completed through review of existing mapping from the Washtenaw County Map Washtenaw website; the City’s Parks and Recreation website; field investigations/site reconnaissance; review of property records; and information obtained from local officials to identify the publicly owned parks, recreation areas, and wildlife and/or waterfowl refuges protected by Section 4(f).
- The City verified public ownership, public access, significance, and funding of parks and recreational facilities.
- For historic Section 4(f) resources, historical and archaeological databases were reviewed at the Michigan State Historic Preservation Office; additional research was conducted using the U-M Digital Library, the City’s Planning/Historic Preservation website, the City’s Public Services Department-Engineering Division, and the Washtenaw County Map Washtenaw website.

4.3.2 Definition of Section 4(f) Uses

After identifying the Section 4(f) properties in the study area, FRA then completed a preliminary assessment of the type of Section 4(f) use according to the Section 4(f) use definitions below.

- **Permanent Use:** A permanent use occurs when land from a Section 4(f) property is permanently incorporated into a transportation project. This may occur as a result of partial or full acquisition of the Section 4(f) property, permanent easements, or temporary easements that exceed regulatory limits.
- **Temporary Occupancy:** This occurs when there is a temporary occupancy of land that is adverse in terms of the statute's preservation purpose. Note that if certain criteria are met, the temporary impacts may qualify for a temporary occupancy exception, as further discussed in 4.6 Temporary Occupancy Exception, below. **Constructive Use:** A constructive use occurs when a transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a property for protection under Section 4(f) are substantially impaired.

4.3.3 Temporary Occupancy Exception

As stated above, a use may occur if there is a temporary occupancy of land that is "adverse in terms of the statute's preservation purpose." However, temporary occupancies of land that are so minimal as to not constitute a use within the meaning of Section 4(f) may occur when the following conditions are satisfied (per 23 CFR 774.13(d)):

- duration of occupancy must be temporary (i.e., less than the time needed for construction of the Project, and there can be no change in ownership of the land);
- the scope of work must be minor (i.e., both the nature and magnitude of the changes to the Section 4(f) property are minimal);
- there are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property on either a temporary or permanent basis;
- the land being used must be fully restored (i.e., the property must be returned to a condition which is at least as good as that which existed prior to the Project); and
- There must be documented agreement of the officials with jurisdiction over the Section 4(f) resource regarding the above conditions.

4.3.4 De Minimis Impact Determination

For Section 4(f) properties that may incur a permanent use, Build Alternatives are evaluated to determine whether it would meet the requirements for a *de minimis* impact determination. The specific requirements for a *de minimis* impact determination are different for historic properties and for public parklands, recreational areas, and wildlife and waterfowl refuges. Evaluation of avoidance Build Alternatives and selection of an alternative having the least overall harm are not required if a *de minimis* impact determination is made.

Parks, Recreation Areas, and Refuges

A *de minimis* impact on a public parkland, recreational area, or wildlife and waterfowl refuge is defined as that which does not “adversely affect the features, attributes or activities qualifying the property for protection under Section 4(f).” This determination requires the concurrence of the official with jurisdiction, and can be made only after an opportunity for public review and comment on the proposed determination is provided.

Historic Properties

A *de minimis* impacts determination is appropriate when the Section 106 of the NHPA process results in a determination of “no historic properties affected” or a determination of “no adverse effect” on the historic property in question.

Official with Jurisdiction

As part of the Section 4(f) analysis, FRA identified the appropriate official with jurisdiction. For Section 4(f) parks and recreation areas, the official(s) with jurisdiction are the official(s) of the agency or agencies that own or administer the property and who are empowered to represent the applicable agency on matters related to the Section 4(f) property. For Section 4(f) historic properties in the study area, the official with jurisdiction is the MSHPO.

4.4 Proposed Action

4.4.1 Project Purpose and Need

The purpose of the Project is to provide an ADA compliant intermodal facility that will accommodate existing and future intercity passenger rail ridership; improve intermodal connectivity between the City of Ann Arbor and its neighboring communities, including proposed commuter rail in the City of Ann Arbor; add ADA compliant parking; and improve the integration of the station in the City of Ann Arbor. The following elements contribute to the need for an intermodal station in Ann Arbor:

- the existing station provides insufficient quantity, quality and comfort for passengers;
- the existing station has inadequate space for intermodal connectivity;
- there is substantial existing and projected future passenger demand; and
- The existing station has limited integration in Ann Arbor and provides limited access to city neighborhoods and the region.

4.4.2 Build Alternatives Considered

As part of the Environmental Assessment process for the Project, the City prepared a two-phased Alternatives Analysis, refer to Chapter 2 for a discussion of the alternative development process. The first phase identified and evaluated a full range of Build Alternatives. Phase I consisted of eight possible site locations for the station along the Intercity Passenger Rail Wolverine Service corridor in the City of Ann Arbor. Based on the criteria set forth in the Phase I Alternatives Analysis, and after public comment was considered, three sites—1-North Main Street, 2-Depot Street, and 3-Fuller Road—advanced to Phase II of the Alternatives Analysis. Station Conceptual Design Alternatives were developed and evaluated in the Phase II Alternatives Analysis.

Phase II of the Alternatives Analysis identified the station and station program elements, with a total of nine build alternatives for the remaining three segments sites, including Build Alternatives 1A and 1B on North Main Street; Build Alternatives 2A, 2B, and 2C on Depot Street; and Build Alternatives 3A, 3B, 3C, and 3D on Fuller Road. These build alternatives were based on design criteria and included: roadway access considerations; automobile parking; taxi stands; nonmotorized connections, including walkways and bicycle paths; vertical circulation elements; and transit interface facilities, including a transit center and bus bays to accommodate multimodal connection to the station.

The City determined that Build Alternatives 1A and 1B did not meet the Project’s purpose and need and could not support station-oriented development. Therefore, Build Alternatives 1A and 1B were eliminated from consideration, reducing the remaining Build Alternatives from nine to seven. Build Alternatives 3B, 3C, and 3D were also eliminated from further consideration due to the larger footprint required from Fuller Park, as compared to Build Alternative 3A.

Four Build Alternatives that meet the purpose and need and project design criteria were carried forward for evaluation in the Environmental Assessment. These included three Build Alternatives at Depot Street—a build alternative with an elevated station at the existing Amtrak station site (Build Alternative 2A), a build alternative with a ground-level station on the northern side of the tracks at the existing station site (Build Alternative 2B); and a build alternative that reuses the historic train station (Michigan Central Depot) and incorporates the land from the existing station site for multi-modal use and parking areas (Build Alternative 2C)—and a build alternative on Fuller Road with an elevated station over the tracks that uses an existing surface parking lot in Fuller Park for the parking ramp and multi-modal uses (Build Alternative 3A). These Build Alternatives are further described below, and shown on Figures 4.2 through 4.5).

Build Alternative 2A

Under Build Alternative 2A, the station building would be constructed on Depot Street above the tracks on the west side of the Broadway Street Bridge, as shown in Figure 4.2. Pedestrian access would be provided directly from sidewalk along the west side of the Broadway Street Bridge. The station building would be constructed within the railroad right-of-way to provide passengers in the station building with equal distances to access both station platforms. The multi-level parking structure, located to the north of the station building, would accommodate 870 parking spaces for inter-city passenger rail, 50 spaces for short-term parking, and an additional 250 parking spaces for commuter rail, if commuter rail would

be implemented. Bicycle storage, a maintenance area, and cyclist amenities will also be located within the parking structure. The entrance to parking structure would be located off of Broadway Street at a signalized intersection. Transit connections for local bus service would be provided on the Broadway Street Bridge and off of Depot Street where nine bus bays would be located at the existing station site.

Under Build Alternative 2A, the existing Amtrak train platform would be reconstructed to accommodate current design specifications and longer train consists. A second platform would be constructed north of the tracks when a second track would be added consistent with future corridor development plans. A pedestrian bridge or concourse would connect to platforms on both sides of the tracks. Both platforms cannot be moved any farther west than the existing platform due to track curvature. The weather-protected concourse would pass above the tracks and would be integrated with or adjacent to the sidewalk on the west side of the Broadway Street Bridge. Elevators and stairwells would connect the concourse to the platform level on both sides of the tracks.

Build Alternative 2B

Under Build Alternative 2B, the station building would be constructed at ground level on west of the Broadway Street Bridge, directly north of the tracks, as shown in Exhibit 4.3. The weather-protected concourse above the tracks would attach directly to the station building. The multi-level parking structure, located to the west of the station building, would accommodate 870 parking spaces for inter-city passenger rail, 50 spaces for short-term parking, and an additional 250 parking spaces for commuter rail, if commuter rail would be implemented. Bicycle storage, a maintenance area, and cyclist amenities will also be located within the parking structure. The entrance to parking structure would be located off of Broadway Street at a signalized intersection. Transit connections for local bus service would be provided on the Broadway Street Bridge and off of Depot Street where nine bus bays would be located at the existing station site. Vertical circulation, such as stairs and elevators, would be located on the north and south side of the tracks and platforms. Build Alternative 2B would place the station building adjacent to a railroad platform on the north side of the tracks and across the tracks from the south platform. The platforms cannot be moved any farther west than the existing platform, due to track curvature.

Exhibit 4.2: Build Alternative 2A



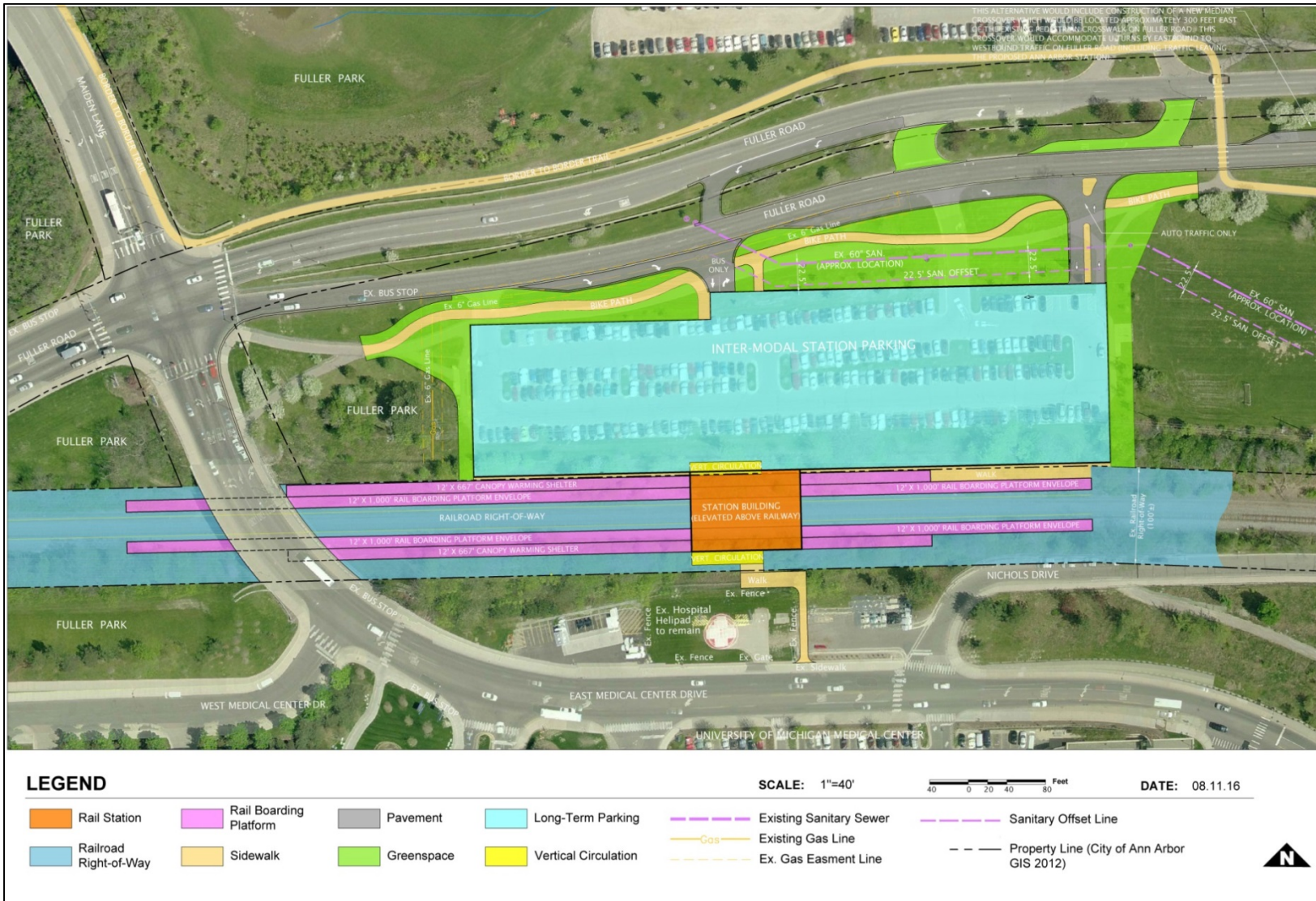
Exhibit 4.3: Build Alternative 2B



Exhibit 4.4: Build Alternative 2C



Exhibit 4.5: Build Alternative 3A



Build Alternative 2C

Under Build Alternative 2C, the historic Michigan Central Depot located on Depot Street, which is currently occupied by the Gandy Dancer restaurant, would be acquired and rehabilitated for use as the station building, as shown in Figure 4.4. The Michigan Central Depot was constructed in 1886 and is listed on the National Register of Historic Places. It has been listed on the National Register of Historic Places since 1975, and included within the City of Ann Arbor's Division Street local historic district since 1976.⁹⁶ Since 1970 the building has housed the Gandy Dancer restaurant.

The multi-level parking structure, located to the west of the station building and the Broadway Street Bridge, would accommodate 870 parking spaces for inter-city passenger rail, 11 spaces for short-term parking, and an additional 250 parking spaces for commuter rail, if commuter rail would be implemented. Bicycle storage, a maintenance area, and cyclist amenities will also be located within the parking structure. The entrance to parking structure would be located off of Broadway Street. Thirty-nine short-term parking spaces would be provided on Depot Street, adjacent to the station building. Transit connections for local bus service would be provided on the Broadway Street Bridge and off of Depot Street where nine bus bays would be located, at the existing station site.

Building modifications and expansion would be required to adapt the interior of the Michigan Central Depot for station program requirements and to provide full ADA accessibility. The required space of 8,494 ft² for the station building would be accommodated within the Michigan Central Depot, and is large enough, in that it contains approximately 11,500 square feet of floor space. However, the division of space within the depot is not ideal for the Intermodal Station program. The depot contains a modest historic waiting room, but other rooms would need to function as satellite waiting areas. This raises functionality and security concerns. An initial assessment indicates that load bearing walls and architecturally significant features would prevent a simple combining of spaces to form a larger waiting room. A platform-level walkway would extend from the building under the Broadway Street Bridge to elevators, stairwells, and the pedestrian concourse on the west side of the Broadway Street Bridge. Under Build Alternative 2C, the station building would be adjacent to the north railroad platform and across the tracks from the south platform.

The existing Amtrak train platform would be reconstructed to accommodate current design specifications based on Amtrak design specifications and longer train consists. A second platform would be constructed north of the tracks when a second track would be added consistent with future corridor development plans being developed by the RTA. The corridor development plans include commuter rail from Detroit to Ann Arbor. The platforms cannot be moved any farther west than the existing platform, due to track curvature. A pedestrian bridge or concourse would connect to platforms on both sides of the tracks. The weather-protected concourse would pass above the tracks and would be integrated with or adjacent to the sidewalk on the west side of the Broadway Street Bridge. Elevators and stairwells would connect the concourse to the platform level on both sides of the tracks.

⁹⁶ Information provided by the City of Ann Arbor's historic preservation coordinator from City databases.

Build Alternative 3A

The Build Alternative 3A station building would be elevated above the tracks with other site facilities located within the area of the existing Fuller Road Park surface parking lot, with the exception of station access features, as shown in Figure 4.5. As mentioned for Site Alternative 2 build alternatives, the station building was designed using Amtrak's Station Program and Planning Guidelines⁹⁷ with 2,205 ft² identified for a waiting area, 930 ft² identified for public toilets, among other station operational spaces. Space needs within the station building for intercity bus operations were determined to be 590 ft² as defined by the Greyhound Station Program Requirements. In total, Build Alternative 3A would require 8,494 ft² of internal space to accommodate station operations and users. In addition, a multi-level intermodal operations and parking structure would accommodate Intermodal transit operations, 50 spaces of short-term parking, 870 long-term parking spaces for inter-city passenger rail, 150 spaces for parks users parking and an additional 250 day parking spaces for commuter rail, if commuter rail would be implemented for daily use. The site would also include storm water management and collection systems. Multi-modal access would be provided north of the tracks and along adjacent streets.

Bicycle and pedestrian access would be available via the bridge link from the station to the sidewalk at grade to East Medical Center Drive and to the Washtenaw County B2B Trail on the north side of Fuller Road across the street from the proposed station building.

Fuller Road/East Medical Center Drive/Maiden Lane Intersection

The intersection of Fuller Road/East Medical Center Drive/Maiden Lane currently experiences traffic congestion in the peak hours. The City is in the process of developing a design solution for this intersection that is not part of the Project. These improvements include the construction of a multi-lane roundabout, and are expected to take place prior to construction of the Project.

4.5 Section 4(f) Properties

This section describes the Section 4(f) properties in the study area, including the activities, features, and attributes of the Section 4(f) property; identifies potential Section 4(f) uses; defines avoidance, minimization, or mitigation measures as applicable; and discloses the preliminary Section 4(f) findings.

4.5.1 Parks, Recreation Areas, and Refuges

There are no wildlife or waterfowl refuges in the study area. There are five Section 4(f) park and recreation areas in the study area: Broadway Park, Wheeler Park, Fuller Park, B2B/Iron Belle Trail, and Huron River Water Trail. These properties and FRA's preliminary use determination are listed in Table 1, and further described below.

⁹⁷ Amtrak Station Program and Planning Guidelines, 2013

Table 4.1: Section 4(f) Parks and Recreational Areas within the Study Area

Property Name	Official with Jurisdiction	Description of Features	Distance to Right-of-Way
Broadway Park	City of Ann Arbor Department of Parks and Recreation	Paved paths; benches; boardwalk; and riverfront area	<ul style="list-style-type: none"> • Adjacent to Build Alternatives 2A, 2B, and 2C • 1,700 feet from Build Alternative 3A
Wheeler Park	City of Ann Arbor Department of Parks and Recreation	Playground; restroom with water fountain; walking/running track; basketball court; plaza with benches; picnic shelter with picnic tables and grills; open field area; and paved path	<ul style="list-style-type: none"> • 75 feet from Build Alternatives 2A, 2B, and 2C • 3,300 feet from Build Alternative 3A
Fuller Park	City of Ann Arbor Department of Parks and Recreation	Outdoor pool and waterslide; soccer fields; commuter/recreation parking lot; wooded and open areas; riverfront area; unpaved trails, shared-use path; picnic shelters, picnic tables, and grills; and restrooms	<ul style="list-style-type: none"> • 250 feet from Build Alternatives 2A, 2B, and 2C • Within the footprint of Build Alternative 3A
B2B/Iron Belle Trail	City of Ann Arbor Department of Parks and Recreation ¹	Off-road pedestrian and bicycle recreational trail	<ul style="list-style-type: none"> • Within the footprint of Build Alternatives 2A, 2B, and 2C • 30 feet from Build Alternative 3A
Huron River Water Trail	Huron River Watershed Council	Paddling recreational activities, including kayaking, canoeing and fishing	<ul style="list-style-type: none"> • Within the footprint of Build Alternatives 2A, 2B, and 2C • 400 feet from Build Alternative 3A
<p>Notes:</p> <p>¹ Within the city limits; trail extends outside of the city, and ownership of those portions are not included here.</p> <p>B2B = Border-to-Border</p>			

4.5.2 Broadway Park (3.8 acres)

Broadway Park is just north of the railroad right-of-way between the Michigan Central Depot and the existing station on Depot Street (Figure 4.6). Sidewalks in Broadway Park provide a paved pathway and riverfront access to the Huron River. The east Broadway Street Bridge sidewalk widens into a shared-use path in the park. A river edge boardwalk passes beneath the bridge to provide pedestrian access to the western side of Broadway Street.

Function(s) of the Property (Intended, Actual/Current, Planned)

Broadway Park contains passive recreation space, riverfront access, and some riparian forest areas. A fenced dog park opened in Broadway Park in October 2016. The park is bound on the south and west by in-use transportation features: the Broadway Street Bridge on the west and the railroad tracks on the south, just north of the Michigan Central Depot. Formal access to the park is from paved trails connecting to Broadway Street; there is no formal designated parking at the site.

Owner and Official with Jurisdiction

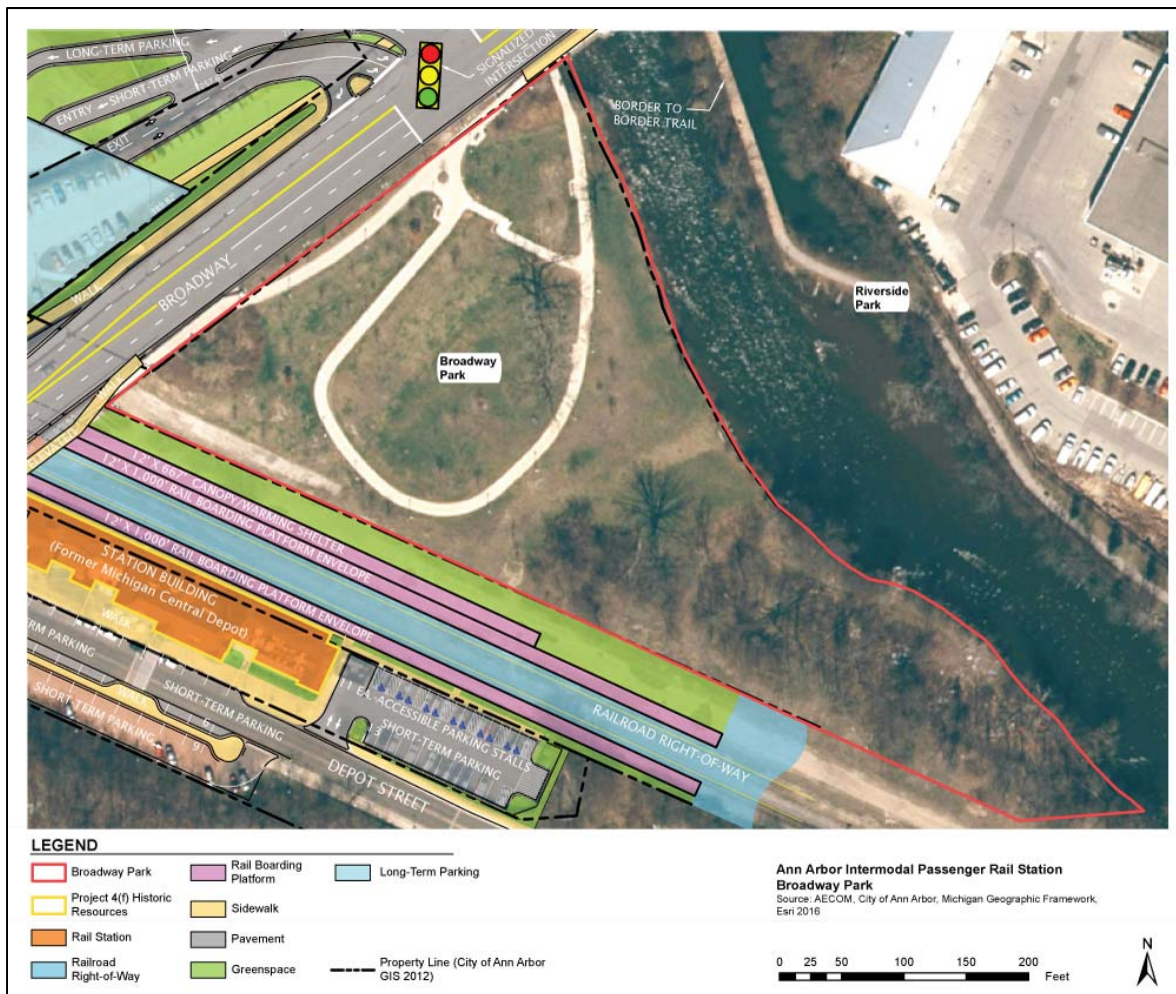
Broadway Park is owned by the City of Ann Arbor and managed by the Department of Parks and Recreation.

Use of Section 4(f) Property

Broadway Park is north of the railroad right-of-way, just behind the Michigan Central Depot on the Depot Street site; therefore, Build Alternative 3A would not affect Broadway Park.

Under Build Alternatives 2A, 2B, and 2C, a platform would be installed adjacent to and north of the Michigan Central Depot, within the railroad right-of-way, adjacent to Broadway Park; Build Alternatives 2A, 2B, and 2C would be immediately adjacent to the park boundary. Under Build Alternatives 2A, 2B, and 2C, improvements to Broadway Street would be constructed on the western side of the roadway. No acquisition or temporary or permanent easements would be required from and no construction activities would occur within Broadway Park under Build Alternatives 2A, 2B, and 2C.

Exhibit 4.6: Broadway Park



Source: City of Ann Arbor. Available online at: <http://www.a2gov.org/departments/parks-recreation/parks-places/Pages/default.aspx>

During construction of the Build Alternatives, access to the park would be maintained. No permanent changes to access to the park would occur. As described in the noise analysis, although noise levels would temporarily increase as a result of construction activities, noise levels from construction of Build Alternatives 2A, 2B, and 2C at the closest modeled receptors to the park would be 5 to 9 equivalent sound level (L_{eq}) A-weighted decibels (dBA) below the established threshold for daytime impact. Additionally, the build alternatives would not result in permanent noise increases in the vicinity of the park.

The triangle-shaped park is currently bound on two sides by transportation features: Broadway Street to the west and the existing Amtrak station and Depot Street to the south. Construction of additional transportation features, such as the introduction of the platforms as a new visual feature, would be consistent with the visual character of the area and user expectations. Urbanized features, such as buildings and transportation corridors, are visible from the park, reducing noise and visual sensitivity of the facility. Furthermore, existing vegetation would provide some screening to park users during construction and operation.

Therefore, Build Alternatives 2A, 2B, and 2C would not substantially impair the characteristics of the park that qualify it for Section 4(f) consideration, and there would be no constructive use of this property.

Coordination

Ongoing coordination with the City of Ann Arbor's Department of Parks and Recreation has occurred through the project development process through internal coordination and presentations to the Parks Advisory Commission; the results of this coordination are reflected in this evaluation. The evaluation included in this EA will be presented to the City of Ann Arbor's Parks Advisory Commission.

Minimization and Mitigation

None required.

Preliminary Determination

The preliminary determination is that no use to Broadway Park would occur under the build alternatives.

4.5.3 Wheeler Park (1.9 acres)

Wheeler Park is between North 4th and 5th Avenues, across Depot Street from the western end of the existing Ann Arbor Amtrak Station (Figure 4.7). This small park, less than 2 acres in size, contains a dense concentration of facilities. The park is bound on three sides by transportation features: Depot Street to the north, Amtrak station to the northeast, 4th Avenue to the west, and 5th Avenue to the east. It is across from commercial uses to the north and east.

Function(s) of the Property (Intended, Actual/Current, Planned)

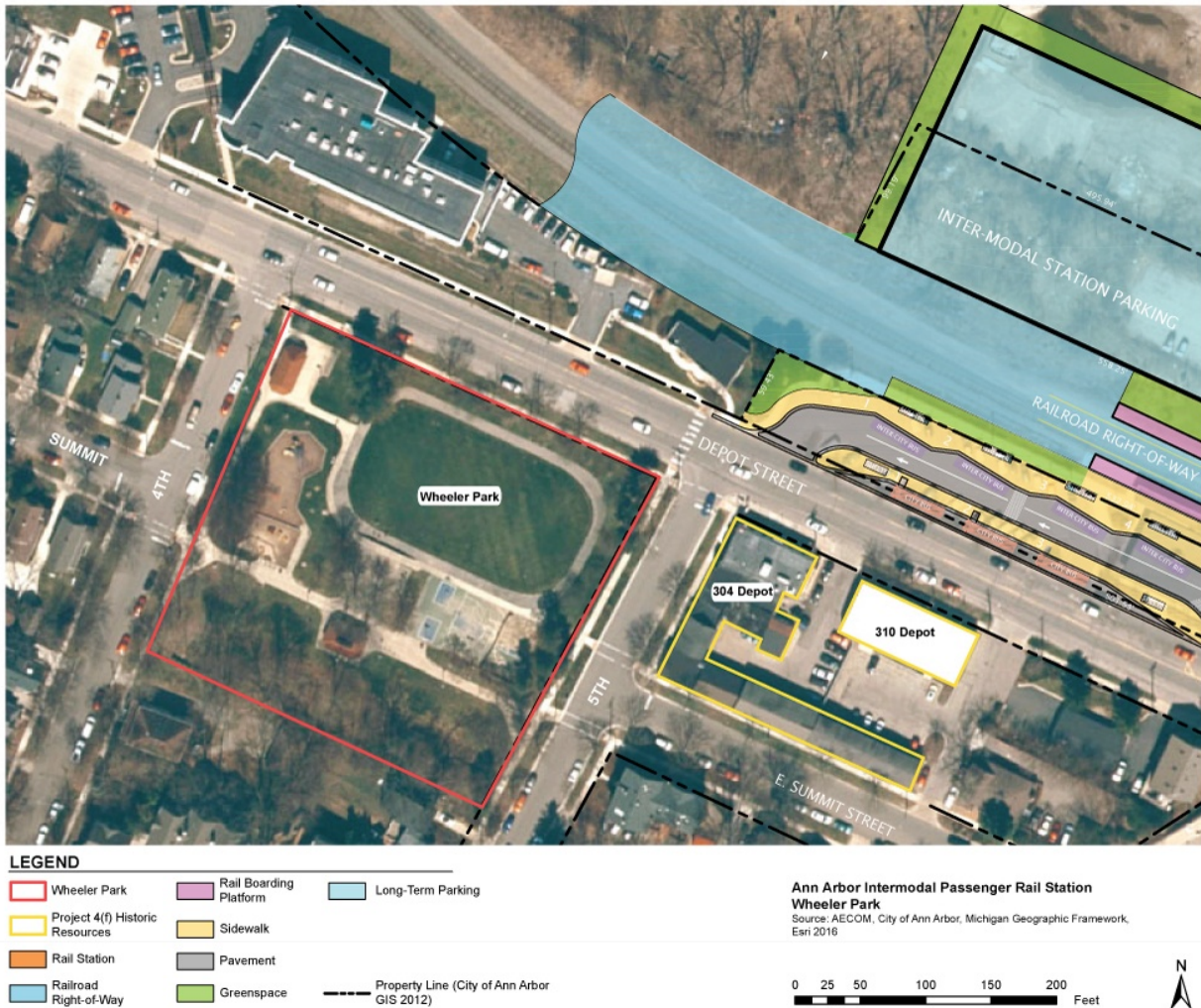
Amenities at Wheeler Park include a playground, a restroom building with water fountain, a walking/running track, a basketball court, a plaza with benches, a picnic shelter with picnic tables and grills, and

an open field area. There is no formal parking area, but street parking is available on the adjacent roadways.

Owner and Official with Jurisdiction

Wheeler Park is owned by the City of Ann Arbor and managed by the Department of Parks and Recreation.

Exhibit 4.7: Wheeler Park



Use of Section 4(f) Property

Wheeler Park is located at the Depot Street site; therefore, Build Alternative 3A would not affect this park.

Under Build Alternatives 2A, 2B, and 2C, the new station would be constructed and operated approximately 75 feet north of Wheeler Park. No acquisition or permanent or temporary easements would be required to implement Build Alternatives 2A, 2B, and 2C.

Under Build Alternatives 2A, 2B, and 2C, access to Wheeler Park would be maintained during construction and no permanent changes to access would occur. Although noise levels would temporarily increase in the vicinity of the park as a result of station construction activities, noise levels from construction at the modeled receptors closest to the park would be approximately 9 L_{eq} dBA below the established threshold for daytime impact. Operation of Build Alternatives 2A, 2B, and 2C would result in a negligible (1 dBA) permanent increase in noise at the park, which is below the established threshold for impacts. Construction activities may be temporarily visible to users of Wheeler Park. Urbanized features, such as buildings and transportation corridors, are in close proximity and visible from the park, reducing visual sensitivity of users of Wheeler Park. The installation of additional transportation features—such as the bus bays for Build Alternatives 2A, 2B, and 2C—would be consistent with the existing visual character of the area and user expectations. Furthermore, existing vegetation at the park would provide some screening during and after construction.

Build Alternative 3A would not affect Wheeler Park. Additionally, Build Alternatives 2A, 2B, and 2C would not substantially impair the characteristics of the park that qualify it for Section 4(f) consideration.

Coordination

Ongoing coordination with the City of Ann Arbor’s Department of Parks and Recreation has occurred through the project development process through internal coordination and presentations to the Parks Advisory Commission. The results of this coordination are reflected in this evaluation.

Minimization and Mitigation

None required.

Preliminary Determination

The preliminary determination is that there would be no use of Wheeler Park under the build alternatives.

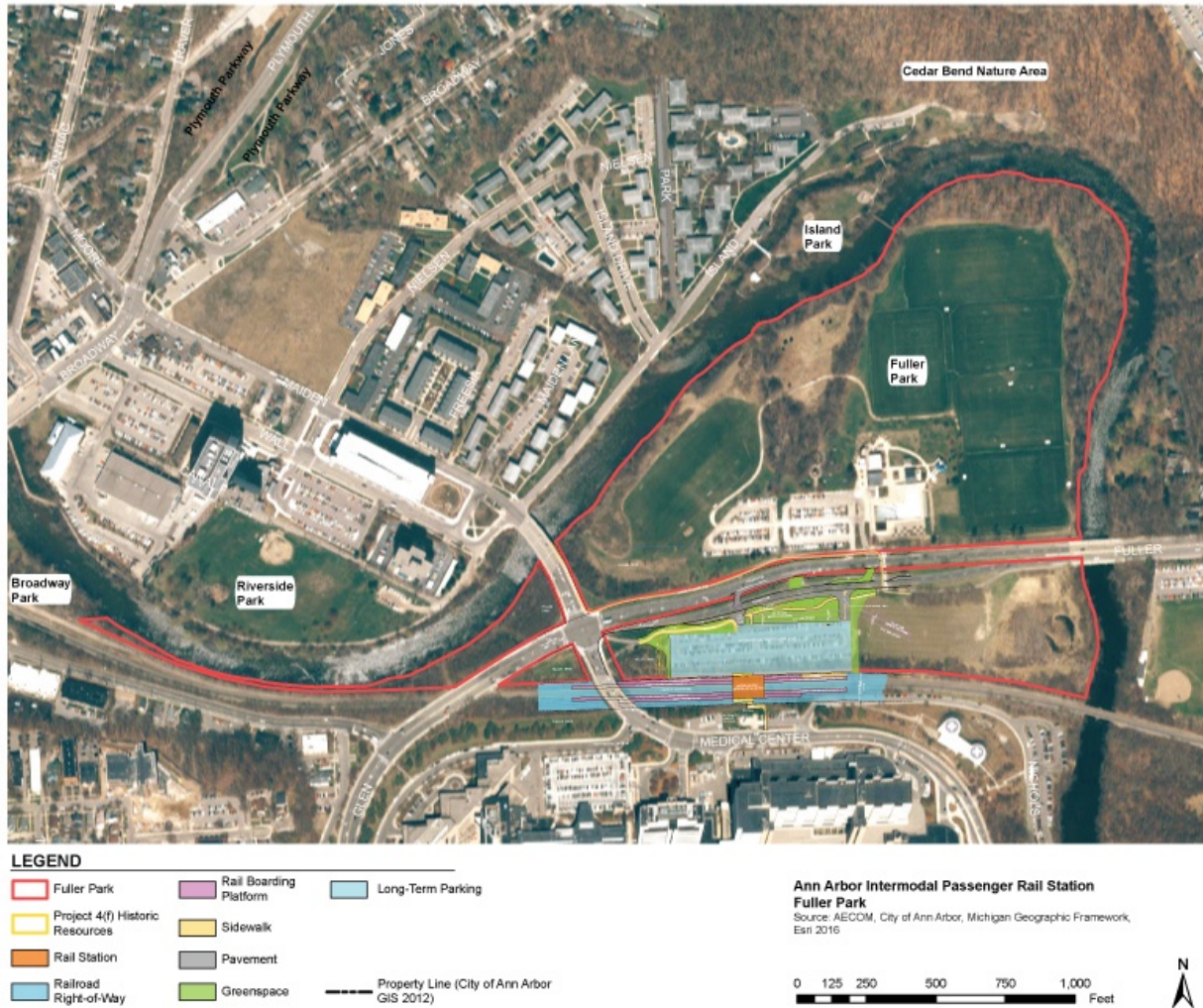
4.5.4 Fuller Park (59.2 acres)

Fuller Park is a 59.2-acre park north of the railroad tracks and south of the Huron River in Ann Arbor, on the Fuller Road Site (Figure 4.8). The park property is bound on the west, north, and east by the Huron River and associated wetlands and riparian forest areas. The park is divided by Fuller Road, a four-lane arterial divided by an approximate 25-foot-wide grassy median. The B2B Trail crosses Fuller Park and is predominately north of Fuller Road; impacts on this resource are discussed separately, below. The U-M Medical Center is south of the parking lot and the railroad tracks, and is visible from Fuller Park.

Function(s) of the Property (Intended, Actual/Current, Planned)

North of Fuller Road, Fuller Park includes an outdoor pool and waterslide, multiple soccer fields, a large commuter/recreation parking lot, small wooded sections, open areas, unpaved trails, and a shared-use path. Amenities at the park include seating, picnic shelters, picnic tables, grills, and restrooms. Fuller Park’s aquatic facility is open daily from May 28 through Labor Day and hosts day camps in the summer, as well as occasional events.

Exhibit 4.8: Fuller Park



Source: City of Ann Arbor. Available online at: <http://www.a2gov.org/departments/parks-recreation/parks-places/Pages/default.aspx>.

South of Fuller Road, Fuller Park includes an approximately 1.8 acre surface parking lot with approximately 250 parking spaces, a multi-use path, and a soccer field east of the parking lot. These amenities are surrounded by lawns and wooded areas, and the park is bound on the east by the Huron River. The surface parking lot serves both the U-M Medical Center and Fuller Park through a joint use agreement that permits U-M employees to use the lot during working hours and reserves the lot for park users in the evening and on weekends.

The City's 2009 *Transportation Plan Update*⁹⁸ recommends integrating rail services with enhanced transit in Fuller Park, on the southern side of Fuller Road. The City's 2016 – 2020 *Parks and Recreation Open Space Plan*⁹⁹ (PROS Plan) references a previous plan to include an Intermodal Station in the park, but states that the City is evaluating alternative locations for the station.

Owner and Official with Jurisdiction

Fuller Park is owned by the City and managed by the Department of Parks and Recreation. The surface parking lot on the southern side of Fuller Road serves both the U-M Medical Center and Fuller Park through a joint use agreement. The terms of the agreement allow for the City to cancel the agreement at any time, with appropriate notice.

Use of Section 4(f) Property

Build Alternatives 2A, 2B, and 2C would not occur at this site, and therefore would have no impact on Fuller Park.

Build Alternative 3A is south of Fuller Road; portions of Fuller Park are on the northern and southern sides of Fuller Road (Figure 4.9).

Under Build Alternative 3A, approximately 3.2 acres (5.4 percent) of Fuller Park would experience permanent impacts from construction of the parking structure, redesigned driveways, added turn lanes, and stormwater infiltration trench. These areas would be permanently converted from a surface parking lot serving the park and the U-M Medical Center to an intermodal facility. The station building would be within the rail right-of-way immediately south of the park, above the tracks. The proposed multi-level intermodal facility and parking structure would be constructed in the location of the existing parking area; this structure, along with station elements such as taxi stands and bus bays internal to the intermodal facility, would be constructed in the park property. Approximately 1,000 feet of the multi-use path would be permanently realigned to accommodate the intermodal facility and driveways and provide safe crossings for pedestrians and bicyclists to access the station or traverse the park.

Under Build Alternative 3A, portions of Fuller Park on the southern side of Fuller Road would be permanently incorporated into a transportation facility. This land is currently vacant or used for parking.

⁹⁸ City of Ann Arbor, The City of Ann Arbor Transportation Master Plan Update, May 2009. Available online at: http://www.a2gov.org/departments/systems-planning/planning-areas/transportation/Documents/2009_A2_Transportation_Plan_Update_Report.pdf Accessed on October 12, 2016.

⁹⁹ City of Ann Arbor, Park and Recreation and Open Space Plan 2016 - 2020. Available online at: <http://www.a2gov.org/departments/Parks-Recreation/administrative/Documents/PROS%20Plan%202016.pdf> Accessed on October 12, 2016.

Construction staging and other temporary construction activities related to construction of Build Alternative 3A would have temporary impacts on approximately 4.7 acres of vegetated open land in Fuller Park adjacent to the surface parking, as well as 1.4 acres of land east of the surface parking lot (currently a soccer field) for use as a temporary parking area during construction. These activities are anticipated to meet the criteria for a temporary occupancy:

- **Duration:** Construction staging and temporary construction activities are anticipated to extend approximately 12 months, which is less than the overall Project construction period of approximately 18 months. There would be no change in ownership of land; the City would retain ownership of the land if Build Alternative 3A were to be constructed, and the land would continue to be managed by the Department of Parks and Recreation.
- **Scope of work:** The scope of work would be minor because it would be limited to staging, access, and installation of a temporary surface parking lot.
- **Permanent adverse physical impacts:** The implementation of Build Alternative 3A would not result in permanent adverse physical impacts to the area, as described in more detail below. Construction would not impact the area north of Fuller Park, where the majority of the park features are located. Although the temporary surface parking lot will impact an area currently used as a soccer field, there are additional fields north of Fuller road, and therefore this impact would not be anticipated to interfere with the protected activities, features, or attributes of the park on either a temporary or permanent basis.
- **Restoration of affected land:** Upon completion of station construction, areas that experienced a temporary impact would be returned to a condition that is at least as good as that which existed prior construction, and stormwater measures such as rain gardens would be installed in the Fuller Road median (Figure 4.9). Aesthetic improvements would be coordinated with the City's Department of Parks and Recreation during final design.
- **Documented agreement:** Refer to the coordination discussion, below.

Currently, Fuller Park includes parking areas north and south of Fuller Road. As described above, the southern parking lot is available to park users in the evenings and weekends in accordance with the joint use agreement with the U-M Medical Center. The southern parking lot (comprising 250 parking spaces) would be closed during construction, to accommodate the construction of the new parking facility. To ensure that adequate parking is available to support recreational activities in Fuller Park during construction, the City would prepare and implement a parking mitigation plan during final design. The parking plan would be approved by the City's Department of Parks and Recreation and Public Works prior to construction. The plan will include details on proposed parking mitigation strategies, such as the use of a temporary surface parking lot (accommodating 150 spaces), signage and other methods to notify users of alternative parking accommodations. The parking plan would also define methods to ensure sufficient parking is available to park users after construction is complete. After construction is complete, park users would continue to have access to 150 parking spaces south of Fuller Road during weekends and evenings.

Pedestrian and bicycle access to Fuller Park includes the B2B Trail, parallel to and north of Fuller Road; and a meandering multi-use path south of Fuller Road. As described above, approximately 1,000 feet of the multi-use path south of Fuller Road would be closed and realigned. During construction, path users would be rerouted to the B2B Trail. Detour signs would be posted to direct users to either East Medical Center Drive on the west, where they would cross north of Fuller Road to access the B2B Trail. On the eastern end of the multi-use path, detour signs would direct users to cross north of Fuller Road to the B2B Trail by way of the existing bicycle and pedestrian crossing south of Fuller Pool. This existing crossing would remain open during construction. During construction, pedestrian access would be maintained to the southern soccer field east of the parking area by way of the B2B Trail, south of Fuller Pool.

Although noise levels would temporarily increase as a result of construction activities under Build Alternative 3A, noise levels from construction would be approximately 7 to 10 L_{eq} dBA below the established threshold for daytime impact. Build Alternative 3A would result in a 1- to 3-dBA permanent noise increase in the park; these increases are below the established thresholds for noise impacts, and therefore would not have a permanent adverse impact on users of Fuller Park.

Under Build Alternative 3A, construction activities would be visible to users of Fuller Park. Though visible from the southern side of Fuller Road, activities would generally be screened from view for users of the facilities north of Fuller Road; however, they may be highly noticeable depending on viewer location. Trees and vegetation on the southern side of Fuller Road, between the existing parking lot and the railroad tracks, would be removed during construction to accommodate the station.

The intermodal facility would add new visual features to Fuller Park under Build Alternative 3A. These new features would be designed to be visually sensitive to, and reflective of, the park setting. The form, scale, and massing of the new intermodal facility would not be highly noticeable to park users, given the dominant multistory U-M facility structures south of Fuller Road. The presence of the new facility would be consistent with park user expectation in this area, as the view shed is characterized by the large concrete linear forms of the U-M campus immediately to the south. Although Build Alternative 3A would result in temporary and permanent changes to the visual setting, the impacts would not be adverse.

Coordination

Ongoing coordination with the City of Ann Arbor's Department of Parks and Recreation has occurred through the project development process through internal coordination and presentations to the Parks Advisory Commission; the results of this coordination are reflected in this evaluation. The evaluation included in this EA will be presented to the City of Ann Arbor's Parks and Recreation Advisory Commission. Refer to Findings discussion below for additional information.

Minimization and Mitigation

Build Alternative 3A incorporates measures to minimize harm to Fuller Park by minimizing the footprint of the intermodal facility and ancillary features (e.g., driveways and stormwater infiltration trench) to

the maximum extent practicable. Alternative 3A was designed to minimize the use of parkland and to maintain pedestrian and bicycle access.

To minimize impact on the visual setting, aesthetic improvements would be subject to public input and coordinated with the City's Department of Parks and Recreation during design.

To provide adequate parking to support recreational activities at the site during construction, the City would prepare and implement a parking mitigation plan during final design. The plan would include details on proposed parking mitigation strategies, such as signage, use of the temporary surface parking lot, and other methods to notify users of alternative parking accommodations. The parking plan would also define methods to ensure sufficient parking is available to park users after construction is complete. The parking plan would be approved by the City's Department of Parks and Recreation and Public Works prior to construction.

Preliminary Determination

FRA's preliminary determination is that Alternative 3A would result in a de minimis impact to Fuller Park. Subsequent to the release of the Draft EA, in compliance with 23 CFR 774 FRA, will request a letter of concurrence on its evaluation and preliminary de minimis determination.

4.5.5 Border-to-Border/Iron Belle Trail

The B2B Trail provides more than 24 miles of paved shared-use paths along the Huron River. In 2015, the B2B Trail was incorporated into the state-designated Iron Belle Trail. The Iron Belle Trail is a 1,273-mile biking and hiking route that traverses the western side of the Lower Peninsula and borders Lake Superior in the Upper Peninsula. The Iron Belle trail uses existing multi-use trails and follows U.S. Route 2, a designated national bicycling route in the Upper Peninsula.¹⁰⁰

The B2B/Iron Belle Trail is north of the Huron River, and crosses under Build Alternatives 2A, 2B, and 2C at the Depot Site (Figure 4.1). The trail is south of the river and crosses Fuller Road, in Fuller Park, approximately 30 feet from Build Alternative 3A (Figures 4.1 and 4.9). The B2B/Iron Belle Trail is expanding with assistance from the Washtenaw County Parks and Recreation Commission and other partners. The trail supports Huron River conservation efforts, provides opportunities for transportation and recreation, and is routed away from roads.¹⁰¹ The larger Iron Belle Trail also continues to be developed along the 1,273-mile route.

Function(s) of the Property (Intended, Actual/Current, Planned)

The B2B/Iron Belle Trail is an off-road pedestrian and bicycle recreational trail in the City of Ann Arbor along the Huron River. Improvements to the B2B/Iron Belle Trail are identified in the City's 2016 – 2020

¹⁰⁰ Michigan Department of Natural Resources. Available online at: http://www.michigan.gov/dnr/0,4570,7-153-10365_16839_71459---,00.html. Accessed on August 18, 2016.

¹⁰¹ eWashtenaw (Washtenaw County, Michigan). Available online at: http://www.ewashtenaw.org/government/departments/parks_recreation/greenways/greenway%20update. Accessed on September 6, 2016.

PROS Plan.¹⁰² This includes improving the condition of the trail and closing gaps in the trail to provide a continuous facility. The B2B/Iron Belle Trail is a high priority for the City in the PROS Plan.

Owner and Official with Jurisdiction

The B2B/Iron Belle Trail is a collaboration of communities and organizations, but the Washtenaw County Parks and Recreation Commission is developing the trail as part of its County Greenways Initiative. The City owns and maintains the B2B/Iron Belle Trail within the city limits and is therefore considered the Official with Jurisdiction for the segments of the trail in the study area.

Use of Section 4(f) Property

Build Alternatives 2A, 2B, and 2C cross the B2B/Iron Belle Trail north of the Huron River. No land from the trail would be permanently incorporated into a transportation feature under Build Alternatives 2A, 2B, and 2C. However, Build Alternatives 2A, 2B, and 2C would require construction on the Broadway Street Bridge over the B2B /Iron Belle Trail. This construction would require a temporary closure of an approximately 100-foot-long segment of the trail under the bridge for the safety of trail users. During this temporary closure, trail traffic would have access to other segments of the trail, with detour access points at Swift Street and Wall Street. Implementation of Build Alternatives 2A, 2B, and 2C would also require the closure of a staircase access point that leads to the trail on the north side of the Broadway Street Bridge east of the River; however access would be maintained from Swift Street, located just east of the current access point. This change in access would require up to 520 feet of additional travel, and would not require any additional street crossings, which would be a negligible impact to trail users.

These activities are anticipated to meet the criteria for a temporary occupancy:

- Duration: Temporary closure of the trail is anticipated to extend approximately 6 months, which is less than the overall Project construction period of approximately 18 months. There would be no change in ownership of land.
- Scope of work: The scope of work would be minor because it would be limited to temporary closure for the safety of trail users. The closure would promote the safety of users during construction on the bridge. After construction on the Broadway Street Bridge, access would be reestablished to the trail.
- Permanent adverse physical impacts: The implementation of Build Alternatives 2A, 2B, and 2C would not result in permanent adverse physical impacts to trail. During construction, detour signs would direct trail users to existing sidewalks along Pontiac Trail; Wall Street, and Maiden Lane; therefore, there would be no interference with pedestrian and bicycle use. The public would be notified of trail closures at least one week prior to the closure. Detours would be posted during construction to provide connectivity for pedestrian and bicycle users of the B2B/Iron Belle Trail.

¹⁰² City of Ann Arbor, Park and Recreation and Open Space Plan 2016 - 2020. Available online at: <http://www.a2gov.org/departments/Parks-Recreation/administrative/Documents/PROS%20Plan%202016.pdf>
Accessed on October 12, 2016.

- Restoration of affected land: After construction, the property would be returned to a condition that is at least as good as that which existed prior to construction.
- Documented agreement: Refer to the coordination discussion, below.

Therefore, there would be a temporary occupancy of this property that is not adverse in terms of the statute's preservation purpose.

The B2B/Iron Belle Trail is on the northern side of Fuller Road, approximately 30 feet from Build Alternative 3A. No portion of this trail would experience direct impacts under Build Alternative 3A, and there would be no change in access to the trail as a result of this alternative. Although noise levels would temporarily increase as a result of construction activities under Build Alternative 3A, noise levels would be approximately 7 to 10 L_{eq} dBA below the established threshold for daytime impact. Build Alternative 3A would result in 1- to 3-dBA permanent noise increases at the closest point to the trail; however, these increases are also below the established thresholds for noise impacts, and therefore would not permanently adversely impact users of the trail. Construction activities would be temporarily visible to users of the B2B/Iron Belle Trail at Fuller Park. Construction of the new parking garage and the adjacent station would add new visual features to the site. However, these features would be consistent with other multistory structures south of Fuller Road, such as the U-M facility. Once the station is constructed, disturbed areas adjacent to the trail would be returned to a condition that is at least as good as that which existed prior to construction. During construction, additional users will be diverted to the B2B/Iron Belle Trail in Fuller Park to accommodate closures of an adjacent multi-use trail. This temporary impact would be limited to a short segment (approximately 1,000 feet) of the more than 1,000-mile route and would not degrade the use of the trail. The traffic anticipated to be generated by Build Alternative 3A would be minimal compared to the existing traffic volumes along Fuller Road; therefore the additional traffic would not substantially impact user experience on the B2B trail.

Therefore, implementation of Build Alternative 3A would not substantially impair the protected activities, features, or attributes that qualify the B2B/Iron Belle Trail for protection under Section 4(f).

Coordination

Ongoing coordination with the City of Ann Arbor's Department of Parks and Recreation has occurred through the project development process through internal coordination and presentations to the Parks Advisory Commission; the results of this coordination are reflected in this evaluation. The evaluation included in this EA will be presented to the City of Ann Arbor's Parks Advisory Commission. Refer to Findings discussion below for additional information.

Minimization and Mitigation

The public would be notified of trail closures at least one week prior to the closure. Detours would be posted during construction to provide connectivity for pedestrian and bicycle users of the B2B/Iron Belle Trail.

Preliminary Determination

FRA's preliminary determination is that Build Alternatives 2A, 2B, and 2C would result in a temporary occupancy of the B2B/Iron Belle Trail but would not result in a use of the B2B/Iron Belle Trail because implementation of these Build Alternatives would result in an occupancy that is temporary, the nature and magnitude of changes to the trail are minimal, there are no permanent adverse physical impacts nor interference with the characteristics that make the trail eligible for protection under Section 4(f); and the land impacted would be fully restored. FRA will request a letter of concurrence on its preliminary determination of a temporary occupancy exception subsequent to the release of the public Draft EA.

4.5.6 The Huron River Water Trail

The Huron River Water Trail is a 104-mile-long river trail that was designated as a National Water Trail by the National Park Service in 2015. It provides paddling recreational activities—including kayaking, canoeing, and fishing—along the Huron River, north of the Build Alternatives (Figure 4.1).

Function(s) of the Property (Intended, Actual/Current, Planned)

The Huron River Water Trail is a recreational trail that extends through several counties. The trail offers paddling recreational activities—including kayaking, canoeing, and fishing—on the Huron River within the study area. The nearest boat launches to the build alternatives is in Gallup Park, 1.6 miles from the Project area, and the Argo Canoe Livery—approximately 1,500 feet northwest of the Project.

Owner and Official with Jurisdiction

The Huron River Water Trail is designated as National Water Trail by the National Park Service and is managed locally by the Huron River Watershed Council. The Huron River Watershed Council is considered the Official with Jurisdiction for the segments of the trail in the study area.

Use of Section 4(f) Property

The Huron River Water Trail crosses underneath Build Alternatives 2A, 2B, and 2C at the Broadway Street Bridge and is approximately 400 feet north of Build Alternative 3A. Build Alternative 3A would not require land from this trail or result in a disruption of the use of or access to the trail. There would be no permanent or temporary use of this property from implementation of Build Alternative 3A.

No land from the trail would be permanently incorporated into a transportation feature under Build Alternatives 2A, 2B, and 2C. However, Build Alternatives 2A, 2B, and 2C would require construction on the Broadway Street Bridge over the Huron River Water Trail. This construction would require restricting recreation use from an approximately 250-foot-long segment of the river under the Broadway Street Bridge for the safety of the recreating public. During this temporary closure, boaters and other recreational users would have access to other segments of the over 100-mile-long trail, but the area under the Broadway Street Bridge would be blocked to the public. The temporary restriction is anticipated to meet the criteria for a temporary occupancy:

- Duration: Temporary closure of the trail is anticipated to extend approximately 6 months, which is less than the overall Project construction period of approximately 18 months. There would be no change in ownership of land.

- Scope of work: The scope of work would be minor because it would be limited to temporary closure for the safety of trail users. The closure would promote the safety of the recreating public during construction on the bridge. After construction on the Broadway Street Bridge, access would be reestablished.

During construction, signs would be posted at the nearest boat launches (to both on the east and west) to inform users of the temporary closure and boaters could continue to access the Huron River Water Trail on either side of the construction closure. To the extent practicable and feasible, work would be scheduled to avoid interruption of peak-season use (i.e., avoid closures of the trail during June, July, and August).

Construction of the build alternatives would result in a temporary and intermittent increase of noise levels along portions of the trail; however, the increase is projected to be 5 to 10 dBA below established criteria for daytime construction impacts. Noise levels during operation of the station under the build alternatives are projected to increase by 0 to 3 dBA at the trail, and would also be below established impact criteria thresholds. Construction activities and the proposed new station would be visible intermittently to trail users, depending on the angle of their view and the season, because dense vegetation is present along most of the river adjacent to the study area.

- Permanent adverse physical impacts: The implementation of Build Alternatives 2A, 2B, and 2C would not result in temporary or permanent changes to the physical features of the trail.
- Restoration of affected land: As there are no temporary or permanent impacts to the physical features of the trail, after construction, the property would be in a condition that is at least as good as that which existed prior to construction.
- Documented agreement: Refer to the coordination discussion, below.

Therefore, there would be a temporary occupancy of this property that is not adverse in terms of the statute's preservation purpose.

Coordination

Coordination with the Huron River Watershed Council, the official with jurisdiction over this property, will be conducted to determine the long-term and short-term effects on the Huron River Water Trail. The FRA will request written concurrence from the Council documenting its agreement with this preliminary determination of a temporary occupancy exception subsequent to the release of the public Draft EA.

Minimization and Mitigation

To the extent practicable and feasible, work would be scheduled to avoid interruption of peak-season use (i.e., avoid closures of the trail during June, July, and August). The public would be notified of trail closures at least one week prior to the closure. Signs would be posted at the nearest boat launches (to both on the east and west) to inform users of the temporary closure.

Preliminary Determination

While Build Alternatives 2A, 2B, and 2C would result in a temporary occupancy of a small segment of the Huron River Water Trail for the safety of the recreating public, when considering the measures to minimize harm, FRA's preliminary determination is that this occupancy is not adverse in terms of the statute's preservation purpose. FRA will request concurrent on its preliminary determination of a temporary occupancy exception subsequent to the release of the public Draft EA

4.5.7 Historic Section 4(f) Resources

Potential Section 4(f) uses of historic properties were evaluated by (1) identifying whether the build alternatives would permanently incorporate land from the property; (2) reviewing the effects on the property, including potential proximity impacts, as documented during the Section 106 of the NHPA process; and (3) assessing the Section 106 effects in the context of the Section 4(f) statute.

- If the build alternatives would permanently incorporate land from the property or result in temporary occupancy but have "no adverse effect," the impact was evaluated to determine whether it would be *de minimis* to the property.
- If the build alternatives would permanently incorporate land from the property or result in an adverse temporary occupancy and would also result in an "adverse effect," this impact was further evaluated to determine whether the effect resulted in a substantial impairment of the properties characteristics and features that qualified it for protection under Section 4(f) and therefore constituted a Section 4(f) use.
- If the build alternatives would not permanently incorporate land from the property but would result in an adverse effect determination under Section 106, the impact was evaluated to determine whether the build alternatives would result in a substantial impairment to the features that qualify the property for protection under Section 4(f), resulting in a constructive use of the property.
- If no acquisition is required from a Section 4(f) historic resource and there is no adverse effect on the property, there is no Section 4(f) use of that historic resource.

The historic properties in the study area that qualify for protection under Section 4(f) are described below. Six historic properties were identified in the study area of Build Alternatives 2A, 2B, and 2C. There are no historic properties in the study area of Build Alternative 3A; therefore, Build Alternative 3A would not result in a Section 4(f) use of historic properties. Table 2 presents the six historic properties in the study area for Build Alternatives 2A, 2B, and 2C that qualify for protection under Section 4(f); the properties are also shown on Exhibit 4.1.

Table 2. Section 4(f) Historic Resources in the Project Area

Historic Resource	Address	Date of Construction	Distance from Build Alternatives	Description
Detroit Edison Energy Argo Station	987 Broadway Street	1928	Build Alternatives 2A, 2B, 2C: 200 feet Build Alternative 3A: 2,600 feet	Individually eligible for listing in NRHP; Criterion A.
Anson Brown Building	1003-1005 Broadway Street	1832	Build Alternatives 2A, 2B, 2C: 480 feet Build Alternative 3A: 2,500 feet	Individually eligible for listing in NRHP; Criteria A, B, and C.
Casey's Tavern/Wood and Perrin	304-310 Depot Street	1901	Build Alternatives 2A, 2B, 2C: 70 feet Build Alternative 3A: 3,500 feet	Individually eligible for listing in NRHP; Criterion A.
Michigan Central Railroad Depot/Gandy Dancer	401 Depot Street	1886	Build Alternatives 2A, 2B: 17 feet Build Alternatives 2C: 0 feet Build Alternative 3A: 2,700 feet	Individually listed in NRHP; Criterion C. In Division Street Historic District.
Old Fourth Ward Historic District (OFWHD)	Ann Arbor, Michigan	Various	Build Alternatives 2A, 2B: 90 feet Build Alternatives 2C: adjacent Build Alternative 3A: 1,500 feet	NRHP eligible (locally listed), historic district; Criterion C.
Division Street Historic District (DSHD)	Ann Arbor, Michigan	Various	Build Alternatives 2A, 2B: 90 feet Build Alternatives 2C: 0 Build Alternative 3A: 2,700 feet	NRHP-eligible (locally listed), historic district; Criterion C. Contributing element in the study area includes brick pavers on Depot Street.

4.5.8 Detroit Edison Energy Argo Station and Preliminary Use Determination

The Detroit Edison Energy Argo Station Building is a two-story brick building at 987 Broadway Street, north of the existing Amtrak Station and west of the Broadway Street Bridge. The property is on the northern bank of the Huron River. The topography of the land in the area prevents any new intrusions into the viewshed because the northern bank is elevated.

The resource is eight bays in width under a flat, parapeted roof. Brick pilasters with stone caps separate the window bays. Diamond-shaped stones near the foundation have been framed by brick stretchers. The Detroit Edison Energy Argo Station building is on land originally owned by Anson Brown. In 1833, Anson Brown built the first mill at this location. After several owners, the mill was consumed by fire in 1904. A small hydroelectric plant constructed at this location was acquired by Detroit Edison in 1905. Although the building now has a brass plaque on the eastern elevation with the date of 1905, the current building may have been constructed after that time but based on the period style. The Detroit Edison Energy Argo Station has been determined to be individually eligible for listing in the NRHP under Criterion A; which denotes properties that are associated with events that have made a significant contribution to broad patterns of history. This resource is located 2,600 feet away from Build Alternative 3A and therefore, this alternative would not result in a use of the Detroit Edison Energy Argo Station.

Under Build Alternatives 2A, 2B, and 2C, the turning lanes from Broadway Street would be 200 feet from the Detroit Edison Energy Argo Station. No land would be temporarily or permanently acquired from this property. Build Alternatives 2A, 2B, and 2C would have no adverse effect on the property under Section 106 of the NHPA and would not impair the characteristics of the structure that qualify it for protection under Section 4(f). Therefore, there would be no use of the property as a result of implementation of Build Alternatives 2A, 2B, and 2C.

4.5.9 Anson Brown Building and Preliminary Use Determination

The Anson Brown Building, currently a St. Vincent DePaul Store, is west of Broadway Street in the Lower Town section of Ann Arbor. The building dates to 1832 and is constructed in the Federal style. The Anson Brown Building is individually eligible for listing in the NRHP under Criteria A, Criteria B (i.e., properties that are associated with the significant persons), and C (i.e., properties that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction).

The property is one of the oldest structures in Lower Town. Anson Brown was the original developer of Lower Town and was a successful businessman in the area. Brown established the area in an attempt to move the heart of the city of Ann Arbor to the northern side of the Huron River. The resource contains the elements of the Federal style, though it was constructed during the Greek Revival style period. The Anson Brown Building faces east, with the southern elevation facing the Argo Station. The property is 2,500 feet from Build Alternative 3A; therefore, Build Alternative 3A would not result in a Section 4(f) use of the Anson Brown Building.

Under Build Alternatives 2A, 2B, and 2C, the turning lanes from Broadway Street would be approximately 480 feet from the Anson Brown Building. No land would be temporarily or permanently acquired from this property. Build Alternatives 2A, 2B, and 2C would have no adverse effect on the property under Section 106 of the NHPA and would not impair the characteristics of the structure that qualify it for protection under Section 4(f). Therefore, there would be no use of the property as a result of implementation of Build Alternatives 2A, 2B, and 2C.

4.5.10 Casey's Tavern/Wood and Perrin and Preliminary Use Determination

Casey's Tavern/Wood and Perrin (Casey's Tavern) is a one-story Commercial Vernacular style building at 304 Depot Street. The property is on the south side of Depot Street and directly across from the existing Amtrak Station parking lot and loading platform. The resource, built in 1901, is the oldest industrial structure remaining in the area. The building served for more than a century as the main offices of a lumber company, one of many in the neighborhood and the last to survive. In the 1980s, it was converted into a restaurant. The complex of rough wooden barns and sheds left over from the lumber yard operation still forms an appropriate background for the brick building at the front of the lot. The viewshed to the east of Casey's Tavern includes the Broadway Street Bridge. The property was determined to be eligible for listing in the NRHP under Criterion A. . The property is 3,500 feet from Build Alternative 3A; therefore, Build Alternative 3A would not result in a Section 4(f) use of Casey's Tavern.

The property is approximately 70 feet south of Build Alternatives 2A, 2B, and 2C. No land would be temporarily or permanently acquired from this property. New visual features would be introduced into the viewshed under Build Alternatives 2A, 2B, and 2C; however, the viewshed already contains modern features, such as the Broadway Street Bridge and commercial buildings. These build alternatives would have no adverse effect on the property under Section 106 of the NHPA and would not impair the characteristics of the structure that qualify it for protection under Section 4(f). Therefore, there would be no use of the property as a result of implementation of Build Alternatives 2A, 2B, and 2C.

4.5.11 Michigan Central Railroad Depot/Gandy Dancer and Preliminary Use Determination

The Michigan Central Railroad Depot (Michigan Central Depot)/Gandy Dancer Restaurant is on Depot Street and currently houses the Gandy Dancer Restaurant. The Michigan Central Depot was listed in the NRHP in July of 1974. The building is listed under Criterion C as the finest example of Richardsonian Romanesque architecture in the Michigan Central Railroad system. The depot was designed by Spier and Rohns, one of Detroit's premier architectural firms. The Michigan Central Depot was the most important passenger station for the railroad along the route connecting Detroit and Chicago, and was considered the finest station between Buffalo and Chicago. The depot is a large, two-and-one-half story rectangular building. The walls of variegated stone are topped by a gable-on-hip roof that is broken by various parapeted cross-gables and eyelid dormers. The eastern end of the building features cross-gables and a hipped-roof square tower. To the east and west of the building are two ancillary buildings constructed in the Romanesque style. When it was completed in 1886, the depot complex included a raised platform with a canopy on its northern side. The Gandy Dancer Restaurant enclosed a portion of this platform to accommodate additional patrons. The Michigan Central Depot is a contributing element to the Division Street Historic District (described separately below). The property is 2,700 feet from Build Alternative 3A; therefore, Build Alternative 3A would not result in a Section 4(f) use of the Michigan Central Depot.

Under Build Alternatives 2A and 2B, no land would be temporarily or permanently acquired from this property. Although Build Alternatives 2A and 2B would not directly impact the property; these Build Alternatives would include extending sidewalks on the Broadway Street Bridge 25 feet closer to the Depot, and the addition of platforms/warming stations on the north and south side of the nearby railroad tracks. However, most of the historic landscape has been removed and replaced by modern infrastructure and the addition of these transportation features would be consistent with the current setting, as well as the historic use of the site as a transportation feature. Further, the new platforms and warming stations would not impede views of the restaurant patrons on the north side of the station. The addition of the nearby platforms and warming stations would not impact the property's integrity of location, design, materials, workmanship, or association. Build Alternatives 2A and 2B would have no adverse effect on the property under Section 106 of the NHPA and would not substantially impair the characteristics of the structure that qualify it for protection under Section 4(f). Therefore, there would be no use of the property as a result of implementation of Build Alternatives 2A and 2B.

Under Build Alternative 2C, the Michigan Central Depot would be acquired and modified to return the resource to its original use as a rail station. Building modifications and expansion would be required to

readapt the interior and exterior of the Michigan Central Depot for station uses and to comply with ADA requirements. Implementation of this Build Alternative would incorporate the main depot and the east and west ancillary buildings into the design, creating one building. The interior renovations and new exterior construction would diminish the character-defining features of the building as a result of impacts to the spatial relationship of the property features, changes to the patterns of exterior window and door openings, and diminished mass and form of the original design.

As described in the Preliminary Cultural Resources Assessment for the Ann Arbor Intermodal Passenger Rail Station, Washtenaw County, Michigan (2017), Build Alternative 2C would result in a Section 106 finding of Adverse Effect to Michigan Central Depot, even with the incorporation of measures to minimize harm. Measures would be applied to mitigate the adverse effect to this resource, including application of the Secretary of the Interior's (SOI's) Standards for the Treatment of Historic Properties (SOI Standards) (36 CFR part 68) and applicable guidelines and preparation of a Historic Structures Report. However, as the implementation of Alternative 2C would require acquisition and alterations to this property that would result in a Section 106 adverse effect. Therefore, the preliminary determination is that there would be a direct use of Michigan Central Depot.

4.5.12 Old Fourth Ward Historic District and Preliminary Use Determination

The Old Fourth Ward Historic District¹⁰³ is bordered by the Huron River on the north, the U-M Medical Center on the east, and the U-M campus and downtown on the south and west, respectively. The Old Fourth Ward Historic District is just south of the Michigan Central Depot. The district dates to 1824, when John Allen and Elisha Rumsey platted the village of Ann Arbor. From the city's first charter in 1851 until 1955, this area was Ann Arbor's Fourth Ward. Despite several subsequent changes in the city's political organization, the neighborhood has continued to be known as the "Old Fourth." The Old Fourth Ward Historic District is a historic district, recommended to be eligible for listing in the NRHP under Criterion C. The Old Fourth Ward Historic District is elevated above Depot Street and surrounded by an urban setting. The historic district is 1,500 feet from Build Alternative 3A and therefore there would be no impact, or use of this resource from implementation of Build Alternative 3A.

Build Alternatives 2A and 2B would be constructed approximately 90 feet north of the boundary of the Old Fourth Ward Historic District historic district; Build Alternative 2C would be immediately adjacent to the district. None of the build alternatives would require the acquisition of land from the district, and no features of the district would experience direct impacts. The historic district is elevated above Depot Street and is an urban setting. Because a dense tree line between High Street and Depot Street serves as a further barrier from viewshed intrusions to the district, the viewshed of the historic district would not be altered by the Build Alternatives. Build Alternatives 2A, 2B, and 2C would have no adverse effect on the property under Section 106 of the NHPA and would not impair the characteristics of the structure that qualify it for protection under Section 4(f). Therefore, there would be no use of the property as a result of implementation of any of the build alternatives.

¹⁰³ <http://www.a2gov.org/departments/planning-development/historic-preservation/Documents/Reports%20and%20Surveys/Old%20Fourth%20Ward%20survey%20publication.pdf>

4.6 Division Street Historic District and Preliminary Use Determination

The Division Street Historic District is on the eastern and western sides of Division Street at the intersection with Ann Street. The district is 2,700 feet from Build Alternative 3A; therefore, Build Alternative 3A would not result in a Section 4(f) use of the Division Street Historic District.

The district is a noncontiguous locally listed historic district, recommended to be eligible for listing on the NRHP under Criterion C. A small portion of the district is located in the study area, with the majority of the district located south of the study area. The Division Street Historic District contains residential buildings that date back to the early settlement of Ann Arbor in 1824. The historic district shares a border with the Ann Street Historic District to the east and the Old Fourth Ward Historic District to the north. The Division Street Historic District was adopted in 1973 by the City and the ordinances were further amended in 1976. The individually eligible Michigan Central Depot (described above) and the brick pavers on Depot Street are contributing elements to the historic district. As described in the *Preliminary Cultural Resources Assessment for the Ann Arbor Multimodal Facility, Washtenaw County, Michigan* (Turner et. Al 2017), the identity of a district results from the interrelationship of its resources, which can convey a visual sense of the overall historic environment or be an arrangement of historically or functionally related properties. Further, elements of a district contribute or express that interrelationship and therefore, impacts to contributing elements impact the district as a whole.

Build Alternatives 2A and 2B would be constructed approximately 90 feet from the Division Street Historic District. There would be no direct impact on this property or its contributing features (e.g., pavers), and no land would be temporarily or permanently acquired from this property. These Build Alternatives would include construction of a station building west of the Broadway Street Bridge and extend sidewalks on the bridge closer to the District. These improvements would not adversely alter the view shed of the district. The addition of platforms and warming stations would be consistent with the historic transportation use and function of the area and would not diminish the integrity of location, design, materials, workmanship, feeling, or association of the Division Street Historic District. Build Alternatives 2A and 2B would have no adverse effect to the district under Section 106 of the NHPA and would not impair the characteristics of the structure that qualify it for protection under Section 4(f). Therefore, the preliminary determination is that there would be no use of the property as a result of implementation of Build Alternative 2A or 2B.

Build Alternative 2C includes the acquisition of a portion of the Division Street Historic District for the reuse of the Michigan Central Depot; the portion acquired (i.e. the Michigan Central Depot) is a contributing element to the overall eligibility of the District. The brick pavers on Depot Street would not be disturbed, but building modifications and expansion would be required to readapt the exterior of the Michigan Central Depot. New construction would connect the main depot to the westernmost ancillary building, thereby creating one structure. The original buildings will lose their mass and form, thus diminishing the aspects of integrity for which the contributing Michigan Central Depot was NRHP-listed. Platforms would be constructed on the northern and southern sides of the existing rail line and within the railroad right-of-way.

Build Alternative 2C would result in an adverse effect on the resource under Section 106 of the NHPA. The FRA’s preliminary determination is that acquisition of property from the district, and the adverse effect recommendation under Section 106 of the NHPA, would constitute a Section 4(f) use.

4.7 Summary

As shown in Table 4.2, the preliminary determination at the Depot Site is that Alternative 2C would result in a use of the Michigan Central Depot and the Division Street Historic District. Feasible and prudent alternatives to these uses are Build Alternative 2A and 2B. At the Fuller Park site, the FRA’s preliminary determination is that Build Alternative 3A would result in a *de minimis* use of Fuller Park.

Table 4.2: Summary of Section 4(f) Preliminary Determinations

Section 4(f) Property	Depot Site			Fuller Site
	Build Alternative 2A	Build Alternative 2B	Build Alternative 2C	Build Alternative 3A
Broadway Park	No use	No use	No use	—
Wheeler Park	No use	No use	No use	—
Fuller Park	—	—	—	<i>de minimis impact</i>
B2B/Iron Belle Trail	Temporary Occupancy; No use	Temporary Occupancy; No use	Temporary Occupancy; No use	No use
Huron River Water Trail	Temporary Occupancy; No use	Temporary Occupancy; No use	Temporary Occupancy; No use	No use
Detroit Edison Energy Argo Station	No use	No use	No use	—
Anson Brown Building	No use	No use	No use	—
Casey’s Tavern/ Wood and Perrin	No use	No use	No use	—
Michigan Central Railroad Depot/Gandy Dancer	No use	No use	Use	—
Old Fourth Ward Historic District	No use	No use	No use	—
Division Street Historic District	No use	No use	Use	—

4.8 Section 6(f)

If a project requires that land within the Section 6(f) boundary of a property be converted for non-recreation activities and/or results in activities that impact the public outdoor recreation utility of an

area, it may trigger a “conversion.” Conversion of Section 6(f) properties is only approved if several requirements are met, including but not limited to an evaluation of all practical alternatives to the proposed conversion; establishment of fair market value of the property; confirmation that the proposed substitute property is of at least equal value, and that the location of the proposed replacement property is of reasonably equivalent usefulness; and completion of required coordination (36 C.F.R. 59.3).

4.8.1 Section 6(f) Property

The City’s 2011-2015¹⁰⁴ PROS Plan indicates that Riverside Park received Land and Water Conservation Act funding for improvements in the late 1970s. The plan describes “Shoreline stabilization and restoration, play area, pathway,” and “park furniture.”¹⁰⁵ The shoreline extends from the Broadway Street Bridge to Maiden Lane. According to the City’s Parks and Recreation Department records, Land and Water Conservation Act monies were used for improvements to land owned by the City. Those improvements, other than shoreline stabilization and restoration, have since been superseded by additional subsequent improvements. Riverside Park is across the Huron River, at a distance ranging from 400 to 600 feet from all of the build alternatives.

4.8.2 Conversion of Section 6(f) Property

None of the build alternatives would require acquisition of land from Riverside Park; therefore, there would be no Section 6(f) conversion of this recreational facility.

¹⁰⁴ An update to the City’s 2016 – 2020 PROS Plan is under development. The plan is available online at: <http://www.a2gov.org/departments/Parks-Recreation/administrative/Pages/Park-Planning.aspx>.

¹⁰⁵ City of Ann Arbor Parks and Recreation Open Space “PROS” Plan 2011-2015, adopted March 7, 2011, page 53. Available online at http://www.a2gov.org/departments/Parks-Recreation/administrative/Documents/PROS_Plan_Final_2011_2015.pdf

5.0 Coordination and Consultation

Key stakeholders, community leaders, and the general public have been invited to participate throughout the study using a variety of communication mechanisms. The Project Team includes the City of Ann Arbor, MDOT, FRA, Amtrak and the Consultant Team under contract to the City. FRA is the administrator of federal project funding and MDOT is the funding recipient. The City is a sub-recipient of project funding and has served as lead entity in preparing the EA. MDOT's team participation has enabled close coordination with planned intercity passenger rail investments in MDOT's Michigan Line and the Amtrak Wolverine service corridor. This coordination includes exchange with the MDOT-led Chicago - Detroit/Pontiac Passenger Rail Corridor Program and associated Tier 1 Draft Environmental Impact Statement (EIS).

Project stakeholder committees are one of the primary mechanisms of ensuring community input into the various stages of the Ann Arbor Station Environmental Review. Two stakeholder groups were involved extensively: a Leadership Advisory Group (LAG) and a Citizens Working Group (CWG). The general public was welcome to attend all meetings.

LAG members include representatives from the following elected offices, jurisdictions, agencies, institutions, transportation operators, commissions, organizations, businesses and media:

Elected Offices

Senator Debbie Stabenow
Senator Carl Levin
Representative John Dingell
Senator Rebekah Warren
Representative Jeff Irwin
Representative Gretchen Driskell
Representative Adam Zemke
Representative David Rutledge

Jurisdictions

City of Ann Arbor Mayor and City Council
City of Ann Arbor staff
State of Michigan
Townships of Ann Arbor, Northfield and Pittsfield
Washtenaw County

Transportation Agencies, Operators and Programs

Ann Arbor Area Transportation Authority (AAATA / TheRide)
Ann Arbor Railroad
GetDowntown
Amtrak station management
Downtown Development Authority (DDA)

Washtenaw Area Transportation Study (WATS)
Southeast Michigan Council of Governments (SEMCOG)
University of Michigan
Greyhound
Megabus
Across Town Cab
Amazing Blue Taxi
Ann Arbor Yellow Cab
Ann Arbor Taxi
Blue Cab Co.
Golden Limousine
Michigan Green Cabs
Selectride
Stadium Taxi

Institutions

University of Michigan
Veterans Affairs (VA) Medical Center

Businesses and Business Organizations

A2Y Chamber of Commerce
American Institute of Architects-Huron Valley
Ann Arbor Area Board of Realtors
Peter Allen Assoc.
Bank of Ann Arbor

Builders and Remodelers Association of Greater
Ann Arbor (BRAG)
Casey's Tavern
DTE
Google
Kerrytown District Association
Main Street Area Association
Main Street Biz
MAV Development
McKinley Properties
Milliken Realty Company
North Campus Plaza Shopping Area
Old West Side Association
Oxford Company
Packard and Stadium Area
Plymouth and Broadway Area
Plymouth Mall Merchants Association
South University Association
State-Packard Association
State Street Area Association
Washtenaw Contractors Association
Washtenaw Area Apartment Association
Zingerman's

Commissions

Ann Arbor Commission on Disability Issues
Ann Arbor Energy Commission
Ann Arbor Environmental Commission
Ann Arbor Housing Commission
Ann Arbor Planning Commission
Ann Arbor Parks Commission
Ann Arbor Public Arts Commission
Ann Arbor Historic District Commission
Washtenaw County Parks Commission
Washtenaw County Road Commission
Washtenaw County Water Resources
Commission

Stakeholder Organizations

Ann Arbor Center for Independent Living (CIL)
Allen Creek Greenway
Allen Creek Watershed Group

Ann Arbor Community Center
Ann Arbor Community Foundation
Ann Arbor Convention and Visitors Bureau
(CVB)
Ann Arbor District Library
Ann Arbor Public Schools
Ann Arbor SPARK
Ann Arbor Tree Conservancy
ArtTrain
Community Action Network
Ecology Center
GetDowntown
Huron River Watershed Council
Malletts Creek Watershed Group
Miller's Creek
Partners for Transit
Sierra Club
United Way of Washtenaw County
University of Michigan Office of Campus
Sustainability
University of Michigan Graham Institute
University of Michigan Erb Institute for Global
Sustainable Enterprise
Washtenaw Biking and Walking Coalition
Washtenaw County Conservation District
Washtenaw Regional Organizing Coalition
(WEROC)

Media

annarbor.com
Ann Arbor Chronicle
Ann Arbor Observer
Ann Arbor Family
Concentrate
Heritage Newspapers
Michigan Daily
University of Michigan
WEMU (89.1)
WLBY (1290)
Ann Arbor Library Blogger
Mode Shift

The CWG was opened to the general public and any citizen who committed to remain engaged with the Project. CWG participants are listed below:

Barbara Bach	Peter Honeyman
Larry Baird	Nancy Kaplan
Leon Bryson	Laurence J. Krieg, PhD
Vince Caruso	Rita Mitchell
Clark Charnetski	Tom Niehus
Alan Connor	Gary Nystrom
James d'Amour	Gwen Nystuen
Larry Deck	John Nystuen
Joan Doughty	Kai Petainen
Nicole Eisenmann	Ethel Potts
Ren Farley	Alice Ralph
George Gaston	Leiza Rea
Carolyn Grawi	Don Salberg
Jeff Hayner	John Satarino
Terry Holman	Nancy Shiffler

One of the main forums for Project communications has been the project website at <http://www.a2gov.org/departments/systems-planning/planning-areas/transportation/Pages/Ann-Arbor-Station.aspx>. The website provides meeting and study milestone notices, as well as access to finalized Project documents, presentations and meeting notes since the Project's inception.

5.1 Agency, Tribal and Organizational Coordination

Regular Project Team coordination calls have included City of Ann Arbor and MDOT participation. FRA has participated in these calls periodically. Through the Leadership Advisory Group and direct meetings, the Project Team has also coordinated with local transportation agencies, operators and stakeholders, including and not limited to Amtrak, the Ann Arbor Area Transportation Authority (AAATA, or TheRide), University of Michigan Transportation, the Regional Transit Authority (RTA), the Southeast Michigan Council of Governments (SEMCOG), Greyhound and other private and social service transportation providers, and local advocacy organizations.

Upon Project startup, early coordination letters were sent in March and April, 2014 to the following federal, state, regional and local agencies, federally recognized Native American tribes, and organizations. Responses are noted.

Federal

Advisory Council on Historic Preservation
Federal Emergency Management Agency
National Park Service
US Environmental Protection Agency: Office of the National Environmental Policy Act (NEPA) Policy and Assistance
US Centers for Disease Control
US Coast Guard

US Department of Agriculture and Rural Development (Response April 2, 2014: no negative impact on prime and / or unique farmland)
US Department of Commerce
US Department of Homeland Security
US Department of Housing and Urban Development
US Department of the Interior - Fish & Wildlife Service (Response October 29 that the agency has no concerns or comments)
US Department of Transportation (USDOT) Federal Aviation Administration
USDOT Federal Highway Administration
USDOT Federal Transit Administration

State

Michigan Department of Agriculture & Rural Development
Michigan Department of Community Health
Michigan Department of Environmental Quality (Response April 2, 2014 with comments regarding environmental resources to include in the EA)
Michigan Department of Natural Resources
Michigan State Historic Preservation Office

Regional and Local

Central Upper Peninsula Planning and Development District
East Central Michigan Planning and Development Region
Eastern upper Peninsula Regional Planning and Development Commission
[Genesee-Lapeer-Shiawassee](#) (GLS) Region V Planning and Development Commission
Northeast Michigan Council of Governments
Northwest Michigan Council of Governments
Northern Michigan Environmental Action Council
Region 2 Planning Commission
Southcentral Michigan Planning Council
Southeast Michigan Council of Governments
Tri-County Regional Planning Commission
West Michigan Environmental Action Council
West Michigan Regional Planning Commission
Upper Peninsula Environmental Coalition
West Michigan Shoreline Regional Development Commission
Western Upper Peninsula Planning & Development Commission

Federally Recognized Native American Tribes

Bay Mills Indian Community
Grand Traverse Band of Ottawa and Chippewa Indians
Hannahville Indian Community
Keweenaw Bay Indian Community
Lac Vieux Desert Band of Lake Superior Chippewa Indians (Response April 28, 2014 that a fee is requested for analysis once historical, religious or culturally significant resources associated with the project have been identified)
Little River Band of Ottawa Indians
Little Traverse Bay Bands of Odawa Indians
Match-E-Be-Nash-She-Wish Band of Potawatomi Indians (Gun Lake Tribe)

Nottawaseppi Huron Band of Potawatomi Indians

Pokagon Band of Potawatomi Indians (Response May 30, 2014 that they were unaware of any historical, religious or culturally significant resources that would be impacted by the project)

Saginaw Chippewa Indian Tribe of Michigan

Sault Ste. Marie Tribe of Chippewa Indians

Organizations

Michigan United Conservation Clubs, Inc.

Sierra Club

5.2 Public Meetings, Forums and Tours

All Ann Arbor Station committee meetings are open to the general public.

Six Citizen Working Group meetings and one site tour (combined with LAG and General Public) were held prior to the preparation of the Environmental Assessment on the following dates, with key themes and attendees noted:

- March 19th, 2014: Early coordination activities to inform residents and stakeholders about the scope of the Ann Arbor Station Environmental Review. 22 citizen attendees.
- March 25th, 2014: Initial Purpose and Need, Design Criteria and site selection process. 26 citizen attendees.
- June 18th, 2014: Alternatives Analysis process—8 initial sites reduced to 2 or 3 recommended for further analysis. 14 citizen attendees.
- September 19th, 2014 (Site Tour). Project Team and 21 LAG and CWG participants. Visited the three remaining station location analysis sites via a chartered AAATA coach. A post-tour discussion was held at City Hall following the tour. Discussion participants agreed that Build Alternative 1 (North Main Street) should be removed from further consideration.
- May 13th, 2015. Progress on the Alternatives Analysis. 15 attendees.
- September 21st, 2016. Release of the Phase II Alternatives Analysis memorandum, with two sites and four alternatives to be included in the EA. 15 citizen attendees.

Four Leadership Advisory Group meetings and one site tour (combined with CWG and General Public) were held prior to the preparation of the Environmental Assessment on the following dates:

- March 25th, 2014: Early coordination activities to inform elected offices, jurisdictions, agencies, transportation operators, institutions and other stakeholders about the scope of the Ann Arbor Station Environmental Review 18 attendees; 17 individuals responded who did not attend.
- June 18th, 2014: Alternatives Analysis process—8 initial sites reduced to 2 or 3 recommended for further analysis. 23 LAG attendees, 4 members of the public, 2 responders who did not attend.
- September 19th, 2014 (Site Tour). Project Team and 21 LAG and CWG participants. Visited the three remaining station location analysis sites via a chartered AAATA coach. A post-tour

discussion was held at City Hall following the tour. Discussion participants agreed that Build Alternative 1 (North Main Street) should be removed from further consideration.

- May 13th, 2015: Progress on the Alternatives Analysis. 13 LAG members, 10 members of the public in attendance.
- September 21st, 2016: Release of the Phase II Alternatives Analysis memorandum, with two sites and four alternatives to be included in the EA. 9 LAG members and 8 members of the general public in attendance.

Three General Public Meetings and one site tour (combined with CWG and LAG) were held prior to the preparation of the Environmental Assessment on the following dates:

- April 2nd, 2014: Scope of the Ann Arbor Station Environmental Review, initial Purpose and Need, Design Criteria and site selection process. 18 attendees.
- June 24th, 2014: Alternatives Analysis process—8 initial sites reduced to 3 recommended for further analysis. 40 citizen attendees.
- September 19th, 2014 (Site Tour). Project Team and 21 LAG and CWG participants. Visited the three remaining station location analysis sites via a chartered AAATA coach. A post-tour discussion was held at City Hall following the tour. Discussion participants agreed that Build Alternative 1 (North Main Street) should be removed from further consideration.
- September 26th, 2016. Release of the Phase II Alternatives Analysis memorandum, with two sites and four alternatives to be included in the EA. 68 citizen attendees.

Two meetings were also held with City of Ann Arbor Commissions:

- Combined Work Session of the Energy, Environmental and Planning Commissions (May 13, 2014). Initial Purpose and Need, Design Criteria and site selection process. 24 Commission attendees.
- Park Advisory Commission (May 20, 2014): Initial Purpose and Need, Design Criteria and site selection process. 9 Commission attendees.

Additional outreach methods made available to the general public and committee members include:

- Project Newsletters (2)
- Questionnaires (11), with distribution to the LAG, CWG, Public Meetings, Tour participants and online
- Press Releases (6)
- Project Fact Sheets (4)
- Site Tours (1)
- Social Media
- Ann Arbor Station Web Presence

6.0 List of Preparers

Federal Railroad Administration (FRA)

David Valenstein, Division Chief, Environment and Systems Planning

Melissa Hatcher, Midwest Regional Manager

Andréa Martin, Environmental Protection Specialist

Peter Schwartz, Transportation Industry Analyst

Michigan Department of Transportation (MDOT)

Therese G. Cody, Rail Operating Programs Manager, MDOT/Office of Rail

Lori Noblet, Project NEPA Coordinator

City of Ann Arbor

Eli Cooper, Transportation Program Manager

Cresson Slotten, Systems Planning Unit Manager

Colin Smith, Parks & Recreation Services Manager

AECOM

Robert Gorski, Project Manager

Martin Peate, Environmental Planner

Peter Voorhees, Transportation Planner

Hank Kelley, Transportation Planner

Eric Dryer, Transportation Planner

Paul Burge, Noise and Vibration Specialist

Nick LaCroix, Traffic Engineer

Linda Peters, 4(f) Specialist

Glen Hendrix, Environmental Scientist

Rebecca Turner, Senior Architectural Historian

Chris Leary, Senior Archaeologist

DLZ

Wesley Butch, Conceptual Site Design

Rob Sherman, Conceptual Site Design

Emily Peabody, Hazardous Materials Specialist

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