



Documented Categorical Exclusion

DRAFT (2018-11-08)

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A. Detailed Project Description

The Indianapolis Public Transportation Corporation (dba IndyGo) proposes to construct the Purple Line Bus Rapid Transit (BRT) project (Purple Line), a mixed-traffic/dedicated lane BRT route that is part of a system-wide expansion of both local route and BRT services identified in the *Marion County Transit Plan*. The approximately 14.8-mile BRT route would serve northern and eastern Marion County, connecting the Julia M. Carson Transit Center in downtown Indianapolis with the Ivy Tech Community College in Lawrence. The Purple Line will share an alignment and seven BRT stations with the Red Line BRT along Meridian Street between 18th and 38th Streets, and along East 38th Street between Meridian Street and College Avenue. These shared improvements and station locations were previously evaluated for environmental impacts in the Documented Categorical Exclusion (DCE) prepared under the National Environmental Policy Act (NEPA) and National Historic Preservation Act (NHPA) Section 106 review for the Red Line BRT project in 2016 and 2017, respectively. The findings of the Red Line DCE and Section 106 review have been carried forward into the Purple Line evaluation and no new analysis or re-evaluation of environmental impacts for this shared section was completed. The Red Line DCE and other analyses can be found at <https://www.indygored.com/wp-content/uploads/2016/11/IndyGo-BRT-NEPA-CE-Phase-1-Complete-Documents-compressed.pdf>.

BRT Operations

The Purple Line would operate for 20 hours per day on weekdays in the opening year. The service is anticipated to operate for 14 hours of the day at 10-minute headways and for 6 hours of the day at 20-minute headways. The 20-minute headway services would be focused on the late night and early morning hours. On Saturdays, the Purple Line is proposed to operate from 6:00 AM to midnight and Sunday from 7:00 AM to 10:00 PM. The Purple Line would operate every 15 minutes during the daytime hours on weekends.¹

Purple Line BRT vehicles would run in dedicated center-running travel lanes in each direction throughout core segments of the route and in mixed-traffic and/or Business Access Transit (BAT)² lanes when entering the Julia M. Carson Transit Center. In areas of the corridor where the center-running configuration is used, mountable center curbs will be installed to discourage turning traffic from illegally crossing the BRT running way. A transit signal priority (TSP) system is also proposed to promote the speed and reliability of the BRT service. The TSP system increases the likelihood of BRT vehicles arriving during a green light at a traffic signal to reduce overall transit travel time. The Purple Line BRT system would use low-floor, multiple-door, 60-foot articulated battery-electric buses to minimize dwell time and noise impacts.

BRT Stations

The Purple Line BRT system consists of 31 BRT stations, spaced between one-third to one mile apart. This number includes the downtown Indianapolis terminus that will utilize the existing terminal and infrastructure at the Julia M. Carson Transit Center; seven shared stations with the Red Line BRT, which will be constructed before Purple Line; and 23 new stations to be constructed for the Purple Line. Of the 23 newly constructed stations, 22 would be center-running stations with double-sided platforms and one larger station for the Lawrence terminus in the Ivy Tech Community College parking lot. A potential 24th station location is being considered at Otis Avenue and Wheeler Road near the Lawrence terminus, pending future funding and development opportunities, and is evaluated as part of this DCE.

Purple Line stations are proposed at each of the following locations:

1. Julia M. Carson Transit Center (uses existing infrastructure and bus bays)
2. Meridian Street and Ohio Street
3. Meridian Street and Vermont Street
4. Meridian Street and 9th Street

¹ Due to project refinements, the description of weekend operations has changed based on schedule builds for the Purple Line. Committed headways as part of the Purple Line FTA Small Starts grant application have not been affected.

² BAT lanes are semi-dedicated lanes for BRT vehicles that also allow for limited use by general purpose traffic turning at driveways or signalized intersections.

5. Meridian Street and 12th Street
6. Meridian Street and 16th Street
7. Meridian Street and 18th Street (shared Red Line BRT station)
8. Meridian Street and 22nd Street (shared Red Line BRT station)
9. Meridian Street and Fall Creek Parkway (shared Red Line BRT station)
10. Meridian Street and 30th Street (shared Red Line BRT station)
11. Meridian Street and 34th Street (shared Red Line BRT station)
12. Meridian Street and 38th Street (shared Red Line BRT station)
13. 38th Street and Park Avenue (shared Red Line BRT station)
14. 38th Street and Coliseum Avenue
15. 38th Street and Orchard Avenue
16. 38th Street and Keystone Avenue
17. 38th Street and Meadows Drive
18. 38th Street and Sherman Drive
19. 38th Street and Arthington Boulevard
20. 38th Street and Emerson Avenue
21. 38th Street and Layman Avenue
22. 38th Street and Arlington Avenue
23. 38th Street and Shadeland Avenue
24. 38th Street and Richardt Avenue
25. 38th Street and Franklin Road
26. 38th Street and Alsace Place
27. 38th Street and Post Road
28. Post Road and 42nd Street
29. Post Road and Pendleton Pike
30. Post Road and 56th Street
31. Otis Avenue and Wheeler Road (potential station location)
32. Lawrence Terminus

The Purple Line BRT station design will be identical to the Red Line BRT stations in appearance, size, materials, and amenities. This includes open station shelters consisting of metal-roof canopies supported by composite wood icons at each end of the stations, level-boarding platforms for each direction of travel, lighting, signage, waste receptacles, ticket vending machines, security, and real-time arrival information. The Lawrence terminus will be a larger-scaled version of this same station design. For those stations shared with the Red Line, the Purple Line route will be differentiated by the application of the Purple Line branding and colors.

Other Proposed Improvements

As part of the project, infrastructure improvements would also be undertaken to accommodate proposed BRT operations and improve pedestrian connectivity. This would include the construction of sidewalks, a new multi-use path along East 38th Street, drainage improvements, pavement replacement, and new traffic signals. The majority of these improvements would occur along East 38th Street and portions of Meridian Street and Post Road. Pavement markings to denote the BRT dedicated lanes or BAT lanes would occur along Ohio Street, Alabama Street, Delaware Street, Meridian Street, East 38th Street, and Post Road.

A new multi-use path would be constructed along the north side of East 38th Street between Tacoma and Sheridan Avenues. It would be approximately 3.2 miles long and typically 10-feet wide to accommodate multiple recreational uses, such as walking, biking, and skating. The path would be paved in asphalt. Depending on its location along East 38th Street and the existing right-of-way limits, the multi-use path may require right-of-way acquisition for its construction. Its location will also determine whether it is curb-adjacent or set-back from the curb with a 5-foot grass buffer.

Drainage improvements are also being considered along Meridian and East 38th Street due to the conversion of existing travel lanes to dedicated BRT lanes. This configuration requires additional drainage inlets and associated pipes. These include new curb inlets along Meridian Street between Ohio and 18th

Streets. The new curb inlets would be spaced approximately 60 feet apart, which is average spacing, on both sides of the street for a total of approximately 100 curb inlets or approximately 10 to 15 new inlets per block in that section. Detention along East 38th Street is also required where the new drainage features drain to the existing combined sewer network. Four separate locations for dry detention basins are being considered, though not all may be implemented. These sites are adjacent or near the north side of East 38th Street at Euclid Avenue, west of Arthington Boulevard, east of Grand Avenue/Leland Avenue, and east of Arlington Boulevard. For the remaining portions of the corridor, detention would be accomplished by in-line storage using underground pipes.

At this time, no park-and-ride facilities are proposed as part of this project; however, strategic partnerships with institutions for the use of existing parking lots along the corridor, remain an option as future conditions warrant.

B. Location

The Purple Line is located in Marion County, Indiana, and traverses the cities of Indianapolis and Lawrence. The BRT route would begin at the Julia M. Carson Transit Center in downtown Indianapolis, using the one-way pair of Delaware and Alabama Streets, Ohio Street, and Meridian Street in the downtown area to 18th Street. At 18th Street, the Purple Line will continue north along Meridian Street to 38th Street, sharing alignment, infrastructure, and seven station areas with the Red Line BRT route (which will have completed construction prior to the construction of the Purple Line). The Purple Line would proceed east along East 38th Street, then north along Post Road to its terminus in Lawrence, near the Ivy Tech Community College campus.

C. Metropolitan Planning and Air Quality Conformity

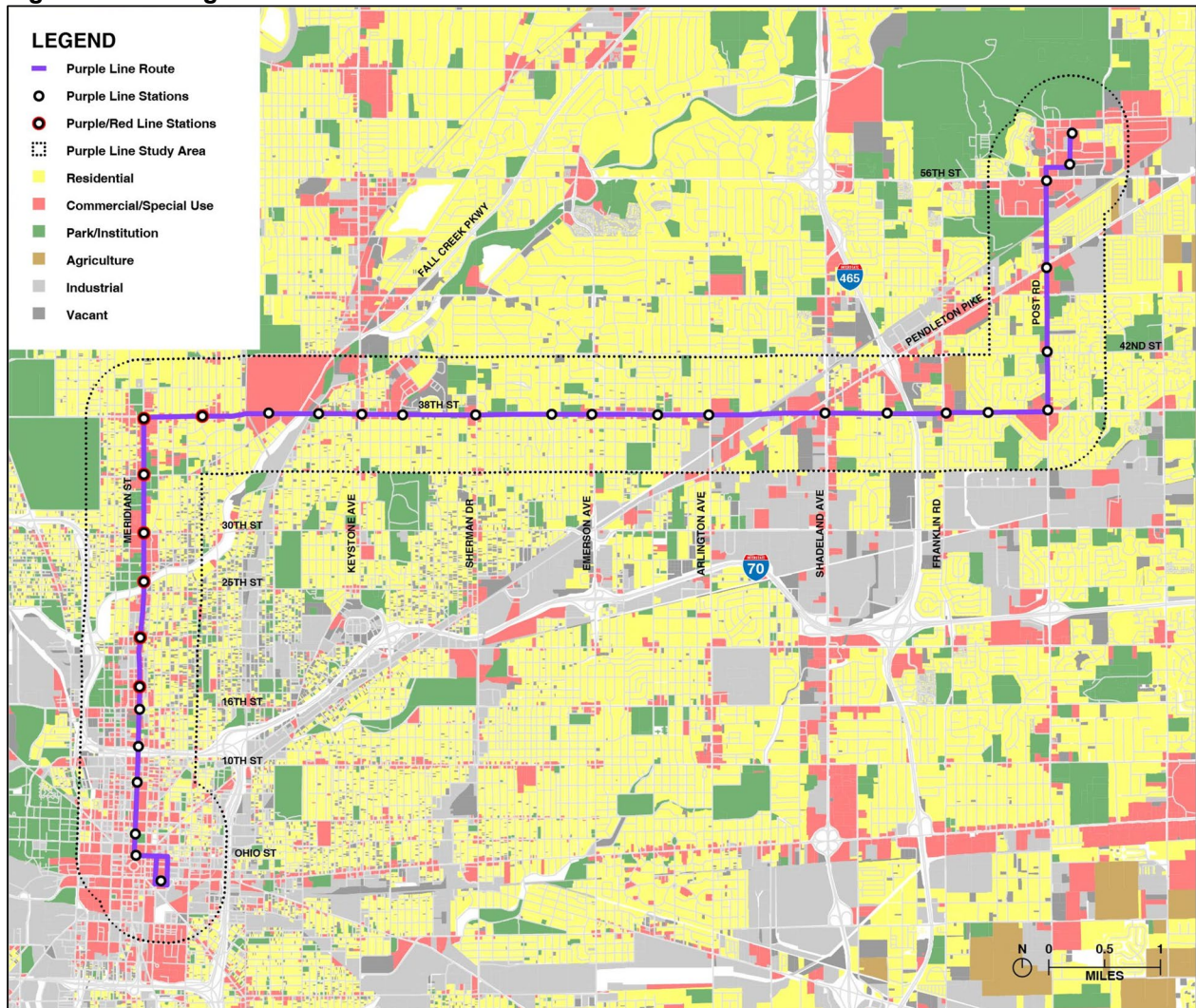
The Purple Line is currently included as part of the Indianapolis Metropolitan Planning Organization's (MPO) *2045 Long Range Transportation Plan* (approved as final December 13, 2017). It is referenced as LRTP #9007 for 'Added Capacity – Transit.' It is also included in the 2016-2019 Regional Transportation Improvement Program. This documentation indicates that emissions projected to occur with the project would conform with the MPO's applicable air quality requirements for the greater Indianapolis, Indiana area.

D. Land Use and Zoning

Note to Reader: This section will be updated in the final DCE as land use policy is finalized within Plan 2020. As of November 1, 2018, public engagement for the land use policy ended October 21, 2018 and is anticipated to be updated for adoption by the Metropolitan Development Commission, and subsequently the townships, in the next several months.

Land use and zoning conditions were reviewed to determine if the Purple Line would have any impacts or benefits upon the existing built environment as well as to examine its compatibility with the land use vision along the corridor. Residential densities along the corridor provide strong conditions to support the Purple Line as a feeder route into downtown and other transit corridors. Commercial uses along the corridor are typical for urban and suburban arterials, but the potential for more intense commercial development exists, especially in conjunction with the development of the Purple Line. Figure 1 shows existing land uses along the Purple Line corridor.

Figure 1: Existing Land Use



Source: IndyGIS. "Current Land Use." OpenIndy Data Portal, 2018.

At the northern terminus, continued residential and commercial development is expected as part of the Fort Harrison reuse efforts. Near the intersection of East 38th and Meridian Streets, the area surrounding Tarkington Park is targeted for continued investment as part of the Great Places 2020 initiative. Tarkington Park itself has seen recent redevelopment and reprogramming, and a mixed-use commercial and residential center is envisioned for the area immediately surrounding the park.

Updated land use and zoning policies are currently in development as part of *Plan 2020*, the city's bicentennial plan. *Plan 2020* seeks to create a unified, countywide land use plan that updates, incorporates, or replaces the dozens of existing planning documents. This unified land use plan will focus on specific dynamics that impact land use, including transportation, that will serve as performance indicators for each land use typology.

The *Marion County Land Use Plan Pattern Book*, adopted in late 2017 as part of the *Plan 2020* effort, identifies new land use typologies that will be applied throughout the county. In addition to Living, Mixed-Use, and Working typologies that would be present along the Purple Line corridor, transit-oriented development (TOD) overlays may exist in areas within walking distance of Purple Line stations. Overlays allow additional or modified land uses that would otherwise not be present in the underlying typology. The

purpose of the TOD overlay is to promote pedestrian connectivity and a higher density than the surrounding area.

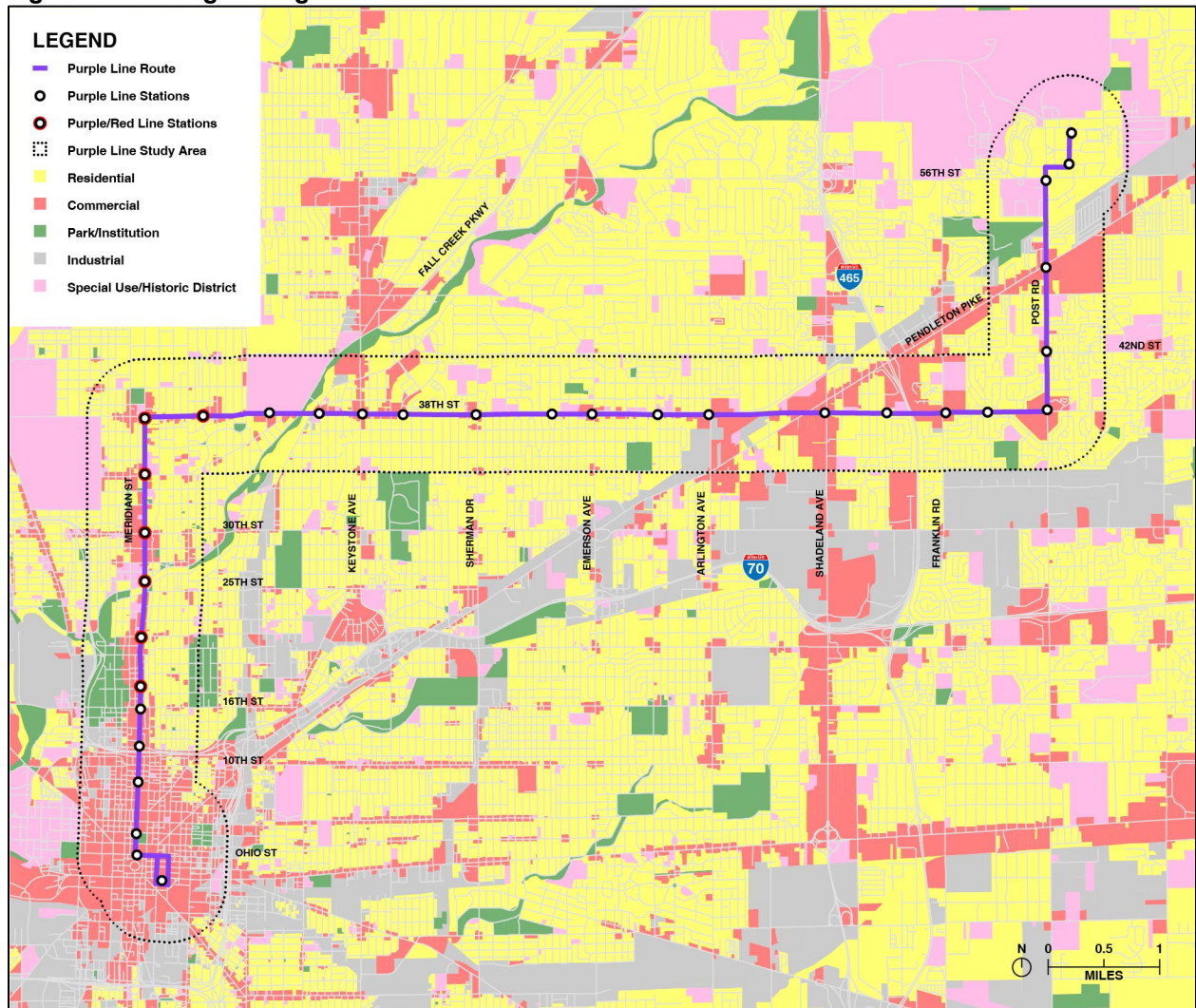
Uses that a TOD overlay could add or modify in Traditional Living, Mixed-Use, and Working typologies could include attached housing, small-scale multi-family housing (15+ dwelling units/acre), large-scale multi-family housing (15+ dwelling units/acre), assisted living facilities/nursing homes, small-scale parks, structured parking with ground floor office/retail, small-scale office/retail (with pedestrian-oriented design requirements), and large-scale office/retail (with pedestrian-oriented design requirements). Uses that a TOD overlay could restrict in traditional typologies could include detached housing, large-scale schools/institutions, community farms/gardens, heavy commercial uses, and surface parking.

In addition to promoting pedestrian connectivity and higher density uses, several indirect benefits are noted in the *Pattern Book*. Development promoted within the TOD overlay could reduce greenhouse gas emissions by discouraging automobile use. Reducing the reliance on automobiles could also reduce transportation costs for residents within these areas.

Zoning policy was updated as part of the Indy Rezone project, which resulted in the *Consolidated Zoning and Subdivision Ordinance* that was most recently updated in November 2017. The zoning districts within the corridor include residential, commercial, mixed-use, central business, industrial, central business, commercial, special uses, development plan, and special use districts. Figure 2 shows the existing zoning districts along the Purple Line corridor.

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Figure 2: Existing Zoning



Source: IndyGIS. "Zoning." OpenIndy Data Portal, 2018.

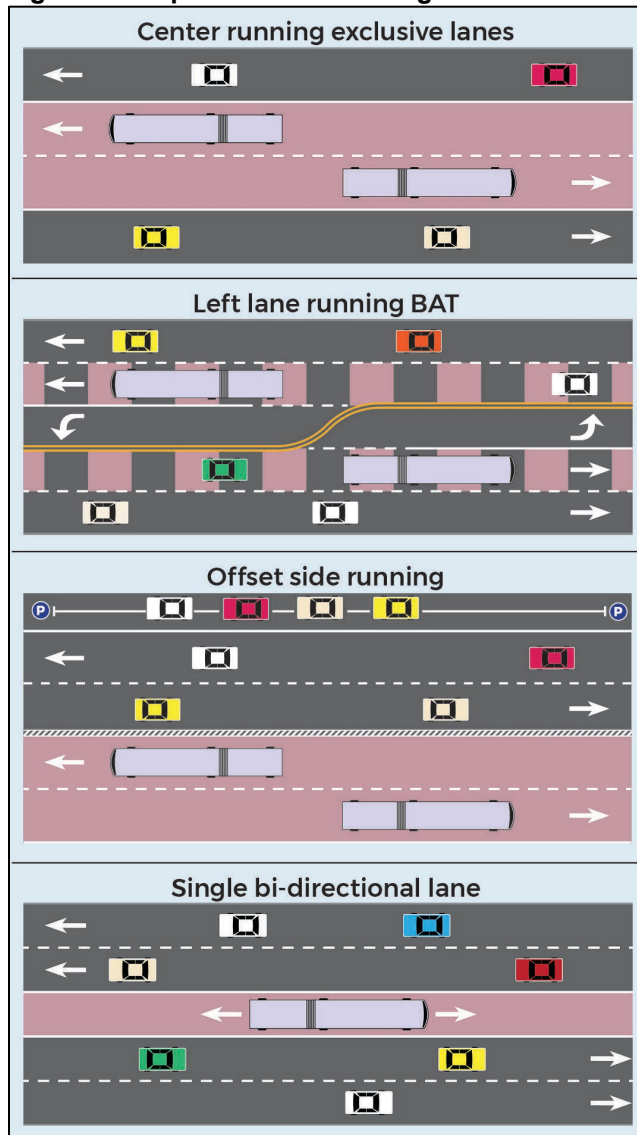
The Purple Line is consistent with existing land use and zoning policy within the corridor and would not have any adverse impacts therein.

E. Traffic Impacts

As the second of three BRT lines being built as part of the *Marion County Transit Plan*, the Purple Line would improve reliability and travel time, relative to existing transit service, by introducing exclusive lanes and BAT lanes along approximately 90 percent of the corridor. The route would traverse 62 signalized intersections, six of which would be newly signalized intersections as a part of the project. These signals would be added to mitigate the effects of dedicated transit lanes on general purpose traffic.

Several different lane configurations throughout the corridor (as shown in Figure 3) were chosen to minimize potential impacts to the existing network, while maximizing BRT efficiency through the use of dedicated lanes or BAT lanes.

Figure 3: Purple Line Lane Configurations



The downtown portion of the route would consist of operations in BAT lanes and mixed-traffic along the one-way pairs of Delaware Street and Alabama Street. BAT lanes are semi-dedicated lanes for BRT vehicles that also allow for limited use by general purpose traffic turning at driveways or signalized intersections. Ohio Street would consist of center-running dedicated lanes, with one block consisting of a center lane that would permit bi-directional travel of BRT vehicles. Meridian Street would consist of offset side-running dedicated lanes from Ohio Street to 9th Street and center-running dedicated lanes from 9th Street to 38th Street (the overlap portion with the Red Line is along Meridian Street from 18th Street to 38th Street). The configurations along East 38th Street and Post Road will vary by segment. Table 1 summarizes the lane configurations by location.

Table 1: Purple Line Lane Configurations by Location

Location Along Purple Line	BRT Lane Configuration	Segment Mileage
Delaware and Alabama Streets to Ohio Street	BAT lanes and mixed-traffic	0.4 mi
Ohio Street from Delaware Street to Meridian Street	Center-running, dedicated one block bi-directional	0.2 mi
Meridian Street from Ohio Street to 9th Street	Offset dedicated lanes, nearest east curb	0.6 mi
Meridian Street from 9th Street to 38th Street	Center-running dedicated lanes	3.2 mi
38th Street from Meridian Street to Guilford Avenue	Mixed-traffic	0.8 mi
38th Street from Guilford Avenue to Shadeland Avenue	Center-running exclusive lanes	5.1 mi
38th Street from Shadeland Avenue to Post Road	BAT lanes	1.9 mi
Post Road from 38 th Street to 56 th Street	BAT lanes	2.1 mi
Otis Avenue from Post Road to Wheeler Road	Mixed-traffic	0.2 mi
Wheeler Road from Otis Avenue to Lawrence Terminus	Mixed-traffic	0.33 mi

The Purple Line would include curb modifications at several intersection corners but would have minimal impact to existing pavement width throughout most of the corridor. TSP would be installed at each signalized intersection along the corridor to reduce dwell time for buses at traffic signals.

Traffic

Where center-running dedicated lanes are being introduced, left turns into and out of driveways and side streets would be restricted. At these locations, a four-inch-high by 14"-wide mountable rubber curb would be installed along the centerline of the road. These medians would separate buses traveling in opposite directions and deter general purpose traffic from crossing the bus-only lanes to make left-turns into and out of unsignalized driveways or cross streets. Figure 4 shows an illustrative example of the mountable curb that would be used for the Purple Line in this configuration. To mitigate the impacts of restricted left-turn access, left-turns and U-turns would be accommodated at signalized intersections in areas with the turn restrictions. Five traffic signals would be added along East 38th Street³ to reduce the distance between signalized U-turn access points, thereby lessening the potential impact to motorists.

³ The five new traffic signals along East 38th Street will be at Lasalle Street / Avondale Village Way, Arthington Boulevard, Hawthorne Lane, Sheridan Avenue and Alsace Place.

Figure 4: Mountable Curb Example



Limiting left-turn access for general purpose traffic where center-running dedicated lanes are being introduced consolidates general purpose access at signalized intersections; this access management strategy will improve travel flow between signalized intersections and reduce the frequency of mid-block crashes. The center-running configuration would likely mitigate several types of crashes between signalized intersections, specifically: left-turn, rear end, right angle, opposite direction sideswipe and same direction sideswipe crashes. The center-running configuration prohibits certain movements that sometimes lead to these crash types; and therefore, the frequency of these crash types should be reduced with implementation (see Appendix A1). Additionally, it is anticipated that many left-turn crashes at signalized intersections will be mitigated due to the implementation of protected signal phasing for left-turning traffic. Crash data associated with East 38th Street from Fall Creek Parkway to Shadeland Avenue (the section where center-running dedicated lanes will be implemented) was evaluated for a three-year period (2013-2015). This assessment indicated that 42 percent of the crashes that occurred from 2013 to 2015 were of the types summarized above and could potentially be mitigated with implementation of the proposed center-running configuration. The crash evaluation memorandum can be found in Appendix A1.

Traffic analysis was conducted for the AM and PM peak hours using Synchro software to assess impacts to general purpose traffic associated with implementation of the Purple Line. The construction year of 2020 was modeled for both the Build and No-Build scenarios as a reference. Traffic operations were evaluated using a rating system called Level of Service (LOS). LOS ratings are measured in terms of average delay per motorist, where delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. LOS A is the freest-flowing operating condition, and LOS F has the longest delays. LOS D or better is considered acceptable in most urban settings, though LOS E is sometimes considered acceptable at high-volume locations. Forty-six (46) signalized intersections that the Purple Line will traverse were included in the Synchro model, including the six⁴ new signals; the other 16 signalized intersections along the corridor were evaluated previously as a part of the Red Line project. Overall intersection LOS was considered acceptable for this project if it was the same or better than existing LOS, or if it was LOS D or better. Results from the Synchro analysis can be found in Appendix A2.

Given the proposed lane configuration for Purple Line, of the 46 signalized intersections evaluated, the only intersections not projected to meet the overall intersection LOS criteria are as follows:

- Meridian and 16th Streets
- 38th Street and Keystone Avenue
- 38th Street and Post Road
- Post Road and Pendleton Pike

⁴ Includes the five new traffic signals mentioned above, and one signal at the intersection of 9th and Meridian Streets to allow for a shift from offset-side running to center-running dedicated lanes at that location.

Under proposed conditions, the intersection of Meridian and 16th Streets is projected to operate at LOS E during the PM peak, even with inclusion of signal timing optimization. Achieving overall LOS D or better would require additional widening, which was deemed impractical due to right-of-way and building face constraints. To achieve the desired LOS, elimination of the northbound and southbound dedicated left-turn lanes was considered, but the lanes were deemed necessary to maintain full access to 16th Street.

Under proposed conditions, the intersection of East 38th Street and Keystone Avenue is projected to operate at LOS E during the PM peak. The addition of a northbound right-turn lane was considered in an effort to achieve LOS D during the PM peak; however the Indianapolis Department of Public Works (DPW), the agency having jurisdiction over the intersection, determined that the benefit would not be worth the cost.

Under proposed conditions, the intersection of East 38th Street and Post Road is projected to operate at LOS E during the PM peak. As proposed, the northbound, southbound and westbound approaches of the intersection will provide dual left-turn lanes; the eastbound approach will provide one left-turn lane. The northbound approach will only accommodate one through lane, as there is only one receiving lane north of the intersection. Achieving overall LOS D or better would require additional widening, which was deemed impractical.

Under proposed conditions, the intersection of Post Road and Pendleton Pike is projected to operate at LOS E during the AM peak. To mitigate general purpose traffic congestion, an alternative to include dual southbound left-turn lanes was considered; however, the Indiana Department of Transportation (INDOT), the agency having jurisdiction over the intersection, prefers the single southbound left-turn lane configuration. INDOT has also requested that the cross-street right turns be signalized.

IndyGo, the Indianapolis DPW, and INDOT recognized the limitations of the project to meet LOS criteria at these four locations, and each has elected to accept operations associated with the proposed configuration. See Appendix A2 for the Purple Line BRT Traffic Analysis Summary memorandum.

Parking

On-street parking is not currently available throughout much of the Purple Line BRT corridor. There are currently 346 on-street parking spaces along the corridor, south of East 38th Street, not including spaces along the Red Line corridor; the majority (67 percent) of these on-street spaces are metered parking spaces. To accommodate dedicated bus lanes within the existing right-of-way along Meridian and Ohio Streets, the Purple Line BRT design would require the removal of 162 on-street parking spaces. A large proportion of the spaces to be removed are along Meridian Street between Ohio and 18th Streets; of the existing 230 on-street spaces along this segment, 161 will be removed. This information has been shared at public and stakeholder involvement meetings and will continue to be communicated to the public during the design and construction phases.

Table 2 includes a summary of metered and unmetered on-street parking spaces along the corridor. Parking impacts along Meridian Street between 18th and 38th Streets were previously evaluated as part of the Red Line project; there will be no additional impacts to that segment as a part of this project.

Table 2: Parking Inventory

Street	From	To	Metered Spaces	Unmetered Spaces	Total Spaces (Metered + Unmetered)	Avg. Occupied Unmetered Spaces*	Percent Occupied (Unmetered)	Spaces Removed	Spaces Regained / Added**	Net Spaces Removed
Alabama	Pearl	Ohio	12	7	19	4	57%	0	0	0
Delaware	Pearl	Ohio	44	13	57	7	54%	1	0	1
Ohio	Alabama	Meridian	30	3	33	3	100%	0	0	0
Meridian	Ohio	18th	139	91	230	27	30%	161	0	161
9th	Meridian	Illinois	7	0	7	N/A	N/A	5	5	0
Total			232	114	346			167	5	162

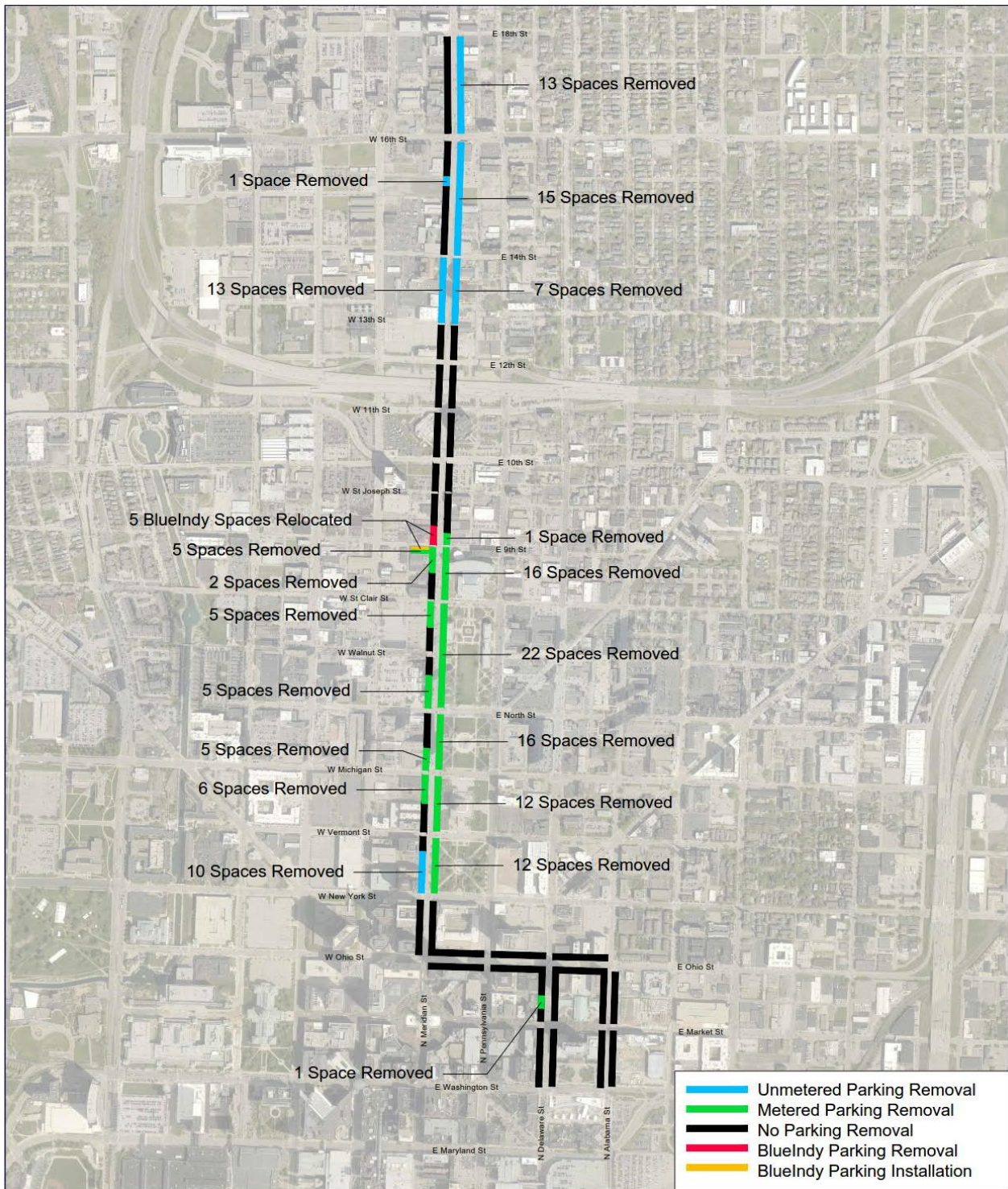
*Observed January 11 and 30, 2018; and April 25, 26, and 28, 2018

**Includes relocated BlueIndy spaces

An inventory of existing on-street parking was taken to determine the impact of displaced parking spaces due to the proposed Purple Line BRT infrastructure. The survey collected parking occupancy rates for unmetered spaces along each roadway segment on two weekdays in January 2018, two weekdays in April 2018, and one Saturday in April 2018. Table 3 above summarizes inventory, unmetered occupancy, and proposed removal of parking spaces along each roadway segment along the Purple Line corridor. In general, unmetered on-street parking spaces along Alabama Street, Delaware Street and Ohio Street are fairly high-turnover; many are marked as loading zones. Along Meridian Street from Ohio Street to 18th Street, on-street parking spaces serve offices, commercial land uses, and a few residential land uses. Throughout this segment, nearby off-street parking lots accommodate many office and commercial land uses. During the parking survey, unused capacity was observed in these parking lots.

There are currently five BlueIndy (an electric vehicle sharing service in Indianapolis) parking spaces on Meridian Street near 9th Street. These spaces are proposed to be relocated onto 9th Street to accommodate the Purple Line. Figure 5 shows the locations of parking space removal and relocation.

Figure 5: Parking Removals and Relocations



Based on the utilization data collected, approximately 36 percent of unmetered spaces along the corridor are occupied, on average. Occupancy of metered spaces was calculated using a separate methodology and did not exceed 33 percent.

Along Meridian Street between Ohio and 18th Streets, utilization data indicates that approximately 46 of 139 total metered spaces and approximately 27 of 91 total unmetered spaces will be used at any given time. Overall, it is projected that 73 of the existing 230 on-street parking spaces along this segment are utilized at any given time. After the removals proposed, 69 on-street parking spaces will remain along Meridian Street between Ohio and 18th Streets. It is expected that the remaining parking demand (four spaces) will be accommodated by off-street parking lots, which have been observed to have available capacity (as previously noted). Based on the data summarized above, only minor parking impacts are expected to nearby community and business uses.

Along East 38th Street, the Purple Line project will include roadway widening and the installation of sidewalks and multi-use path. This work would result in impacts to some off-street parking areas. There would also be off-street parking impacts at the terminus near Ivy Tech. Impacts to off-street parking areas have been identified (based on plans completed November 2, 2018) and are summarized in Table 3 below. These findings may be subject to change as the project design progresses; additionally, further coordination with property owners may result in mitigation opportunities.

Table 3: Off-Street Parking Impact Areas⁵

Nearby Intersection	Property	Existing Parking Count	Proposed Parking Count	Net Parking Count Impact	Notes
38 th Street & Orchard Avenue	Thrifty Used Tires	4	4	0	
38 th Street & Orchard Avenue	Indy Auto	3	3	0	
38 th Street & Kinnear Avenue	Blank DVD & CD Media	7	6	-1	
38 th Street & Tacoma Avenue	Community Spirits	21	20	-1	
38 th Street & Temple Avenue	Our Brother's Place and Our Sister's Place	14	6	-8	
38 th Street & Sherman Drive	Family Dollar & Abandoned Strip Mall	-	-	-8	No existing delineated parking in front of former Beauty Supply building. Proposed improvements will encroach into this area.
38 th Street & Forest Manor Avenue	St. Andrew the Apostle Church	150	152	2	Parking lot expansion for front lot results in net gain of parking.
38 th Street & Emerson Avenue	Dollar General	57	42	-15	
38 th Street & Emerson Avenue	Flava Barber & Beauty Salon	15	12	-3	
38 th Street & Emerson Avenue	Subway	7	2	-5	Parcel includes some of the parking lot to the west, shared by Hotel Indy. This lot not included in the parking count, but may be available for this business use.

⁵ Based on November 2, 2018 design.

Nearby Intersection	Property	Existing Parking Count	Proposed Parking Count	Net Parking Count Impact	Notes
Post Road & Pendleton Pike	El Parasio Supermarket	-	-	0	Impacts to area in front of building, but appears not used for parking. Parking provided on side of building which is not impacted.
Otis Avenue & Rising Road	Ivy Tech	-	-	-44	Multiple acres of parking at the campus

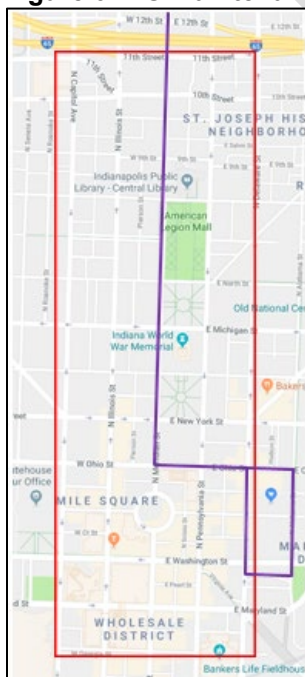
F. CO Hot Spots

While the majority of Marion County is in attainment for Carbon Monoxide (CO), a small portion of the county is classified as maintenance. As shown in Figure 6, the area outlined in red and defined by EPA as the “Part of the City of Indianapolis (area bounded by 11st Street on the north, Capitol Avenue on the west, Georgia Street on the south, and Delaware Street on the east),” is classified as a maintenance area for CO. The traffic analysis in Section E evaluated 39 intersections to determine if the Purple Line causes any of the intersections not to meet overall intersection Level of Service (LOS) criteria due to the project. Of the 39 intersections analyzed, three intersections do not meet the overall intersection LOS criteria due to the Purple Line. These intersections are:

- Meridian and 16th Streets
- 38th Street and Keystone Avenue
- 38th Street and Post Road
- Post Road and Pendleton Pike

These intersections do not lie within the CO maintenance area. As such, the Purple Line is not anticipated to create a CO hotspot or exacerbate a violation of the applicable CO air quality standard within the maintenance area. Additionally, the Purple Line proposes to use electric buses, meaning the vehicles will not emit any additional CO during operation.

Figure 6: CO Maintenance Area – City of Indianapolis



G. PM2.5 and PM10 Hot Spots

Marion County is currently classified as in attainment for both particulate matter less than 2.5 microns in diameter (PM2.5) and particulate matter less than 10 microns in diameter (PM10). As such, the area already conforms to the applicable PM standards and does not require a PM conformity analysis. The Purple Line is not likely to be considered a project of concern for PM; the project proposes to use electric buses, which would not emit any additional PM during operation.

H. Historic Resources

Note to Reader: Any comments or concurrence received on the Assessment of Effects Addendum Memo and the Archaeology Addendum Report from the Indiana SHPO and consulting parties will be appended to the DCE in Appendix B. The signed Memorandum of Agreement will also be appended to Appendix B and further summarized in this section once completed.

The Purple Line is a federal undertaking because the Federal Transit Administration (FTA) may provide funding, and therefore, is subject to compliance with the National Historic Preservation Act of 1966 (NHPA), as amended (16 USC 470 et seq.) and its implementing regulations (36 CFR 800). Specifically, Section 106 of the NHPA requires FTA to take into account the effects of its undertakings on historic properties and affords the Advisory Council on Historic Preservation (ACHP) and consulting parties a reasonable opportunity to comment on the undertaking.

For the shared section of the Purple Line and the Red Line BRT project, the findings of the Red Line Section 106 review have been carried forward for the Purple Line. No new historic properties identification or effects assessment was completed for those seven shared station areas.

Appendix B includes copies of the Historic Property Report, Assessment of Effects Report, and Section 106 consultation, correspondence, and meeting materials.

Built Historic Resources

The above-ground resources Area of Potential Effects (APE) includes all roadway rights-of-way within which the BRT would operate and a minimum 150-foot visual buffer at each proposed BRT station location to accommodate potential visual impacts to historic properties located near stations. Maps depicting the APE boundary are included as part of Appendix B. The APE boundary was provided to the Indiana State Historic Preservation Officer (SHPO) and proposed Section 106 consulting parties for review and comment on January 3, 2018. The SHPO concurred with the APE boundary in a letter dated January 26, 2018.

The APE was reviewed for historic properties listed in or eligible for listing in the National Register of Historic Places (NRHP) through background research and an intensive-level field survey. In total, 97 above-ground resources were identified along the BRT route within the APE. Of these, there is one National Historic Landmark (NHL)—the Indiana World War Memorial Plaza Historic District—and 10 historic properties listed in the NRHP. Twenty-seven of the identified above-ground resources were further researched and evaluated in a NRHP determination of eligibility and 11 were recommended as NRHP-eligible in the Historic Property Report. The remaining above-ground resources were not recommended eligible for listing in the NRHP due to a lack of architectural or historical distinction and, in some cases, significant alterations resulting in a lack of integrity. The Historic Property Report was provided to the SHPO and Section 106 consulting parties for review on May 25, 2018. The SHPO concurred with the NRHP eligibility recommendations in a letter dated June 25, 2018.

An Assessment of Effects Report was prepared to evaluate the potential effects of the project to the one NHL, 10 NRHP-listed historic properties, and 11 NRHP-eligible historic properties in the APE. As a result, FTA determined the Purple Line would result in no adverse effect to nearby historic properties and the SHPO concurred with this determination in a letter dated August 2, 2018.

Project refinements, including sidewalk widening and drainage inlets at select locations, resulted in an Assessment of Effects Addendum Memo to evaluate the potential effects of these refinements to

proximate historic properties. As a result, FTA determined the Purple Line would result in no adverse effect to nearby historic properties; the SHPO concurred with this determination in a letter dated XXXX.

Archaeological Resources

A Phase Ia survey for the Purple Line was completed to document any anticipated impacts that the undertaking may have on archaeological resources, to comply with Section 106 of the NHPA. The archaeological APE boundary was defined by the proposed footprints of the BRT stations and the limits of potential right-of-way acquisition along the corridor for new sidewalks and curb ramp work. In total, it encompasses 47.97 acres.

A large number of previous surveys and previously inventoried sites are near the APE that are related to the archaeological work completed at the time Fort Benjamin Harrison was closed in 1991 and Fort Harrison State Park was developed. The records check indicated 167 archaeological surveys had been completed within 1 mile of the corridor, 25 of which either encompassed portions of the current project's APE or are adjacent to it. Based on a review of the Indiana State Historic Architectural and Archaeological Research Database (SHAARD), 134 sites have been recorded within 1 mile of the project area. Two of these sites, 12-MA-0637 and 12-MA-0587, are within or adjacent to the corridor. Through previous work, Site 12-MA-0637 was determined not eligible for inclusion in the NRHP. Previous work conducted on Site 12-MA0587 included Phase Ia and Phase II testing, but no conclusion as to the site's eligibility was reached and additional Phase II testing was recommended.

This archaeological corridor was divided into 37 areas based on geographic location of the proposed Purple Line station footprints. Previously surveyed areas were not retested. The soils in the APE are classified as urban land that has been modified extensively throughout the history of Indianapolis. The corridor has been modified by landscaping and infrastructure, including pavement (road, sidewalk, driveways, parking lots, bridges), drainage ditches, and buried utilities (electricity, fiber optic lines, gas, high-pressure 18" gas lines, sewer, storm water drainage, telecommunication, water, traffic control) in narrow, grassy rights-of-way. Due to the extensive disturbance and previous survey of portions of the APE, very little testing was required beyond visual inspection. A total of 13 shovel probes were excavated in four of the 37 areas. The rest of the areas were only visually inspected. All the soils documented in the APE were disturbed and no archaeological sites were recorded. The results of the survey were documented in a Phase Ia short report with the recommendation that the project be allowed to proceed as planned. The SHPO concurred with this recommendation in a letter dated July 2, 2018.

Project refinements consisting of a wider multi-use path and dry detention basins along East 38th Street prompted additional archaeological reconnaissance and survey after the Phase Ia short report was completed. An additional 31 survey areas were designated to investigate new portions of the archaeological APE created by the project refinements. Two sites were identified during the survey: 12Ma1042 and 12Ma1043. One site, 12 Ma1042, also known as the Interurban Group Site, is associated with the early interurban railroad system in Indianapolis and possesses the qualities of integrity and significance as defined by the NRHP criteria for evaluation (36 CFR 60.4 [a-d]). It was recommended eligible for the NRHP and the IRHSS in a Phase Ia archaeological report. It has been determined that the project refinements will affect this site. The second site, 12Ma1043, is a scatter of prehistoric lithic deposits of an unknown age. It was recommended not eligible for either the NRHP or the IRHSS in the same report.

As a result, FTA determined the Purple Line would result in an adverse effect to 12Ma1042; the SHPO concurred with this determination in a letter dated XXXX.

Section 106 Consultation

Per Section 106 requirements, FTA identified organizations with an interest in cultural resources in the project vicinity and invited them to participate as consulting parties during the project. Eighteen potential consulting parties, including the SHPO, and seven federally-recognized tribes were identified and invited to participate in the process via a letter dated January 3, 2018. A list of invited consulting parties and their response status is available in the Historic Property Report in Appendix B.

A Section 106 kick-off meeting and corridor tour was held on January 24, 2018 to introduce the Purple Line to the SHPO and participating Section 106 consulting parties. Representatives from FTA, IndyGo, SHPO, the Indianapolis Historic Preservation Commission (IHPC), Ivy Tech Community College, and Indianapolis Department of Public Works (DPW) attended the tour. An overview of the corridor, proposed stops, and operations was provided. Among participants, discussion focused on the dedicated BRT travel lanes, mountable center curbs, and bi-directional lanes. During the corridor tour, SHPO and IHPC expressed concern about potential effects to historic properties. In particular, there were concerns that left-turn access, traffic, and historically-significant views would potentially be obstructed by BRT stations. These concerns specifically involved views along Meridian Street toward the Soldiers' and Sailors' Monument and the Indiana World War Memorial Plaza Historic District. Other topics of discussion focused on traffic analysis and coordination with other projects in the corridor.

A Section 106 consulting parties meeting was held on July 11, 2018 to discuss and receive comments on the findings of the Assessment of Effects Report. Representatives from FTA, IndyGo, SHPO, IHPC, and DPW attended the meeting. A presentation was given providing an overview of the project, the Section 106 process, individual effects findings for above-ground properties, and results of archaeological investigations. Among the participants, discussion focused on BRT operations along Meridian Street with the use of mountable curbs, viewshed and visual quality concerns for historic properties proximate to the BRT stations, BRT station design, and vehicular traffic and parking along Meridian Street.

To mitigate the adverse effect to archaeological site 12Ma1042, FTA and IndyGo developed a Section 106 Memorandum of Agreement (MOA) in consultation with the Indiana SHPO. **The MOA is available in Appendix B.** As detailed in the MOA, mitigation for this site would involve Phase III archaeological data recovery investigations.

I. Visual Quality

The Purple Line involves the construction of BRT stations within existing developed road rights-of-way and would not result in substantive changes to the landscape or viewshed proximate to these rights-of-way. The surrounding area generally consists of a mix of commercial and residential land uses within a local and regional roadway network, typical of the urban and suburban communities that encompass the project. Thus, there are no sensitive views in the area.

New stations have been sited along the Purple Line corridor in proximity to major activity and employment centers, residential areas, and at intervals consistent with BRT operations for this project. Figure 7 shows the proposed BRT station and the dedicated bus-only lanes at Meridian & 9th Streets and at Meridian & Vermont Streets. The center-running stations will have double-sided platforms and be identical to the Red Line BRT station design in appearance, size, materials, and amenities. This includes open station shelters consisting of metal-roof canopies supported by composite wood icons at each end of the station, level-boarding platforms for each direction of travel, lighting, signage, waste receptacles, and ticket vending machines. The Lawrence terminus would be a larger-scaled version of the same station design. The BRT routes will be differentiated by the application of the branding and colors to each station; signage for the Purple Line will also be applied to the seven shared Red Line BRT stations, which will be constructed prior to the Purple Line.

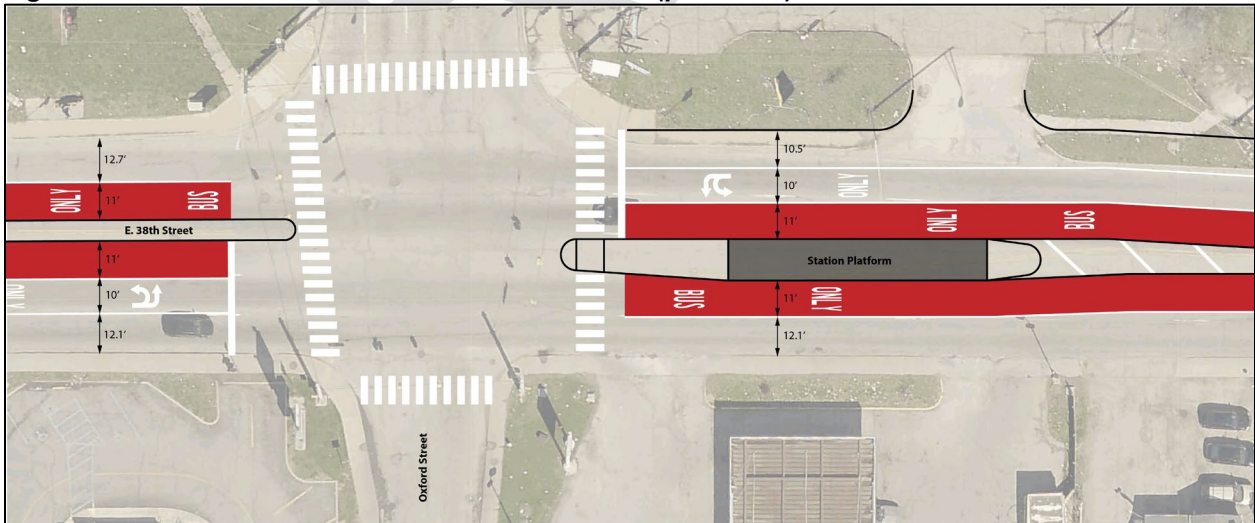
Two culturally significant viewsheds exist along Meridian Street; south toward the Soldiers and Sailors Monument in Monument Circle and north toward the Indiana World War Memorial. The south view, from at least 11th Street southward to Monument Circle, provides motorists with an unobstructed view of the Soldiers and Sailors Monument, an icon associated with Indianapolis' cultural landscape. The north view, between Vermont and Michigan Streets, provides motorists and pedestrians with a view of the imposing Indiana War Memorial Museum, which is part of the Indiana World War Memorial Plaza. The Purple Line would introduce a new built component, the BRT stations, into these viewsheds along Meridian Street at Ohio, Vermont, and 9th Streets. Although the BRT stations would be visible to motorists and pedestrians and represent a change from the existing viewshed, the BRT stations would not obscure views north and south along Meridian Street and would not materially change the visual quality or experience of these culturally significant viewsheds due largely to the prominence and scale of these existing monuments in comparison to the small size and open design of the BRT stations.

Figure 7: Meridian and Vermont BRT Station (northbound view)



Figure 8 shows the proposed BRT station and dedicated bus-only lanes in plan view at East 38th and Oxford Streets. Additional visualizations of proposed BRT station locations and pavement and lane markings are available in Appendix C.

Figure 8: East 38th and Oxford Streets BRT Station (plan view)



Views to and from the Purple Line corridor are not anticipated to materially change as a result of the project, as these built elements would be visually consistent in the context of existing corridor conditions.

J. Noise

A noise assessment was determined unnecessary since the Purple Line proposes the use of electric buses on existing roadway. The BRT vehicles would not adversely affect or aggravate conditions such that noise impacts would occur along the corridor or in the vicinity of the proposed stations. Construction of the stations would result in temporary and short-term noise impacts that would cease once construction is completed (see Section V – Impacts Caused by Construction). The proposed stations, once in operation, would not result in noise impacts.

K. Vibration

A vibration assessment was determined unnecessary since the Purple Line does not include new or relocated steel rail or tracks. The BRT vehicles proposed would be comparable to existing buses already in service and, accordingly, would not adversely affect or aggravate conditions such that adverse consequences would occur along the corridor or in the vicinity of the proposed stations. Construction of the stations would result in temporary and short-term vibration impacts that will cease once construction is completed (see Section V – Impacts Caused by Construction). The proposed stations, once constructed, would not result in vibration impacts.

L. Acquisitions & Relocations Required

Note to Reader: An estimate of permanent right-of-way acreage will be provided in the final DCE.

The Purple Line would not displace any businesses or residences along the corridor. Access to businesses and residences along East 38th Street, east of Shadeland Avenue, and Post Road would be maintained through the implementation of BAT lanes that allow shared use of the center lanes by the BRT vehicles and other vehicles needing to complete turns into corridor businesses or intersecting streets. Along Meridian Street and portions of East 38th Street, west of Shadeland Avenue, where center-running dedicated lanes are introduced, left-turns would be restricted. To mitigate this and continue to provide access to businesses and residences, five new signalized intersections would be implemented to accommodate left-turns and U-turns.

The BRT system would be constructed and operate within the existing roadway right-of-way, except at its south and north termini, which would utilize the existing downtown transit center and a parking lot within the Ivy Tech Community College, Lawrence campus. A permanent easement for the north terminus in the parking lot would be required. The project's infrastructure improvements would require permanent right-of-way acquisition and temporary construction easements, primarily along East 38th Street and sections of Post Road. The new right-of-way is expected to involve approximately 218 parcels with acquisitions varying in size up to approximately one-half acre. **A total of XX acres** of new right-of-way throughout the corridor would be required to construct the new multi-use path, sidewalk, drainage, pavement, and traffic signals.

M. Hazardous Materials

Analysis of the Purple Line corridor identified potential sources of hazardous material (HazMat) impacts within existing right-of-way and on adjacent property that may be acquired for the project. These sites of concern, which have previously or currently contained hazardous materials and/or waste, still have the potential to contain HazMat contamination.

An Indiana Department of Environmental Management (IDEM) Virtual File Cabinet (VFC) records review was conducted (last accessed October 18, 2018) to obtain records and data associated with these HazMat sites. This included a review of information about the storage, leakage, disposal, and transportation of contaminated material, both presently and historically.

From the records review, 91 sites were identified and researched along the corridor. Of these, 22 sites of concern (36 Map ID numbers) are present along the corridor. Six of these sites are Brownfields, six are Leaking Underground Storage Tank (LUST) sites, six are UST sites, two are RCRA generator sites, and two are institutional control sites. Three sites have multiple categorizations: Map IDs 5-6 are labeled as a Brownfield/UST site; Map IDs 65-68 are labeled as both UST and RCRA; Map IDs 76-77 are labeled as

both LUST and institutional control. Table 4 provides a summary of sites by type. Details about these sites are documented in *Hazardous Materials Screening for the Purple Line BRT NEPA and Design Services Project* (March 2018) in Appendix D.

Construction associated with the Purple Line will involve reconstruction of pavement sections along 38th Street, the addition of new sidewalks along East 38th Street and Post Road where no or insufficient sidewalks currently exist, as well as the construction of the BRT stations. Excavation required for these types of construction would be typically limited to only include the top three to five feet below the current ground surface.

Some areas of property along the corridor will need to be acquired based on the current design. These areas occur mainly along East 38th Street and Post Road, as well as at the southeast and southwest corners of Meridian and 16th Streets. Once the extent of right-of-way acquisition is determined and/or construction is confirmed near the above referenced sites, a Phase I and Phase II (if necessary) Environmental Site Assessment (ESA) is recommended prior to the purchase of the property to determine the level of potential contamination. If contamination is present in these locations, steps will be taken to assure that proper personal protective equipment (PPE) is used and proper disposal of any contaminated soil or construction debris will occur, in accordance with federal, state, and local regulations.

Table 4: Hazardous Materials Sites by Type

Address	Map ID	LUSt	UST	Brownfield	RCRA	Institutional Control
300 E. Market Street	5-6		X	X		
923 N. Meridian Street	15-18			X		
1171 E. 39th Street	31			X		
2379 E. 38th Street	36			X		
3601 E. 38th Street	45		X			
3637 E. 38th Street	46-49		X			
3832 E. 38th Street	51-53	X		X		
5060 E. 38th Street	56	X				
5102 E. 38th Street	57				X	
5432 E. 38th Street	58		X			
5825 E. 38th Street	60		X			
7039 E. 38th Street	65-68		X		X	
8939 E. 38th Street	71-72	X				
3799 N. Post Road	73-75	X				
3801 N. Post Road	76-77	X				X
4609 N. Post Road	81	X				
8990 and 9100 Pendleton Pike	82					X
5140-5162 N. Post Road	87-90			X		
Total		6	6	6	2	2

N. Social Impacts and Community Disruption

The Purple Line will provide enhanced transit services from the Julia M. Carson Transit Center to Lawrence, via Delaware/Alabama Streets, Ohio Street, Meridian Street, and East 38th Street, to Post Road and local streets within the reuse area of the former Fort Benjamin Harrison. The alignment will run within or adjacent to parts of 14 neighborhood areas: Downtown, Near Northside, Crown Hill, Mapleton-Fall Creek, Butler-Tarkington/Rocky Ripple, Meridian- Kessler, Fairgrounds, Meadows, Forest Manor, Arlington Woods, Devington, Far Eastside, Lawrence, and Lawrence-Fort Ben-Oaklandon. There are many community resources along the Purple Line corridor; resources within 500 feet of the alignment are listed in Table 5.

Table 5: Community Resources within 500 feet of the Purple Line

Community Resources	Type	Address
United States Postal Service	Government	456 North Meridian Street
Indianapolis Housing Agency	Government	1935 North Meridian Street
Social Security Administration	Government	575 North Pennsylvania Street
Marion County Public Health Department	Government	3838 North Rural Street
Marion County Corporation Counsel	Government	200 East Washington Street
Indianapolis Fire Department Station 24	Government	5520 East 38th Street
Lawrence City Fire Department	Government	9001 East 59th Street
Family & Social Services Administration	Government	3266 North Meridian Street
US Citizenship and Immigration Services	Government	1099 North Meridian Street
Indianapolis Public Library - Central	Library	40 East St Clair Street
Indianapolis Public Library - East 38th Street	Library	5420 East 38th Street
Indianapolis Public Library - Library Services Center	Library	2450 North Meridian Street
American National Red Cross	Social Services	1510 North Meridian Street
YMCA at the City Market	Social Services	242 East Market Street
La Plaza	Social Services	8902 East. 38th Street
Indiana Legal Services, Inc.	Social Services	151 North Delaware Street #1800
Julian Center Shelter	Social Services	2011 North Meridian Street
Little Red Door Cancer Agency	Social Services	1801 North Meridian Street
Early Learning Indiana	Social Services	1776 North Meridian Street
Connected by 25	Social Services	2625 North Meridian Street
Big Brothers Big Sisters	Social Services	2960 North Meridian Street
Salvation Army Indiana Divisional Headquarters	Social Services	3100 North Meridian Street
Neighborhood Christian Legal Clinic	Social Services	3333 North Meridian Street #201
Community Action of Greater Indianapolis, Inc.	Social Services	3266 North Meridian Street
CCI Refugee Resettlement	Social Services	1400 North Meridian Street
United Way of Central Indiana	Social Services	2955 North Meridian Street #300
Children's Bureau - Fay Biccard Glick Family Place	Social Services	3801 North Temple Avenue
Catholic Charities	Social Services	1400 North Meridian Street
Adult and Child Health	Social Services	222 East Ohio Street
Step Up	Social Services	850 North Meridian Street
Mental Health of Greater America	Social Services	301 East 38th Street
Community Outreach Network Services, Inc.	Social Services	2105 North Meridian Street #102
Dress for Success Indianapolis	Social Services	820 North Meridian Street
Boys & Girls Club	Social Services	3870 North Post Road
Forest Manor Multi-Services Center	Social Services	5603 East 38th Street
Midtown Community Mental - Meridian Center	Social Services	3171 North Meridian Street
Indiana Blood Center	Social Services	3450 North Meridian Street

Community Resources	Type	Address
Planned Parenthood - Midtown Health Center	Social Services	3750 North Meridian Street
Habitat for Humanity	Social Services	3135 North Meridian Street
National Able Network	Social Services	3737 North Meridian Street #404
Teach for America	Social Services	1314 North Meridian Street #200
Autism Society of Indiana	Social Services	1800 North Meridian Street #600
Mid-States Minority Supplier Development Council	Social Services	2126 North Meridian Street
Indiana Forest Alliance, Inc.	Social Services	2123 North Meridian Street
Benjamin Harrison YMCA	Social Services	5736 Lee Road
Circle City Classic	Social Services	3145 North Meridian Street
Sagamore Institute	Social Services	2902 North Meridian Street
Dayspring Center	Social Services	3736 North Meridian Street
Coburn Place Safe Haven	Social Services	604 East 38th Street
Goodwill	Social Services	2950 East 38th Street
The Villages of Indiana	Social Services	3833 North Meridian Street
Dove Recovery House for Women	Social Services	3351 North Meridian Street
Eskenazi Health Urgent Care East	Hospital	3901 Meadows Drive
Eskenazi Health Center Forest Manor	Hospital	3840 North Sherman Drive
St. Richards Episcopal School	School	33 East 33rd Street
Ivy Tech Community College Culinary and Conference Center	School	2820 North Meridian Street
Ivy Tech Community College Indianapolis	School	50 West Fall Creek Parkway North Drive
Ivy Tech Community College Lawrence	School	9301 East 59th Street
Ivy Tech Community College Fall Creek Center	School	2535 North Capital Avenue
Indiana College Preparatory School	School	4050 East 38th Street
North Illinois Center at Ivy Tech Community College	School	108 West 28th Street
Moore's Montessori	School	7206 East 38th Street
Purdue Extension Marion County	School	1202 East 38th Street #201
George and Veronica Phalen Leadership Academy	School	2323 North Illinois Street
St. Andrew the Apostle School	School	4050 East 38th Street
Witness for Christ Christian School	School	6190 East 38th Street
Nurse Aide Training Services	School	1815 North Meridian Street #300
William A. Bell School 60	School	3330 North Pennsylvania Street
Shortridge High School	School	3401 North Meridian Street
The Children's Museum of Indianapolis	Museum	3000 North Meridian Street
Indiana Masonic Library Museum	Museum	525 North Illinois Street
First Christian Missionary Church	Church	6190 East 38th Street
Lighthouse Community Church	Church	4367 North Post Road

Community Resources	Type	Address
Immanuel Presbyterian Church	Church	3620 East 38th Street
Mt. Zion Apostolic Church	Church	4900 East 38th Street
Turning Point Family Worship Center	Church	4501 North Post Road
Church of Living God	Church	2502 East 38th Street
Jester Memorial Church	Church	3101 East 38th Street
Saint Peter and Paul Cathedral	Church	1347 North Meridian Street
Roman Catholic Archdiocese of Indianapolis	Church	1400 North Meridian Street
Trinity Episcopal Church	Church	3243 North Meridian Street
Lawrence Baptist Church	Church	4330 North Post Road
Capital City Church of Christ	Church	8925 East 42nd Street
Saint Andrew the Apostle Roman Catholic Church	Church	4052 East 38th Street
Living Water Church of God in Christ	Church	2002 East 38th Street
Shiloh Missionary Baptist Church	Church	3801 Forest Manor Avenue
North United Methodist Church	Church	3808 North Meridian Street
Nazarene Missionary Baptist Church	Church	3505 East 38th Street
Temple of Believers	Church	5230 East 38th Street
Lawrence Church of God	Church	4230 North Post Road
New Direction Church	Church	5330 East 38th Street
True Belief Missionary Baptist	Church	4829 East 38th Street
Citadel of Faith Church of God in Christ	Church	7676 East 38th Street
Muhammad Mosque	Church	2248 East 38th Street
Greater St. Mark Baptist Church	Church	5502 East 38th Street
Messiah Missionary Baptist Church	Church	5640 East 38th Street
Scottish Rite Cathedral	Church	650 North Meridian Street
Iglesia De Jesucristo Palabra Miel.	Church	1703 East 38th Street
Unification Church	Church	404 East 38th Street
Indianapolis City Market	Other	222 East Market Street
Indiana State Fairgrounds & Event Center	Other	1202 East 38th Street

The 14 neighborhoods listed above are within the following census tracts (all within Marion County, Indiana: FIPS 18097): 3562, 3910, 3542, 3533, 3516, 3515, 3510, 3503, 3220, 3221, 3504, 3225, 3505, 3226, 3506, 3227, 3601.02, 3310, 3602.01, 3309, 3308.05, 3602.02, 3308.06, 3308.03, 3604.02, 3308.04, 3307, and 3906. Census block groups contained within these tracts were consulted to determine the demographic profile.

The demographic profile within these block groups shows a total population of 69,766 within the corridor. Of this population, 20 percent are under age 18, 69 percent are between ages 18-64, and 10.3 percent are age 65 and older, with the highest population in the range of 25-34 years old. The female population is 35,127, while the male population is 34,639.⁶

The range of households within this area are 16 percent at less than \$10,000, 25 percent at \$10,000 to \$24,999, 30 percent at \$25,000 to \$49,999, 13 percent at \$50,000 to \$74,999, 6.2 percent at \$75,000 to

⁶ U.S. Census Bureau, American Community Survey 5-year Averages, Department (Code Enforcement (DCE), Marion County Public Health Department, Indiana Department of Local Government Finance via Indiana Business Research Center, Marion County Superior Court, [SAVI Community Profiles]. 2012 - 2016. Retrieved from <http://www.savi.org> (7 May 2018).

\$99,999, and 9.3 percent at \$100,000 or more.¹ Public transportation represents an affordable alternative to car ownership for the many low- and moderate-income households within the corridor. Further, improved transit speed and frequency would increase the number of employment and educational opportunities available to residents within the corridor.

The added benefit of new sidewalk allows pedestrians a safer route to nearby locations, which is greatly needed in the areas along East 38th Street, where there are sidewalk gaps and areas in need of ADA-compliant curb ramps. The addition of new sidewalks and the East 38th Street multi-use path, as well as the transit system itself, will help foster a healthier lifestyle with more walking and less time sitting in traffic.

No residences or community resources will be displaced as a result of this project. Community plans from the neighborhoods within the Purple Line corridor as well as city plans were reviewed. According to these plans, this project will add to the overall well-being of the community. All of these plans mention the importance of improved transportation, accessibility, and road and sidewalk conditions, as well as amenities. A detailed matrix of the plans with excerpts related to transportation can be found here <https://www.dropbox.com/s/h3e3410guwercj7/Purple%20Line%20Previous%20Plan%20Matrix.xlsx?dl=0>.

Potential negative impacts on the area related to the noise, dust, and travel disruptions would be temporary in nature, occurring during construction; these impacts will discontinue when the project is complete. The Purple Line would not adversely affect community cohesion as it does not change access or travel patterns. The Purple Line is not expected to have adverse impacts on the social or community environment.

O. Environmental Justice

According to the US Environmental Protection Agency (EPA), Environmental Justice (EJ) is the “fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.”⁷ EJ analysis was performed in accordance with related federal and state laws and guidance including Title VI of the 1964 Civil Rights Act, Executive Order (EO) 12898, EO 13166, and FTA Circulars 4703.1 and 4702.1B.^{8,9,10,11} This section provides information on the EJ analysis conducted for this project.

FTA Circulars 4703.1 Environmental Justice Policy Guidance for Federal Transit Administration Recipients and 4702.1B Title VI Requirements and Guidelines for Federal Transit Administration Recipients provide the following goals of all projects receiving FTA funds:^{2,5}

- 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.

⁷ United States Environmental Protection Agency. Environmental Justice. Retrieved from <https://www.epa.gov/environmentaljustice>

⁸ U.S. Department of Transportation, Federal Transit Administration. October 1, 2012. Circular FTA C 4702.1B. Title VI requirements and guidelines for federal transit administration recipients. Retrieved from https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Title_VI_FINAL.pdf

⁹ The President. Executive Order 12898 of February 11, 1994. Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. Federal Register. Vol. 59, No. 32. Retrieved from <https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf>

¹⁰ The President. Executive Order 13166 of August 11, 2000. Improving Access to Services for Persons with Limited English Proficiency. Federal Register. Vol. 65, No. 159. Retrieved from <https://www.transportation.gov/sites/dot.gov/files/docs/eo13166.pdf>

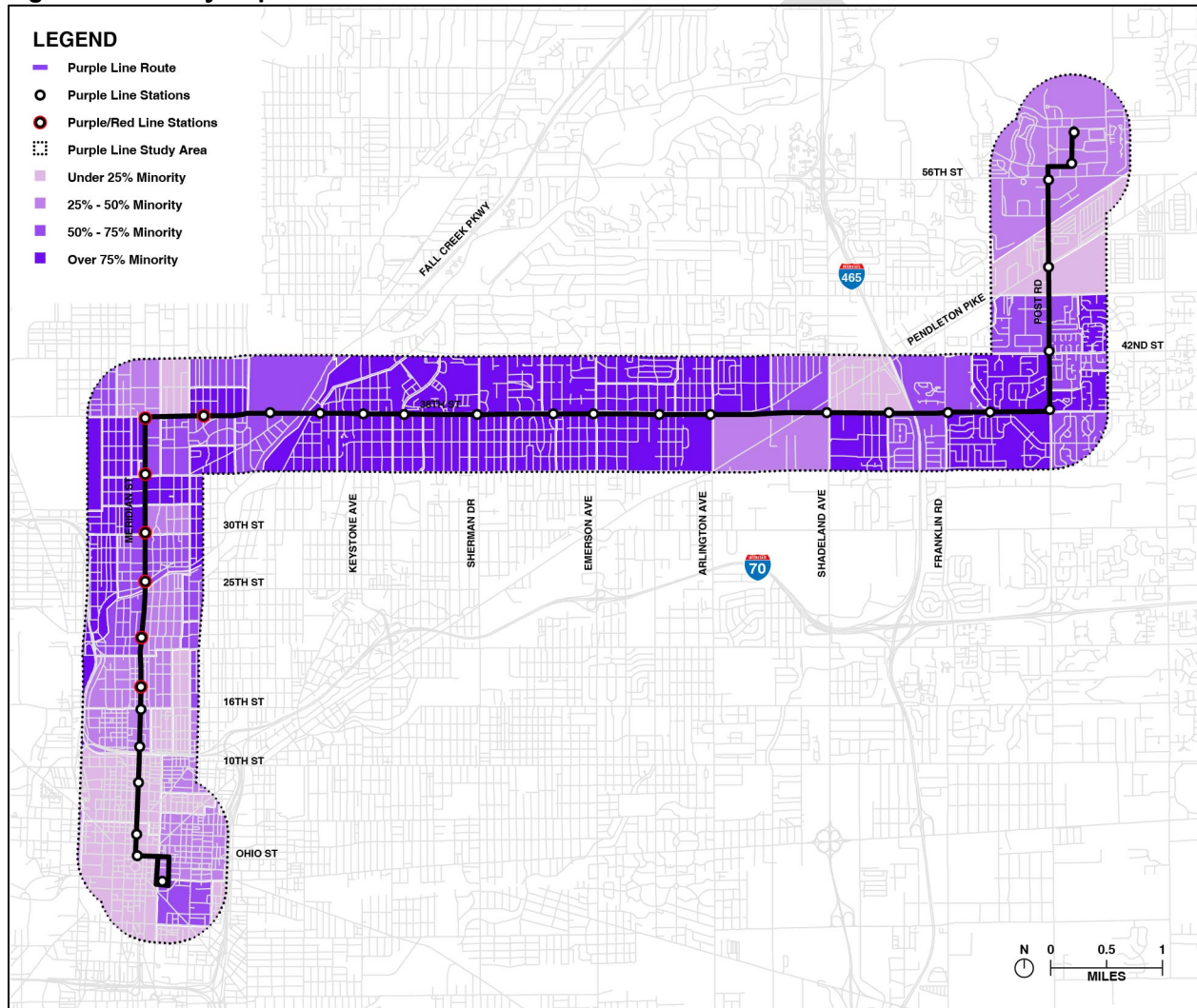
¹¹ U.S. Department of Transportation, Federal Transit Administration. Circular FTA C 4703.1. August 15, 2012. Environmental Justice Policy Guidance for Federal Transit Administration Recipients. Retrieved from https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_EJ_Circular_7.14-12_FINAL.pdf

- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.¹²

To establish the presence or absence of low-income and minority populations within the project area, American Community Survey data was analyzed for all block groups within a half-mile of the proposed alignment along the travel corridor.

Figure 9 provides a map of the minority populations within block groups along the Purple Line corridor. The map shows that higher concentrations of minority populations are present along most of the project alignment along East 38th Street and the northern portions of Meridian Street.

Figure 9: Minority Populations

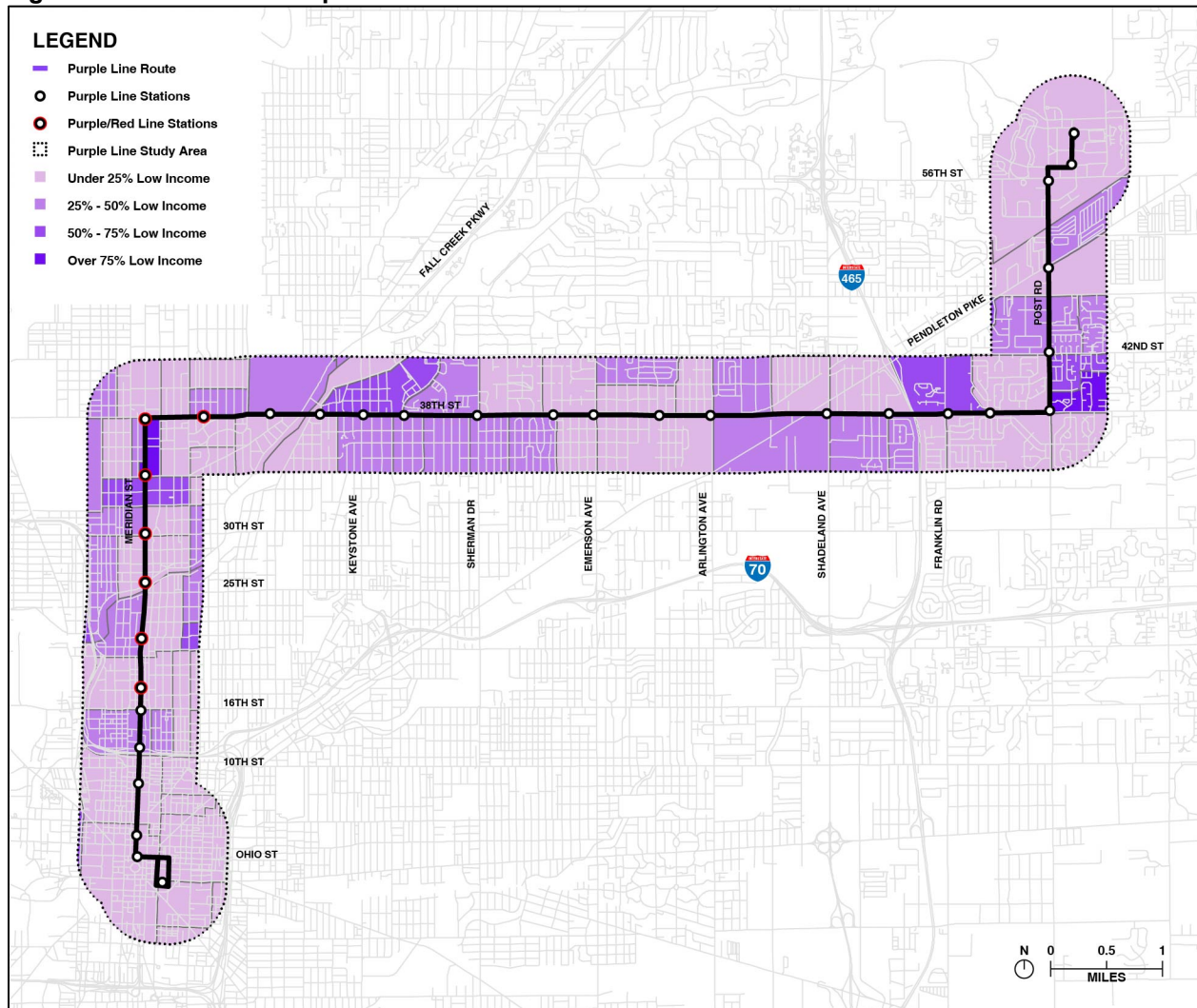


Source: 2016 ACS 5-Year Estimates

Figure 10 provides a map of the low-income populations of the block groups along the Purple Line corridor. The map shows that high concentrations of low-income populations are present along sections of the project alignment along, Post Road, East 38th Street, and the northern portions of Meridian Street.

¹² Low-income populations are defined as those below the poverty line.

Figure 10: Low-Income Populations



Source: 2016 ACS 5-Year Estimates

Areas with concentrations of low-income and minority populations were analyzed to determine whether impacts would occur disproportionately in the areas with EJ populations. The Purple Line will have temporary traffic impacts on all populations along the corridor but will not have a high or disproportionate impact on EJ communities. The project will provide a variety of benefits to all populations within the project area, including EJ communities. Benefits include faster, more frequent bus service, improved bus stations, sidewalk enhancements, and associated quality of life and safety improvements. These construction improvements may also contribute to potential economic development and livability improvements for populations along the corridor. No other direct impacts or indirect/cumulative impacts are anticipated from this project.

Community Outreach

IndyGo's community outreach efforts for the proposed Purple Line have included outreach to minority and low-income communities. Throughout the planning process, IndyGo has continued to prepare and distribute materials to update the community and stakeholders, including minority and low-income residents, on the project. The outreach process to EJ communities has followed several parallel paths, including: public presentations, informational boards, stakeholder meetings, inclusion in IndyGo's newsletter, a project-specific website, coordination with partner organizations, social media outreach, email outreach, and telephone outreach. IndyGo's marketing and communications team have responded

individually to each inquiry associated with the project. Inquiries will continue to be addressed throughout the Purple Line's continued development, and can be received in person, via phone, or via an online portal that is available on IndyGo's project website (<https://www.indygotpurple.com/>).

In support of these efforts, a variety of materials have been developed to provide an overview of the project and corresponding opportunities for public input. Surveys conducted and materials displayed and discussed at events in 2017 and 2018 have been made available on the project website for the benefit of those who could not attend. Information was also distributed to the Mayor's Neighborhood Liaison, neighborhood leaders, and community stakeholders, and to those who attended the events. Public meetings held by IndyGo for the Purple Line are shown in Table 6 (through September 2018). Community outreach is ongoing and will continue through project development, with an emphasis on EJ populations.

Table 6: Public Meetings Conducted for the Purple Line (through September 2018)

Date	Met With	Address
6/15/2017	IndyVolved	40 East St Clair Street
6/21/2017	Community Alliance of the Far Eastside (CAFE) Economic Development Meeting	
6/30/2017 – 7/7/2017	Purple Line On-Bus Engagements	Julia M. Carson Transit Center and on Route 39
7/8/2017	Pack the Parks	45 West 40th Street
7/10/2017	City of Lawrence	9001 East 59th Street
7/11/2017	YMCA Meadows	3908 Meadows Drive
7/12/2017	CAFE	8902 East 38th Street
7/17/2017	General Public @ Central Library	40 East St Clair Street
8/7/2017	City of Lawrence Common Council	9001 East 59th Street
8/15/2017	Community Conversation with the Alliance for Northeast Unification	8908 Meadows Drive
8/28/2017	General Public Town Hall with Councilor Clay	5640 East 38th Street
10/20/2017	IndyGo Purple Line with Marion County Health Department	3838 North Rural Street
11/1/2017	3Cindy Artist Info Workshop	5420 East 38th Street
11/13/2017	Neighborhood Developmental Working Group (Mid-North)	Indianapolis Children's Museum
1/17/2018	Lawrence Township Republican Club	8255 Craig Street
1/17/2018	General Public, Transit Talk: Shortridge High School	3401 North Meridian Street
1/18/2018	General Public, Transit Talk: Central Library	40 East St Clair Street
1/24/2018	General Public, Transit Talk: College Avenue Library	4180 North College Avenue
1/25/2018	General Public, Transit Talk: The Vogue	6259 North College Avenue
1/31/2018	General Public, Transit Talk: University of Indianapolis	1400 East Hannah Avenue
2/20/2018	General Public, Amber Woods Apartments	10202 John Jay Drive
2/20/2018	Community Resurrection Partnership	3908 Meadows Drive
2/21/2018	IndyMoves, College Ave. Library	4180 North College Avenue
2/22/2018	CityLeague, Little Bethel Crosstown Community Center	3279 Winthrop Avenue
2/24/2018	Transit Ambassador Outreach, Transit Center	201 East Washington Street
2/27/2018	Transit Ambassador Outreach, Transit Center	201 East Washington Street
2/27/2018	IndyMoves, Brookside Community Park	3500 Brookside Parkway South Drive
2/28/2018	IndyMoves, Warren Education and Community Center	975 North Post Road
3/5/2018	IndyMoves, Lawrence Branch Library	7898 Hague Road
3/6/2018	IndyMoves, Trinity Episcopal Church	3243 North Meridian Street
3/7/2018	Transit Ambassador Outreach, Transit Center	201 East Washington Street

Date	Met With	Address
3/12/2018	Transit Ambassador Outreach, Transit Center	201 East Washington Street
3/16/2018	Transit Ambassador Outreach, Transit Center	201 East Washington Street
3/17/2018	Transit Ambassador Outreach, Transit Center	201 East Washington Street
3/26/2018	Millersville Keystone Neighborhood Assn., Marion County Health Department	3838 North Rural Street
3/29/2018	Transit Talk, Indy Tech-Lawrence	9301 East 59th Street
3/29/2018	General Public, Transit Talk: Central Library	40 East St Clair Street
4/3/2018	General Public, Transit Talk: Central Library	40 East St Clair Street
4/11/2018	General Public, Transit Talk: Meadows YMCA	3908 Meadows Drive
4/24/2018	Neighborhood City Hall - CAFE	8902 East 38th Street
4/30/2018	Stakeholder Meeting – Sea Kings Seafood	5523 East 38th Street
5/15/2018	Crown Hill Neighborhood Association	
5/16/2018	Blue Line Internal Outreach – Maintenance Lounge	1501 West Washington Street
6/6/2018	Stakeholder Meeting – Ivy Tech Parking Lot	Ivy Tech Parking Lot, Rising Road
6/7/2018	Transit Ambassador Outreach, Transit Center	201 East Washington Street
6/8/2018	Transit Ambassador Outreach, Transit Center	201 East Washington Street
6/9/2018	Transit Ambassador Outreach, Transit Center	201 East Washington Street
6/9/2018	Walk Safe Workshop, Avondale Meadows YMCA	3908 Meadows Drive
6/11/2018	Transit Ambassador Outreach, Transit Center	201 East Washington Street
6/13/2018	Transit Ambassador Outreach, Transit Center	201 East Washington Street
6/18/2018	Transit Ambassador Outreach, Transit Center	201 East Washington Street
6/18/2018	INRC President’s Roundtable	708 East Michigan Street
6/22/2018	HealthNet – Healthy Families Picnic, Garfield Park	2345 Pagoda Drive
6/22/2018	Community BBQ Party & Art from the Heartland Exhibition Opening	820 East 67th Street
7/6/2018	Transit Ambassador Outreach, Transit Center	201 East Washington Street
7/7/2018	Tacos y Tacones	
7/9/2018	Transit Ambassador Outreach, Transit Center	201 East Washington Street
7/11/2018	Transit Ambassador Outreach, Transit Center	201 East Washington Street
7/14/2018	Convoy of Hope, John Marshall High School	10101 East 38th Street
7/14/2018	Cars & Gravy	215 East 38th Street
7/14/2018	Transit Ambassador Outreach: Route 39	Route 39
7/19/2018	Transit Talks: Purple Line CAFE	8902 East 38th Street
7/19/2018	Indiana Black Expo Job Fair	100 South Capitol Avenue
7/25/2018	Transit Talk: Blue/Purple Line Central Library	40 East St Clair Street
7/26/2018	Transit Talk: Purple Line Resurrection Community Church	2502 East 38th Street
7/31/2018	Transit Talk: Purple Line Ivy Tech Lawrence	9301 East 59th Street
8/2/2018	Purple Line Transit Talk: Mapleton-Fall Creek Development Corporation	3190 North Meridian Street
8/7/2018	Fort Harrison Reuse Authority	1501 West Washington Street
8/22/2018	Marian University Multicultural Fair	3200 Cold Spring Road
9/3/2018	Transit Ambassador Outreach, Transit Center	201 East Washington Street
9/7/2018	Meeting with Pastor Jordan, Avondale Meadows YMCA	3908 Meadows Drive
9/19/2018	Meeting with Vanessa Brown, 1846 East 38th Street	1846 East 38th Street
9/19/2018	Transit Ambassador Outreach, Transit Center	1501 East Washington Street

At these public outreach meetings, commonly expressed topics of interest and concerns included BRT operations, consequences to traffic, consideration of a multi-use path along portions of East 38th Street, and the timing and frequency of service options. IndyGo addressed these topics and concerns to the extent possible at these meetings. A primary point of concern was maintenance of business access and

turning movements for the public and delivery vehicles along East 38th Street, specifically in the section between Keystone Avenue and Oxford Street.

P. Use of Public Parkland and Recreation Areas

In accordance with Section 4(f) of the Department of Transportation Act of 1966, which prohibits the use of park and recreational lands and wildlife and waterfowl refuges for transportation projects, the corridor was examined to determine the location of such lands along the proposed Purple Line corridor.¹³ The Purple Line is located within 500 feet of 17 existing parks, greenways, and trails, as shown in and by the labeled features in Table 7 and Figure 11.¹⁴

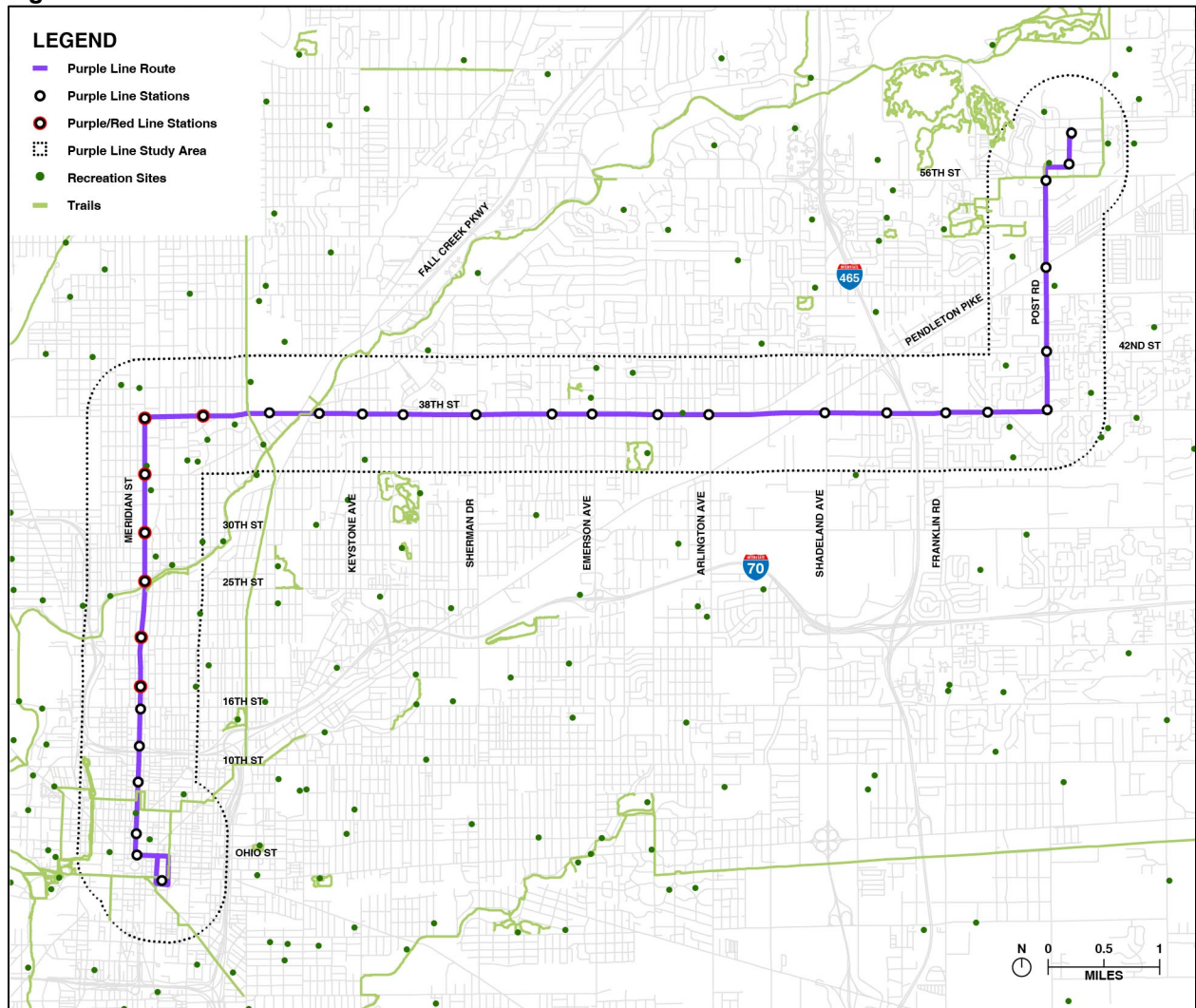
Table 7: Parks and Trails within 500 feet of Purple Line Corridor

Park Name	Managing Entity	Total Area (ac)	Area within 500 feet of Project (ac)	Use
Al E. Polin Park	Indy Parks	1.7	0.43	Active Park
American Legion Mall	Indiana State World War Memorial	8.75	8.75	Memorial
Boulevard Station	Indy Parks	0.25	0.25	Passive Pocket Park
City Market plaza	Indy Parks	0.83	0.83	Memorial
Cultural Trail	ICT, Inc.	N/A	N/A	Urban Trail
Eva Talley Park	Indy Parks	2.4	2.4	Passive Pocket Park
Fall Creek Greenway	Indy Parks	179	6.69	Trail
Franklin & E. 38th Street Park	Indy Parks/Community Alliance for the Far Eastside	11.82	5.6	Active Park
George E. Kessler Park	Indy Parks	1.43	1.43	Passive Park
Indiana War Memorial	Indiana State War Memorial	4.67	4.67	Memorial
Lawrence Community Park	City of Lawrence	145.7	4.75	Active Park
Monon Greenway	Indianapolis Department of Metropolitan Development	55.85	1.52	Trail
Monument Circle	Indiana State World War Memorial	2	1	Memorial
Presidential Place	Indy Parks	0.55	0.55	Passive Pocket Park
University Park (University Square)	Indiana State World War Memorial	4.66	4.66	Memorial
Veteran's Memorial Plaza (Obelisk Square)	Indiana State World War Memorial	4.65	4.65	Memorial
Watson Road Bird Preserve	Indy Parks	4.02	1.26	Wildlife Sanctuary

¹³ US Department of Transportation Federal Highway Administration: Office of Planning, Environment, and Realty Project Development and Environmental Review. July 20, 2012. Section 4(f) Policy Paper. Washington, DC 20590. Retrieved from <https://www.environment.fhwa.dot.gov/legislation/section4f4fpolicy.pdf>.

¹⁴ OpenIndy Data Portal. Retrieved from <http://data.indy.gov/datasets/indianapolis-parks> and <http://data.indy.gov/datasets?q=trails>

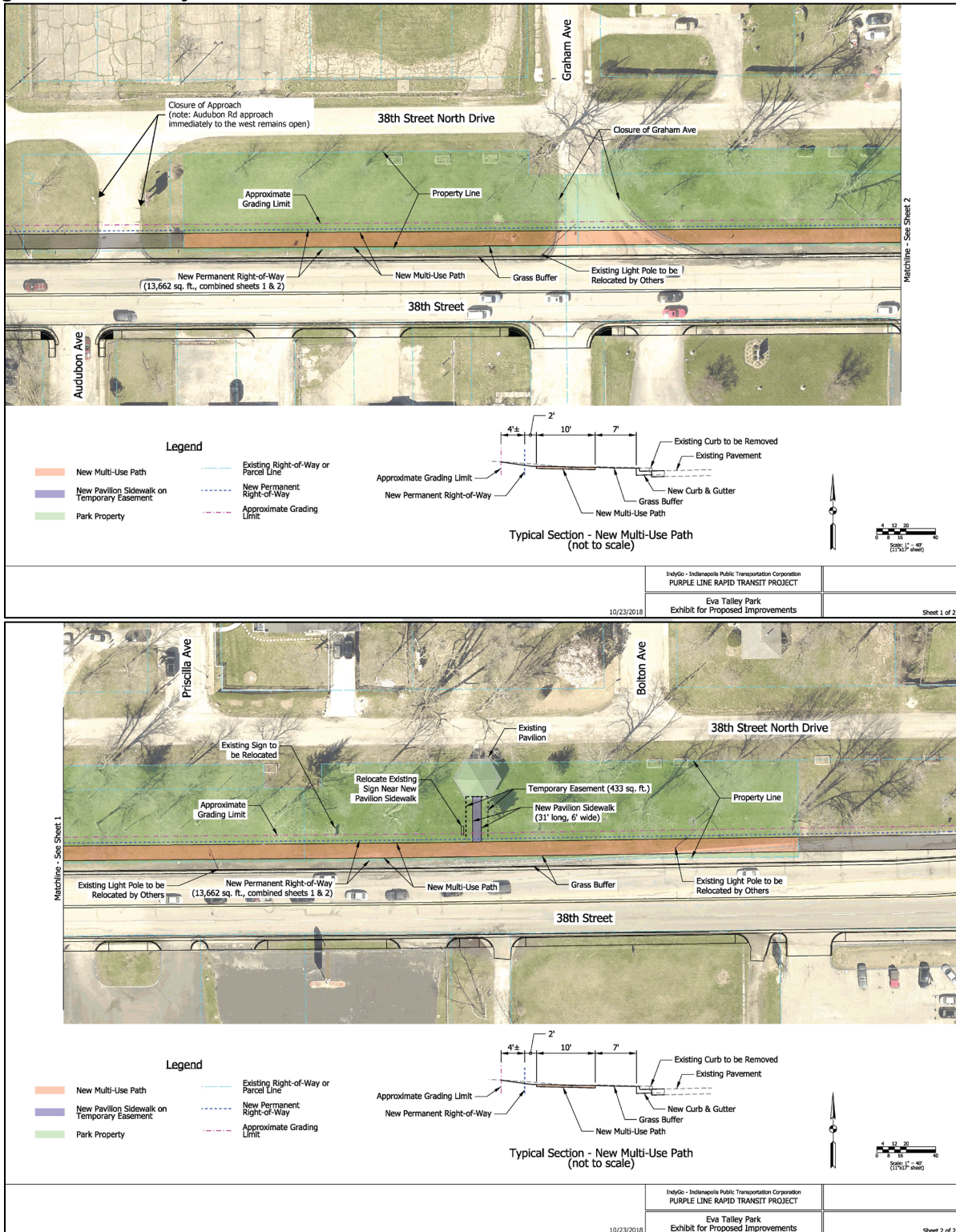
Figure 11: Recreational Facilities



Source: IndianaMAP. "Outdoor Recreational Facilities in Indiana." Indiana Department of Natural Resources, 2009.

Most parks within 500 feet of the corridor would not be affected by the Purple Line, with one exception. Eva Talley Park, located on East 38th Street west of Arlington Avenue, would be impacted as a result of right-of-way acquisition of 0.31 acre (13,662 square feet) and a temporary easement of 0.01 acre (433 square feet) for the construction of a new 10-foot-wide asphalt multi-use path within the park's boundaries. The new multi-use path would be constructed along East 38th Street and would improve pedestrian safety, accommodate multiple recreational uses, and provide access to a new BRT station west of the East 38th Street and Arlington Avenue intersection. The new multi-use path would continue east and west along East 38th Street beyond the park property to connect to an existing sidewalk, as shown in Figure 12 and Appendix E. Furthermore, a new sidewalk approximately 31 feet long and 6 feet wide would connect the existing pavilion in Eva Talley Park to the new sidewalk along East 38th Street.

Figure 12. Eva Talley Park



Eva Talley Park is owned and managed by Indy Parks, the City of Indianapolis Parks and Recreation department. Coordination has been ongoing with Indy Parks regarding the proposed multi-use path construction through the south side of the park. The permanent right-of-way and temporary easement acquired from Eva Talley Park for construction of a 6-foot-wide sidewalk to the pavilion and a multi-use

path along East 38th Street constitutes a transportation use of a Section 4(f) property. Use occurs when land from a 4(f) resource is converted from a recreational use to transportation use. The multi-use path construction would require 13,662 square feet of new permanent right-of-way from the park, while the sidewalk construction would require 433 square feet of temporary easement. Construction of the path and the sidewalk in Eva Talley Park as part of the Purple Line would not adversely affect the activities, features, or attributes of this property. Therefore, use of this public park would result in a *de minimis* determination finding. A *de minimis* determination results when, after taking into account any measures to minimize harm, the impact would not adversely affect the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f).¹⁵

Construction of a multi-use path in Eva Talley Park is proposed as an enhancement to this recreation area. A new multi-use path in the park and a sidewalk connecting the path to the park's existing pavilion would improve accessibility to the park and pedestrian safety. The park is currently accessible by vehicles pulling onto East 38th Street North Drive from East 38th Street, but there is no existing sidewalk or pedestrian access to the park along East 38th Street.

A meeting with Indy Parks was initially held on December 11, 2017, in which proposed sidewalk construction through the park was discussed (Appendix E). A second meeting with Indy Parks was held on July 13, 2018, after the proposed sidewalk plans changed to a wider multi-use path. In accordance with Section 4(f) of the US DOT Act of 1966 (49 U.S.C. § 303) and its implementing regulations (23 CFR Part 774.17), to complete the *de minimis* determination, IndyGo presented and sought public comment on the project's construction activities in Eva Talley Park associated with the multi-use path at public meetings conducted on July 26, 2018 (at the Resurrection Community Church in Indianapolis) and in August 2018. The activities were also presented at a neighborhood association meeting on April 26, 2018 (Millersville Keystone Neighborhood Association). A public notice requesting public comment, in accordance with Section 4(f), was published in the IndyStar on September 10, 2018. The notice was also shared via IndyGo's newsletter. One public comment was received in support of the multi-use path through Eva Talley Park. IndyGo also coordinated with and sought comment from Steve Talley, the person responsible for establishing the park; his comments were supportive of the park improvements. No other comments have been received to date and IndyGo will coordinate with Indy Parks in response to any future comments received.

An official correspondence letter requesting concurrence with the determination that the Purple Line will have a "*de minimis*" impact on Eva Talley Park was sent to IndyParks on October 24, 2018. Indy Parks concurred in writing with the *de minimis* finding on October 24, 2018 (Appendix E).

The Purple Line corridor would cross the Cultural Trail and Fall Creek Greenway at multiple locations, and the Monon Greenway at one location. At each trail crossing, with the exception of the Fall Creek crossing, pedestrians use a crosswalk to cross the street and continue to the trail on the other side. In the near future, as part of a separate project, the Fall Creek Greenway will undergo an adjustment that will permit bicyclists and pedestrians to cross East 38th Street at a signalized crossing and proceed to the 39th Street pedestrian bridge. The Monon Trail will, as a separate project, also undergo an improvement where it meets East 38th Street. At this point, the Monon Trail will cross over East 38th Street via a grade-separated pedestrian bridge. Ground-level access to East 38th Street from the Monon Trail will be retained. The Purple Line would be constructed within the existing roadway at these trail crossings and would not impact these trails. It should be noted that Fall Creek Greenway and the Monon Trail projects are separate undertakings with different project sponsors and would proceed with or without implementation of the Purple Line BRT.

The majority of the Purple Line would be constructed within the existing roadway and would not impact parks or trails located near the project. The park that will be impacted, Eva Talley Park, would be enhanced by the installation of a multi-use path for improved pedestrian access and safety. The Purple

¹⁵US Department of Transportation Federal Highway Administration: Office of Planning, Environment, and Realty Project Development and Environmental Review. July 20, 2012. Section 4(f) Policy Paper. Washington, DC 20590. Retrieved from <https://www.environment.fhwa.dot.gov/legislation/section4f/4fpolicy.pdf>.

Line would enhance access to existing parks along the alignment, especially parks that are near the BRT stations, including University Park, the Monon Greenway, Fall Creek Greenway, Eva Talley Park, and East 38th Street and Franklin Road. The Purple Line would have a positive impact on and benefit to the recreational parks and trails located along the corridor through enhanced access and use.

Q. Impacts on Wetlands

The 1977 Executive Order 11990, *Protection of Wetlands*, under the authority of NEPA, and implemented by the U.S. Department of Transportation (USDOT, Order 5600.1A), requires that transportation facilities plan and construct projects to avoid and minimize impacts to wetlands to the fullest extent practicable.^{16,17,18} USDOT Order 5660.1A further requires an analysis of potential project impacts to wetlands. In addition, per Section 404 of the Clean Water Act, infrastructure development that discharges dredge or fill material into wetlands or waters of the U.S. is regulated by the U.S. Army Corps of Engineers (USACE) and requires permit applications.¹⁹

Aerial maps of the project area, including the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) map, were consulted to assess project impacts on any wetlands mapped in or near the Purple Line corridor.²⁰ A field investigation was conducted on January 9, 2018 to verify mapped and unmapped wetlands. The corridor is located in an urbanized area and would be constructed primarily within the existing right-of-way. As a result, there are no anticipated impacts on wetlands associated with the project.

Four wetlands are located within 500 feet of the proposed alignment. A forested/shrub wetland island is located in Fall Creek approximately 50 feet west of the Meridian Street bridge. Two freshwater ponds are located along the corridor north of East 38th Street and were verified in the field. The first freshwater pond is located approximately 85 feet north of East 38th Street and 400 feet east of Franklin Road. The second freshwater pond is located approximately 50 feet north of East 38th Street and 625 feet west of Emerson Avenue. The fourth wetland is a freshwater emergent wetland located approximately 40 feet west of Post Road. This wetland appears to have been paved over by a parking lot and does not exist in the field. These wetlands are located outside of the Purple Line construction limits and extent of right-of-way acquisition. The Purple Line would be constructed primarily within the existing roadway and right-of-way and is not expected to impact these wetlands. No work is expected outside of the right-of-way on existing bridges, and no bridge modifications are proposed. Therefore, no impacts to wetlands are expected.

The Purple Line would cross four waterways at five locations: Fall Creek at Meridian Street and Fall Creek Parkway; Fall Creek at East 38th Street and Fall Creek Parkway; Pogues Run at East 38th Street and Arlington Avenue; Field Creek on Post Road approximately 500 feet south of 42nd Street; and Bells Run on Post Road approximately 500 feet north of 46th Street. One stream is mapped on the NWI adjacent to Hess Avenue and west of Post Road, but it appears to be encapsulated underground as it was not observed in the field. The Purple Line would be constructed within the current right-of-way on existing bridges and within the roadway near these stream locations, and it would have no impacts on these waterways. One unnamed tributary to Fall Creek located south of East 38th Street may be impacted by work to extend a culvert for approximately 20 feet under Arthington Boulevard. This unnamed stream appears to drain adjacent roads and neighborhoods and is likely the only waterway impacted by the Purple Line.

¹⁶ The President. Executive Order 11990 of May 24, 1977. Protection of Wetlands. Federal Register. Vol. 42, No. 26961. Retrieved from <https://www.epa.gov/cwa-404/protection-wetlands>

¹⁷ National Environmental Policy Act of 1969, as amended (Pub. L. 91 190, 42 U.S.C. 4321-4347, January 1, 1970, as amended by Pub. L. 94 52, July 3, 1975, Pub. L. 94 83, August 9, 1975, and Pub. L. 97 258, § 4(b), Sept. 13, 1982). Retrieved from https://energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/Req-NEPA.pdf

¹⁸ U.S. Department of Transportation (USDOT). August 24, 1978. Order 5660.1A. Preservation of the Nation's Wetlands. Retrieved from <http://www.dot.ca.gov/ser/vol1/sec1/ch1fedlaw/USDOTOrder56601A.pdf>

¹⁹ Clean Water Act. 1972. Section 404 (33 U.S.C. 1344). Retrieved from <https://www.epa.gov/cwa-404/clean-water-act-section-404>

²⁰ U.S. Fish and Wildlife Service National Wetlands Inventory: Wetlands Mapper. Retrieved from <https://www.fws.gov/wetlands/data/mapper.html>

R. Floodplain Impacts

The 1979 USDOT Order 5650.2, *Floodplain Management and Protection*, requires agencies to include detailed floodplain analyses if a proposed project is located within a floodplain.²¹ The Federal Emergency Management Agency's (FEMA) Flood Insurance Rate map (FIRM) was reviewed to assess the locations and impact of the Purple Line on floodplains.²²

The Purple Line crosses the floodways of Fall Creek at Meridian Street and Fall Creek Parkway, Fall Creek at East 38th Street and Fall Creek Parkway, and Pogues Run just west of Arlington Avenue via bridges. No BRT stations lie within the floodway or 100-year floodplain at these locations. All work would occur within the existing right-of-way in the mapped floodway, and there would be no increase of impervious area in the floodway. Existing bridges would not be modified. The Purple Line would have no adverse impacts on floodways or base flood elevations.

Approximately 750 feet of the Purple Line near East 38th Street and Arlington Avenue lies within the 100-year and 500-year floodplain. There would be minor (approximately 0.12 acre) right-of-way acquisition in the 100-year floodplain north of East 38th Street and west of Arlington Avenue to construct a new sidewalk to Eva Talley Park. This would result in an incremental increase of impervious area, which would not adversely impact the floodplain. The 38th Street and Arlington Avenue BRT station platform would be constructed in the 500-year floodplain just west of Arlington Avenue. This station construction would occur outside of the 100-year floodplain and would be built in the median of the existing road, resulting in no increase of impervious area. One detention pond is proposed approximately 250 feet east of Arlington Avenue and would have minimal encroachment on the mapped 500-year floodplain. Construction of the detention pond would not substantially increase the impervious area and would not result in significant impacts to the 500-year floodplain at this location. No substantial increase of impervious area is expected from construction in the 100-year and 500-year floodplains, and no adverse impact to the floodplains is anticipated. Roadway construction is expected to be minimal and not impact base flood elevations.

The beginning of the alignment at the Julia M. Carson Transit Center in downtown Indianapolis is located adjacent to, but outside of, the 500-year floodplain. At the northern end of the project, the Purple Line crosses the 500-year floodplain on Post Road south of the 42nd Street and Pendleton Pike BRT stations. No right-of-way acquisition or station construction is expected to occur in the 500-year floodplain at these locations.

No substantial impacts on floodplains are anticipated. The Purple Line is located primarily within current right-of-way on existing roadways and would not affect surface contours. The addition of impervious surfaces due to sidewalk construction and minor widening at select locations along East 38th Street would be minimal and not impact base flood elevations. Coordination with the local floodplain administrator for the City of Indianapolis will occur to ensure impacts to the floodplain remain minimal.

S. Impacts on Water Quality, Navigable Waterways, & Coastal Zones

The Clean Water Act of 1977, as amended, regulates waters of the U.S. and water quality, while Section 10 of the Rivers and Harbors Act of 1899, as amended (33 USC 403), regulates navigable waterways.^{23,24} The Navigable Waterways Roster and the Outstanding Rivers List for Indiana were reviewed to determine possible presence of protected waterways in the project area.²⁵ No listed waterways were identified within or adjacent to the Purple Line corridor. Indiana is a landlocked state and does not have any protected coastal zones.

²¹ USDOT. April 23, 1979. Order 5650.2. Floodplain Management and Protection. Retrieved from <https://www.fhwa.dot.gov/engineering/hydraulics/policymemo/order56502.pdf>

²² Department of Homeland Security, FEMA Flood Map Service Center. Retrieved from <https://msc.fema.gov/portal>

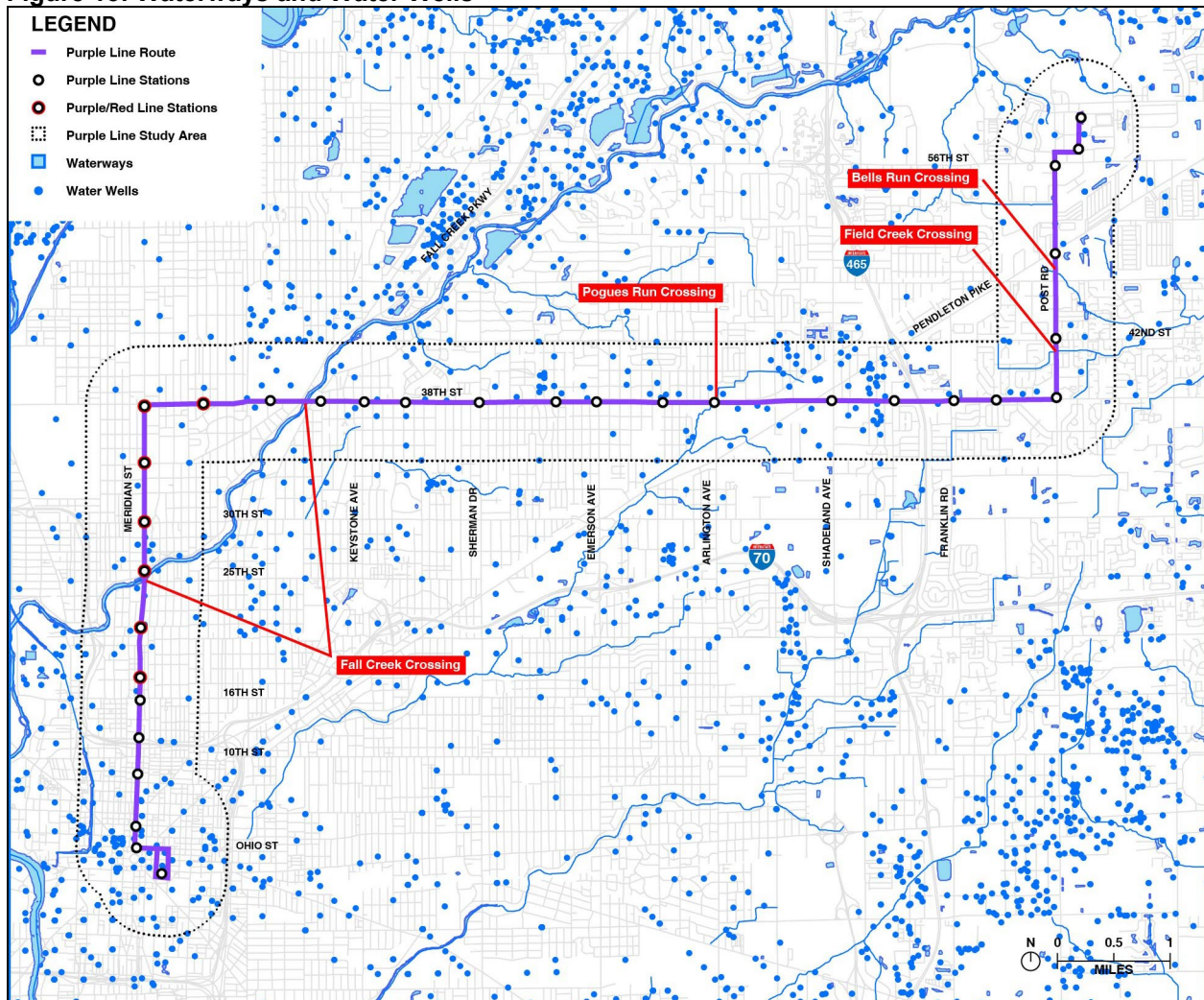
²³ Clean Water Act. 1972. Section 404 (33 U.S.C. 1344). Retrieved from <https://www.epa.gov/cwa-404/clean-water-act-section-404>

²⁴ River and Harbor Act of 1899. 33 USC § 401 et seq.

²⁵ Indiana Natural Resources Commission. Navigable Waterways Roster. Retrieved from <https://www.in.gov/nrc/2393.htm>

A site investigation on January 9, 2018, along with review of the USFWS NWI map, National Hydrography Dataset (NHD) map, and 2016 aerial photography, identified the presence of perennial and intermittent streams in the project area.²⁶ Figure 13 shows waterways in the vicinity of the Purple Line.

Figure 13: Waterways and Water Wells



Source: IndianaMAP. "Rivers, Canals, etc." U.S. Geological Survey National Hydrography Data, 2008.
 IndianaMAP. "Streams, Ditches, etc." U.S. Geological Survey National Hydrography Data, 2008.
 IndianaMAP. "Wells." Indiana Department of Natural Resources, 2016.

The Purple Line crosses four waterways: Fall Creek, Pogues Run, Field Creek, and Bells Run. All waterways support perennial or intermittent flow, a defined bed and bank and ordinary high water mark (OHWM), a connection to downstream receiving waters, and are all likely regulated as Waters of the U.S. under the jurisdiction of the U.S. Army Corps of Engineers (USACE). No work below the OHWM is expected to occur at these stream crossings; therefore, it is anticipated that there would be no direct impacts on these streams. One unnamed tributary to Fall Creek would be impacted by culvert extension under Arthington Boulevard and construction of the detention pond north of 38th Street and between Drexel Avenue and Arthington Boulevard. As a result, Section 404 and Section 401 permits under the USACE and Indiana Department of Environmental Management (IDEM) are likely required. Coordination will occur with these regulatory agencies to determine what permits are needed once design of the trail

²⁶ National Hydrography Dataset. Retrieved from maps.indiana.edu

and detention ponds is finalized. No endangered or threatened species have been noted in these streams according to the USFWS.²⁷

The 2016 IDEM Section 303(d) list of Impaired Waters was reviewed for the project area.²⁸ Table 8 identifies designated impaired waterways, causes of impairment, and impairment category of the streams.

Table 8: Impaired Waters Crossed by the Purple Line²⁴

Waterway	Facility Carried	Cause of Impairment	Impaired Category ²⁹
Pogues Run	38th Street	E. Coli	5A ⁱ
		Impaired Biotic Community	
Fall Creek	38th Street	E. Coli	4A ⁱⁱ
		PCBs	5B ⁱⁱⁱ
Fall Creek	Meridian Street	E. Coli	4A
		PCBs	5B

ⁱ Category 5: The water quality standard is not attained. Category A: The waters are impaired or threatened for one or more designated uses by a pollutant(s) and require a TMDL (Total Maximum Daily Load).

ⁱⁱ Category 4: Impaired or threatened for one or more designated uses but does not require the development of a TMDL. A: A TMDL has been completed that results in attainment of all applicable WQS (Water Quality Standards) and has been approved by U.S. EPA.

ⁱⁱⁱ Category 5B: The water quality standard is not attained. The waterbody AU (assessment unit) is impaired due to the presence of mercury or PCBs or both in the edible tissue of fish collected from them at levels exceeding Indiana's human health criteria for these contaminants.

Water quality within urban settings is often impaired by runoff from transportation uses. Construction of transit projects can cause erosion and/or pollutant spills that decrease water quality in receiving streams as storm water runoff leaves construction sites and enters adjacent waters. There is potential for pollutants associated with construction machinery and transit vehicles to contaminate soil in and near the project area if not properly contained. As the project would disturb more than one acre of land, Rule 5 approval from the Marion County Storm Water Management District (MCSWMD) and IDEM is required. A component of the Rule 5 application is the preparation of a Storm Water Pollution Prevention Plan (SWPPP), which implements erosion control measures before, during, and after construction to minimize impacts from storm water runoff to waterways. The Rule 5 approval process would ensure Best Management Practices (BMPs) are utilized in the project's erosion control plan. It is the responsibility of IndyGo, or their Agent, to prepare the Rule 5 and SWPPP prior to construction. The incorporation of BMPs and erosion control features required for Rule 5 approval would minimize and reduce runoff that could lead to decreased water quality or further degradation of the impaired waterways. Rule 5 erosion control measures would ensure that the project does not hinder any established recovery plans for impaired streams.

The Purple Line proposes the installation of four detention ponds to minimize stormwater runoff and groundwater pollutants. The detention ponds are located north of 38th Street, at Euclid Avenue, between Drexel and Arthington Avenue, east of Leland Avenue, and east of Arlington Avenue. Construction of the ponds would involve excavation, fill, and installation of pipes and control structures, such as manholes, to connect to the existing roadway stormwater system and provide an outfall connection. Construction of the detention pond east of Drexel Avenue would result in impacts to the unnamed tributary, and therefore, require an IDEM 401 USACE 404 Waterway Permit. Construction of the remaining three ponds are not likely to result in any additional impacts to wetlands or streams. There appears to be incremental encroachment on the 500-year floodplain from construction of the detention pond east of Arlington

²⁷ United States Department of the Interior Fish and Wildlife Service. Official list of threatened and endangered species. Retrieved from <https://ecos.fws.gov/ipac/publicDocument/2KLLOBKX2JBGJOIGBXOHZXN3DU>

²⁸ Indiana Department of Environmental Management. Online E303d Tool. Retrieved from <http://www.in.gov/idem/nps/pages/e303d/index.html>

²⁹ Categories defined from IDEM's 2010 Consolidated Assessment and Listing Methodology. Retrieved from http://www.in.gov/idem/nps/files/303d_2010_epa_submit_attach_2.pdf

Avenue. This is not anticipated to substantially increase the impervious surface area or cause adverse impacts to the floodplain. Construction of the detention ponds would be incorporated in the SWPPP, and will be subject to approval from the MCSWMD and IDEM. The approval process would ensure BMPs are utilized in the design and construction of the ponds.

A National Pollutant Discharge Elimination System (NPDES) permit may also be required for the project as the drainage outfalls from the BRT stations and detention ponds may be considered a point source discharge of pollutants. The NPDES permits would contain discharge limits, monitoring and reporting requirements, and other provisions to ensure water quality is not degraded to a point that adversely affects public health.³⁰

Vegetated and concrete-lined roadside drainage ditches exist along the proposed alignment on East 38th Street and Post Road for storm water drainage purposes. Erosion control measures outlined in the SWPPP would minimize the amount of runoff that would enter these roadside ditches. Some of these drainage features may be improved as part of the proposed project to improve effectiveness and longevity of the storm water drainage system.

Impacts on water quality from the Purple Line are expected to be limited to surface runoff discharged through storm waters and sheet flow into receiving waterways. The implementation of erosion control measures outlined in the SWPPP would minimize these impacts during construction phases, while the NPDES permit would provide long term measures to control pollution discharged into the affected waterways. Therefore, the Purple Line is not expected to adversely impact water quality along the corridor.

IDEM's Wellhead Proximity Locator was accessed on January 10, 2018.³¹ The project area was reviewed, and it was determined that the project is located within at least one Wellhead Protection Area (WHPA). Due to security concerns related to WHPAs, detailed location information about the WHPA is not provided. Any potential for impacts related to the WHPAs would be associated with areas where construction would occur at station locations or areas of pavement widening. These impacts would be temporary and addressed through the sediment and erosion control plan approved through the Rule 5 permitting process. Coordination has occurred with Citizens Energy Group, the manager of the WHPA. In their response letter dated March 13, 2018, Citizens Energy Group indicated that several of the BRT stations are located in the Fall Creek Wellhead Protection Area and the Riverside Wellhead Protection Area (Appendix F). In addition, Citizens Energy Group has a surface water intake on Fall Creek near the intersection of Keystone Avenue and Fall Creek Parkway; however, it was determined that the BRT stations are south and downstream of this intake. The proposed detention pond locations appear to be outside the eastern limits of the Fall Creek Wellhead Protection Area. Strict compliance with existing regulations such as Spill Prevention Control and Countermeasures (Oil Spill Prevention), Storm Water Pollution Prevention, and Emergency Response Planning is necessary to protect the groundwater by preventing spills of fuel and chemicals during project construction. Citizens Energy Group provided further recommendations in their response letter to prevent groundwater contamination that will be included as environmental commitments for the Purple Line.

The Indiana Department of Natural Resources (IDNR) Water Wells Enhanced Web Viewer was accessed on January 10, 2018.³² Approximately 13 bedrock water wells, 24 unconsolidated water wells, 16 unknown water wells, and five significant withdraw water wells are along the corridor. Two bedrock wells, two unconsolidated wells, three unknown wells, and one significant withdrawal well are mapped within or adjacent to the project limits (Figure 13 above). Coordination would occur with the managing entities of the wells to determine potential impacts and any avoidance or minimization measures required throughout project development.

³⁰ Section 402 of the Clean Water Act. National Pollutant Discharge Elimination System. 33 USC § 1342. Retrieved from <https://www.epa.gov/cwa-404/clean-water-act-section-402-national-pollutant-discharge-elimination-system>

³¹ IDEM Wellhead Proximity Determinator. Retrieved from <http://www.in.gov/idem/cleanwater/pages/wellhead>

³² IDNR Water Well Viewer. Retrieved from <https://indnr.maps.arcgis.com/apps/webappviewer/index.html?id=4b4f37e1dde744ce865e1be4d157ac93>

Because the project is in Marion County, the project is not located within the St. Joseph Sole Source Aquifer System, which is the only legally designated sole source aquifer in the state. The St. Joseph Sole Source Aquifer System is located within St. Joseph, Elkhart, Lagrange, Kosciusko, and Noble Counties in the northern portion of Indiana. Due to the geographic distance between the project and the St. Joseph Sole Source Aquifer, no impacts are anticipated.

T. Impacts on Ecologically-Sensitive Areas and Endangered Species

Species that are in danger of becoming extinct or are likely to become in danger of extinction within the foreseeable future, along with their designated habitat, are protected under the Endangered Species Act (ESA) of 1973 (16 USC § 1531). Section 7 of the ESA requires consultation with the USFWS if a government project receiving federal funding may affect listed endangered or threatened species or their designated habitat³³.

In accordance with the NEPA environmental process, the USFWS's Information for Planning and Consultation (IPaC) database was used to identify endangered and threatened species and their habitat in or adjacent to the Purple Line corridor. An Official Species List of federally threatened and endangered species that may occur in or adjacent to the Purple Line corridor and/or may be affected by the Purple Line was generated on March 27, 2018. Two bat species, the endangered Indiana bat (*Myotis sodalis*) and the threatened northern long-eared bat (*Myotis septentrionalis*), were listed as potentially occurring in or adjacent to the Purple Line corridor. No critical habitats were identified within or adjacent to the Purple Line corridor (Appendix F). The range of these two listed bats includes the entire state of Indiana. Both species hibernate in caves and mines during the winter months. Suitable habitat for both species includes a wide variety of forested/wooded habitats with trees at least three inches diameter at breast height (dbh) that have exfoliating bark, cracks, crevices, and/or hollows. Typically, trees found in highly-developed urban areas such as street trees and downtown areas are unsuitable habitat for these bats. The bats have also been found to roost in pipes, culverts, and bridges³⁴. A Range-wide Programmatic Consultation for the Indiana bat and northern long-eared bat has been created by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), FTA, and USFWS.

This project follows the instructions given by the USFWS *User's Guide*³⁵ which includes completion of the USFWS Determination Key on the IPaC website. The Determination Key was completed on March 19, 2018, with a determination of "May Affect, Not Likely to Adversely Affect" for either species of bats. The determination key was sent to FTA for verification along with a consistency letter on March 27, 2018. FTA verified the determination on March 27, 2018, and submitted the determination to USFWS for their 14-day calendar review period (Appendix F). No response was received from the USFWS. Any project that receives no response during the review period is considered to be in concurrence with the USFWS guidance. The determination includes applicable avoidance and minimization measures that will be adopted as Environmental Commitments to prevent adverse impacts to these federally listed species.

One large culvert under East 38th Street, located near Arthington Boulevard, will be modified by an approximate 20-foot extension along the south side of East 38th Street as part of the Purple Line. An inspection of the culvert on March 15, 2018, revealed no signs of bat use or observations of bat species. Prior to construction, the structure should be checked again for the presence of bats. If bat species or signs of bats are documented during this inspection, the USFWS will be contacted immediately.

The Purple Line is adjacent to one area of potentially suitable summer bat habitat, the undeveloped forested tract near East 38th Street and Franklin Road. The remaining sparsely wooded areas along the Purple Line corridor are narrow and surrounded by dense urban development and likely provide limited potential habitat. To accommodate installation of a proposed sidewalk north of East 38th Street, some

³³ Department of the Interior. U.S. Fish and Wildlife Service. 1973. Endangered Species Act of 1973 as Amended through the 108th Congress. Washington, D.C. 20240

³⁴ U.S. Fish and Wildlife Service. May 9, 2017. 2017 Range-Wide Indiana Bat Summer Survey Guidelines. <https://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html>

³⁵ U.S. Fish and Wildlife Service. February 2018. Version 5.0. User's Guide for the Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat. <https://www.fws.gov/MIDWEST/endangered/section7/fhwa/pdf/UserGuideRevisedFeb2018.pdf>

brush and understory vegetation removal is required along the edge of the forested area near East 38th Street and Franklin Road. It is anticipated that the vegetation removal will not include any suitable bat habitat, as it is primarily invasive brush along the street. There will be no other impacts to potentially suitable bat habitat as a result of this project.

An early coordination letter was prepared and sent to the USFWS on February 7, 2018. The USFWS early coordination response, dated February 8, 2018, stated that the USFWS has no objections to the Purple Line as currently proposed (Appendix F). The USFWS provided standard recommendations to minimize impacts to threatened and endangered species, which are incorporated into this project as Environmental Commitments. This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act of 1973, as amended. However, should new information arise pertaining to project plans or a revised species list be published, it would be necessary for the Federal agency to reinitiate consultation. Appendix F includes coordination correspondence with USFWS.

An early coordination letter was also sent to the Indiana Department of Natural Resources (IDNR), Division of Fish and Wildlife on February 7, 2018. In their March 8, 2018, response letter, the IDNR indicated that one plant species, Butternut (*Juglans cinerea*), listed on the state watch list, has been documented within 0.5 mile of the northern end of the Purple Line corridor (Appendix F). The Division of Nature Preserves does not anticipate any impacts to this plant species as a result of the project. The IDNR also identified two bird species within 0.5 mile of the Purple Line corridor, the Cerulean Warbler (*Setophaga cerulea*), a state endangered species, and the Peregrine Falcon (*Falco peregrinus*), a state species of special concern. The IDNR further determined that the Purple Line corridor does not contain suitable habitat for Cerulean Warblers, and Peregrine Falcons in the area are conditioned to the city life. Therefore, impacts to these bird species are unlikely as a result of this project. The IDNR identified five species of freshwater mussels documented within 0.5 mile of the Purple Line corridor, two are listed as federally and state endangered and three are listed as state species of special concern. However, as long as standard erosion control measures are implemented, and no work takes place within Fall Creek, the IDNR does not foresee any impacts to the mussel species as a result of this project.

The IDNR, in their early coordination response letter, provided recommendations that address potential impacts to avoid, minimize, and mitigate impacts to fish, wildlife, and botanical resources to the greatest extent possible. With the incorporation of IDNR's recommendations as commitments, the Purple Line would not adversely affect any state or federally threatened or endangered species, or ecologically-sensitive areas.

U. Impacts on Safety and Security

To ensure the safety of all riders, IndyGo partners with the Indianapolis Metropolitan Police Department (IMPD), public safety agencies, and hires its own security force to monitor buses, bus stops, and areas in and around the downtown transit center. All IndyGo buses and the downtown transit center are equipped with audio and video surveillance equipment.

These same safety and security measures would be implemented for this project, both during construction and following the commencement of operations. No impacts to safety or security are anticipated as a result of the Purple Line.

The Purple Line has the potential to enhance the safety and security of the corridor for all pedestrian users. Infrastructure and pedestrian improvements undertaken for the project would contribute to enhanced safety for all roadway users. The BRT stations would include new or restriped crosswalks, enhanced accessibility through sidewalks and ramps, pedestrian signals, and transit signals, where appropriate. Along East 38th Street and a portion of Post Road, new sidewalk would be installed to improve connectivity and safety for pedestrians. Security measures, such as more lighting and new security cameras at proposed station areas, may also contribute to a safer environment.

Along Meridian Street, the dedicated bus-only travel lane may enhance safety for all roadway users by segregating uses and reducing the number of vehicular lanes, which may have a traffic-calming effect.

V. Impacts Caused by Construction

Construction would primarily consist of earth removal and hauling, grading, repaving and restriping of lanes, sidewalk improvements, other infrastructure improvements, and placement of shelters and other BRT station features. Construction would primarily occur during daylight hours, accounting for peak travel hours to minimize traffic delays wherever possible. Some nighttime work may be required where specific work activities would disrupt traffic or create safety concerns.

Construction activities are expected to result in some temporary effects, which would be mitigated as described in the following sections:

Noise and Vibration

Noise and vibration resulting from construction activities would be temporary, short-term, and vary throughout the construction period. In some areas, construction noise impacts can be expected to be greater due to the close proximity of existing housing. However, these impacts are not expected to be substantial given the relatively short-term nature of construction noise at any one location and daytime scheduling of construction activities. Additionally, construction noise will be minimized through maintenance of equipment and exhaust mufflers.³⁶ Construction noise and vibration would cease when construction is complete.

Disruption of Utilities

Throughout the project limits within the right-of-way, existing utilities are present, including underground gas, fiber optic, cable, telephone, electric, water, sanitary sewers, storm sewers, and thermal. In addition, above-ground, electric, telephone, and cable is within the project limits. Utility relocation at station areas is likely to consist of valves, fire hydrants, utility poles, utility boxes, and vaults. Where utility access is required underneath station areas, utility relocations may be required; however, this work would be short-term in duration and could be completed in tandem with other roadway restriping and paving work to minimize impacts on traffic flow during this time.

For potential utility relocation, all utility companies within the Purple Line project limits have been contacted, responses have been received, and their plans are being incorporated into the survey files. In addition, monthly utility coordination meetings have occurred to address relocations.

Disposal of Debris and Spoil

Any material to be disposed of is likely to be the result of site preparation activities, such as demolition materials, vegetation clearance, and general construction debris. There may also be the removal of any soil unsuitable for construction or soil volumes in excess of that needed for facility construction. Responsibility for disposal will be that of the contractor, subject to all applicable regulations and requirements. IndyGo's contractors will follow all applicable laws and regulations concerning the proper disposal of construction debris and spoil.

Access and Distribution of Traffic

During construction, small areas of adjoining parcels at proposed stations may be temporarily impacted by minor ground surface disturbance to accommodate concrete work.

Partial road and sidewalk closures may be needed around station locations to accommodate construction, although these closures will be temporary and short-term. Detailed maintenance of traffic plans would be developed during final design in coordination with DPW to ensure safety of all workers and users during construction and to ensure emergency vehicle access is not impeded.

Water Quality and Runoff

Construction activities may adversely affect water quality through erosion and sedimentation. Erosion is usually greater during construction due to the exposed soil during grading and earth-moving operations,

³⁶ Indianapolis-Marion County, Indiana, Chapter 391 Nuisances, Article III. Noise, Section 391-302 Unlawful Noises. Indianapolis-Marion County, Indiana, Chapter 611 Motor Vehicles, Article I. In General, Section 611-102 Mufflers Required; Standards.

although such is expected to be minimal given the developed condition of the Purple Line corridor and the small size of the platforms to be constructed. Temporary soil disturbance during construction will be addressed by compliance with soil erosion and sedimentation control laws.³⁷

Air Quality and Dust Control

Construction specifications will indicate when dust control is needed and the method of control to be used. Appropriate industry standards will be specified and used. Vegetation and mulching specifications are provided. A reference to these provisions will be a part of the Purple Line's contract documents.

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³⁷ Indiana Storm Water Quality Manual. October 2007. <http://www.in.gov/idem/stormwater/2363.htm>