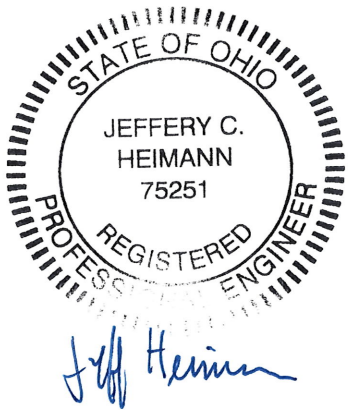
Report for

City of Cincinnati Department of Transportation and Engineering

Central Parkway Preliminary Design Report



Prepared by:

STRAND ASSOCIATES, INC.®
615 Elsinore Place, Suite 320
Cincinnati, OH 45202
www.strand.com

February 2024

STRAND ASSOCIATES®
Excellence in Engineering℠

TABLE OF CONTENTS

Page No.
or Following

SECTION 1–INTRODUCTION

1.01 Introduction 1-1
1.02 Abbreviations and Definitions 1-3

SECTION 2–PURPOSE AND NEED SUMMARY

2.01 Corridor Study 2-1
2.02 Project Purpose and Need Elements 2-3

SECTION 3–ALTERNATIVES CONSIDERED

3.01 Alternatives Considered 3-1

SECTION 4–DESIGN ISSUES

4.01 Background 4-1
4.02 Traffic and Safety Analysis 4-1
4.03 Roadway Design Issues 4-6
4.04 Multimodal Design Considerations 4-7
4.05 Structural Design Issues 4-9
4.06 Maintenance of Traffic 4-10
4.07 ROW Requirements 4-12
4.08 Preliminary Geotechnical Assessment 4-12
4.09 Utility and Railroad Issues 4-12
4.10 Environmental Analysis 4-13
4.11 Aesthetics 4-15
4.12 Cost Estimate 4-15

SECTION 5–PUBLIC INVOLVEMENT

5.01 Public Involvement 5-1

SECTION 6–COMPARISON OF ALTERNATIVES

6.01 Comparison of Alternatives 6-1

SECTION 7–CONCLUSION

7.01 Preferred Alternative 7-1

SECTION 8–NEXT STEPS

8.01 Project Funding 8-1
8.02 Project Schedule 8-1
8.03 Future Design Considerations 8-1

TABLE OF CONTENTS Continued

Page No.
or Following

TABLES

4.01-1	LOS Thresholds	4-1
4.02-1	No-Build Crash Analysis	4-2
4.02-2	Future No-Build LOS Results (AM and PM)	4-3
4.02-3	Future No-Build LOS Results (Pre- and Post-Match)	4-4
4.02-4	Alternative 1 LOS Results (AM and PM Peak)	4-4
4.02-5	Alternative 1 LOS Results (Pre-and Post-Match)	4-5
4.02-6	Alternative 2 LOS Results (AM and PM Peak)	4-5
4.02-7	Alternative 3 LOS Results (Pre- and Post-Match)	4-6
4.02-8	Alternative 3 LOS Results (Pre- and Post-Match)	4-6
4.02-9	Alternative 3 LOS Results (AM and PM Peak)	4-6
6.01-1	Central Parkway Comparison of Alternatives Matrix	6-1

FIGURES

1.01-1	Existing Central Parkway Corridor	1-1
1.01-2	Central Parkway Improvement and Objectives	1-2
2.01-1	Miami-Erie Canal	2-1
2.01-2	Subway Tunnel Construction in the 1920s and Current Day Use for Utilities	2-2
2.02-1	Central Parkway Corridor	2-1
4.02-1	Heat Map of Existing Crash Data	4-3
7.01-1	Central Parkway Proposed versus Existing Cross Section	7-2
7.01-2	Central Parkway at Liberty Street	7-3
7.01-3	Central Parkway at TQL Stadium Steps and Plaza	7-3
7.01-4	Central Parkway at Ezzard Charles Drive and Music Hall	7-4
7.01-5	Central Parkway at Grant Street	7-4

APPENDICES

APPENDIX A–CENTRAL PARKWAY ALTERNATIVE PLAN VIEW SCHEMATICS
APPENDIX B–PRELIMINARY TYPICAL SECTIONS
APPENDIX C–SUBWAY VENT SHAFT LOCATIONS
APPENDIX D–EXISTING UTILITY CROSS SECTIONS
APPENDIX E–PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST
APPENDIX F–PUBLIC ENGAGEMENT MATERIALS
APPENDIX G–ALTERNATIVES COMPARISON MATRIX
APPENDIX H–PREFERRED ALTERNATIVE PLAN VIEW SCHEMATIC

SECTION 2
PURPOSE AND NEED SUMMARY

2.01 CORRIDOR HISTORY

Cincinnati's Central Parkway is connected to a legacy of regional and municipal transportation, of community separation, and of distinct cultural heritages within its surrounding communities. Understanding the modern transportation needs of this historic facility requires familiarity with how the corridor evolved from Cincinnati's earliest days and the impact it had and continues to have on the neighborhoods it abuts.

The Miami-Erie Canal was one of the first documented transportation facilities on the alignment of current-day Central Parkway. The canal connected Toledo on Lake Erie with Cincinnati on the Ohio River, and included the cities of Defiance, Piqua, and Dayton along the route. Construction on the Cincinnati-to-Dayton segment began in 1825 and opened in 1828, creating a 40-foot-wide canal with 10-foot-wide towpaths on either side. The opening of the canal facilitated the transfer of goods and people to and from the city and helped establish Cincinnati as an important port along the Ohio River. Following the rise of the railroad industry in the 1850s, the canal's significance diminished as a major transportation route, and it was finally abandoned in 1877. However, the water was not drained until 1920 when the corridor was repurposed for the construction of a rapid transit loop.

Source: City of Cincinnati DOTE

Figure 2.01-1 Miami-Erie Canal

The Cincinnati Subway was conceived to fit within the canal trench and to be topped by a grand parkway-style boulevard for vehicular traffic and pedestrian enjoyment, creating a multimodal facility. Construction of the subway was not completed before the 1929 stock market crash. The project was abandoned when it was no longer economically feasible, then motorized vehicle traffic supplanted mass-transit as a primary mode of transportation. Central Parkway was constructed on top of much of the old canal alignment and was dedicated in 1928. Some subway infrastructure remains under a portion of Central Parkway today.

Source: City of Cincinnati DOTE

Figure 2.01-2 Subway Tunnel Construction in the 1920s and Current Day Use for Utilities

The Miami-Erie Canal created a boundary between the original Cincinnati center and the less desirable neighborhood along the northern boundary of the original Cincinnati charter. German immigrants who came to Cincinnati in the 1850s began to settle in this northern area, which was eventually called OTR, as a derogatory reference that connected the unsanitary canal with the immigrants' homeland. Regardless of this unsavory connotation, OTR became the home to Cincinnati's first convention center, the Music Hall (in 1878) funded in part by Reuben R. Springer, and the remainder by community members. The Music Hall was located facing Elm Street, with the back abutting the canal. The canal also created a boundary between OTR and the West End neighborhood, which was situated in the bottoms along the confluence of Mill Creek on the west and the Ohio River to the south, with Clifton Heights to the north. The West End became the home to industrial land uses and the largest African American population in Cincinnati by 1925. The creation of the grand boulevard-style Central Parkway reinforced this boundary between the German and African American communities, turning into a motorized vehicle conduit between the auto-oriented suburban developments to the north and west, and the Downtown Central Business District.

Entering the latter half of the 20th century, the working-class OTR neighborhood remained mostly intact, even as its demographics changed. OTR's founding families moved to the suburbs and left behind a struggling neighborhood. While the community began to diversify and experience economic decline, numerous historic buildings remained including the Music Hall with the 2,500 seat Springer Auditorium in its original central portion; the Music Hall was designated a National Historic Landmark in 1975. The OTR Historic District was listed on the National Register of Historic Places in 1983 and is recognized as one of the largest intact historic districts in the United States (U.S.). During the same period, the West End began to experience the impact of New Deal Public Works Administration projects, the loss of industrialization, and urban renewal to remove the largest, densest slum in Cincinnati. In 1950, the first

housing projects began to tear down the historic housing stock and residents began relocating to nearby OTR or historically African American neighborhoods in other parts of Cincinnati. Finally, the construction of Interstate 75 (I-75) along the Mill Creek Valley razed much of the original West End. By 1980, the West End was home to six housing projects, including the largest projects in Cincinnati. Much of the industrial land area was gone, and economic opportunities shifted away from the neighborhood.

Transitioning into the 21st century, Cincinnati is working to address deficiencies in both neighborhoods. While Central Parkway is still a Principle Arterial roadway for Cincinnati, regional vehicular connectivity is supported by I-75 parallel to Central Parkway one-half mile to the west. Three planning studies for OTR (completed in 2001, 2013, and 2021), identified opportunities including transportation issues to support historic industries and economic growth in the neighborhood. Four planning studies for the West End (completed in 2001, 2004, 2016, and 2019), primarily focus on housing concerns and supporting a community that has been negatively impacted by previous actions. The studies for both neighborhoods emphasized the need for pedestrian-oriented street networks and pedestrian connectivity between neighborhoods. A catalyst for this effort is the recent construction of a Major League Soccer stadium complex on Central Parkway between Ezzard Charles Drive and Liberty Street. This 26,000-seat stadium further changes the transportation profile for the section of Central Parkway between Plum and Liberty Streets and requires a revamped look at how to support the transportation needs of the residents of and visitors to the adjacent communities.

2.02 PROJECT PURPOSE AND NEED ELEMENTS

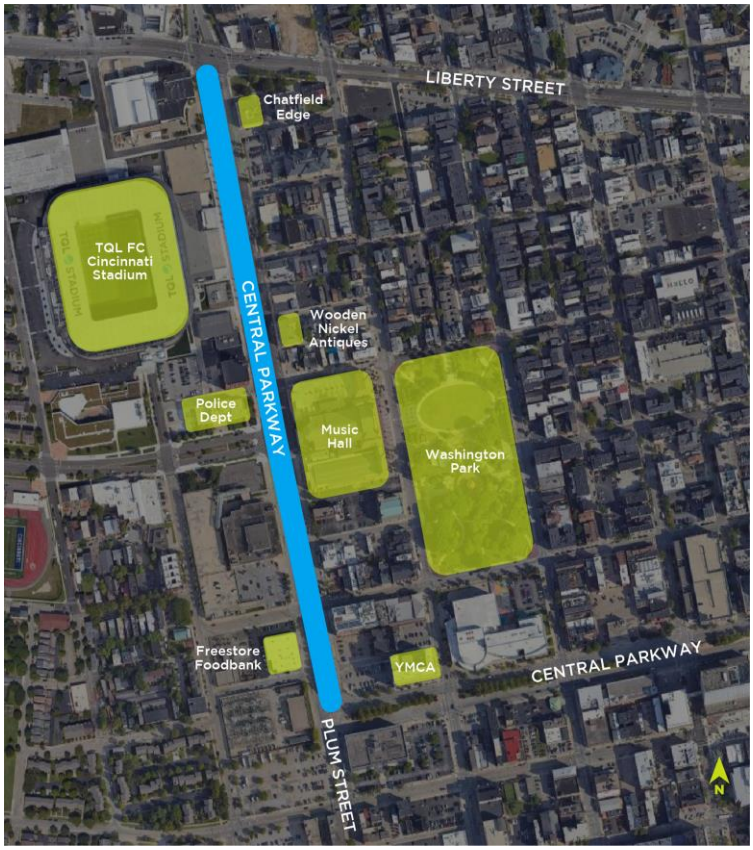
The purpose of this project is to provide pedestrian-oriented connectivity between the OTR and West End neighborhoods that supports the existing land uses and proposed developments, that incorporates Complete Streets concepts focused on a variety of transportation modes (including active transportation), and that is sensitive to the historic cultural identities and landmarks within the neighborhoods.

Central Parkway between Plum and Liberty Streets is an Urban Principal Arterial consisting of two northbound lanes and three southbound lanes separated by a curbed grass median that varies in width from 10 feet to 34 feet. The Central Parkway Cycle Track consists of dedicated bike lanes on both sides of the street, buffered from the southbound travel lane by a 3-foot-wide painted island and from the northbound parking lane by a 5-foot-wide painted island. Dedicated turn lanes are provided at the 12th Street, Ezzard Charles Drive, 14th Street, and Liberty Street intersections. The total curb-to-curb roadway width is approximately 120 feet. In 2001, daily vehicular traffic on this section was just under 15,550 vehicles per day (vpd). In 2018, traffic had decreased to 12,000 vpd and in 2021 it was 7,300 vpd. The Central Parkway Cycle Track opened in 2014 as part of the Cincinnati Bicycle Transportation Plan adopted in 2010.

Primary parking options in the vicinity include the Town Center Parking Garage on the west side of Central Parkway between West 12th Street and Ezzard Charles Drive behind and below the WVXU/WCET building, the parking garage under Washington Park between Elm and Race Streets, various surface lots in neighboring blocks, and on-street parking along portions of northbound Central Parkway. The on-street parking is poorly defined because pavement markings do not seem to be adequate for denoting where parking is and is not allowed, and there are sight distance issues at driveways because of the cycle track being placed between the parking spaces and the curb. Transit

service to the area is provided by the Cincinnati Bell streetcar route on Elm and Race Streets, and Cincinnati Metro bus routes on Central Parkway, Ezzard Charles Drive, Elm Street, Race Street, and Liberty Street. Pedestrian facilities include 15- to 25-foot-wide sidewalks that typically abut the buildings in the study area, Americans with Disabilities Act-compliant curb ramps, marked crosswalks at signalized intersections, pedestrian signal heads, and call buttons for crossing Central Parkway. As recently as 2016, a pedestrian bridge over Central Parkway connected the second floor of the Music Hall with an elevated pedestrian walkway access to the Town Center Parking Garage. The concrete piers for this bridge still stand in the sidewalk along the rear access to the Music Hall and in the grass median. Field crews observed pedestrians maintaining this travel pattern without the bridge by crossing the street midblock instead of at the signalized crossing 120 feet to the north.

The study area contains several notable pedestrian generators, with several more in development. Foremost is the Music Hall, located between Grant Street and West 14th Street on the east side of Central Parkway. Ezzard Charles Drive terminates into Central Parkway at the Music Hall's loading bay just north of the Stage Door. The Music Hall's front façade faces Elm Street and Washington Park, but many patrons use parking facilities along Central Parkway when attending events. The Music Hall's Springer Auditorium is home to the Cincinnati Symphonic Orchestra, Pops Orchestra, Cincinnati Ballet, Cincinnati Opera, May Festival Chorus, and most Broadway Series national touring performances that come to the city. Springer Auditorium is a 2,500-seat traditional shoebox-style concert hall comparable to Symphony Hall in Boston and Carnegie Hall in New York City. Other venues inside the Music Hall include the Ballroom (capable of hosting 200 to 1,400 people) and Corbett Tower (capable of hosting 150 to 400 people) for special events. Other arts venues in the study area include Memorial Hall, the School for Creative and Performing Arts, the Otto M. Budig Theater (home of the Cincinnati Shakespeare Company), and numerous art galleries.



Source: https://www.centralparkwaycincinnati.org/

Figure 2.02-1 Central Parkway Corridor

Washington Park is another historic pedestrian generator in the study area. Built in the 1860s (on five acres bounded by Elm Street, Race Street, West 14th Street, and West 12th Street), the park predated the Music Hall by more than 10 years. It originally contained bandstands, walkways, fountains, a pond, and wading and swimming pools. It endured years of neglect that started during the Great Depression and continued through the end of the 20th century. In 2008, the park was

expanded to 8 acres and completely redesigned. The wading and swimming pool was removed, and new additions include a children's playground, interactive water park, dog park, and The Porch concessions area. Bike racks, play equipment, Smart Cinci Wi-Fi, and restrooms are available free for public use. A 450-space parking garage was built below the north end of the park. The Porch hosts a calendar of community events, such as the weekly Workout on the Green, Jazz at the Park, Trivia Night, and Reggae Unplugged; monthly Flea Markets and Yappy Hours; FC Cincinnati prematch events; and other community-related activities.

TQL Stadium (home to FC Cincinnati), is located on a complex bounded by 14th Street, Liberty Street, Central Parkway, and John Street, one block north of the Music Hall on the west side of Central Parkway. One of the largest soccer-specific stadiums in the U.S., it seats 26,000 people. There are minimal parking facilities on-site. Instead, the facility relies on neighborhood parking amenities throughout the study area. TQL Stadium's grand concourse stairs open onto Central Parkway and the roadway is closed to through traffic between Ezzard Charles Drive and Liberty Street on gamedays to support pedestrian traffic.

Planned future development in the study area includes a large redevelopment that is focused on pedestrian-oriented commercial land use at the WVXU/WCET complex south of Ezzard Charles Drive on the west side of Central Parkway; a best-in-class mixed-use development north of the stadium to Liberty Street, and a proposed boutique hotel across the street from TQL Stadium and north of the Music Hall.

Seven planning studies for both OTR and the West End (dating from 2001 to 2019) focused on economic and residential needs of the area. All the studies included discussion of how an inadequate pedestrian environment negatively affects these concerns. OTR Planning Studies include the 2001 OTR Comprehensive Plan, the 2013 Brewery District Master Plan, and the 2013 Mohawk Area Plan. These plans were initiated during different stages of OTR's rejuvenation, to address challenges (such as disinvestment, poverty, crime, and the perception of an unsafe environment), lack of community cohesion because of racial and economic diversity, and to support investment and business development within the neighborhood. Each plan identified goals of supporting pedestrian-oriented streetscapes, creating multimodal corridors, and "greenways to guide pedestrians"[1] to meet community objectives. The streets should serve as "the connective tissue for the places within the neighborhood." [2] The scale and auto-focused role of Central Parkway was referenced as an obstacle to be overcome with the implementation of each plan. Central Parkway was repeatedly referenced as a neighborhood boundary comprised of vast stretches of asphalt, and a road that cannot support businesses that require walkable neighborhoods.

West End Planning Studies include the 2001 West End Urban Design Plan, the 2004 West End Comprehensive Plan, the 2016 West End Speaks, and the 2019 Cincinnati West End Housing Study. Taken together, the four planning studies document an early 21st-century pattern of an urban renewal project intended to address late 20th-century blight and housing inequity that resulted in resident displacement, onset of gentrification, and a mismatch in incomes compared to price-appropriate housing. A common theme in all the West End Planning Studies is the need for pedestrian-oriented streets to support economic growth and quality of life for the residents. The West End Speaks Future Land Use

[1] 2001 OTR Comprehensive Plan, pg. 134
[2] 2013 Brewery District Master Plan, pg. 56

Map shows Pedestrian Mixed Use for the parcels along Central Parkway between West 12th Street and Liberty Street, defined as “smaller scale buildings that are close to the sidewalk and engage the street, with a pedestrian-oriented mix of ground floor commercial or office uses, sometimes with residential or office above.”[3]

Residents and community leaders in both neighborhoods have clearly articulated the need and desire for pedestrian-oriented neighborhood connectivity along the Central Parkway corridor. The purpose of the project is to find a solution that meets the stated goals of nearly 25 years of planning activities.

[3] 2016 West End Speaks Plan, pg. 31

SECTION 3
ALTERNATIVES CONSIDERED

3.01 ALTERNATIVES CONSIDERED

In addition to a No-Build Alternative, three alternatives were considered for the Central Parkway corridor improvements between Plum and Liberty Streets to meet the Cincinnati's goals and objectives for this corridor. Each alternative uses the same general alignment as the existing corridor from Plum Street north to Liberty Street, with variations to the number of lanes and placement of the curb lines. All alternatives provide enhanced facilities to promote safety for all users and an overall enhancement to the aesthetics of the corridor. Appendix X includes a plan view schematic for each of the three alternatives outlined in the following.

A. No-Build

The No-Build alternative does not include any new construction or changes to the lane configurations, the on-street bike lane, or pedestrian crossings throughout the corridor.

B. Alternative 1–Three-Lane Section

Alternative 1 significantly reduces the roadway width from two, three, or four lanes in some locations to just one lane the entire length of the corridor from Liberty Street to Plum Street. This alternative provides a raised separated bike line in each direction, a very wide pedestrian zone on each side of the roadway, and enhanced pedestrian crossings at key locations in the corridor.

C. Alternative 2–Five-Lane Section

Alternative 2 reduces the roadway width from three or four lanes in each direction south of Ezzard Charles Drive and maintains two lanes in each direction north of Ezzard Charles Drive to Liberty Street. As with Alternative 1, this alternative provides a raised separated bike line in each direction, a wide pedestrian zone on each side of the roadway and enhanced pedestrian crossings at key locations in the corridor.

D. Alternative 3–Hybrid Three and Five-Lane Section

Alternative 3 is a hybrid option of Alternatives 1 and 2. Alternative 3 provides one lane of traffic in each direction from Liberty Street to the Ezzard Charles Drive intersection and two lanes of traffic in each direction from Ezzard Charles Drive to Plum Street. As with Alternatives 1 and 2, this alternative also provides a raised separated bike line in each direction, a wide pedestrian zone on each side of the roadway and enhanced pedestrian crossings at key locations in the corridor.

SECTION 4
DESIGN ISSUES

4.01 BACKGROUND

As previously stated, three alternatives and the No-Build Alternative were considered for the Central Parkway corridor improvements between Plum and Liberty Streets. Each alternative uses the alignment of the existing corridor with variations to the number of lanes and placement of the curb lines. The following sections highlight key design considerations that were evaluated for each alternative.

In accordance with Ohio Department of Transportation (ODOT) standards, Level of Service (LOS) was the metric used to evaluate each intersection. According to ODOT standards, the acceptable LOS for an intersection is LOS D or better in the design forecast year. LOS is determined using the following methods:

A. For side-street, stop-controlled intersections, the highest delay for any yielding movement (calculated using the Highway Capacity Manual [HCM] methodology) is used to also report the overall intersection operations. This is because the average intersection delay for unsignalized intersections tends to be skewed, as through movements on the free-flowing mainline receive zero delay and would otherwise be factored into and lower the overall average delay.

B. For all-way, stop-controlled and signalized intersections, the overall intersection operations are reported using HCM methodology (weighting each movement based on its volume compared to the total intersection volume to calculate an average delay).

Table 4.01-1 shows the standard LOS thresholds:

LOS	Unsignalized Intersection (average delay, seconds)	Signalized Intersection (average delay, seconds)
A	<10	<10
B	10 to 15	10 to 20
C	>15 to 25	>20 to 35
D	>25 to 35	>35 to 55
E	>35 to 50	>55 to 80
F	>50	>80

Table 4.01-1 LOS Thresholds

4.02 TRAFFIC AND SAFETY ANALYSIS

The following summarizes the traffic and safety analysis completed for the four alternatives.

A. No-Build Alternative

1. Crash Analysis

A crash analysis of the existing corridor in the no-build condition was completed to understand the current trends observed within the corridor. Crash data was collected for the previous 5 years (2018 through 2022). Crash data was collected, and results were analyzed using the ODOT Crash Analysis Module tool. Rear-end crashes were the most common (32 percent of crashes), followed closely by sideswipe crashes (30 percent of crashes). A heat map was created and is shown in Figure 4.02-1.

Total Crashes Crash Type	Injury Level (2) Serious Injury Suspected	(3) Minor Injury Suspected	(4) Injury Possible	(5) PDO/No Injury	Grand Total
Rear End	0	2	2	32	36
Sideswipe - Passing	0	3	2	29	34
Angle	0	4	1	11	16
Left Turn	1	0	1	8	10
Pedestrian	2	1	0	1	4
Fixed Object	0	0	1	2	3
Pedalcycles	1	2	0	0	3
Parked Vehicle	0	0	0	3	3
Head On	0	0	0	2	2
Right Turn	0	0	0	2	2
Grand Total	4	12	7	90	113

Table 4.02-1 No-Build Crash Analysis

Figure 4.02-1 Heat Map of Existing Crash Data

As expected, the majority of the crashes within the corridor occur at intersections, with a high number of rear-end crashes. There are also a high number of sideswipe crashes, likely caused by vehicles attempting lane changes throughout. Countermeasures to address these crashes include reduction in pavement width to promote slower speeds and reduce sideswipe crashes. Curb extensions could also be used to reduce the potential for crashes with parked vehicles along the corridor. Providing raised pedestrian crossings should also reduce the potential for pedestrian-related incidents.

Furthermore, upgrades to signage and vehicular signal head backplates should promote higher visibility of intersections, helping to alleviate rear-end crashes throughout.

2. Current Traffic Conditions

Existing traffic volumes were collected by The Kleingers Group in May of 2023. This included the collection of turning movement counts at each of the major intersections along the corridor: Plum Street, West 12th Street, Ezzard Charles Drive, West 14th Street, and Liberty Street. AM and PM peak hour traffic volumes were established and used in traffic models.

Future redevelopment will occur along the corridor, including the West End Mixed-Use development at the southwest corner of the Liberty Street intersection and potential redevelopment of the Town Center Garage site, just south of Ezzard Charles Drive. Additionally, a background growth rate of 1.0 percent was used based upon historic growth trends. All these things were considered when determining opening day traffic volumes (2026) and design forecast volumes (2046).

3. Operational Analysis

A traffic capacity analysis was also completed for the existing corridor using Synchro11 Software. Recent traffic count data was input into a Synchro11 model to evaluate the intersections for their operational capacity.

The opening day year was established as 2026, with a design forecast year of 2046. Anticipated future development traffic was included in the forecasted traffic volumes. The following provides a breakdown of the intersection LOS results within the corridor assuming no changes in the current corridor configuration:

Intersection	AM Peak		PM Peak	
	2026	2046	2026	2046
Plum Street	C	C	C	C
West 12th Street	B	B	B	B
Ezzard Charles Drive	C	C	C	C
West 14th Street	A	A	A	A
Liberty Street	D	D	D	D

Table 4.02-2 Future No-Build LOS Results (AM and PM)

In addition to the typical AM and PM peak hours, the corridor was also evaluated for Pre- and Post-Match conditions of the adjacent TQL soccer stadium.

Intersection	Pre-Match		Post-Match	
	2026	2046	2026	2046
Plum Street	C	C	B	C
West 12th Street	B	B	A	A
Ezzard Charles Drive	C	C	C	C
West 14th Street	A	A	C	C
Liberty Street	D	E	C	C

Table 4.02-3 Future No-Build LOS Results (Pre- and Post-Match)

Traffic patterns during FC Cincinnati games are significantly different because southbound lanes are closed from Liberty Street to Ezzard Charles Drive and only open to local traffic for northbound lanes. With various parking garages located within the vicinity of the stadium, pedestrian volume is also much higher during FC Cincinnati games and events, providing another reason for increased safety and mobility throughout the corridor with future improvements.

4. No-Build Results Summary

The No-Build alternative results show that the corridor currently meets operational and capacity standards for all the intersections within the project limits. Additionally, the crash history that has been documented is consistent with statewide average crash histories for similar types of corridors. However, the corridor does have a history of excessive speeding that the surrounding communities would like addressed as part of any improvements.

The alternatives for the project enhancements will aim to provide a similar operational condition for the corridor.

B. Alternative 1: Three-Lane Section

This alternative reduces the through lanes to one lane in each direction. However, additional left-turn-only lanes will still be used. Existing signal timings have been adjusted, and signal coordination introduced to improve corridor operations.

Intersection	AM Peak		PM Peak	
	2026	2046	2026	2046
Plum Street	C	C	C	C
West 12th Street	B	B	B	C
Ezzard Charles Drive	B	B	B	B
West 14th Street	A	A	B	B
Liberty Street	D	D	D	D

Table 4.02-4 Alternative 1 LOS Results (AM and PM Peak)

Intersection	Pre-Match		Post-Match	
	2026	2046	2026	2046
Plum Street	C	C	B	B
West 12th Street	B	B	A	A
Ezzard Charles Drive	F	F	F	F
West 14th Street	A	A	C	C
Liberty Street	D	D	C	C

Table 4.02-5 Alternative 1 LOS Results (Pre-and Post-Match)

The results indicate that Alternative-1 provides an acceptable LOS, except for the Ezzard Charles Drive intersection. This alternative provides an intersection LOS F during any of the FCC match conditions, and the eastbound movement has a LOS F because only one eastbound right-turn lane can be provided if only one southbound receiving lane on Central Parkway is provided. As a result, this option is not considered feasible. It should be noted that DOTE anticipates working with the West End community to evaluate the potential for Central Avenue to be converted from one way northbound to two-way traffic between Ezzard Charles Drive and Court Street. If this change is made, the operations at the Central Parkway and Ezzard Charles Drive intersection would be impacted.

C. Alternative 2: Five-Lane Section

This alternative provides two lanes in each direction for the length of the project corridor, with left-turn-only lanes at applicable intersections.

The results indicate that Alternative 2 provides an acceptable LOS at all intersections. The LOS at the Liberty Street intersection matches the No-Build Alternative.

Intersection	AM Peak		PM Peak	
	2026	2046	2026	2046
Plum Street	C	C	C	C
West 12th Street	A	B	A	B
Ezzard Charles Drive	B	B	B	B
West 14th Street	C	C	C	C
Liberty Street	D	D	D	D

Table 4.02-6 Alternative 2 LOS Results (AM and PM Peak)

D. Alternative 3: Hybrid Three and Five-Lane Section

This alternative is a combination of Alternatives 1 and 2. For the Hybrid Option there is one lane in each direction north of Ezzard Charles Drive and two lanes in each direction south of Ezzard Charles Drive.

Intersection	Pre-Match		Post-Match	
	2026	2046	2026	2046
Plum Street	C	C	B	B
West 12th Street	B	B	A	A
Ezzard Charles Drive	C	C	A	A
West 14th Street	A	A	C	C
Liberty Street	D	D	C	C

Table 4.02-7 Alternative 3 LOS Results (Pre- and Post-Match)

Intersection	Pre-Match		Post-Match	
	2026	2046	2026	2046
Plum Street	C	C	B	B
West 12th Street	B	B	A	A
Ezzard Charles Drive	C	C	A	A
West 14th Street	A	A	C	C
Liberty Street	D	D	C	C

Table 4.02-8 Alternative 3 LOS Results (Pre- and Post-Match)

Intersection	AM PEAK		PM PEAK	
	2026	2046	2026	2046
Plum Street	C	C	C	C
West 12th Street	A	B	A	B
Ezzard Charles Drive	B	B	B	B
West 14th Street	A	A	B	B
Liberty Street	D	D	D	E

Table 4.02-9 Alternative 3 LOS Results (AM and PM Peak)

The results indicate that Alternative 3 provides an acceptable LOS throughout the corridor.

4.03 ROADWAY DESIGN ISSUES

A. Existing Conditions (No-Build Alternative)

Central Parkway is a principal arterial within urban Cincinnati. The existing road has a posted speed limit of 35 miles per hour (mph) with three to four lanes of traffic in each direction, on-street parking, and on-street bike lanes. The existing pavement width is more than 120 feet wide, separated by a planted median. At intersections, the median width tapers to accommodate turn lanes. Curb and sidewalk run along each side of the road.

Following a sharp curve at Plum Street, the alignment runs north on a consistent bearing for 3,000 feet through Liberty Street. The roadway is centered within the right-of-way (ROW), with businesses and parking lots lining each side. There are 14 driveways within the project area.

B. Roadway Design Considerations

With each alternative, this project will reduce the number of travel lanes and pavement width throughout the corridor and expand the pedestrian space on each side of the roadway, which is consistent with the project's goals and objectives. The existing alignment of the road will be maintained, and a median will be provided in all considered alternatives. In addition, Central Parkway is U.S. Route 27, which is a Federal Aid Primary Route and part of the National Truck Network. As such, a minimum of one, 12-foot lane must be provided throughout the corridor. This was prioritized in the planning of each alternative.

Access to driveways and on-street parking will be maintained to the extent practical with this project. The design speed for this project is 25 mph, which is consistent with streets in Cincinnati's Central Business District and appropriate for an urban roadway of this character. New 25 mph speed limit signs will be placed within the corridor with this project.

Special attention will be given to project termini points at Plum and at Liberty Streets. The intersection of Plum Street will not be modified as part of this project, so the design of Central Parkway in this area must connect to the existing lane configuration. Central Parkway has two northbound lanes and three southbound lanes at this intersection. In addition, as noted in the capacity analysis section, two northbound lanes and two southbound lanes are recommended on Central Parkway at the south leg of the intersection with Ezzard Charles Drive. This intersection is approximately 900 feet north of the intersection with Plum Street, so introducing lane tapers or changes to the curb line of Central Parkway between intersections is not feasible. Therefore, a two-lane alternative, such as Alternative 2 or Alternative 3, would be more practical for this section of the corridor.

The intersection of Liberty Street at the north end of the project poses fewer design challenges. The design of Central Parkway will be carried through the intersection, so transitioning from proposed to existing pavement widths will occur north of Liberty Street. Improvements will end approximately 400 feet north of the intersection for all alternatives; therefore, the Liberty Street intersection is not a deciding factor for selecting a preferred alternative.

Preliminary typical sections and plan sheets were developed for the hybrid option, Alternative 3, and are provided in Appendix B.

4.04 MULTIMODAL DESIGN CONSIDERATIONS

Maximizing space behind the proposed curb line to provide equity for all users is a primary design objective of this project. All alternatives satisfy this objective, while also meeting the principles set forth in Cincinnati's Complete Streets policy. This policy emphasizes accessibility, connectivity, and safety for all modes of transportation including pedestrians, bicyclists, and transit users. The increased space behind the curb lines will be used for enhanced bicycle and pedestrian facilities, vegetation and trees, and an amenity zone.

A. Pedestrian Facilities

The existing 12-foot sidewalk, measured from the existing curb to the building face, is too narrow to serve as both a pedestrian walkway and amenity zone, and is therefore inadequate for the desired vision of the corridor. A wider frontage zone will be proposed as part of all alternatives, to address the purpose and need of the project, increase comfort for pedestrians, and expand the corridor's capacity to accommodate events with large pedestrian volumes. All alternatives propose a minimum of 27 feet of mixed-use frontage along the building face, which will include a minimum of 10-foot pedestrian accessible routes on both sides of the street. This walkway area will be separated from vehicular traffic by parking lanes, planting strips, and raised bicycle lanes.

Pedestrian crossings of Central Parkway will be significantly improved with this project. All alternatives propose fewer travel lanes and, therefore, narrower pavement widths and shorter crossing distances for pedestrians. Curb bump-outs will be provided at intersections to further decrease crossing distances, while also protecting parking and loading zones at the edge of the travel lanes. Refuge areas will be provided in the roadway median to allow for phased crossings of Central Parkway. High-visibility pavement markings and extra-wide crosswalks will be implemented at high-use crossings, such as Ezzard Charles Drive and 14th Street. Two midblock crossings will be included with this project near Grant Street and 15th Street. These locations, for all alternatives, will feature raised crosswalks that will help decrease speeds and enhance visibility of pedestrians.

All alternatives improve pedestrian facilities; however, Alternatives 1 and 3 provide more space behind the proposed curb line, offering larger pedestrian and amenity zones and reduced crossing distances, as compared to Alternative 2.

B. Bicycle Facilities

The City of Cincinnati's Bicycle Transportation Plan (2010) identifies and implements a planned bike network within Cincinnati. In accordance with this plan, Central Parkway's current facilities include protected bicycle lanes, which are located on the outside edge of pavement on each side of the road and shielded from vehicular traffic by a buffer zone. The buffer zone includes a parking lane and physical barriers such as concrete parking blocks and delineator posts.

The protected bicycle lanes will be relocated as part of the proposed improvements and placed on grade with the sidewalk. The raised location will give an added level of protection for bicyclists from vehicular traffic. On-street parking lanes and a 5-foot-wide landscaping strip will further separate the bikes and motor vehicles. Protected bicycle lanes will be included for the length of the corridor for all alternatives and connect to existing on-street facilities outside the project area.

C. Other Considerations

Coordination with the Southwest Ohio Regional Transit Authority (SORTA) which operates, Metro, southwest Ohio's fixed bus service, occurred during the development of alternatives and will continue throughout detailed design. Metro indicated that there are four major and two minor stop locations that should be maintained within the project corridor. Metro's preference is for stops to occur within the travel lane, as pull-off lanes are difficult for the bus drivers and are rarely used. Metro requested that stop

locations be placed on the far side of intersections when possible and that all major stop locations have space for amenities such as benches, shelters, and lighting. The floating bus stops north of Liberty Street are expected to be reconstructed as part of the design of that intersection. Final stop locations in the corridor and installation of amenities will be coordinated throughout design.

Stations for Cincinnati's bikeshare system, Red Bike, will also be incorporated as design progresses.

4.05 STRUCTURAL DESIGN ISSUES

As previously mentioned, there is an abandoned subway tunnel underneath this portion of Central Parkway. Stantec completed a preliminary review of the subway location, along with geotechnical considerations for the area. The subway was constructed within what was previously a canal. All alternatives will require consideration of the subway and canal infrastructure below Central Parkway. The preparation and compaction applied to the soil underlying the subway floor is unknown. Because of this, settlement of the soils below the subway tunnel is a concern if significant increases in the loading above the tunnel are made. Stantec recommends that the following precautions be taken for design above the subway for any alternative:

1. Tree or shrub species with deep-seated roots (gums, white oaks, walnuts, hickories, and others) should be avoided. Tree or shrub species with shallow roots (oaks, maples, willows, birches, rhododendrons, hydrangeas, azaleas, and others) are recommended for planting.

2. Water features (like fountains) that could leak and cause saturation of soil above the subway are not recommended. Rain gardens are not recommended above the subway tunnel. A closed system should be used to collect roadway drainage.

3. Poles typically require embedment of approximately one-half of the distance above ground. The height of poles will be limited by distance between proposed grade and the top of the subway roof.

4. The weight and movement arm of traffic signals and lighting poles should be considered. Drilled shafts required for mast arm support may not be able to be taken deep enough to satisfy equilibrium requirements because of the presence of the subway.

5. Lightweight fill could be considered to increase the ground surface elevation above the subway without increasing the loading. Granular lightweight fill includes wood fiber, blast furnace slag, boiler slag, fly ash, shredded tires, foam glass gravel (made from recycled glass) and expanded shale, clay, and slate. Nongranular lightweight fill includes geofoam and cellular concrete. Lightweight fill used as backfill behind a retaining wall can greatly reduce the bearing pressures of wall footings.

6. Geogrid could be considered to increase traffic loading above the tunnel. Geogrid used underneath pavement aggregate base material will effectively spread the loading from vehicle tires, causing a reduction in pressure to the top of the tunnel.

7. Monitoring of the tunnel during construction could be considered to detect movement or excessive vibration caused by construction activities. Construction methods that cause vibration should be avoided. Vibration from construction activities could potentially cause settlement of soil below the subway tunnel.

8. Available geotechnical records from owners adjacent to the subway should be requested from Cincinnati in order to proceed with preliminary recommendations, analyses, and evaluations. Significant increases in loading above the tunnel could require structural analyses of the tunnel roof as well as settlement evaluations of the soil below the tunnel using assumed conservative consolidation parameters.

In addition to the previously listed considerations, there are existing vent shafts along the subway alignment to provide ventilation for the tunnels. Along Central Parkway, these shafts are currently located within the median or outside of the travel lanes. DOTE prefers that these shafts are not located in the travel lanes. Over the years, some of the original shafts have been abandoned and the covers were modified from open grates to more sturdy perforated plated covers. As a result (especially with added irrigation systems), Cincinnati has found there is a lot more moisture in some portions of the tunnel, which can be a long-term issue.

Options to avoid having the existing shafts located within the travel lanes include abandonment, which is not good for ventilation or modifications to extend the shafts and relocate the vents (which can be very expensive). Depending on the locations of the shafts impacted by the selected alternative for the Central Parkway improvements, a combination of abandoning some and relocating others can be considered.

After review of the three options, Alternatives 1 and 3 create less implications for the existing vent shaft locations.

1. Alternative 1–There are two shafts that will be impacted with the proposed roadway changes.

2. Alternative 2–There are at least four, and possibly five, vent shafts in the northern portion of the corridor that would be impacted with the proposed roadway changes.

3. Alternative 3–There are two shafts that will be impacted with the proposed roadway changes.

Please see Appendix C for a map showing the location of the vent shaft along the current project corridor.

4.06 MAINTENANCE OF TRAFFIC (MOT)

Maintaining two-way traffic to the extent possible during the construction of the Central Parkway improvements is desired regardless of the selected alternative. This can be achieved in all three proposed roadway improvement alternatives with slight variations based on the number of travel lanes. In general, the same construction sequencing and MOT scheme would be implemented for each of the alternatives as described in the following.

A. Phase 1

Both directions of traffic will be shifted to the west side of the roadway from Plum Street to Liberty Street, using much of the existing pavement that will be removed in future construction phases. The traffic should be shifted to the west side of the Central Parkway, south of the Liberty Street intersection to minimize disruption and confusion at the higher volume crossing. Signal timing and signal head placement will need to be modified at all signalized intersections to accommodate the altered traffic patterns. This phase will focus on the construction of the east side of Central Parkway from the building face to the median including roadway pavement, curb and gutter, storm sewer, sidewalk, and aesthetic features. The median will not be constructed in this phase. Attention will be given to maintaining pedestrian access to the businesses on the east side of Central Parkway throughout this phase. For Alternatives 1 and 3 that have a single northbound lane of travel in portions of the corridor, some temporary pavement will need to be installed as a part of this phase in the location of the new median, to accommodate two-way traffic during the second phase of construction.

B. Phase 2

Once the roadway improvements are completed on the east side of Central Parkway, vehicular and bicycle traffic will be shifted to the newly constructed permanent and if applicable temporary pavement on the east. Similar to the first phase, all traffic shifts should be completed prior to Ezzard Charles Drive to the south and to the south of Liberty Street. Signal timing and head positions will be modified as needed and pedestrian access to businesses on the west will be maintained. Roadway pavement, curb and gutter, storm sewer, and aesthetic improvements will be constructed on the west side of the roadway. The western portion of the median curb can also be constructed from the west side to take advantage of the workspace and minimize disruptions to traffic in the third construction phase when the remainder of the median is constructed. Because of the pedestrian crowds that can be generated in front of TQL Stadium for large events, efforts to minimize impacts to the existing sidewalk space should be considered. This could be accomplished by prioritizing the construction of the curb and sidewalk during this phase of construction to offer additional space to accommodate heavy pedestrian activities.

C. Phase 3

After completing the roadway improvements on the west side of Central Parkway, northbound traffic can remain in the easternmost curb lane, but southbound traffic will use the westernmost curb lane constructed during Phase 2. In this phase, the temporary pavement, previously constructed in the median area, will be removed and the remainder of the median curbing and storm sewer catch basins will be constructed as well as the median aesthetic enhancements. To facilitate certain construction activities, such as pouring the remaining median curb on the east, short-duration or night-time closures of the northbound traffic lane may be necessary for Alternatives 1 and 3, in locations where there is only a single lane of traffic proposed.

D. Intermediate and Post Phases

In addition to the three primary construction phases discussed above, there will likely be additional short duration MOT schemes that need to be implemented for ancillary work (such as implementation of traffic shifts, improvements at the Liberty Street intersection, and placement of the final asphalt surface course and pavement markings).

Because the three roadway improvement alternatives will all follow a similar framework for the construction sequence and MOT scheme (as described previously), MOT is not a deciding factor in selecting a preferred alternative.

4.07 ROW REQUIREMENTS

ROW is not anticipated for this project. The project will be designed to avoid new ROW or temporary construction easements in order to maintain the anticipated construction start date.

4.08 PRELIMINARY GEOTECHNICAL ASSESSMENT

Stantec completed a preliminary review of the geologic conditions along the Central Parkway project. Geologic mapping shows that there is approximately 130 to 160 feet of soil above bedrock along the project alignment. This soil is described as glacial outwash from the Late Wisconsinan glaciation. Glacial outwash typically consists of sandy and gravelly material.

A water well log from near the intersection of Central Avenue and 15th Street (surface elevation 533.5) shows a total depth of 155 feet, static water at a depth of 94 feet, and shale bedrock at a depth of 154 feet. The soil overburden is described as sand and clay, sand and gravel, and sand. A water well log from near the intersection of Central Avenue and Charles Street (surface elevation 542.7) shows a total depth of 177 feet, static water at a depth of 106 feet, and shale bedrock at a depth of 171 feet. The soil overburden is described as fill material to a depth of 35 feet underlain by alternating layers of sand and clay.

Geotechnical borings will be performed as a part of the design phase, and subgrade analysis will be completed in accordance with ODOT guidelines.

4.09 UTILITY AND RAILROAD ISSUES

The scope of work throughout the Central Parkway project area is such that deep excavation (greater than 6 feet) is not anticipated to accomplish the envisioned complete street improvements. Additionally, there are no overhead utilities within the project corridor, decreasing the potential for utility relocation. However, because of the nature of the project and the abundance of existing utilities in the area, coordination with utility owners occurred early in the preliminary design phase. DOTE held a utility coordination meeting with applicable utilities in the area to review the project goals and objectives, gather insight on key utility networks or infrastructure in the corridor, and to request available record drawings. The efforts for this project do not anticipate any major changes or modifications to existing information. The goal of this request was to understand what utilities are located within the corridor so that they can be avoided with the recommended improvements. In addition to DOTE's infrastructure, the utilities located within the corridor are listed in the following.

1. Greater Cincinnati Water Works (GCWW)
2. Duke Energy–Gas and Electric
3. Metropolitan Sewer District of Greater Cincinnati
4. Cincinnati Stormwater Management Utility
5. AltaFiber
6. Verizon

7. Lumen
8. Spectrum
9. Zayo
10. Windstream

Major utility considerations within the project corridor include three water mains running down the corridor, a Duke Energy underground substation at Charles Street, and a significant amount of AltaFiber conduit, including a trunk system that feeds a large portion of the City. During the initial coordination meeting, GCWW and Duke Electric both expressed a desire to replace existing infrastructure before the corridor improvements. GCWW is interested in replacing the existing 12-inch cast iron main built in 1926 and the existing 16-inch cast iron main that was installed before 1926. Duke Electric is interested in potential improvements to eliminate the existing utility tunnel underneath the subway.

The provided record drawings and an overlay of the infrastructure within the several cross-sections of the corridor are provided in Appendix D. Impacts to existing utilities are anticipated to be similar between all three alternatives and, therefore, they are not a deciding factor in selecting a preferred alternative.

4.10 ENVIRONMENTAL ANALYSIS

Lawhon & Associates, Inc., conducted a review of existing data to evaluate the potential environmental impacts of the Central Parkway project. Following is a summary of the findings. This information is provided regarding the requirements of the National Environmental Policy Act (NEPA) process if the project receives federal transportation funding administered by ODOT.

A. Cultural Resources

Historic and archaeological resources are protected under NEPA and related regulations. Sites that are eligible, nominated, or listed in the National Register of Historic Places (NRHP) are subject to protection under Section 106 of the National Historic Preservation Act as part of federal undertakings, such as projects with federal funds or federal permits. NRHP-eligible historic sites are also protected under Section 4(f) of the US Department of Transportation Act when federal transportation funds are involved. The Ohio State Historic Preservation Office (SHPO) maintains a database of known historic sites. The most critical issues for management of cultural resources are discussed here.

Based upon SHPO mapping, the primary resources within the project limits are:

1. OTR Historic District–A NRHP-listed district encompassing approximately 943 properties within the slightly larger locally designated historic district. It is generally bounded on the west and south by Central Parkway. With few exceptions, buildings on the east side of Central Parkway within the project limits are within the district.

2. The Music Hall, 1243 Elm Street–Individually listed on the NRHP and within the OTR Historic District. IT is a NPS listed National Historic Landmark and locally designated historic landmark. Constructed in approximately 1878. Centrally located within the project limits.

Proposed improvements will be developed with the intent to avoid adverse impacts to historic properties. Once the project moves forward, ODOT will be consulted regarding the scope of additional cultural resources studies and coordination that will be required.

B. Parks and Recreation Areas

Publicly owned recreational areas are subject to protection under Section 4(f) of the U.S. Department of Transportation Act if any federal transportation funds are used for the project. There are no publicly owned parks within the project limits. The closest park is Washington Park, located one block east of Central Parkway.

There is a public owned green space at the corner of Liberty Street and Central Parkway that includes a bench and appears to be used for exercising pets. Coordination with Cincinnati Parks will be conducted once the impacts to this area are known.

Central Parkway itself is overseen by Cincinnati Parks. Because this segment of Central Parkway is not significant for recreation, it is not expected to be subject to Section 4(f). The final determination of applicability of Section 4(f) will be made by ODOT.

C. Environmental Justice

Census data was reviewed from ODOT's Transportation Information Mapping System (TIMS) for Environmental Justice populations. The census tract on the west side of Central Parkway is 30 percent minority and 11 percent low income. The two tracts on the east side of Central Parkway are 58 to 65 percent minority and 73 to 99 percent low income. Environmental Justice populations are present in the project area. Public outreach during the NEPA process involved coordination with local stakeholders to identify methods to encourage public participation in the process. The project is not expected to have adverse impacts on minority or low-income populations.

D. Drinking Water Resources

According to the Ohio Environmental Protection Agency Drinking Water Source Protection Areas mapping, there are no drinking water source protection areas or sole source aquifers within the project limits. No well locations are shown on the Ohio Department of Natural Resources (ODNR) Water Wells Database. Based upon ODNR's Karst Interactive Map, there are no recorded karst areas within the project area. No impacts to drinking water sources are anticipated.

E. Regulated Materials Review (RMR)

The Ohio Regulated Properties Search Tool does not indicate the presence of landfills or Superfund sites. There are four RCRA registered sites and Leaking Underground Storage Tank records at two sites. This project is not anticipated to involve new permanent ROW or deep excavation (6 feet or greater), therefore, a detailed RMR Screening will likely not be required for ODOT review. If a RMR is needed, the results of the RMR research would be used to determine whether any plan notes or further investigations will be needed to address regulated materials.

F. Ecological Resources

United States Geological Service Streamstats indicates no stream crossings. National Wetland Inventory does not indicate any wetlands. Vegetation appears to be limited to landscape plants and street trees. Based upon aerial photography, no other ecological resources are anticipated.

G. Floodplains

The project is not within a floodplain or other special flood hazard area. No floodplain coordination is required.

H. Farmlands

The project is entirely within an urbanized area. No farmland coordination is required.

I. Environmental Documentation

If the project receives funding administered by ODOT, NEPA documentation will be required. It is most likely that a Categorical Exclusion (CE) will be appropriate, requiring supporting documentation for each of the above topics to be submitted within ODOT's EnviroNet. The level of CE document is likely to depend on the outcome of the Section 106 process regarding effects on cultural resources.

4.11 AESTHETICS

The overall aesthetics of the project corridor are an important part of the project and are anticipated to be consistent between all alternatives evaluated. As previously mentioned, objectives of this project include connecting neighborhoods, re-establishing development potential, prioritizing pedestrian access and safety, and incorporating more complete street features. Based on public feedback included with these objectives is an expectation of a more welcoming and vibrant corridor with plantings, streetscape furnishings, decorative pavements, and spaces for potential future private enhancements.

4.12 COST ESTIMATE

While the roadway width, pedestrian zone and other features vary between each alternative, all alternatives require significant changes to the curb lines and amount of pavement, increases in hardscape and landscape zones, raised bike lanes, enhanced pedestrian crossings, among other similar items. Therefore, the overall cost for each alternative is anticipated to be similar and not considered to be a deciding factor when selecting a preferred alternative. The key items to be considered for implementing this project are consistent with each alternative.

A preliminary opinion of construction cost (OPCC) was developed for Alternative 3, the hybrid option. This alternative is anticipated to cost approximately $22.5 million. A detailed breakdown of the preliminary OPCC can be found in Appendix E.

SECTION 5
PUBLIC INVOLVEMENT

5.01 PUBLIC INVOLVEMENT

As a transformative project for this corridor, the public involvement component of the preliminary evaluation was extensive. A detailed public engagement plan (developed by Rasor) outlines the communications and public engagement strategy for this project. As part of this phase of the project, the project team developed a project specific website, *https://www.centralparkwaycincinnati.org*, provided project information and updates via City press releases, e-mail blasts, and social media posts. Additionally, DOTE included three key engagement opportunities with this phase of the project including an initial public survey to gain the public's input on the objectives for the project, a public workshop to review potential alternatives and changes to the roadway configuration through the corridor, and a public meeting to present the preliminary preferred alternative. The full Public Engagement Plan, various survey results and public workshop and meeting presentations can be found in Appendix F. The following provides a brief overview of the three main public involvement events.

A. Initial Public Survey

An initial 30-day public survey was conducted from June 12, 2023, through July 12, 2023. During that time there were 499 responses to the survey. Key takeaways from the survey included:

1. Pedestrians feel unsafe crossing Central Parkway.
2. Bicyclists feel unsafe riding along Central Parkway.
3. Liberty Street, Plum Street, and Ezzard Charles Drive are seen as problematic intersections.
4. High speeds are a concern for pedestrians, bicyclists, and motorists.
5. Majority of respondents felt that Central Parkway has too many vehicular lanes.
6. Potential improvements should focus on pedestrian spaces.
7. Improvements should consider tree canopy, other aesthetic improvements, and wider sidewalks for a more welcoming corridor.

B. Public Meeting No. 1

Using input from the initial public survey, the project team developed four configurations showing various options for distributing the space within the ROW among the intended users: pedestrians, bicyclists, and vehicles. These options looked at various combinations of sidewalk width, median width and placement, and number of lanes. During a Public Information Workshop on August 29, 2023, DOTE and the project team reviewed the four options, identified pros and cons of each, and gathered feedback on the space allocation throughout the corridor with the local residents and community stakeholders during small group discussions. There were over 120 participants in this workshop. Following the workshop, attendees and the general public were asked to provide additional feedback on the alternatives through an online survey.

During the 30-day public comment period following the workshop, 400 survey responses were received. Key takeaways from this meeting and the survey included:

1. Overall desire for less pavement and narrower pedestrian crossings.

2. Consider the impact that buses, emergency vehicles, parallel parking, and related have on traffic operations.

3. Wide sidewalk areas preferred over wide medians.

4. Implement raised crosswalks and curb bump-outs where feasible.

5. Raised or separated bike lanes are preferred.

6. On-street parking should remain.

7. Project should include lighting and well-marked crossings.

8. Maximize green features and shade opportunities for pedestrians.

C. Public Meeting No. 2

Following the feedback from Public Meeting No. 1, the project team updated and selected a draft preferred alternative. This alternative, along with detailed conceptual renderings, was presented to local residents and community stakeholders on October 26, 2023. A question-and-answer period and open house style format following the presentation allowed meeting participants to provide feedback and ask questions of the project team. Following the meeting, a 30-day public comment period allowed participants and those who visited the project website to view the meeting materials and provide feedback through online comments. There were approximately 70 attendees at the in-person meeting and more than 45 online comments were received during the public comment period. Feedback reflected an overall appreciation of the corridor enhancement and potential aesthetics for the positive experience of all users. Support was expressed for specific project elements, including the reduced crossing distance and overall pavement width throughout the corridor. Responses to the online comments received during the public comment period following this meeting are included in Appendix F. Elements identified by the public as requiring additional evaluation during design included ease of emergency vehicle access, opportunities for business loading areas, and overall vehicular congestion with reduced lane capacity.

SECTION 6
COMPARISON OF ALTERNATIVES

6.01 COMPARISON OF ALTERNATIVES

When comparing the three alternatives, the project team evaluated a range of design considerations, carefully reviewed feedback received through the extensive public engagement process, and focused on the purpose and need. A comparison of the alternatives is represented in the symbolic evaluation matrix shown in Figure 6.01. The key project elements evaluated in this matrix are further outlined in the following and a more detailed summary table can be found in Appendix G.

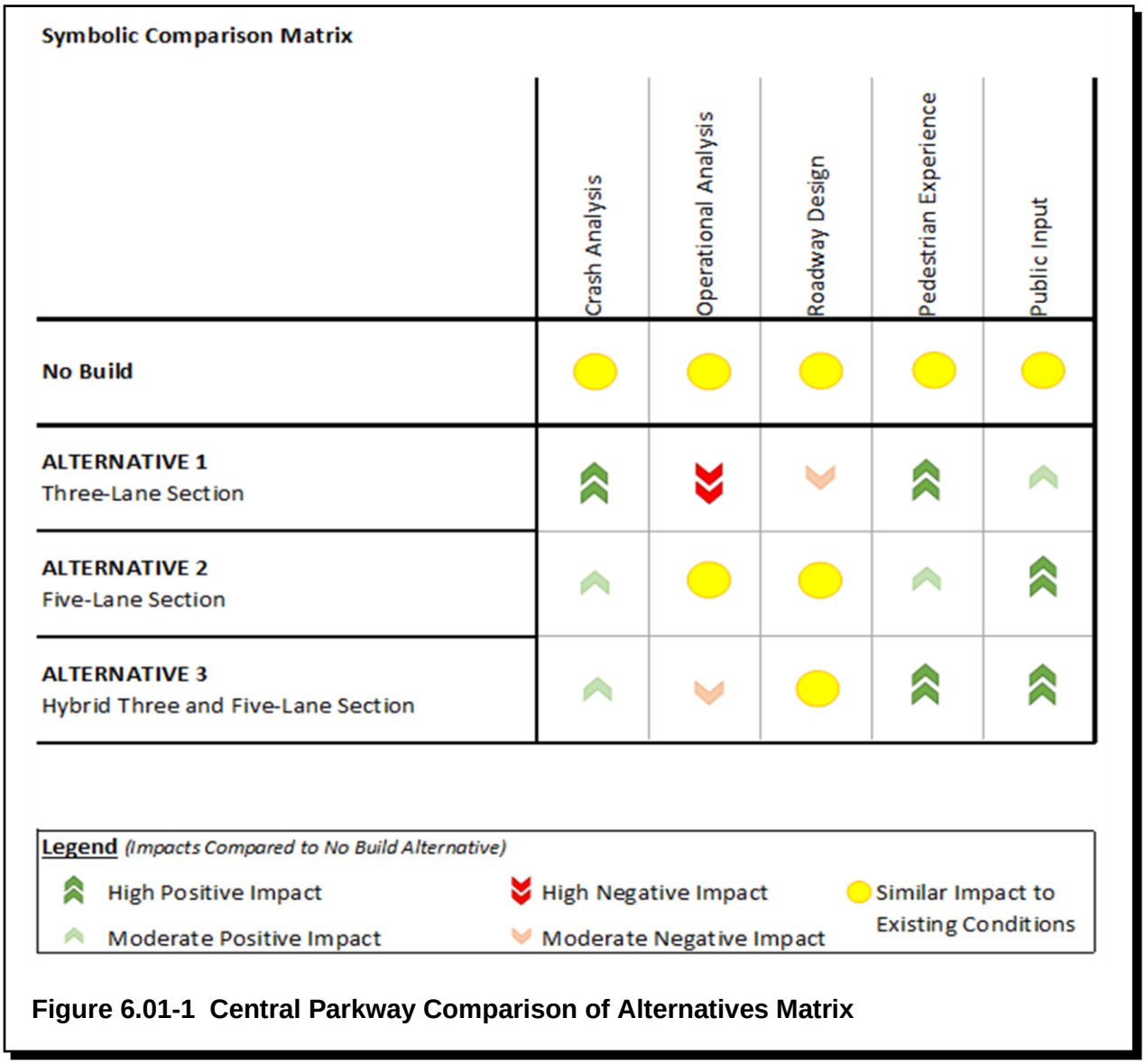


Figure 6.01-1 Central Parkway Comparison of Alternatives Matrix

A. Crash Analysis

Crashes are anticipated to be reduced with the implementation of any alternative, however, Alternative 1 is expected to perform the best in this category as sideswipe crashes south of Ezzard Charles Drive are still likely to occur in both Alternatives 2 and 3.

B. Operational Analysis

The traffic operation of Alternative 2 is most similar to existing conditions and provides the highest LOS amongst the three alternatives. Alternative 1 does not provide an acceptable LOS at the Ezzard Charles Drive intersection and, therefore, is not feasible. Alternative 3 provides a lower LOS than the existing conditions and Alternative 2 but does maintain the existing connection between Central Parkway and the Plum Street intersection and allows for existing dual right-turn lanes from Ezzard Charles Drive on to Central Parkway.

C. Roadway Design

All three alternatives have a similar impact. However, Alternative 1 is constrained for a significant portion of the project length. Central Parkway must have two lanes at both Plum Street and at Ezzard Charles Drive to maintain connecting operations. The short distance between those intersections limits the space to taper to a single lane through this stretch of the corridor. Therefore, Alternative 1 is not feasible. Alternatives 2 and 3 perform better under this category.

D. Pedestrian Experience

All three alternatives will significantly enhance the pedestrian experience as compared to existing conditions. Wider sidewalk areas, shorter crossings at existing intersections, and new, raised crossings are important components of each alternative. Alternative 1 provides the most sidewalk space and shortest crossing distances for this project and, therefore, scores best in this category. Alternative 1 and Alternative 3 provide the same pedestrian experience for nearly two-thirds of the project and, therefore, are ranked equally for this component.

E. Public Input

All three alternatives received positive feedback from the public for emphasis on pedestrian space, reduction of pavement widths, improved bicycle facilities, and overall corridor aesthetics. The feedback on alternatives with sections with one lane in each direction and raised medians relayed concerns that the limited pavement widths may adversely impact traffic operations due to emergency vehicles, buses, and other roadside loading or parking situations. This condition exists for only short segments in Alternative 3 and can be addressed using depressed medians in select locations. Thus, Alternative 3 ranked slightly higher than Alternative 1 in this category.

F. Summary of Comparison and Selection

The existing Central Parkway (No Build) does not meet the purpose and need of the project, nor is it satisfactory from the perspective of the public and is, therefore, not considered a feasible option for this corridor. Alternative 1 best meets the project's multiuser objectives as it provides the greatest benefit to improvement of pedestrian experience and reduction in anticipated crashes. However, this alternative fails to provide acceptable LOS at the intersection of Ezzard Charles Drive and, as a result, has been eliminated as a feasible option. Alternatives 2 and 3 have similar impacts to each other in the evaluated categories. When selecting the preferred alternative, these two options were further compared to the project's purpose and need statement for enhancement to pedestrian

experience. Alternative 3 was selected as the preferred alternative as it is both feasible and best meets the project's objective.

SECTION 7
CONCLUSION

7.01 PREFERRED ALTERNATIVE

The preferred alternative for the Central Parkway improvements is Alternative 3 or the hybrid option. This option provides one lane of traffic in each direction from Liberty Street to the Ezzard Charles Drive intersection and two lanes of traffic in each direction from Ezzard Charles to Plum Street. Turn lanes are provided as needed at intersections. This alternative also provides raised separated bike lanes on each side of the roadway, a wide pedestrian zone on each side and enhanced pedestrian crossings at key locations in the corridor.

Since Public Meeting No. 2, on October 26, 2023, only minor changes have occurred to this alternative. These include:

1. Addition of a Red Bike dock within the corridor.

2. Elimination of the southbound taper at Charles Street to improve continuity of the through movement to Plum Street.

3. Modification to the bus stop locations and amenities based on Metro input.

This alternative meets the purpose and need for the project and is consistent with the goals and objectives outlined at the beginning of this project to reconnect neighborhoods, re-establish the vision and development potential of the corridor, prioritize pedestrians and safety, and to incorporate complete street features within the corridor. The preferred alternative also received positive feedback from the public. The recommended improvements with this alternative accomplish the following:

1. Reduction in pavement from 240,000 to 118,000 square feet (SF).

2. Enhancements to existing and new pedestrian crossings.

3. Overall increase in street trees from 100 to 200.

4. Reduction in median area from 50,000 to 28,000 SF.

5. Increase in sidewalk landscaping from 1,000 to 125,000 SF.

6. Provide new lighting system along corridor and at intersections.

7. Include new mast arm traffic signal installations.

While staying within the current 150-foot ROW, the preferred alternative allows for the reallocation of space within the corridor to improve connectivity and safety for pedestrian and bicycle users. Expanded sidewalk zones, raised bike lanes, reduction in median width and changes to the lane configuration will allow DOTE to create an inviting and safe corridor for all users. Figure 7.01-1 provides an overview of the proposed versus existing cross section at two key locations highlighting the change in space allocation to transform this corridor.

Cross Section at 15th Street (One Lane in Each Direction)

Cross Section at Grant Street (Two Lanes in Each Direction)

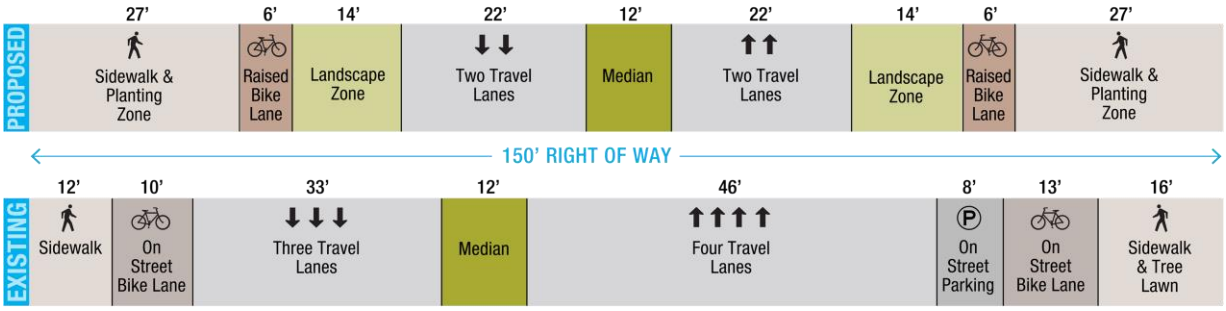


Figure 7.01-1 Central Parkway Proposed versus Existing Cross Sections

The current plan view for the preferred alternative can be found in Appendix F. Graphical renderings depicting examples of the anticipated finishes and look of the Central Parkway corridor are shown on the following pages.

Figure 7.01-2 Central Parkway at Liberty Street

Figure 7.01-3 Central Parkway at TQL Stadium Steps and Plaza

Figure 7.01-4 Central Parkway at Ezzard Charles Drive and Music Hall

Figure 7.01-5 Central Parkway at Grant Street

SECTION 8
NEXT STEPS

8.01 PROJECT FUNDING

Design and construction funding for this project have not yet been identified or allocated. DOTE anticipates that congressionally directed spending in the amount of $3.5 million may be provided for this project. If additional funding is provided for the project, it is currently anticipated that the money will come from private investment. Based on the project schedule, which is described in more detail in the following, funding through traditional federal transportation programs is not considered viable because it would not be available in time.

8.02 PROJECT SCHEDULE

The construction schedule is being driven by stakeholders. There is a desire to have construction completed by May 2026 so that the improvements will be in place before potential significant events that may be hosted at TQL Stadium and the future West End Mixed Use Development. To achieve the completion date, construction is anticipated to begin in early 2025. As a result, the design phase of the project will need to be completed by approximately mid-November 2024 to allow time for bidding and award before the start of the 2025 construction season.

At this time, a detailed design schedule with milestone dates has not been identified for the project. If additional funding is secured and the project advances, ODOT will be involved to administer the congressionally directed money. ODOT's involvement will trigger the need for an LPA scoping meeting, and as part of the LPA scoping process a detailed design schedule will be developed. The schedule will be developed to meet the anticipated construction schedule previously described.

8.03 FUTURE DESIGN CONSIDERATIONS

If the project advances, there are many elements that will require further consideration to evaluate how they may impact the proposed design. Elements that are anticipated to be critical to the project schedule and/or budget are identified in the following.

A. Utility Relocations

As described in Section 4.08, two utility owners with facilities in the project area indicated a desire to replace some of their existing infrastructure. For this to occur without adding risk to the project schedule, the utility replacements will need to be completed by the end of 2024. This is a very tight time frame and will require constant communication and information sharing between the project team and the utility owners. In addition, any unavoidable utility conflicts because of the proposed improvements will need to be assessed very early in design to allow time for the utility owners to complete the relocations before construction begins in 2025.

B. Stakeholder Communication

Additional communication will be required with property owners and stakeholders as the design phase advances. This communication will focus on receiving input on maintenance of traffic plans, access during construction, and plantings, streetscape furnishings, and infrastructure necessary to support potential future private enhancements.

C. Potential Redevelopment within the Project Limits

As mentioned in Section 4.01, future redevelopment may occur within the project limits. The West End Mixed Use development just north of TQL Stadium has been approved by Cincinnati's Planning Commission and is proceeding with a similar design and construction schedule as this project. Additionally, Cincinnati issued a Request for Qualifications for development teams to present ideas related to the Town Center Garage site just south of Ezzard Charles Drive. Land uses and potential changes to infrastructure are currently unknown. Communication with the development teams for both projects will be important to provide the timely sharing of accurate data that will influence design. This includes the potential conversion of Central Avenue from one-way northbound to two-way between Ezzard Charles Drive and Court Street, which may affect operations at the Ezzard Charles Drive and Central Parkway intersection.

D. Subway Analysis

The proposed improvements may require potential modifications to the existing subway. Most specifically, the existing vent shafts and access hatches may need to be relocated so they are not within the roadway. Any modifications to the subway will require communication with DOTE Structures staff and should be incorporated into the design as soon as possible because they will influence the construction schedule and cost.

E. Integration with other Planned City Projects

Cincinnati is planning other improvements in and around the project area. These include enhancements to the bike lanes on the east-west section of Central Parkway, a new crosswalk on the north leg of the Ezzard Charles Drive and Central Parkway intersection, potential future improvements to the Plum Street and Central Parkway intersection, and potential cross section changes to Central Parkway north of Liberty Street that would reduce Central Parkway to one lane in each direction. The details of these projects should be understood early in design so they can be considered in the design of this project.

F. Project Phasing

As noted, the Feasibility Study analyzed the Central Parkway corridor between Plum Street and Liberty Street. As the project advances, it may be advantageous to phase design and/or construction to accommodate available funding or meet the desired construction schedule. The project team performed a preliminary evaluation and identified a logical phasing plan that includes Phase 1 from south of Ezzard Charles Drive to north of Liberty Street and Phase 2 from Plum Street to south of Ezzard Charles Drive. If a phased approach is required for the project, the limits of each phase will need to be identified immediately upon initiation of the design phase so that resources can be properly allocated to meet the schedule.