STATE STREET CORRIDOR PLAN

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– SPECIAL THANKS –
The City of Hastings extends a special thank you to all the residents and participants who took time to provide feedback or attend public meetings and events for the development of this plan.

TABLE OF CONTENTS

1 INTRODUCTION

The State Street Corridor Plan is a planning initiative led by the City of Hastings in response to the Michigan Department of Transportation's (MDOT) plans to reconstruct the roadway between Cook Road and Broadway Avenue. State Street has functioned as one of Hastings' main commercial corridors and a key gateway into the city for decades. **The planned reconstruction of the roadway provides the City, residents, and local stakeholders with a once-in-a-generation opportunity to look at the corridor with fresh eyes, envision the future of State Street, and work hand-in-hand with MDOT to arrive at desired outcomes.**

Key elements of this report are:

- **State Street Yesterday and Today:** Analysis of State Street's evolution over time, current conditions, and community perceptions of the corridor.
- **Opportunities for Reconstruction:** Evaluation of various alternatives for reconstruction based on community priorities.
- **State Street Tomorrow:** Summary of the various options for State Street reconstruction and enhancements to the corridor as a whole.
- **Implementation Framework**: A roadmap to guide reconstruction and continuous improvement of the State Street Corridor.

Figure 1: Study Area

In 2028, the Michigan Department of Transportation (MDOT) will conduct a reconstruction of the State Street corridor between Cook Road and M-37 (Broadway Avenue) – an undertaking that typically occurs once every thirty years. The process will include a comprehensive reconstruction of the street surface, underground utility systems, and sidewalk and curb ramps at intersections, and as such presents a significant opportunity for potential modifications to the design and operation of the corridor. The State Street Corridor Plan project team, comprised of City staff, MDOT, and key stakeholders, analyzed historical safety outcomes, traffic operations, and access needs in order to identify a corridor design that is context-appropriate, responsive to local concerns and challenges, and positions the corridor for future change and development.

As State Street is owned and maintained by MDOT, this plan has been developed accordingly in consultation with state engineers in order to ensure that design solutions are compatible with applicable standards and guidelines. As land use context, traffic characteristics, and local needs continue to evolve, fully engineered design solutions will be determined during the formal design process, which will commence in Summer 2026.

1.1 PLANNING PROCESS

The planning process was initiated by the City of Hastings in the fall of 2025 and was guided by a Steering Committee comprised of City leaders, City staff, members of the Hastings Downtown Development Authority (DDA), mobility disability advocates, business owners along the corridor, and representatives from Barry County and MDOT.

A high-level overview of the planning process undertaken for this project is provided in Figure 2.

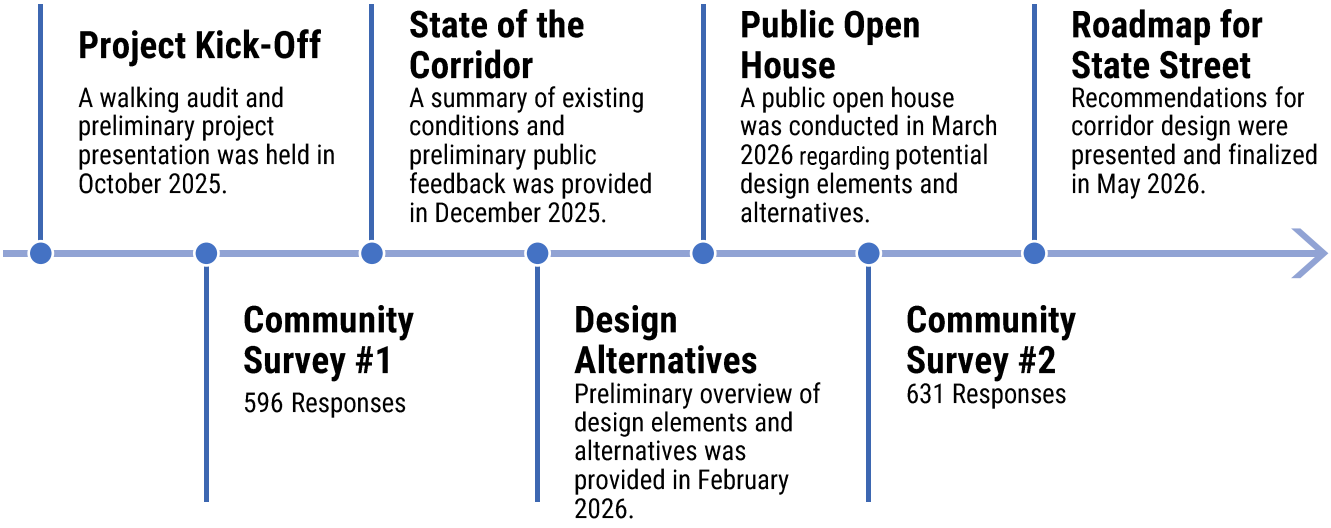


Figure 2: Project Process

A project kick-off meeting and corridor walking audit were held in October 2025 with City representatives, the consultant team, and the steering committee. Following the walking audit, analysis of existing conditions data, and a public survey that solicited high-level community feedback, a 'State of the Corridor' presentation was delivered to the steering committee in December 2025.

The project team utilized the results of the existing conditions analysis, synthesized with community feedback, to develop design alternatives. Design alternatives were presented to MDOT representatives and the steering

committee in February 2026. After an initial screening from MDOT and the steering committee, three (3) design alternatives were advanced to the public in an open house event held in March 2026. The open house was paired with a second online survey, which provided an additional opportunity for community members to evaluate potential design alternatives and express preferences.

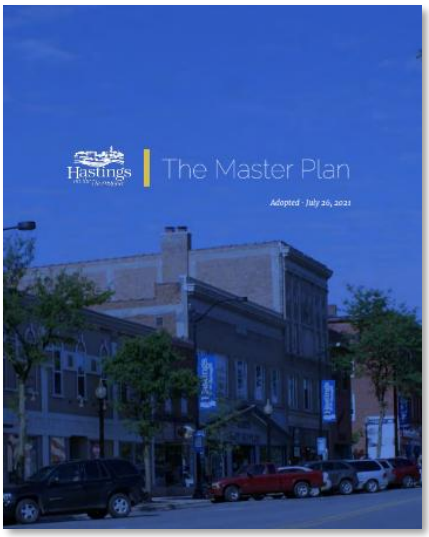
The results of the second round of public engagement were synthesized and presented to City representatives and the steering committee in May 2026. Following the incorporation of additional feedback, the consultant team developed a list of recommended design elements and policy modifications, presented in this report.

1.2 RELEVANT PLANS AND STUDIES

The City of Hastings and Barry County have adopted a number of relevant planning documents over the previous ten years that impact the future of the State Street corridor. This section summarizes the relevant documents in order to provide a preliminary understanding of prior community goals pertaining to the State Street corridor.

1.2.1 City of Hastings Master Plan (2021)

The City's Master Plan document does not explicitly identify potential redesign opportunities for the State Street corridor; however, it does acknowledge its importance as a "key gateway." Future land uses are designated as "Gateway Commercial," which emphasizes auto-oriented commercial development, largely similar to existing land uses between Cook Road and Market Street.

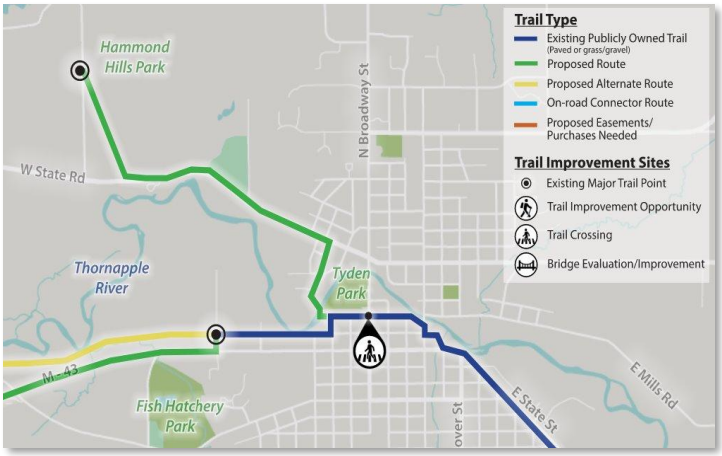


The master plan acknowledges that "**State Street is a key corridor in the City," and the "differing character of the corridor as it extends east and west through the city provides unique opportunities for planned business growth, diversity of business types, and cooperative marketing [and] branding efforts.**"

In addition to providing an understanding of the corridor as a critical facilitator of current and future development, the Master Plan also acknowledges the importance of ensuring safe outcomes for people walking, bicycling, or driving across the street. Particular emphasis is given to prioritizing signalization at "non-motorized transportation [route]" crossing locations in order to increase system-wide use.

1.2.2 Barry County Trails Plan (2023)

Developed with a regional focus, the Barry County Trails Plan recommends an extension of the Apple Street non-motorized pathway west of Industrial Park Drive. **Two (2) potential alignments were identified, with the preferred alternative being a non-motorized path along the north side of and parallel to State Street, while the second alternative provides a path along an existing easement behind commercial properties**. This plan identifies the Apple Street and Industrial Drive intersection as a major trailhead.



1.2.3 City of Hastings Bike Master Plan (2016)

The most recent citywide non-motorized plan, developed in 2016, recommends an extension of the existing non-motorized pathway along Apple Street to the west of Industrial Park Drive, shown in blue in Figure 3. In addition, the plan recommends four-foot striped bicycle lanes to be placed adjacent to the curb on Cook Road, Green Street, and Market Street, shown in red in Figure 3.

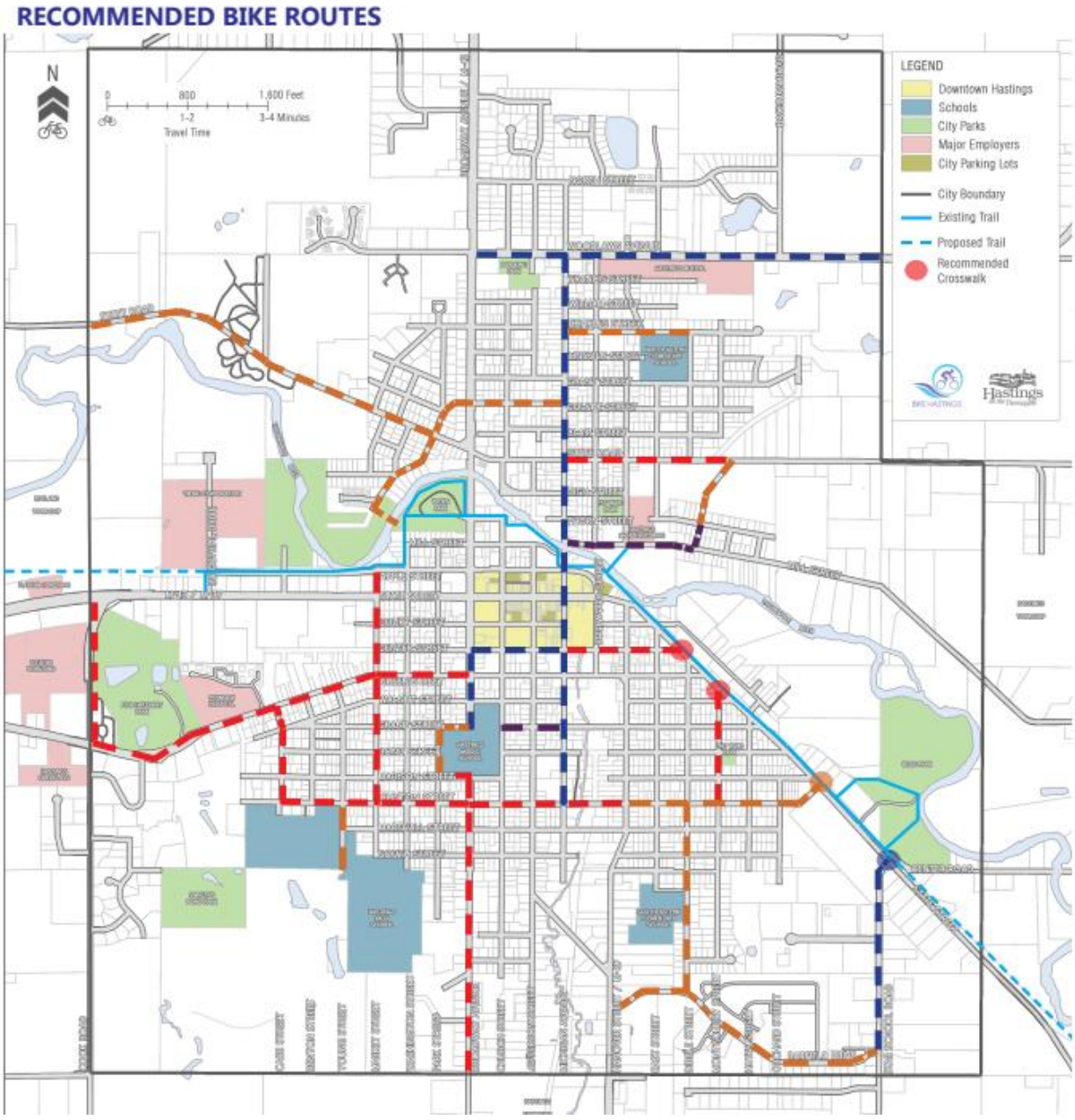


Figure 3: Recommended Bicycle Routes (Source: Hastings Bike Master Plan)

2 STATE STREET: YESTERDAY AND TODAY

State Street has served as a significant connector to and through the city, as well as the broader Barry County region, for over 70 years. Owned and maintained by MDOT, State Street is classified as a minor arterial, supporting adjacent commercial development as well as facilitating east-west movement through the county.

Existing as a five-lane roadway between Broadway Street to the east and Cook Road to the west, State Street features large clusters of strip shopping centers, banks, drive-through restaurants, and other auto-oriented businesses in the community. The corridor is defined by numerous driveways and a center turn lane, creating conflicts as drivers turn into businesses. Although pedestrian access is accommodated by a relatively consistent sidewalk network, foot traffic is low due to the low-density development pattern and the challenges inherent to crossing a five-lane, high-speed roadway on foot. State Street is a corridor serving as a truck route, a passing lane, a local access street, and a multi-modal facility. Consequently, State Street does not serve any one user group particularly well.

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2.1 STATE STREET YESTERDAY

2.1.1 History

Although State Street now carries the M-37 and M-43 designations through Hastings, this has not always been the case. Green Street, shown in red in Figure 4It was the historic state highway through Hastings, routing regional traffic south of the former Barry County fairgrounds and Fish Hatchery Park.

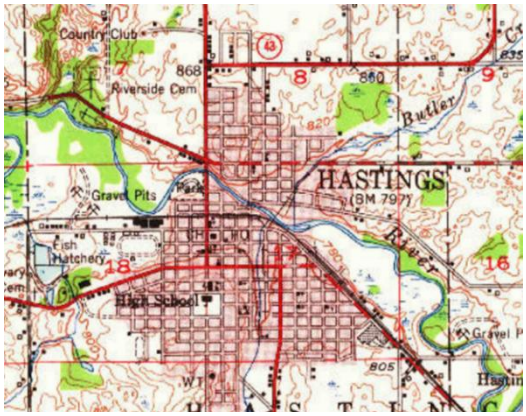

Figure 4: Historical State Route Alignment

However, this alignment created several challenges, as Green Street was primarily residential in context and not well-suited to support both local access and regional 'through' traffic. In 1966, the Hastings State Highway Plan laid the groundwork for the eventual expansion of State Street to its current five-lane configuration following the transfer of the state route designation from Green Street to State Street. The proposed alignment of state routes within Hastings is shown in the bottom half of Figure 2.

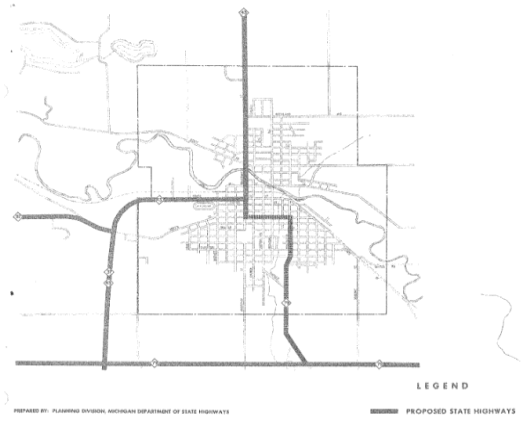

Figure 5: Hastings State Highway Plan Routing

The designation of State Street as the primary east-west state highway within Hastings coincided with increased state investment into its roadway infrastructure, modernizing the former dirt path into a wide, paved corridor capable of facilitating high-speed vehicular access to and through the city. In order to capitalize on this increase in vehicular traffic, investments in the creation of commercial centers along the corridor were made, resulting in the land use patterns that remain today. However, this initial investment has not resulted in continued change and development

along the corridor. Figure 6, shown below, illustrates the development pattern and its extents in both 2005 and 2025: in the past twenty years, just three parcels, shown in orange, along State Street have been redeveloped and reconfigured while one new greenfield development, shown in blue, has occurred. Three additional building structures along the corridor have been repurposed and are shown in pink, including the addition of a Whitewater Express Car Wash at 1105 State Street in 2025, the addition of a Walgreens at 126 Broadway Avenue in 2014, and the addition of Union Bank at 529 State Street in 2007. Site modifications – particularly the conversion of the former State Street Diner to the Whitewater Express Car Wash – have impacted traffic demand and flow along the corridor.

Figure 6: Historical Development

2.1.2 Access Management Plan

The countywide access management plan, developed in 2004, provides another indication of the lack of change along the State Street corridor. Although several iterative improvements have been made to driveway locations and cross-access between private properties to facilitate improved access management, the adjacent building locations and configurations remain largely unchanged.

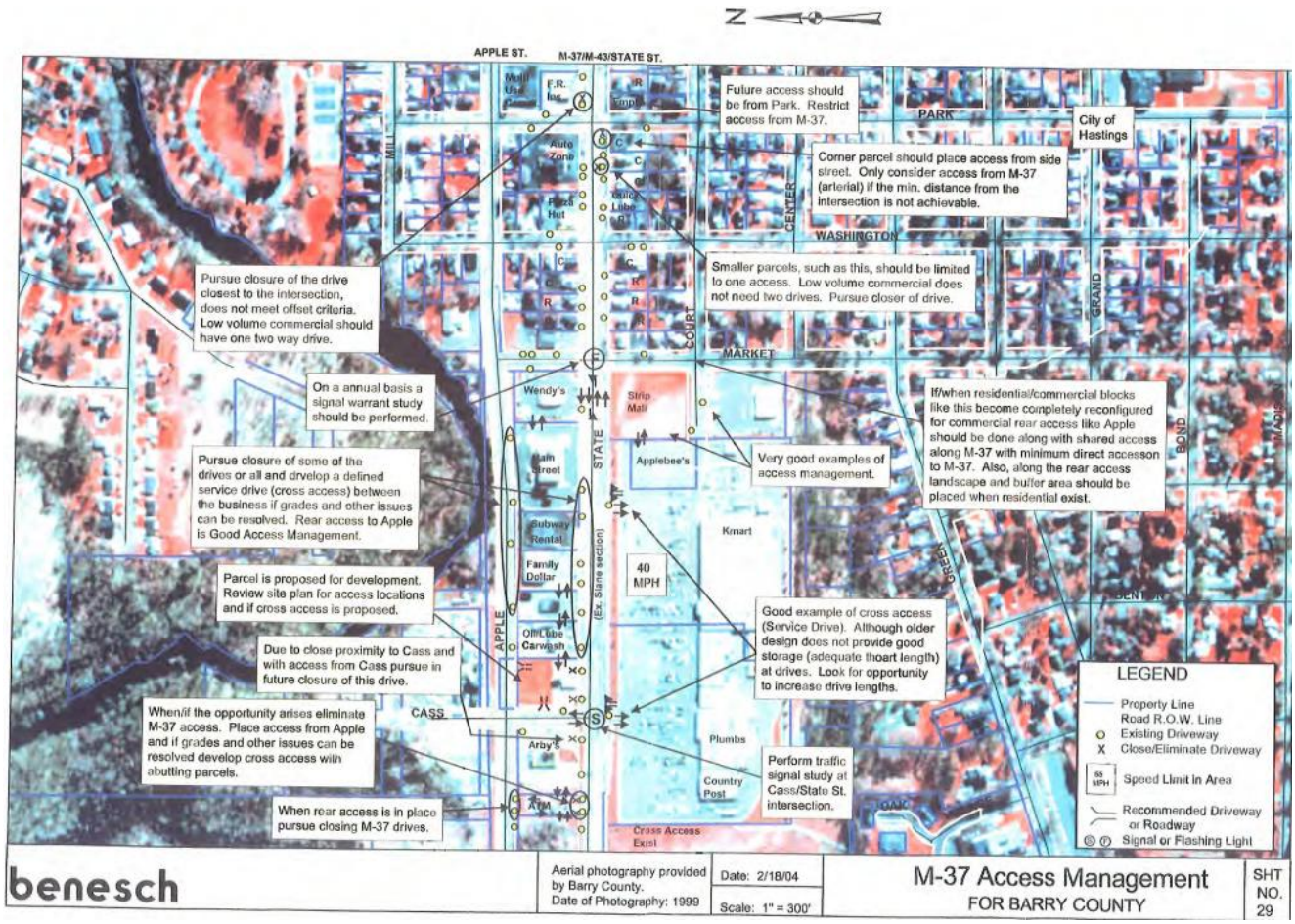

Figure 7: 2004 Access Management Plan (Courtesy MDOT)

2.2 STATE STREET TODAY

Evaluating the history and background of a corridor in conjunction with a comprehensive understanding of current corridor operations, safety outcomes, and development opportunities provides an informed baseline upon which to ground potential recommendations.

2.2.1 Demographic Changes

The population of Hastings increased by 420 people, or 5.9%, between 2000 and 2023, an average annual growth rate of 0.25%. While this growth rate exceeds the statewide average over the same time period, population growth lags behind comparable communities in closer proximity to Grand Rapids.

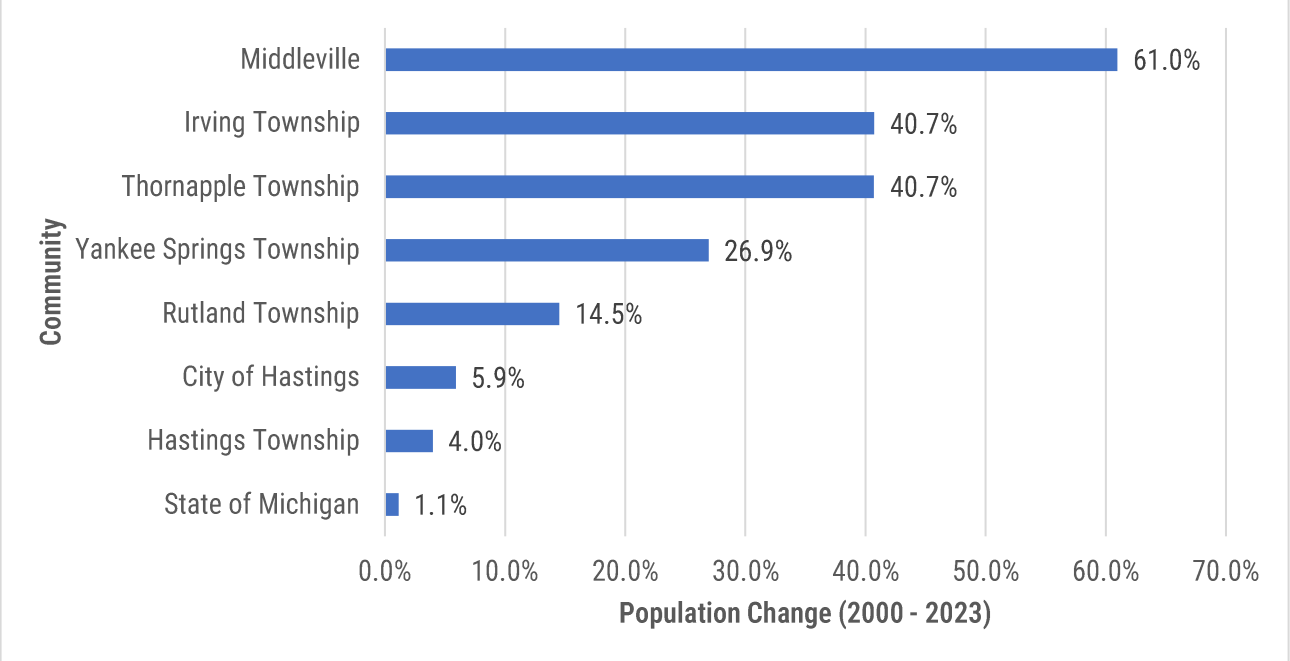

Figure 8: Population Change in Barry County

Population changes are not uniform across age ranges in Hastings. Between 2010 and 2023, the number of Hastings residents 17 years of age or younger decreased by 619, while the number of residents 65 years of age or older increased by 687. Although transportation and land use frameworks that ensure safe access to and from local destinations are vital in all communities, aging populations may shift priorities to destinations such as public gathering spaces, healthcare facilities, and commercial centers.

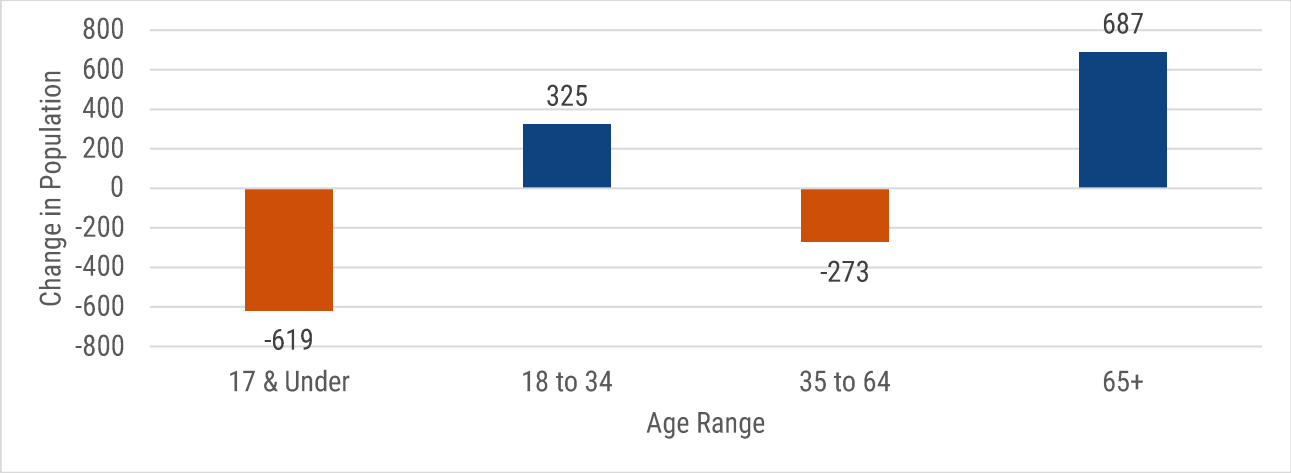

Figure 9: Population Change by Age Range (Source: American Community Survey)

2.2.2 Land Use & Physical Conditions

State Street is a five-lane suburban-style roadway featuring drive-through restaurants, shopping centers, medical offices, and other land uses oriented around private vehicle access and storage. Although the corridor is largely commercial in nature, the eastern section of State Street between Market Street and Broadway Avenue facilitates access to residential properties and the historic neighborhood street grid. The recent Tyden Lofts development located along the eastern portion of State Street serves to complement the historic neighborhood context and extend the downtown development pattern west of Broadway Avenue.

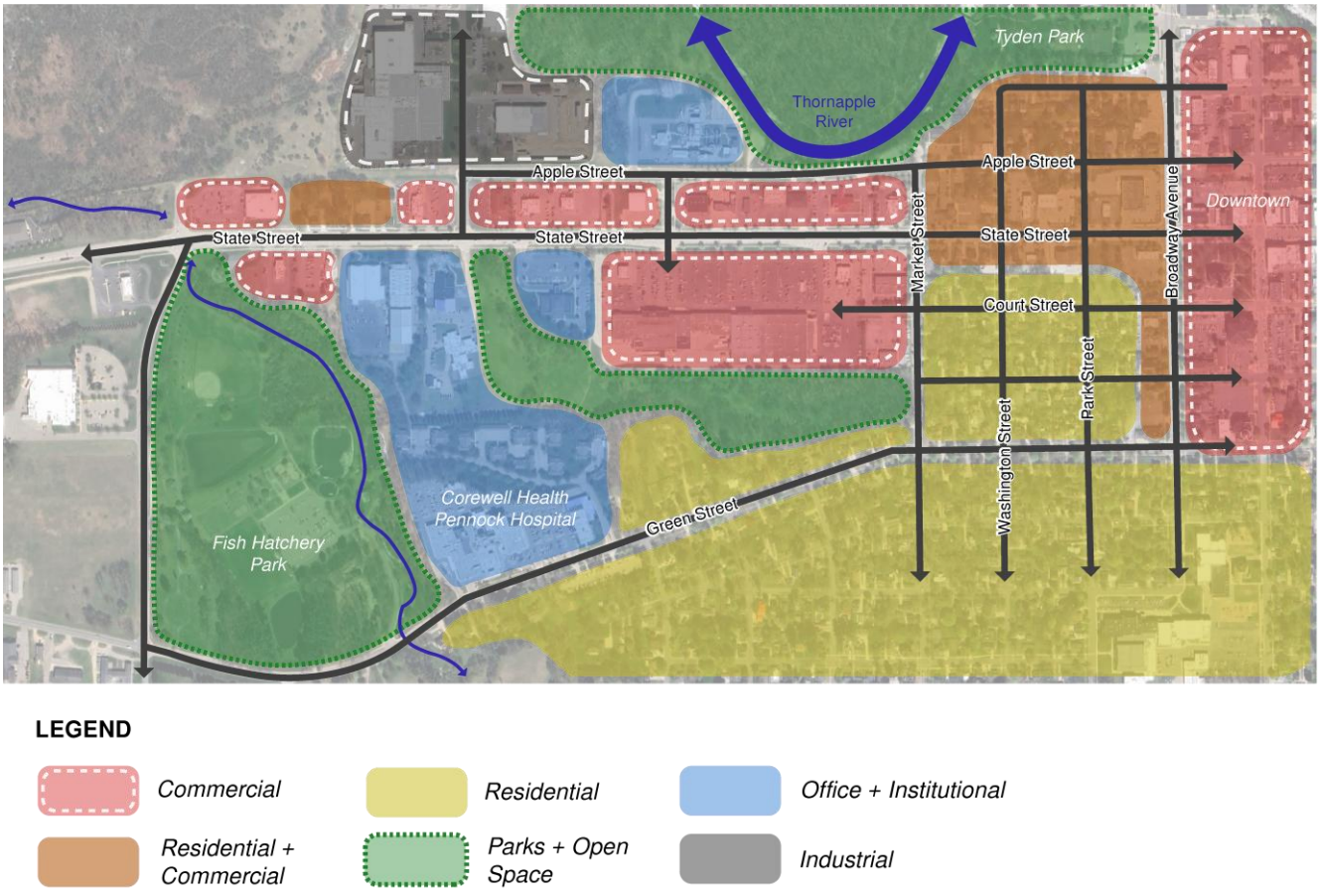

Figure 10: Corridor Land Use Framework

In the one-mile corridor segment between Broadway Avenue and Cook Road, a distance that would require approximately 20 minutes to walk, there are forty-seven curb cuts (or driveways), two gaps in the sidewalk network, and one signalized crossing.

The lack of an interconnected street network west of Market Street channels local and regional traffic to State Street. In addition, limited pedestrian connectivity between Green Street and State Street – although it is noted that unmarked pedestrian facilities between Pennock Hospital and Family Fare are provided – makes pedestrian access to destinations from the north or south uncomfortable and non-intuitive. Furthermore, the relative lack of pedestrian facilities across the State Street corridor inhibits non-motorized access across the street. In the one-mile corridor

segment between Broadway Avenue and Cook Road, a distance that would require approximately 20 minutes to walk, there are forty-seven curb cuts (or driveways), two gaps in the sidewalk network, and one signalized crossing. The lack of connectivity parallel to State Street to the south limits network redundancy and resiliency, while gaps in the pedestrian network preclude safe and comfortable non-motorized access to destinations along the corridor for local residents.

2.2.3 Right-Of-Way and Curb-to-Curb Widths

Corridor right-of-way (ROW) refers to the land area owned and maintained by a public agency, MDOT in this case, and reserved exclusively for transportation-related purposes. Using parcel data available from the City, as well as MDOT maps, the project team examined the approximate ROW widths along the corridor. Measured from the edge of a sidewalk to the edge of the opposing sidewalk, the ROW width along the State Street corridor varies modestly. The ROW width between Cook Road and Industrial Park Drive is 100 feet, while the ROW width between Industrial Park Drive and Broadway Avenue is 95 feet.

The width from curb-to-curb along the project corridor is approximately 64 feet along the extent of the corridor, increasing to approximately 75 feet at locations with a right-turn taper or turn lane.

A cross-section of the existing corridor is shown in Figure 11.

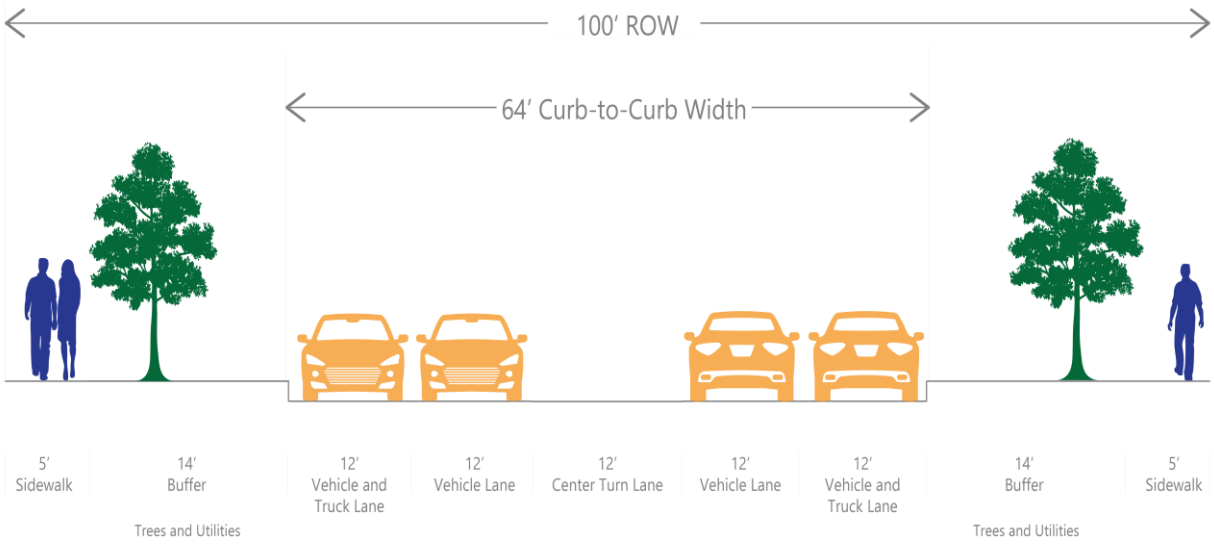

Figure 11: Corridor Cross-Section

2.2.4 Traffic and Operational Analysis

Although the population in Hastings and the surrounding region has increased modestly in the past 25 years, traffic volumes along the State Street corridor have not increased accordingly. Average traffic volumes along State Street were approximately 19,300 vehicles per day in 2001, while volumes at the same location along State Street were 12,500 in 2024 – a 35% decrease.

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Transportation-related investments are often planned for and prioritized under an implicit assumption that traffic volumes will increase at a linear rate over time. Figure 12 provides a representation of the differential between a projected traffic volume grown at a flat rate from the earliest date from which static traffic volume data is available, 2002, and the actual change in traffic volumes over time. Because reconstruction projects typically occur every 30-50 years on state highways, this compares one of the assumptions that would have supported the last major reconstruction or investment in State Street—that traffic volume would continue to increase—to the actual performance of the roadway.

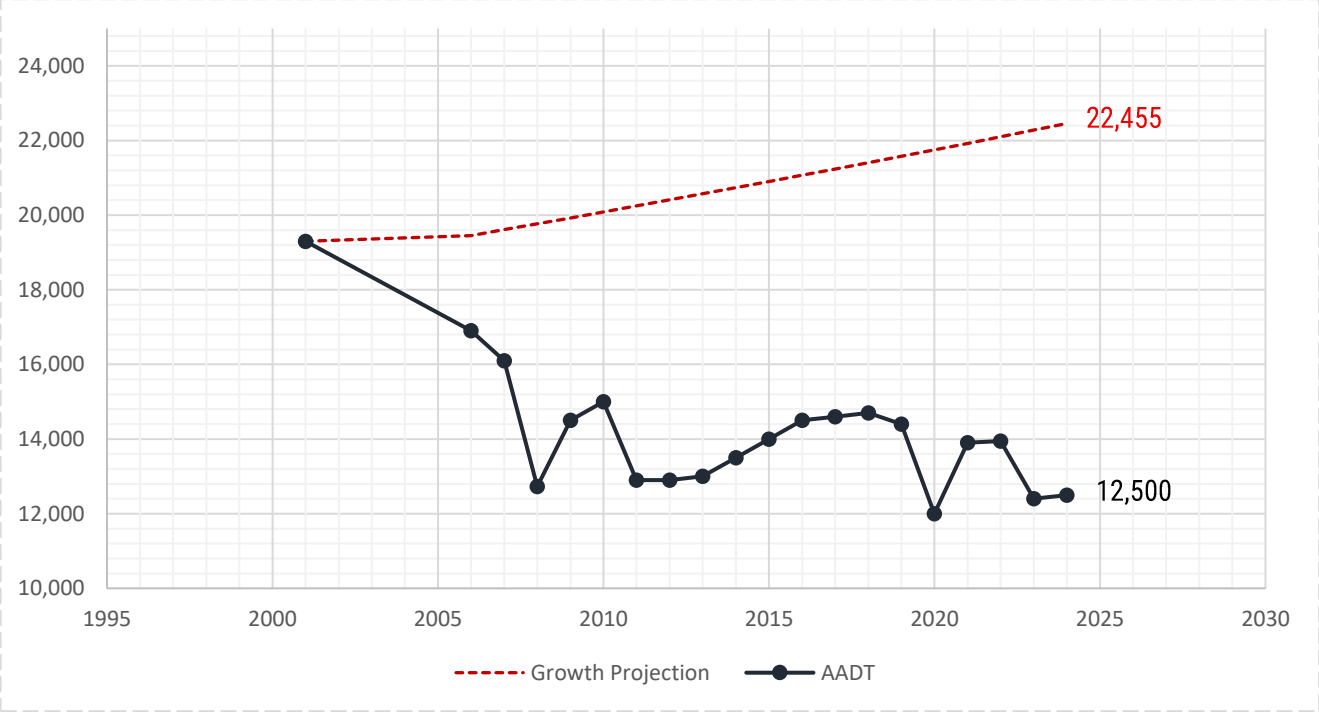

Figure 12: Growth Projections and Actual Traffic Volumes Along State Street

2.2.4.1 Capacity Analysis

The existing configuration of State Street, which features two through lanes in each direction and a two-way center-left turn lane, has a planning-level capacity of approximately 2,800 vehicles per hour and 45,000 vehicles per day. Hourly volume data, sourced from the MDOT Transportation Demand Management System, indicates that the peak hourly bidirectional volume along State Street is approximately 1,300 vehicles – less than 50% of roadway capacity. The peak hour directional volume generally occurs at 3 PM in the afternoon in the westbound direction, with approximately 670 vehicles per hour. Between the hours of 5 AM and 9 PM, where mobility activity is highest, traffic demand on State Street peaks at 40% of roadway capacity for three hours in the afternoon. During the remaining thirteen hours of a 'typical' day period, and 21 hours of the entire day, 60% or more of roadway capacity is unused.

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Figure 13 and Figure 14 indicates approximate hourly through traffic volumes in both the eastbound and westbound directions in relation to the one-way, two-lane roadway capacity provided. The white space in each figure indicates unused roadway capacity.

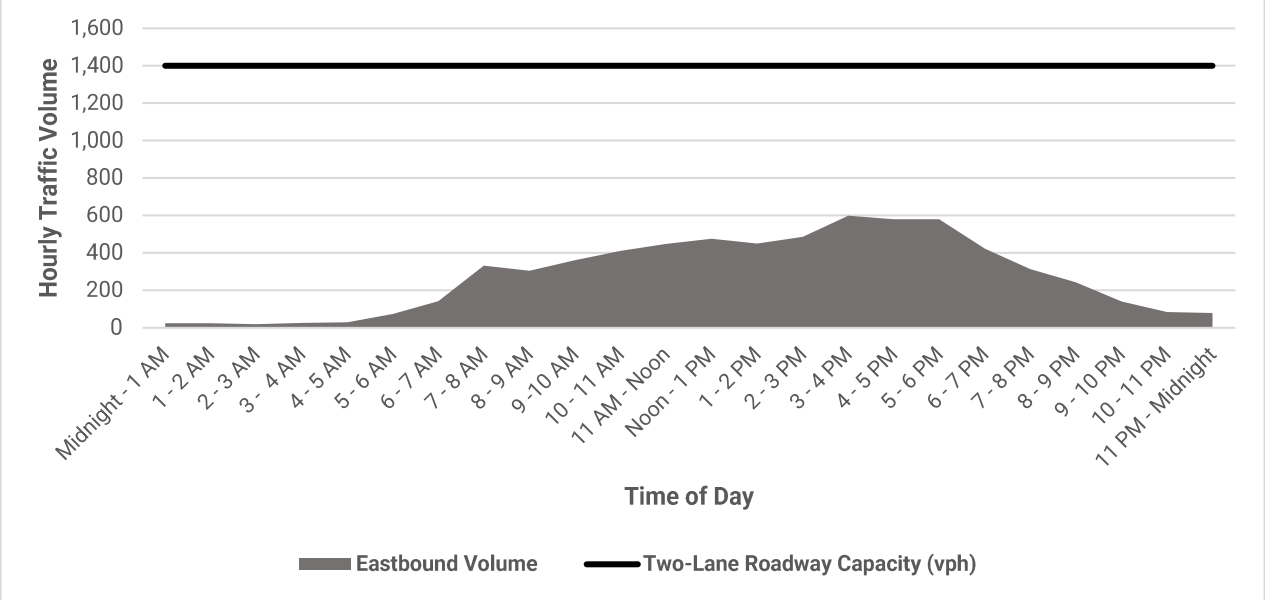


Figure 13: Roadway Capacity and Eastbound Volumes

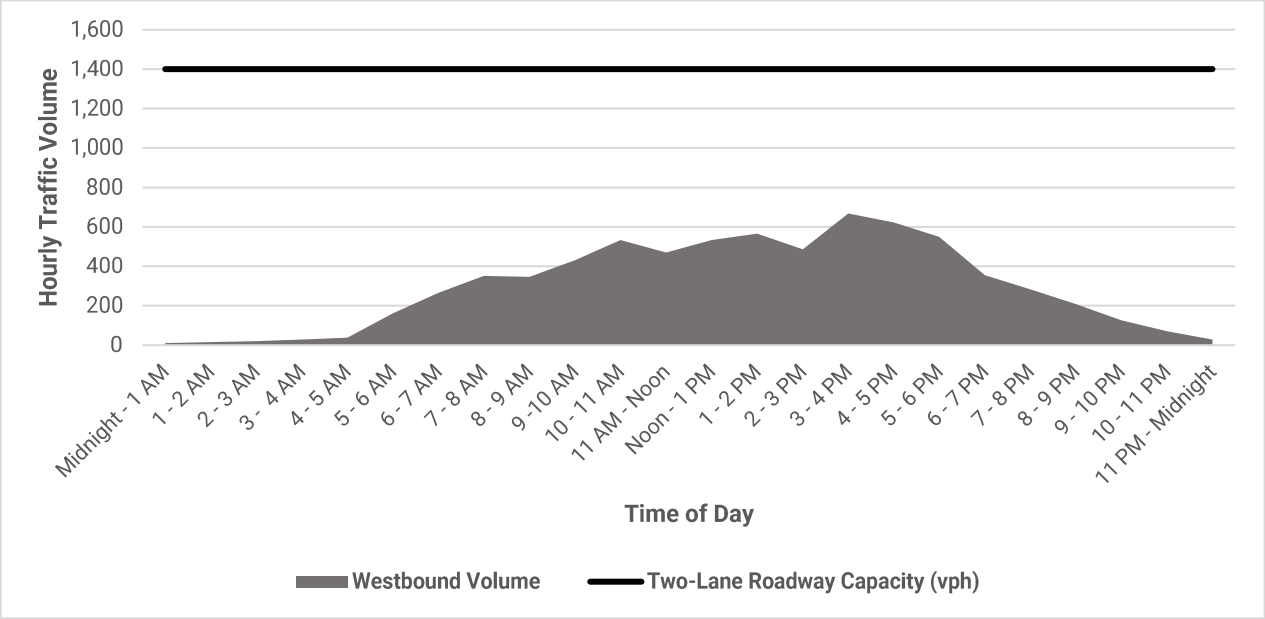


Figure 14: Roadway Capacity and Westbound Volumes

2.2.4.2 Commuter Patterns

According to data from the US Census Bureau, **just over 3,000 workers commute to Hastings daily**. Most of these residents live in the adjacent community areas of Rutland, Irving, or Thornapple Townships, while fewer commute to Hastings from Caledonia, Gaines Township, and Kentwood farther north. Outflow patterns are comprised **of just under 2,700 employees living in Hastings and commuting outside of the City** for work each day. Hastings residents commuting to other areas primarily work in Middleville and the industrial corridors of Kentwood near Gerald R. Ford International Airport. Roughly a quarter of Hastings residents commute further than 25 miles in each direction.

2.2.5 Crash Analysis

Crash data for the State Street Corridor was sourced from the Michigan Traffic Crash Facts website provided by MDOT and analyzed for the period between 2020 and 2024. During this period of time, **141 crashes occurred along State Street between Cook Road and Broadway Avenue, including 37 crashes that resulted in injury, and four crashes that resulted in severe injury**. Crash locations and severities are shown in Figure 15.

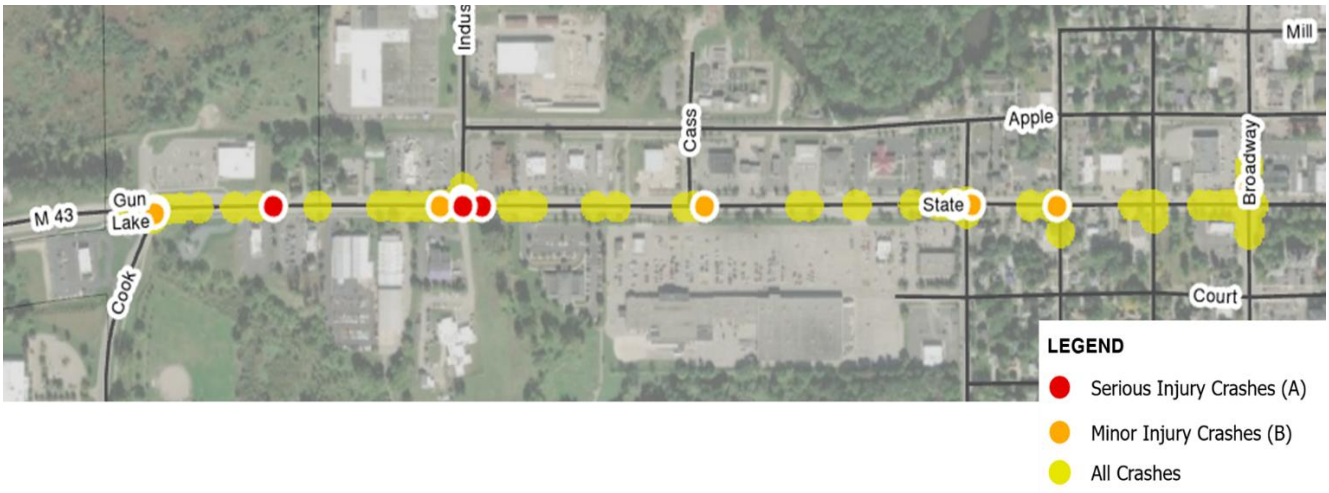


Figure 15: Crash Locations

A summary of the four crashes that resulted in severe injury is provided below.

- During daylight and dry road conditions, a driver turning west on State Street attempted to turn left into the 1310 West State Street access driveway from the northernmost westbound lane. The driver crossed four lanes of traffic prior to crashing into a driver proceeding eastbound. The turning driver suffered severe injuries.
- During daylight and wet road conditions, a driver was stopped at the signalized intersection of State Street and Industrial Park Drive when they suddenly reversed over the curb, then accelerated forward into a light pole. The driver suffered severe injuries.
- During daylight and dry road conditions, a driver attempting to turn left from the 1215 West State Street driveway struck a driver proceeding westbound. The turning driver suffered severe injuries.
- During daylight and dry road conditions, a distracted driver proceeding westbound on State Street entered the signalized intersection of State Street and Industrial Park Drive against a red-light indication, striking a driver turning left from Industrial Park Drive. The driver turning left suffered severe injuries.

Angle crashes were the most common type of crash, comprising 40% of all crashes and 65% of the 37 crashes resulting in injury. Sideswipe and rear-end crashes were the second and third most prevalent crash types,

comprising 22% and 21% of crashes, respectively, although it is noted that no sideswipe crashes resulted in injury. Seven rear-end crashes resulted in a possible (Type C) injury – 13% of all injury crashes.

Two crashes involving vulnerable road users, including people walking or bicycling, occurred between 2020 and 2024. One crash occurred when a driver struck a person attempting to cross State Street near Market Street on foot, with the person attempting to cross suffering a minor (Type B) injury. The second crash occurred when a driver struck a person riding a bicycle while attempting to perform a right-turn-on-red maneuver from southbound Broadway Avenue to westbound State Street. The person riding a bicycle suffered a minor (Type B) injury.

2.2.5.1 Crash Rate Analysis

In addition to a comprehensive review of crash outcomes along the State Street corridor, an analysis of crash rates along State Street, as well as transportation facilities in the Hastings area, was performed. Crash rate calculations control for traffic volumes and segment lengths, providing a more equivalent comparison of crash risk across different street, road, and highway types.

State Street between Cook Road and Broadway Avenue has both the highest crash rate and the highest severe and fatal crash rate across all street, road, and highway facilities in the Hastings area that were evaluated.

A summary of crash rates, normalized by vehicle-miles traveled (VMT), is provided in Table 1. State Street between Cook Road and Broadway Avenue has both the highest crash rate and the highest severe and fatal crash rate across all street, road, and highway facilities in the Hastings area that were evaluated. The significant excess capacity in the corridor, which contributes to increased driver operating speeds and more aggressive driver behavior, high posted speed limit, numerous access points, distance between signalized intersections, and accommodation for non-motorized users all contribute to a high crash rate.

Table 1: Crash Rate Analysis

Corridor	Length (mi)	Daily Traffic Volume	Number of Crashes	Number of Severe Crashes	Number of Fatal Crashes	Crash Rate	Severe & Fatal Crash Rate
M-43 (State Street) from Cook to Broadway	0.89	12,500	141	4	0	697	19.8
M-43 (Broadway Avenue) from State to Woodlawn	0.84	12,200	72	1	1	384	10.7
Green Street from Cook to Broadway	0.97	7,000	32	1	0	258	8.1
State Street from Broadway to Clinton	1.03	2,900	26	0	0	477	0.0
I-94 from 40th to 44th	2.02	57,000	164	2	2	78	1.9

2.2.6 Walking Audit

The Steering Committee held a walking audit on October 28, 2025, in conjunction with its initial meeting. The walk audit provided the consultant team, MDOT staff, local officials, and key project stakeholders with an opportunity to experience and evaluate the non-motorized experience along the State Street corridor. Informed by local disability advocates and utilizing an audit checklist, the committee walked along and across the corridor. **Key conclusions included speeding-related concerns, high truck traffic volumes, gaps and tripping hazards in the sidewalk network, and the lack of controlled crossing opportunities between Industrial Park Drive and Market Street**. These conclusions informed potential design recommendations, including the provision of improved pedestrian connections across State Street, opportunities for cross-access within private properties, and the need to account for potential development and traffic volume growth to the west of the city limits.

Figure 16: Walking Audit

2.2.7 Online Community Survey

Gathering feedback on how residents, business owners, and visitors perceive State Street was imperative in identifying existing challenges and opportunities for its future. An online survey was created and distributed, beginning in November 2025 and closing in March 2026. In total, 596 people responded to the survey, with 96% of respondents identifying as residents of either Hastings or Barry County. A summary of survey results is provided below, with full results included in the Appendix.

- **99.3% of people use a car on State Street**. Of those, 18% also walk and 5% use a bike or scooter.
- **19% and 11% of people, respectively, said they would like to walk or bike** on State Street, but do not today. 75% of people said they prefer to only use their car.
- **40% of people are unsatisfied with the current state of State Street**, compared to 35% of people who are satisfied with its current state.
- **68% of people feel safe when driving on State Street,** compared to 11% of people who feel unsafe.
- **38% of people feel safe when walking or bicycling on State Street**, compared to 23% of people who feel unsafe.
- When asked to use one word to describe State Street today**, the most common response was "Bumpy."**
- When asked to use one word to describe the desired future state of State Street, **the most common response was "Smooth."**
- When asked to rate a series of potential improvements on a scale from "Very Important" to "Not Important," the improvements that were identified as **most important were street lighting, accessibility features, and wider sidewalks**, while the least important improvements **were and art and placemaking elements, including signage and banners.**

State Street Today

Future Vision for State Street

2.3 CORRIDOR THEMES

Following a comprehensive review of corridor characteristics, engagement efforts, including community surveys, walk audits, and meetings with key stakeholders, project themes were developed. **The three alternatives explored for reconstruction were developed to respond to these themes.**

1. Uncomfortable Experience: The State Street experience for people walking or riding a bicycle is unpleasant for most of the study area, and the experience for drivers is not much better.
2. Speed and Safety: State Street's excess roadway capacity contributes to higher traffic speeds. These higher traffic speeds, in turn, lead to more dangerous crashes.
3. Stable Population and Declining Traffic: Hastings has grown by 6% since 2000, and traffic volumes on State Street are down by 35% over the same period.
4. Transformational Opportunity: The State Street area has "good bones" and enough right-of-way to transform the corridor from a challenge to a point of pride for Hastings.

3 EXPLORING OPPORTUNITIES FOR RECONSTRUCTION

State Street is a vital connector between places and facilitates access to several key commercial and residential destinations. However, it is also acknowledged that the corridor does not currently function as well as it could. When asked to describe the current state of State Street in one word, many respondents to the initial community survey answered with "bumpy" or "rough."

When asked to envision an ideal future state of State Street, the prevailing themes from community residents were safety and smoothness. Understanding that road design is an integral part of the 'feel' of the corridor and that adverse safety outcomes are attributable to the concentration of motorized and non-motorized activity, the project team developed feasible design concepts for the future state of State Street. Following procedures outlined in the National Cooperative Highway Research Program (NCHRP) Report 1036, shown below in Figure 17, goals were defined. Three design alternatives were identified and evaluated relative to their ability to achieve project goals and mitigate community concerns.

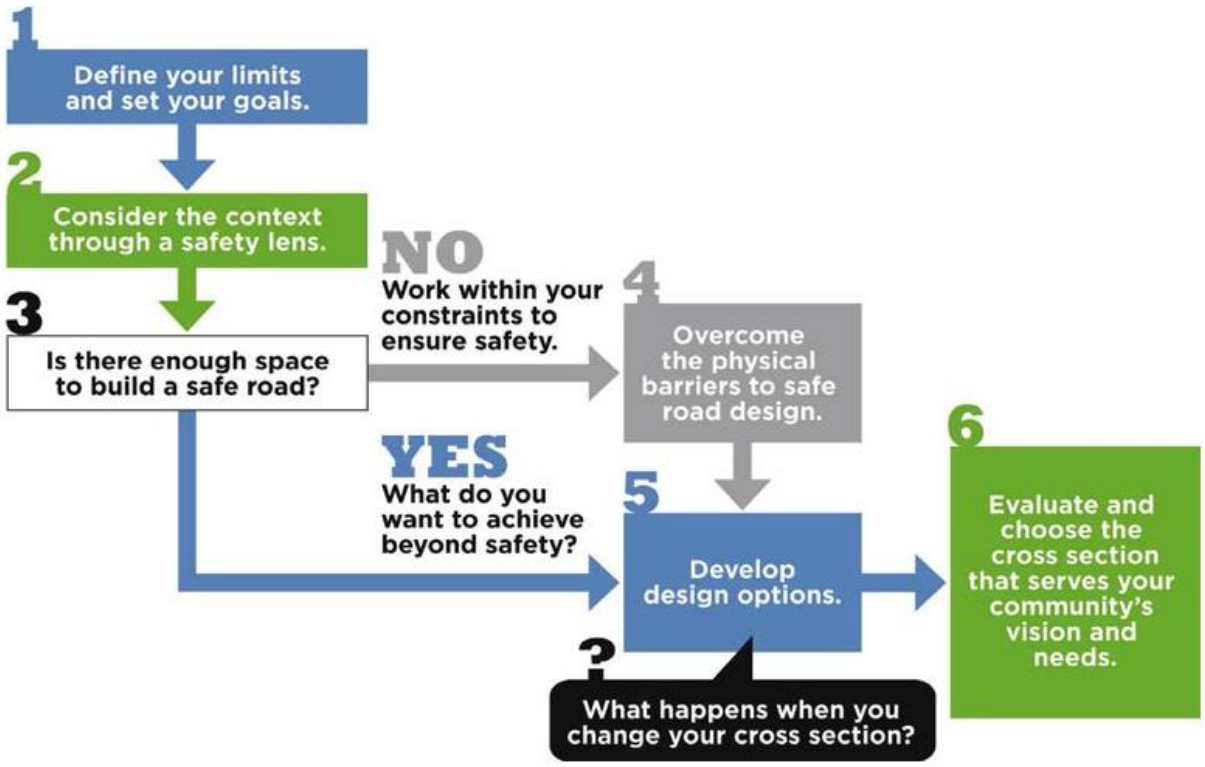


Figure 17: NCHRP Report 1036 Framework

In its current form, State Street facilitates robust access to commercial and residential destinations, encourages high rates of vehicular speed through its design, has an abundance of parking, and accommodates non-motorized users along sidewalks. However, although this configuration appears to appropriately accommodate all potential uses for the roadway, traffic flow is neither efficient nor safe. Vehicles staging in the center turn lane to perform a left turn, extended cycle lengths at signalized intersections, and abrupt movements to and from access points between signals all hinder operational efficiency, prolonging travel times and contributing to the 'bumpy' feeling of the corridor. Design interventions are intended to improve efficiency and travel times for drivers, as well as improve

safety for pedestrians and bicyclists. The intended result of these design interventions is to promote continued development along the State Street corridor and provide greater economic benefit to the Hastings community.

3.1 ALTERNATIVES OVERVIEW

Three design alternatives were developed and evaluated in accordance with project goals and criteria. Design alternatives were presented to the community at a public open house held on March 19, 2026. Residents were invited to view the alternatives and provide feedback regarding preferences for corridor-wide alternative implementation as well as individual design elements that comprise the alternatives. The public open house was paired with an online survey where community members could share equivalent feedback. In total, over 660 community members shared feedback between the open house and the online survey.

Alternatives were evaluated in accordance with five criteria: safety, speed, accessibility, economic development, and public feedback. A high-level overview of alternative performance relative to each of the five criteria is provided in Table 2, with additional information provided in Section 3.5.

Table 2: Alternatives Overview

Alternatives	Safety	Speed	Accessibility	Economic Development	Public Feedback
Alternative 1: Refresh					
Alternative 2: Access Control					
Alternative 3: Restoration					

3.2 ALTERNATIVE 1: REFRESH

The Refresh alternative mirrors the existing configuration of State Street, providing two through lanes for vehicles in both directions, a continuous center left-turn lane, and a continuous sidewalk on both sides of the road. Gaps in the sidewalk network should be connected, and additional opportunities for landscaping between the curb and sidewalk may be pursued in accordance with MDOT guidelines. Inside lane widths may be narrowed to 11 feet to encourage driver operating speeds that align with posted speed limits, while outside lane widths should be held at 12 feet to accommodate heavy vehicle and commercial traffic.

A cross-section of Alternative 1, as well as a representative corridor segment, is shown below.

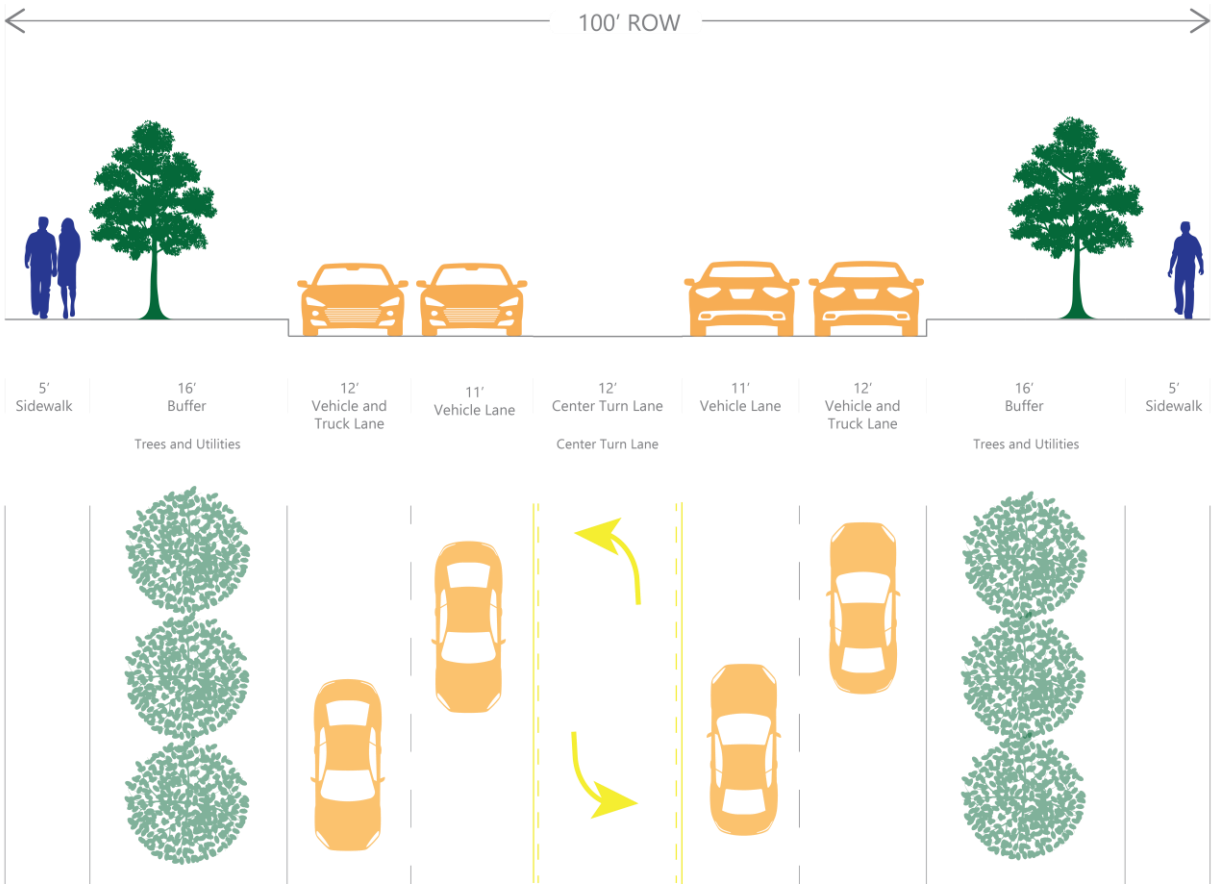
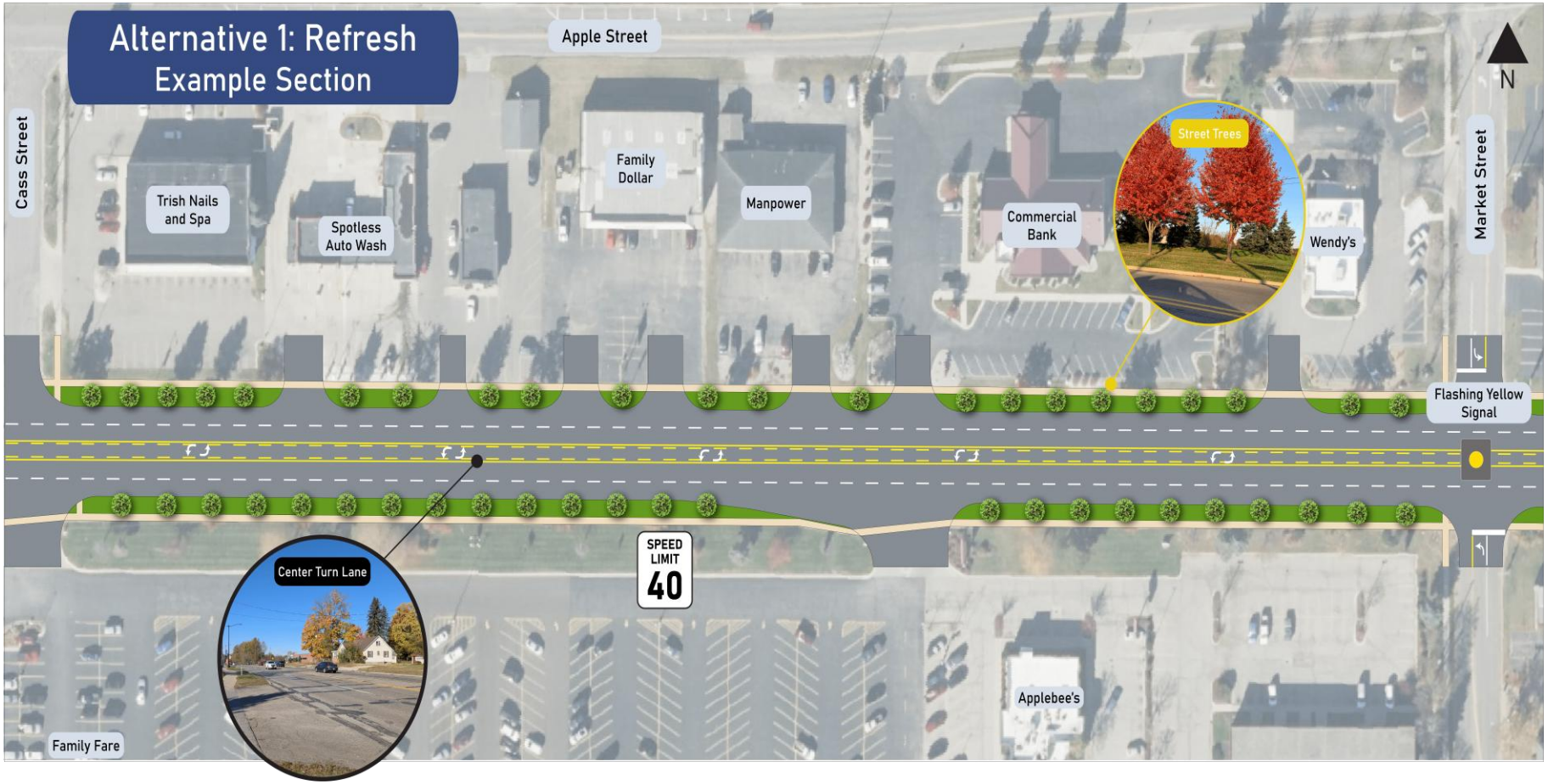


Figure 18: Alternative 1 Cross-Section


Alternative 1: Refresh
Example Section
Apple Street
Cass Street
Market Street
N
Trish Nails and Spa
Spotless Auto Wash
Family Dollar
Manpower
Commercial Bank
Street Trees
Wendy's
Flashing Yellow Signal
Center Turn Lane
SPEED LIMIT 40
Applebee's
Family Fare

3.3 ALTERNATIVE 2: ACCESS CONTROL

Access Control introduces raised and landscaped center medians in place of the two-way center left-turn lane where practical and feasible. By restricting left-turn access, traffic flow along the corridor is anticipated to be smoother and more efficient, while the median island may provide opportunities for pedestrian refuge at designated mid-block locations. In addition, by consolidating left-turn access to commercial destinations at key intersections and driveways, turning volumes at these key intersections will be higher, thereby increasing the possibility of satisfying relevant signal warrants. In locations where center two-way left turn lanes (like State Street today) have been replaced with access-controlling medians, crashes have been reduced by 45%, and crashes resulting in severe and fatal injuries have been reduced by 35%.[1]

Incorporating center medians provides the opportunity to introduce raised pedestrian refuge islands along the corridor. These islands provide pedestrians and bicyclists with a safe space to wait within the roadway, allowing them to evaluate and judge traffic flow in only one direction at a time. Refuge islands have been proven to reduce crossing-related crashes by up to 55%.[2]

The precise implementation of center medians, including spaces where they may not be appropriate, and the location of direct left turns within the corridor may **be finalized during final design with MDOT. The left turn locations and median implementation shown in this plan are not final at this time.**

A cross-section of Alternative 2, as well as a representative corridor segment, is shown below.

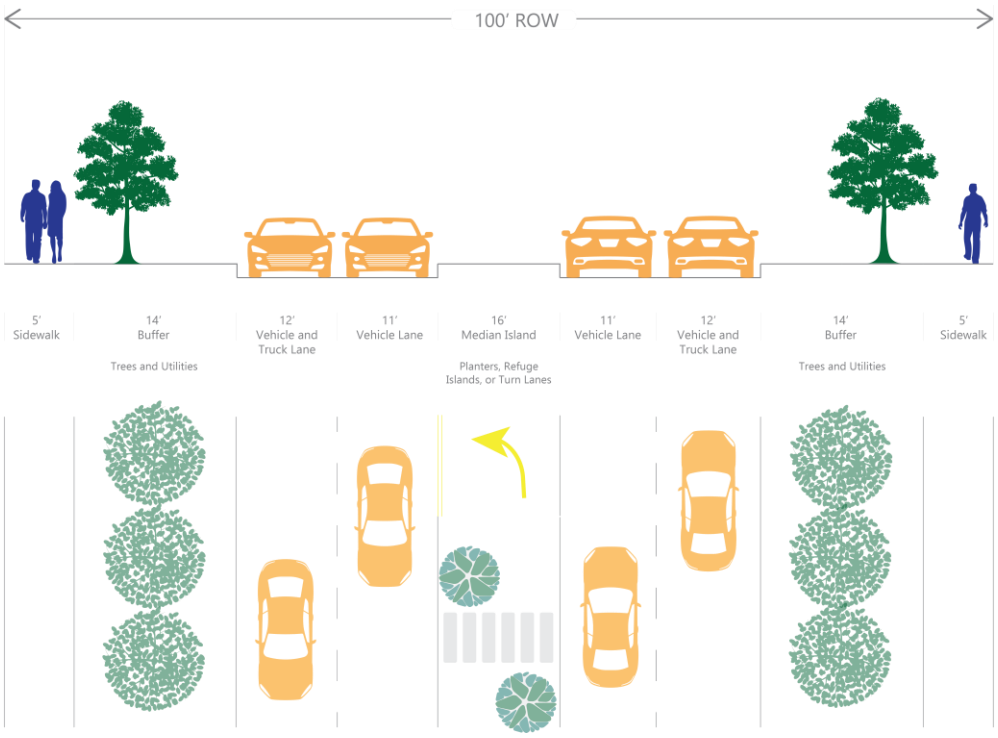
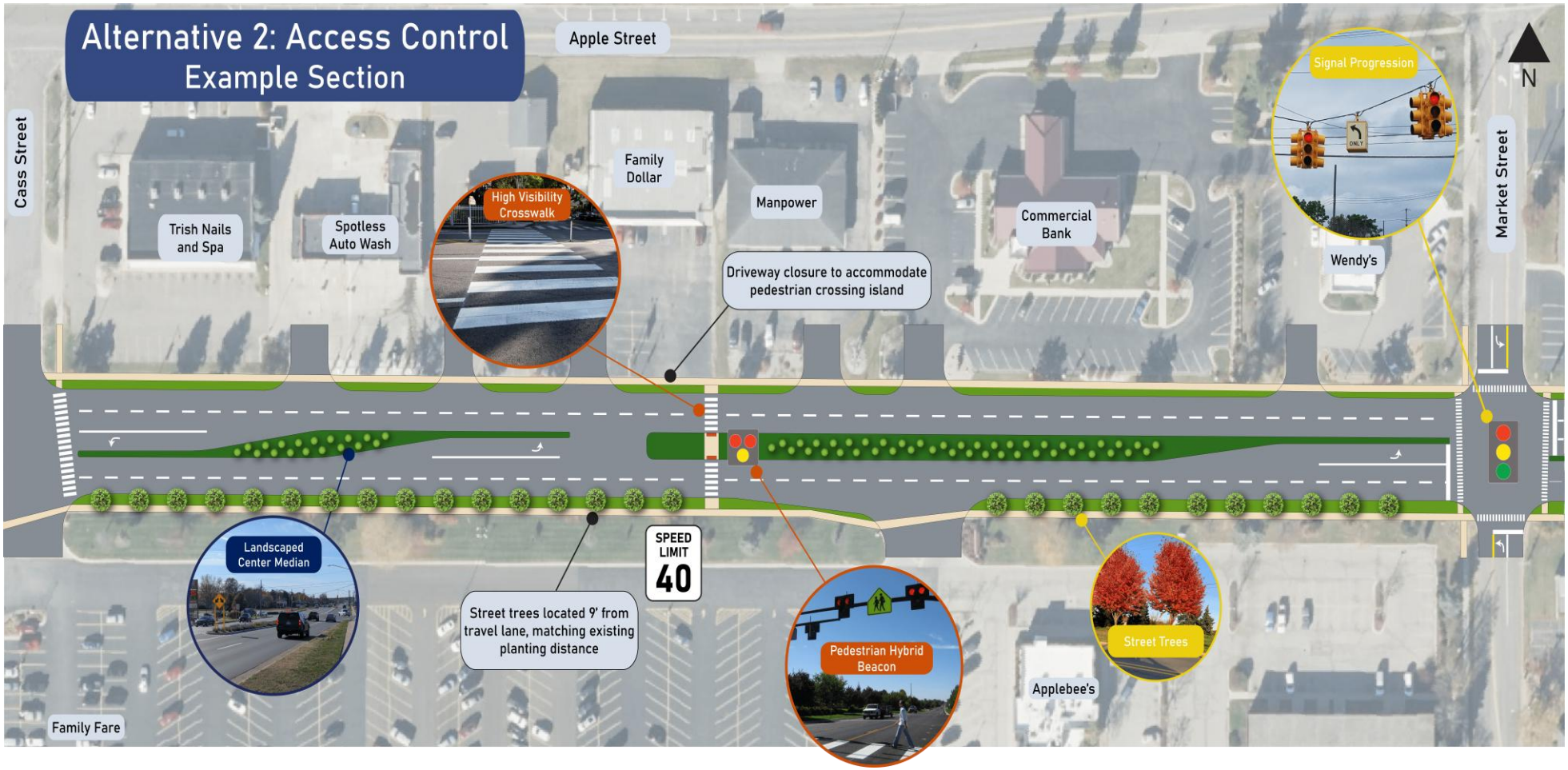


Figure 19: Alternative 2 Cross-Section

[1] https://stars.library.ucf.edu/cgi/viewcontent.cgi?article=5823&context=etd
[2] https://highways.dot.gov/sites/fhwa.dot.gov/files/Medians%20and%20Pedestrian%20Refuge%20Islands_508.pdf


Alternative 2: Access Control
Example Section
Apple Street
Cass Street
Market Street
N
Trish Nails and Spa
Spotless Auto Wash
High Visibility Crosswalk
Family Dollar
Manpower
Commercial Bank
Signal Progression
Wendy's
Driveway closure to accommodate pedestrian crossing island
Landscaped Center Median
Street trees located 9' from travel lane, matching existing planting distance
SPEED LIMIT 40
Pedestrian Hybrid Beacon
Street Trees
Applebee's
Family Fare

3.4 ALTERNATIVE 3: RESTORATION

Restoration aligns vehicular capacity with existing and anticipated future demand by removing two through lanes for vehicle traffic throughout the corridor. This alternative matches the existing width and cross-section of State Street west of Cook Road, which features a three-lane cross-section while accommodating higher traffic volumes. The street restoration would be anticipated to improve safety outcomes, maintain all existing access, and ensure traffic flows smoothly and more efficiently, with minor impacts to vehicle delay.

In addition, the street restoration would be anticipated to increase non-motorized connectivity and accessibility by increasing the buffer distance between the road and sidewalk. This buffer distance could be leveraged to provide a dedicated shared-use path on the south side of State Street, improving comfort and safety for people walking or bicycling along the corridor. Restoration also improves the pedestrian crossing experience by limiting the number of lanes required to cross. Pedestrian refuge islands may be implemented at targeted locations within the center left-turn lane to improve crossing safety and comfort.

Emergency response times would be anticipated to be marginally impacted, as the continued provision of a center left-turn lane provides a dedicated space for emergency vehicles to utilize. In addition, the anticipated benefits of the street restoration generally include fewer crash occurrences, reducing the need for emergency response to safety incidents on the corridor, and increasing responder availability for incidents that occur elsewhere within the city.

Specific consideration for heavy vehicle and commercial traffic utilization would be incorporated into the detailed design process, with lane widths and turning radii designed to accommodate anticipated use by larger-body vehicles.

A cross-section of Alternative 3, as well as a representative corridor segment, is shown below.

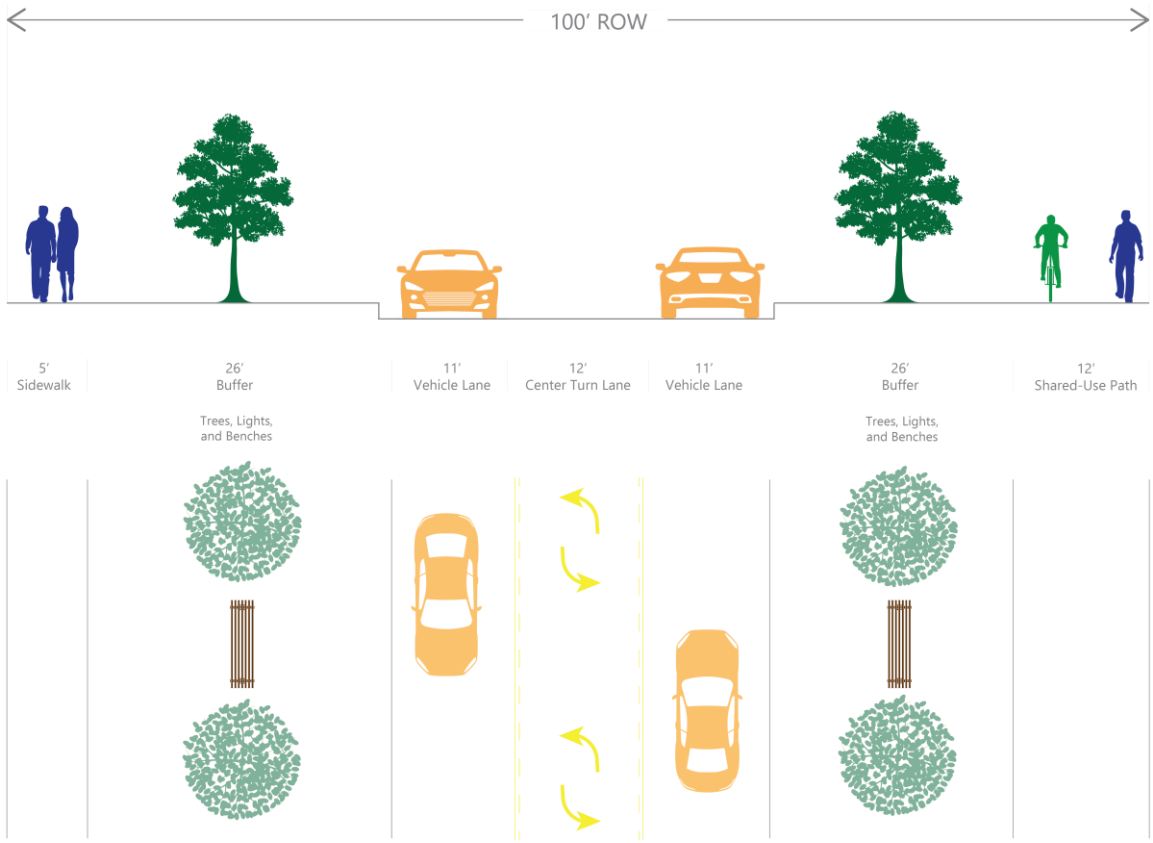
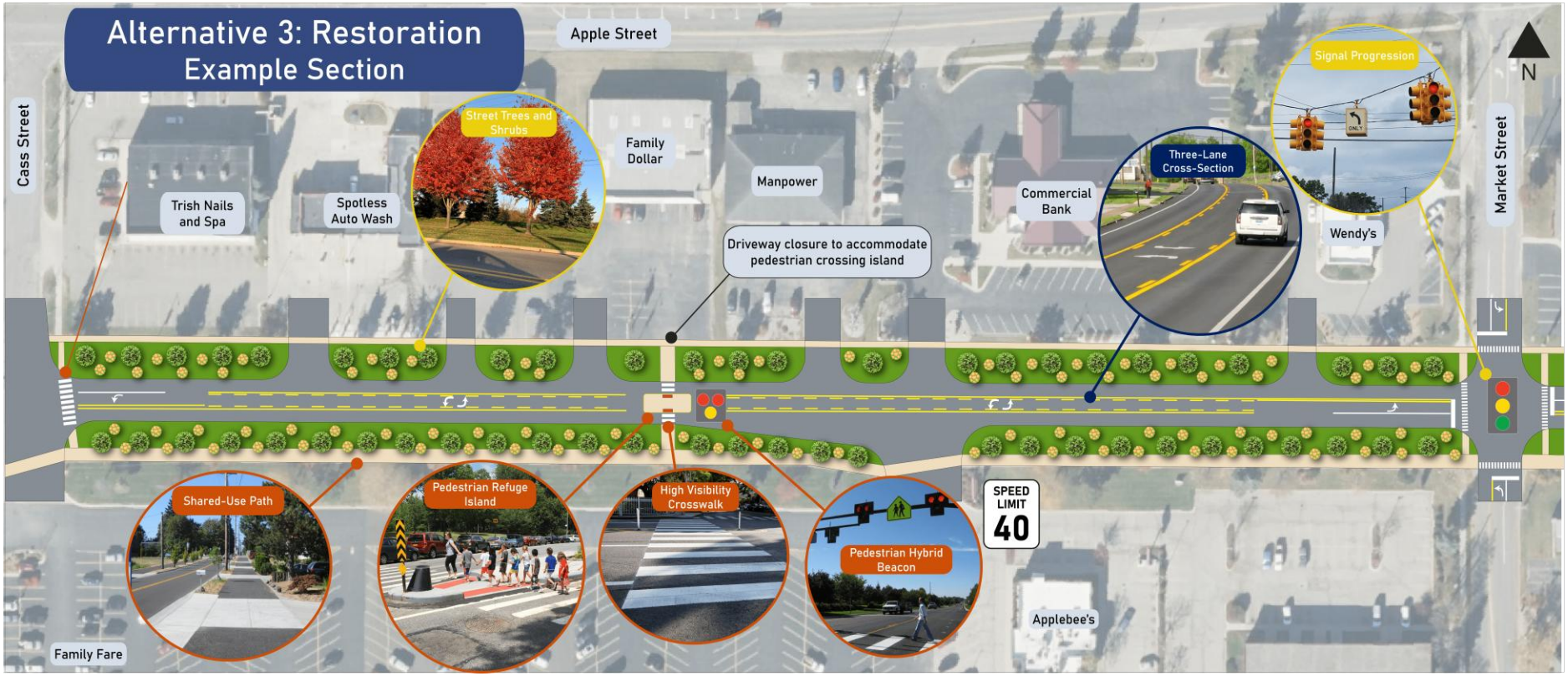


Figure 20: Alternative 3 Cross-Section


Alternative 3: Restoration
Example Section
Apple Street
Cass Street
Market Street
N
Trish Nails and Spa
Spotless Auto Wash
Street Trees and Shrubs
Family Dollar
Manpower
Driveway closure to accommodate pedestrian crossing island
Commercial Bank
Three-Lane Cross-Section
Signal Progression
Wendy's
Shared-Use Path
Pedestrian Refuge Island
High Visibility Crosswalk
Pedestrian Hybrid Beacon
SPEED LIMIT 40
Family Fare
Applebee's

3.5 EVALUATING DESIGN ALTERNATIVES

This section provides an outline of the analysis process utilized to evaluate the benefits and tradeoffs of the three design alternatives for State Street. Evaluation criteria were derived following a review of industry best practices.

3.5.1 Methodology

Each of the three design alternatives was evaluated relative to existing conditions on five criteria. Since alternatives are conceptual and preliminary in nature, evaluation is primarily based on qualitative measures compiled from industry best practices and local understanding of the corridor, rather than quantitative data grounded in real-world conditions. Alternatives were assigned a score of "high," "medium," or "low" for each of the five criteria in accordance with the descriptions below:

High: The alternative performs well on these criteria, relative to existing conditions and other alternatives. The alternative represents the best-case scenario for the corridor based on known and anticipated design constraints.

Medium: The alternative performs well on these criteria, relative to existing conditions and other alternatives; however, certain elements or anticipated outcomes do not represent the best-case scenario for the corridor based on known and anticipated design constraints.

Low: The alternative does not perform well on these criteria, relative to existing conditions and other alternatives.

3.5.1.1 Evaluation Criteria

The five evaluation criteria are summarized below.

1. **Safety**
   - Will crash frequency, or the number of crashes that occur along the corridor, decrease if this alternative is implemented?
   - Will crash severity, or the number of crashes that result in a fatality or serious injury, decrease if this alternative is implemented?
   - Is walking or bicycling along or across the corridor safer and more comfortable, should this alternative be implemented?
2. **Speed**
   - Will driver operating speeds, in the aggregate, decrease if this alternative is implemented?
3. **Accessibility**
   - How does the alternative impact accessibility along the corridor for:
     - All road users, to businesses or residences
     - People walking or bicycling to adjacent non-motorized facilities, including the shared-use path provided along Apple Street
4. **Economic Development**
   - How does the alternative encourage continued support of existing businesses and accommodate new development? Consideration is given to alternatives that encourage business accessibility by all modes, including driving, walking, bicycling, and using paratransit alternatives.
5. **Public Feedback**
   - To what extent does the local community support the potential implementation of the design alternative?

3.5.2 Alternative 1

Refresh preserves all key elements of the existing State Street corridor, including two through lanes in each direction for vehicular traffic, a dedicated and continuous two-way center left-turn lane, and 5 feet sidewalks on either side of the street. A summary of corridor-wide impacts to the roadway configuration, non-motorized facilities, and landscaping opportunities, as well as performance relative to the five project criteria, is provided in Table 3.

Table 3: Alternative 1 Key Elements

Roadway Configuration	Non-Motorized Facility Type	Landscaping Opportunities
12' outside lanes and 11' inside lanes, center two-way left-turn lane, and right-turn lanes at intersections and key driveways	5' sidewalk on both sides of the street, with network gaps connected	Similar to existing conditions, with mature trees located at least 10' from the edge of the outside travel lane

Project Criteria Evaluation				
Safety	Speed	Accessibility	Economic Development	Public Feedback
				

A summary of alternative performance for each of the five criteria is provided below.

1. Safety – Medium
    a. Crash frequency and severity would be anticipated to remain similar to existing outcomes, as no significant modifications to geometric designs or corridor operations are anticipated under this alternative.
    b. Opportunities for pedestrian crossings remain limited. Curb cuts and access points remain accessible to drivers turning both left and right, increasing the exposure of people walking or bicycling across driveways or intersections.
2. Speed – Medium
    a. Driver operating speeds, which were identified as higher than desired in the initial community survey, would be anticipated to remain similar to existing conditions. Driver speeds may increase slightly following reconstruction of the road surface.
3. Accessibility – Medium
    a. Accessibility to destinations along the corridor for people driving will remain equivalent to existing conditions. Accessibility is also higher relative to Alternative 2.
    b. Accessibility to adjacent non-motorized facilities remains challenging, as the alternative provides limited opportunities for crossing.
4. Economic Development – Medium
    a. New development is anticipated to remain relatively stagnant, mirroring trends seen in the previous 20 years, as the operational characteristics of the corridor do not change significantly.
    b. The corridor would be anticipated to continue the attraction of national retail chains that prioritize high vehicle volumes and significant parking provision, similar to existing business composition.
5. Public Feedback - High
    a. Public sentiment was in favor of this alternative, with 297 residents ranking it as their preferred choice and 223 residents ranking it as their second choice. General consensus to maintain the

existing condition of the roadway was heard, with the need to mitigate vehicle congestion during peak hours, facilitate access to businesses, and accommodate regional traffic and heavy vehicles heard.

3.5.3 Alternative 2

Access Control preserves some key elements of the existing State Street corridor, including two through lanes in each direction for vehicular traffic and 5' sidewalks on either side of the street. However, in certain locations where practical and feasible, an access-controlling, raised, and hardened center median is introduced that restricts left-turn access for drivers to and from certain driveways. A summary of corridor-wide impacts to the roadway configuration, non-motorized facilities, and landscaping opportunities is provided in Table 4.

Table 4: Alternative 2 Key Elements

Roadway Configuration	Non-Motorized Facility Type	Landscaping Opportunities
12' outside lanes and 11' inside lanes, center median in strategic locations paired with a center two-way left-turn lane, and right-turn lanes at intersections and key driveways	5' sidewalk on both sides of the street, with network gaps connected. Marked and controlled crossings are accommodated at strategic locations, in alignment with the center median	Small-scale landscaping may be introduced within the center median, in accordance with sight-distance requirements. Roadway widening necessary to accommodate the center median may necessitate the removal or relocation of several mature trees located in the buffer space between the street and sidewalk

Project Criteria Evaluation				
Safety	Speed	Accessibility	Economic Development	Public Feedback
				

A summary of alternative performance for each of the five criteria is provided below.

1. Safety – High
    a. Crash frequency and severity would be anticipated to decrease relative to existing outcomes, as corridor conflict points are reduced. In locations where center two-way left-turn lanes have been replaced with access-controlling medians, crashes that result in severe or fatal injuries have been proven to be reduced by up to 35%.[3]
    b. Opportunities for pedestrian crossings are improved, as the center median may be utilized as a refuge island in conjunction with safety countermeasures, such as high-visibility crosswalks or pedestrian hybrid beacons. Left-turn vehicular access to driveways is largely restricted, decreasing the exposure of people walking or bicycling across impacted driveways.
2. Speed – Low
    a. Driver operating speeds, which were identified as higher than desired in the initial community survey, would be anticipated to increase slightly relative to existing conditions, as traffic 'turbulence' is reduced and flow is channelized to key intersections.

[3] https://stars.library.ucf.edu/cgi/viewcontent.cgi?article=5823&context=etd

3. Accessibility – Medium
    a. Access to destinations along the corridor for people walking and bicycling, and drivers turning right, remains unchanged. Access for drivers attempting to turn left into a commercial driveway is largely restricted. Emergency vehicle access may also be impacted, depending on the median design.
    b. Accessibility to adjacent non-motorized facilities is improved through the provision of dedicated crossings that utilize the median as a refuge island.
4. Economic Development – Medium
    a. Despite public opinion to the contrary, support of existing businesses is anticipated to remain relatively unchanged, with studies finding that the installation of center medians does not significantly impact economic outcomes.[4] Installation of center medians represents a significant local commitment to improving safety, which may in turn be reciprocated by private developers, despite anticipated impacts to business access.
5. Public Feedback - Medium
    a. Public sentiment was somewhat in favor of this alternative, with 148 residents ranking it as their preferred choice and 222 residents ranking it as their second choice. Consensus regarding improved traffic flow and pedestrian crossings was heard, along with the need to balance commercial access and the potential detrimental impacts of median installation.

3.5.4 Alternative 3

Restoration represents the most significant intervention to the design and operation of the State Street corridor. Aligning roadway capacity with existing and future demand results in the removal of one through lane in each direction for vehicular traffic, providing additional space in the ROW to accommodate additional landscaping and a dedicated shared-use path for people walking or bicycling. A continuous center two-way left-turn lane is maintained, with opportunities to introduce pedestrian refuge islands that take advantage of the reduced roadway width provided. A summary of corridor-wide impacts to the roadway configuration, non-motorized facilities, and landscaping opportunities is provided in Table 5.

Table 5: Alternative 3 Key Elements

Roadway Configuration	Non-Motorized Facility Type	Landscaping Opportunities
11’ lanes (subject to further coordination and design vehicle considerations), continuous center two-way left-turn lane, and right-turn lanes at intersections and key driveways	5’ sidewalk on the north side of the street and 12’ shared-use path on the south side of the street, with network gaps connected. Marked and controlled crossings are accommodated at strategic locations, paired with refuge islands	Increased buffer distance between road and sidewalk or shared-use path provides additional opportunities to introduce mature landscaping along the corridor, narrowing driver’s fields of vision and providing traffic calming benefits

Project Criteria Evaluation				
Safety	**Speed**	**Accessibility**	**Economic Development**	**Public Feedback**
				

[4] https://www.hemetca.gov/DocumentCenter/View/4001/Raised-Medians-and-Economic-Impact-on-Adjacent-Businesses?bidId=

A summary of alternative performance for each of the five criteria is provided below.

1. Safety – High
    a. Crash frequency and severity would be anticipated to significantly decrease relative to existing outcomes, as corridor conflict points are reduced. Although traditional crash modification factors for the conversion of a five-lane roadway to a three-lane roadway are not available, a review of similar three-lane facilities in the West Michigan area indicates that crash occurrences, including fatal and severe crash occurrences, may be decreased by up to 50%.
    b. Opportunities for pedestrian crossings are improved, as the crossing distance at mid-block locations and intersections is reduced. Although left-turn vehicular access to commercial driveways is maintained, the reduction in through travel lanes reduces the cognitive load on drivers evaluating a safe gap in which to perform a turning movement, increasing pedestrian visibility and safety.
2. Speed – High
    a. Driver operating speed differentials would be anticipated to be significantly reduced, and the prevalence of high-speed passing or weaving maneuvers mitigated. Operating speed outcomes would be more dependent on vehicle type composition and signal progression opportunities.
3. Accessibility – High
    a. Access to destinations along the corridor for people driving and using transit remains unchanged relative to existing conditions.
    b. Accessibility to adjacent non-motorized facilities is improved through the provision of dedicated crossings that utilize refuge islands and require shorter crossing distances.
4. Economic Development – High
    a. Access to existing businesses and total traffic volume along the corridor is anticipated to remain relatively unchanged, while anticipated increases in non-motorized utilization supported by the shared-use path have been shown to modestly increase economic activity along similar corridors.[5]
    b. Modifications to the roadway cross-section represent a preliminary signal of the city's intent to extend the existing downtown core west of Broadway Avenue, and may encourage development in alignment with the multi-modal, safe, and comfortable context of a three-lane corridor with a shared-use path.
5. Public Feedback - Low
    a. Public sentiment was primarily in opposition to this alternative, with 143 residents ranking it as their preferred choice and 121 residents ranking it as their second choice. 273 residents (40%) ranked it as their least-favorite alternative. Consensus regarding restrictions to vehicular flow and the perceived impact on delay and congestion was heard, although support for increasing corridor-wide safety for all road users through design was also heard.

[5] https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/planning/fto/mobility/powerlinerd-beforeafter.pdf?sfvrsn=c18c7084_2

4 STATE STREET TOMORROW

The preferred future for State Street is an improved roadway that is safe for all who use it, regardless of whether they choose to drive, walk, or bicycle. In addition to improved safety outcomes, it is also critical to enhance the overall operation of the street while supporting future investment along the corridor. **Although Alternative 3: Restoration performed the best on the four objective evaluation criteria, public feedback regarding its perceived detrimental impacts to regional traffic flow, traffic speed, and inability to accommodate heavy vehicles was heard throughout the second round of public engagement.**

In order to provide the city and key stakeholders with potential recommendations for change along the corridor, an overview of feasible design elements and their related safety and operational-related outcomes, modifications within the ROW, and potential opportunities for development is summarized in this section. Opportunities are summarized based on their relation to the corridor: roadway improvement opportunities, ROW improvement opportunities, and land use improvement opportunities, and are ranked in order from highest cost and impact to lowest cost and impact.

4.1 ROADWAY IMPROVEMENT OPPORTUNITIES

4.1.1 Overview

A high-level overview of roadway improvement opportunity performance relative to each of the five criteria is provided in Table 6.

Table 6: Roadway Improvement Opportunities Overview

Roadway Improvement Opportunity	Safety	Speed	Accessibility	Economic Development	Public Feedback
Three-Lane Cross-Section					
Center Medians					
Pedestrian Crossing Opportunities					
Signal Progression and Timing Modifications					
Reduced Lane Widths					

4.1.2 Three-Lane Cross-Section (High Cost, High-Impact)

Providing a three-lane cross-section for vehicles aligns roadway capacity with existing and anticipated future demand. With a current peak hour bidirectional through volume of approximately 1,200 vehicles, and a peak hour through volume of approximately 670 vehicles in the westbound direction, roadway demand would not be anticipated to exceed capacity for any hour of the day in either direction, as shown in Figure 21 and Figure 22. Although driver travel times throughout the corridor would likely increase slightly, the magnitude of the increase is not anticipated to be significant.

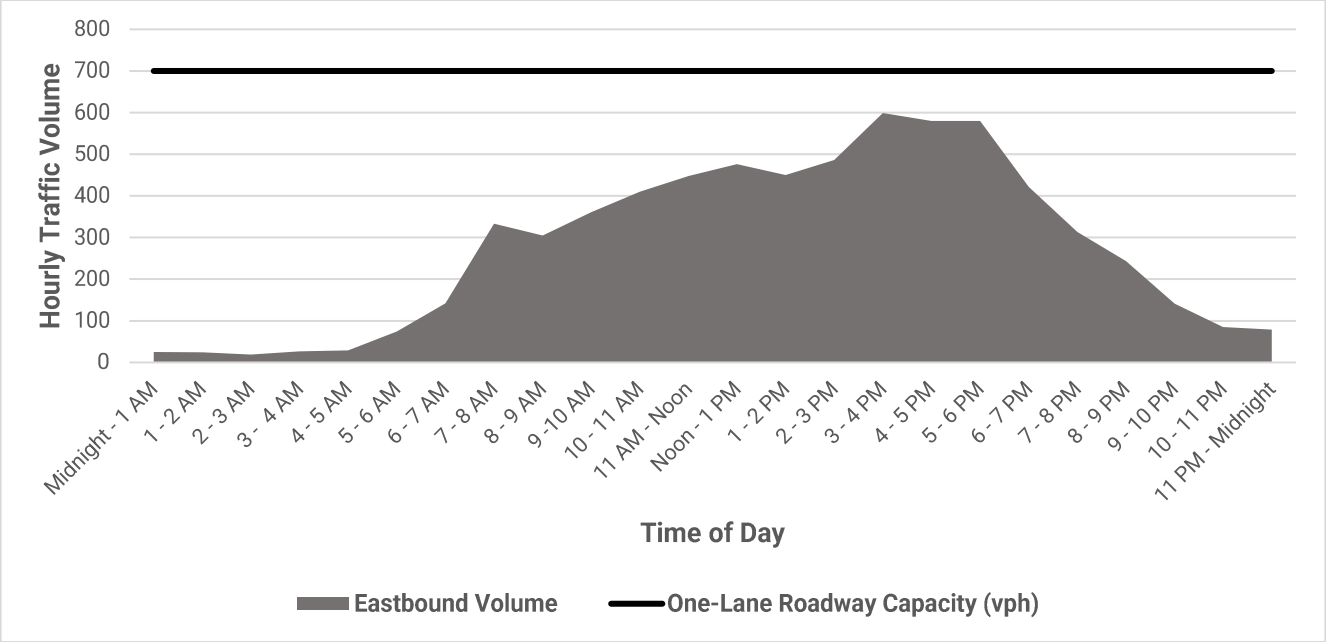


Figure 21: One-Lane Roadway Capacity and Eastbound Volumes

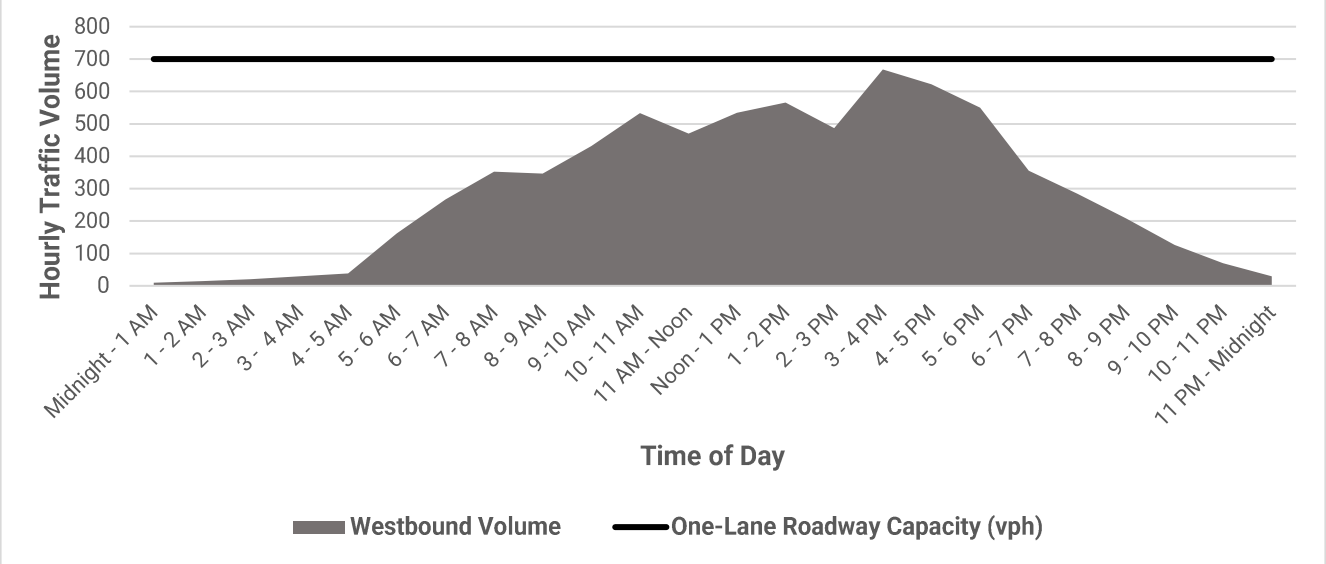


Figure 22: One-Lane Roadway Capacity and Westbound Volumes

As five- to three-lane conversions are not prevalent nationwide, and most 'traditional' projects involve the conversion of a four-lane roadway to a three-lane roadway with a dedicated center turn lane, a traditional crash modification factor (CMF) is not available. CMFs are an industry-wide standard that provides a proven measure of the anticipated impacts to crash frequencies and severities following the implementation of a particular design element or

countermeasure. For example, the CMF associated with the conversion of a four-lane roadway to a three-lane roadway with a center turn lane is 0.53, representing a 47% reduction in crashes following implementation.[6] Safety benefits associated with a traditional 4- to 3-lane conversion are largely derived from the inclusion of a dedicated left-turn lane, although benefits grounded in the reduction in crossing distances for people driving, walking, or bicycling, and the promotion of smoother and more consistent traffic speeds would be anticipated to be achieved should State Street be converted to a three-lane cross-section.

To provide a high-level overview of potential safety benefits that could be achieved by converting State Street to a three-lane cross-section, an analysis of similar transportation facilities in the West Michigan region was conducted. Each of the three facilities listed in Table 7 carry similar traffic volumes, have similar posted speed limits, and are roughly equivalent in length. The primary differentiator between the three example facilities and State Street is the number of lanes provided. The three example facilities feature a three-lane cross-section, compared to the five-lane cross-section currently present on State Street. Higher numbers of crashes, including crashes that result in injury, occur on State Street than on each of the three-lane facilities.

Table 7: Crash Trends on Similar Facilities

Street	Location	Street Length (mi)	Average Daily Traffic Volume	Speed Limit (MPH)	Number of Lanes	Number of Crashes	Number of Injury Crashes	Number of Severe Crashes
M-43 (State Street)	Hastings	0.90	12,500	40 / 50	**5**	141	**37**	**4**
M-21 (Main Street)	Lowell	1.00	14,000	45 / 55	**3**	71	**15**	**2**
M-66 (State Road)	Ionia	0.90	15,000	45	**3**	136	**23**	**1**
M-51	Dowagiac	1.00	10,000	40	**3**	32	**9**	**2**

The three example facilities feature a three-lane cross-section, compared to the five-lane cross-section currently present on State Street. Higher numbers of crashes, including crashes that result in injury, occur on State Street than on each of the three-lane facilities.

Converting State Street to a three-lane cross-section would be anticipated to improve safety outcomes for all road users, whether driving, walking, bicycling, or using transit, without significantly impacting traffic operations. Although future development along State Street may slightly increase traffic volumes, growth is not anticipated to be sufficiently high to necessitate the continued provision of five through lanes for vehicular traffic. Additional modifications to the transportation network, including signal installation at key driveways or intersections, could be utilized to manage and mitigate potential adverse impacts of traffic volume growth. In addition, it is recommended that a comprehensive analysis of traffic operations throughout the course of a typical day be evaluated when considering capacity adjustments to the roadway. Although a three-lane cross-section may introduce minor operational delay to the corridor during a short peak timeframe, its capacity is significantly better-aligned with demand throughout the rest of the day, representing a more efficient investment into transportation infrastructure that limits current and future investments needed to maintain a state of good repair.

[6] https://highways.dot.gov/safety/proven-safety-countermeasures/road-diets-roadway-reconfiguration

4.1.3 Center Medians

Introducing center medians within the roadway will improve safety outcomes and make traffic flow more smoothly and efficiently. By limiting ingress and egress points along State Street to key intersections and driveways, conflicts between turning vehicles, through vehicles, and non-motorized users are minimized. Center medians also provide more consistent vehicle speeds by concentrating turning locations, which improves the efficiency of the roadway. In addition, medians can be utilized for refuge by crossing pedestrians or bicyclists. In locations where center two-way left turn lanes have been replaced with access-controlling medians, crashes have been reduced by 45%, and crashes resulting in severe and fatal injuries have been reduced by 35%.[7]

In the absence of a lane reduction, which would improve safety outcomes and maintain existing access but could also increase vehicle delay, center medians are the most significant means by which to improve safety and efficiency for all road users. Additional work outside of the corridor ROW, including improving cross-access between businesses, can further improve access while reducing conflict points between turning vehicles and through traffic, as well as between vehicles and pedestrians and bicyclists.

Right-turning vehicles, pedestrians, and bicyclists would not be impacted by the median implementation. Consideration of truck access also represents a concern to be further evaluated during final design.

Center medians provide the opportunity for landscaping to be introduced within the roadway, beautifying the corridor, reducing stormwater runoff, and encouraging reduced vehicle speeds by introducing vertical 'friction.' In other words, creating a feeling of being in a smaller space encourages drivers to reduce speed. Although narrow median widths preclude the installation of robust landscaping, such as trees or tall bushes, appropriate plantings, including shrubs and grasses, could be introduced to improve the area's aesthetics while mitigating sight distance. However, the roadway widening necessary to accommodate a center median is anticipated to reduce the buffer distance between the road and sidewalk, placing people walking or bicycling closer to high-speed vehicle traffic and potentially necessitating the removal of existing mature landscaping along the corridor.

The precise implementation of center medians, including spaces where they may not be appropriate, and the location of direct left turns within the corridor would be finalized during final design with MDOT. The left turn locations and median implementation shown in this plan are not final at this time.

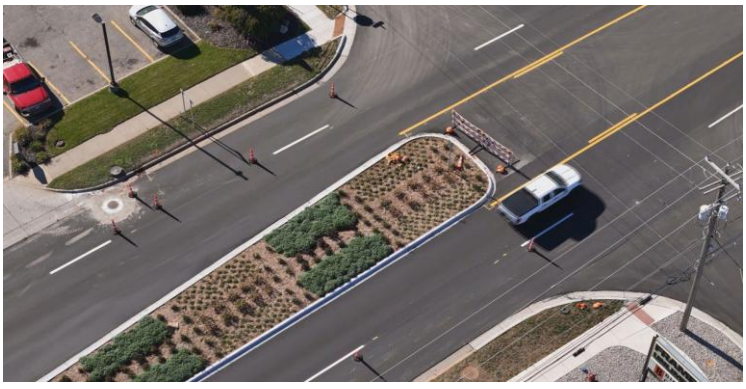


Figure 23: Center Median Example

[7] https://stars.library.ucf.edu/cgi/viewcontent.cgi?article=5823&context=etd

4.1.4 Pedestrian Crossing Opportunities

Pedestrian refuge islands, whether separate elements or as part of a center median, provide pedestrians and bicyclists with a safe space to wait within the roadway, allowing them to evaluate and judge traffic flow in only one direction at a time. **Refuge islands have been proven to reduce crossing-related crashes by up to 55%.**[8] Refuge islands also represent significant cost savings when compared to grade-separated alternatives, such as pedestrian bridges or tunnels. Pedestrian bridges or tunnels require significant funding commitment from the City, while accommodations for mobility-impaired users may necessitate private property acquisition at further cost. In contrast, pedestrian refuge islands can be incorporated into potential funding commitments and accomplished in a variety of ways that are both permanent and temporary to "test" the effectiveness of different locations.

Figure 24: Pedestrian Refuge Island

Pedestrian refuge islands should be paired with enhanced signage as feasible, including rectangular rapid flashing beacons (RRFB) or pedestrian hybrid beacons (PHB) that operate like a stoplight. Controlled mid-block crossings facilitate safer pedestrian crossings without requiring significant walking times away from a destination to a signalized intersection. The greatest distance pedestrians are likely to walk to access a safe crossing is approximately 500 feet, and if signalized intersections are spaced greater than 500 feet apart, people are likely to cross at an unsafe location.

F

Figure 25: Pedestrian Signal

4.1.5 Signal Progression and Timing Modifications

Modifications to signal operations should be made to improve crossing experiences, minimize conflicts between turning vehicles, and accommodate a wide range of road users. These modifications may include the following:

1. **Continued evaluation of the feasibility of signal installation at the intersection of State Street and Market Street**. Although a detailed signal warrant analysis was not performed as part of this planning effort, approach volumes are unlikely to be sufficiently high to satisfy relevant warrants. Access consolidation through the introduction of center medians may increase approach volumes relative to existing conditions, which may increase the likelihood of signal warrant satisfaction.
    - Should additional signalization be implemented along the corridor, timing and operations should be modified to encourage driver operating speeds in alignment with the posted speed limit.

[8] https://highways.dot.gov/sites/fhwa.dot.gov/files/Medians%20and%20Pedestrian%20Refuge%20Islands_508.pdf

2. **Reduced cycle lengths, which minimize opportunities for drivers to enter intersections at high rates of speed**, reduce pedestrian delay by shortening the time needed to wait between phases with safe crossings, and encourage greater compliance for those crossing.
3. **Removal of permissive turning movements**, including left turns made on flashing yellow arrows and right turns on red, which simplifies intersection operations for drivers and minimizes interactions between pedestrians and turning vehicles. Such signal modifications *may* introduce increased delay for drivers but *will* provide significant safety benefits for all road users.
4. **Improvements to pedestrian crossing infrastructure**, including upgrading signals and pushbuttons to Accessible Pedestrian Signals (APS), which facilitate safer crossings for vision-impaired pedestrians. APS devices may be required at all signalized intersections under new federal guidance.

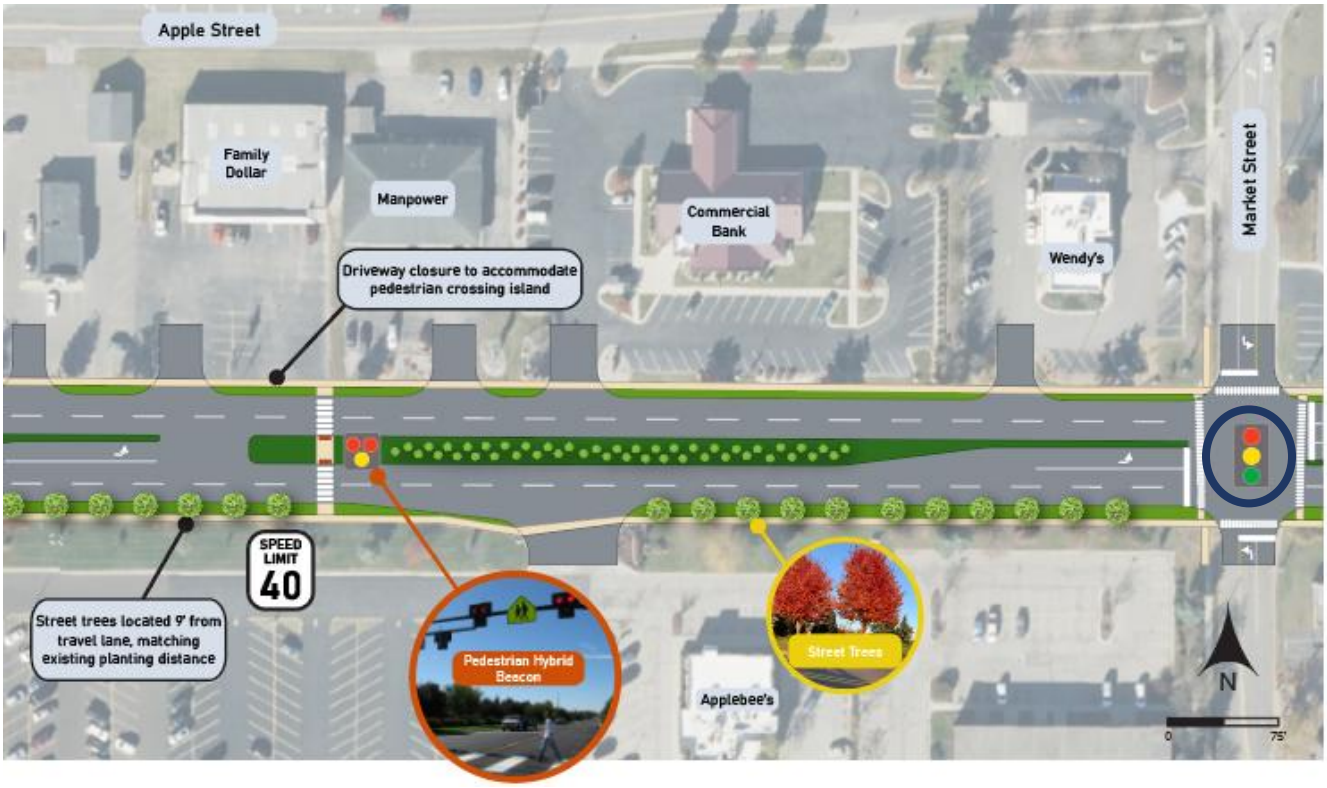


Figure 26: Proposed New Signals in Alternative 2

4.1.6 Reduced Lane Widths

Narrower lane widths have been proven to encourage reduced vehicle speeds on arterial streets, thereby minimizing the severity of crashes that do occur and improving safety for all road users.[9] Therefore, it is recommended that inside (left-hand) travel lane widths be reduced to 11 or 10.5 feet. Similar measures have been implemented along MDOT roadways, such as US-31 (Grandview Parkway) in Traverse City, while federal and state design guidance provides flexibility when selecting appropriate lane widths. Due to the prevalence of commercial traffic along State Street, the outside (right-hand) lane width should not be reduced below 11 feet, should a five-lane cross-section be maintained.

Figure 24: 11' Lane Widths in Mt. Pleasant, MI

Lane width reductions may be made during the programmed reconstruction project, with the understanding that modifications to the existing curb-to-curb width will require modifications to drainage structures. Moving the curb inward by reducing lane widths will also slightly increase the buffer space between the sidewalk and roadway, which can improve the pedestrian experience in locations where the sidewalk is currently closer to the roadway.

4.2 RIGHT-OF-WAY IMPROVEMENT OPPORTUNITIES

4.2.1 Overview

A high-level overview of right-of-way improvement opportunity performance relative to each of the five criteria is provided in Table 8.

Table 8: Right-of-Way Improvement Opportunities Overview

Right-of-Way Improvement Opportunity	Safety	Speed	Accessibility	Economic Development	Public Feedback
Shared-Use Path					
Streetscaping					
Filling Gaps in the Sidewalk Network					
Access Management					

[9] https://nacto.org/docs/usdg/review_lane_width_and_speed_parsons.pdf

4.2.2 Shared-Use Path

The existing sidewalk along State Street provides an option for people outside of a vehicle to travel along State Street today. However, its narrow width and frequent curb-cut interruptions make the sidewalk difficult to use and make the experience as a pedestrian or bicyclist unsafe and unpleasant, particularly along the northern side of State Street. Should a three-lane cross-section be implemented, sufficient ROW becomes available in which a bidirectional 12-foot shared-use path could be implemented.

Figure 27: Example Shared-Use Path

Funding availability, utility locations, and other external factors may preclude implementation of robust non-motorized facilities along both sides of State Street. **It is recommended that a widened shared-use path be implemented along the south side of State Street if one side is to be prioritized.** Such a shared use path does not require a clear separation between users but should include signage encouraging walkers and slower riders to stay to the outside of the pathway. The shared use path can be implemented in place of a sidewalk on one side of the street, or in addition to a sidewalk.

Bicycle facilities are not recommended for inclusion within the curb-to-curb width of State Street due to the high vehicle speeds and volumes. Although utilization of State Street by 'vehicular' cyclists, who ride with vehicle traffic may still occur, provision of a robust separated facility is recommended to best facilitate safe and comfortable riding. Enhancing landscaping and adding placemaking elements, such as public artwork, can be introduced as a 'linear park' to enhance the area as a gateway to the Hastings community and further encourage increased non-motorized utilization and activity.

4.2.3 Streetscaping

Streetscape elements, including trees and plantings, artwork or banners, and drainage elements, could be further explored in order to provide an improved visual understanding of the corridor. While some areas of the corridor have excellent street trees that make walking

pleasant, particularly adjacent to the Family Fare shopping center, other areas farther to the West are not as comfortable for walking.

Landscaping, including street trees and plantings, can provide environmental and health-related benefits in addition to its natural traffic calming effects. Implementation of a three-lane cross-section would create many new opportunities to add trees and streetscape elements that calm traffic, make it easier to walk and bike, and enhance the look and feel of the corridor. Other streetscape elements like pedestrian-oriented lighting and banners can also be maintained or enhanced. Existing banners along the corridor should be maintained and should be updated to provide a consistent visual indicator of place and location within the city.

4.2.4 Filling Gaps in the Sidewalk Network

Two significant gaps in the sidewalk network are present along the State Street corridor. Although completion of the network not adjacent to an intersection or driveway falls outside of MDOT's purview, the city may explore opportunities to connect gaps in conjunction with proposed redevelopment, or as a standalone project. By connecting sidewalk facilities, people walking, bicycling, or using mobility assistance devices are provided with the same connectivity to destinations as are people who drive.

A map indicating the existing locations of sidewalk gaps along the north side of State Street is shown in Figure 28.

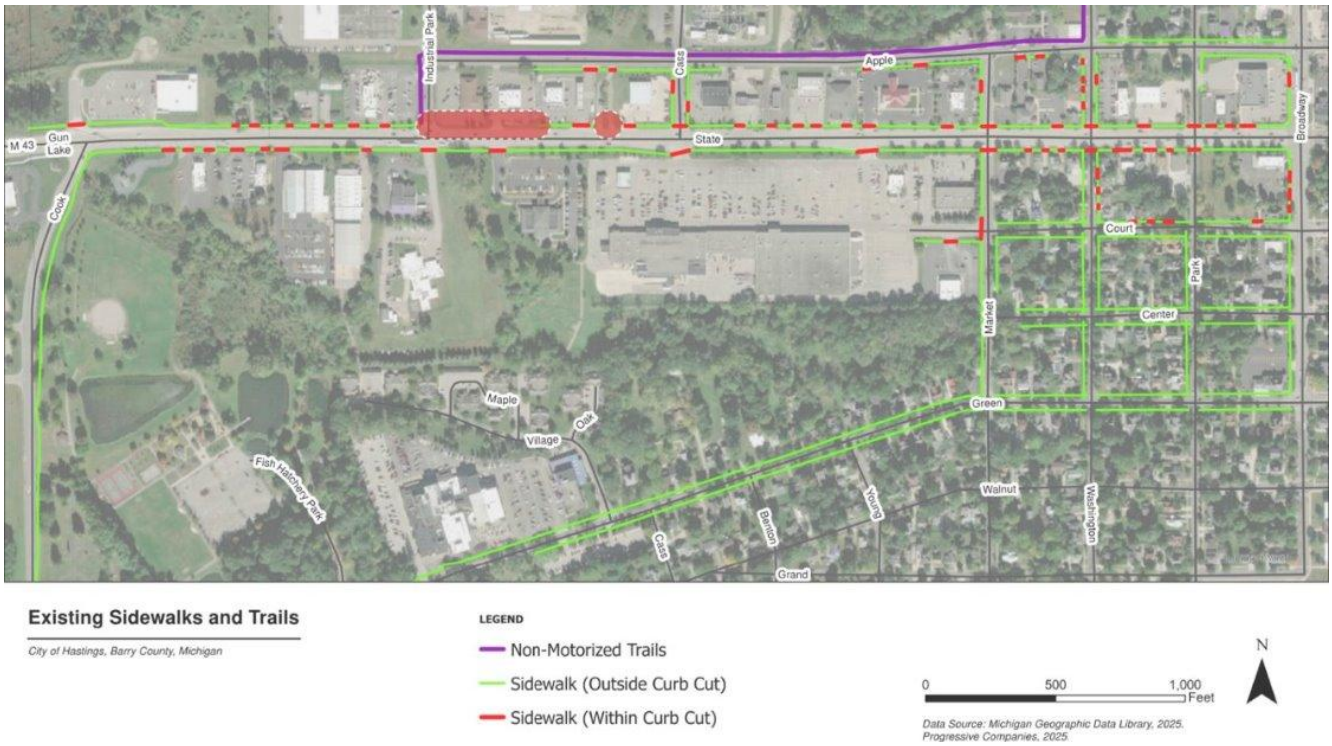


Figure 28: Sidewalk Gaps

4.2.5 Access Management

Best practices for access management should be implemented to reduce the number and location of driveways along the State Street corridor. Cross access concentrates vehicle access to and from properties adjacent to State Street at key intersections and driveways, minimizing conflicts between vehicles and pedestrians, simplifying driver understanding of corridor operations, and encouraging more consistent vehicle speeds along the corridor. Concentrating access also increases the likelihood of certain locations satisfying signal warrants, further improving

safety for drivers attempting to access destinations along State Street. Finally, cross-access also improves the viability of median implementation, minimizing the need for drivers to perform U-turn movements to access businesses, instead performing a traditional left turn movement and utilizing a shared drive to access their desired destination.

Cross access and access management best practices are generally exemplified in the developments to the north and south between Cass Street and Market Street. However, opportunities for driveway consolidation or closure in accordance with MDOT spacing guidelines, shown in the table, along properties west of Cass Street and east of Market Street should be explored during the reconstruction process or as redevelopment occurs.

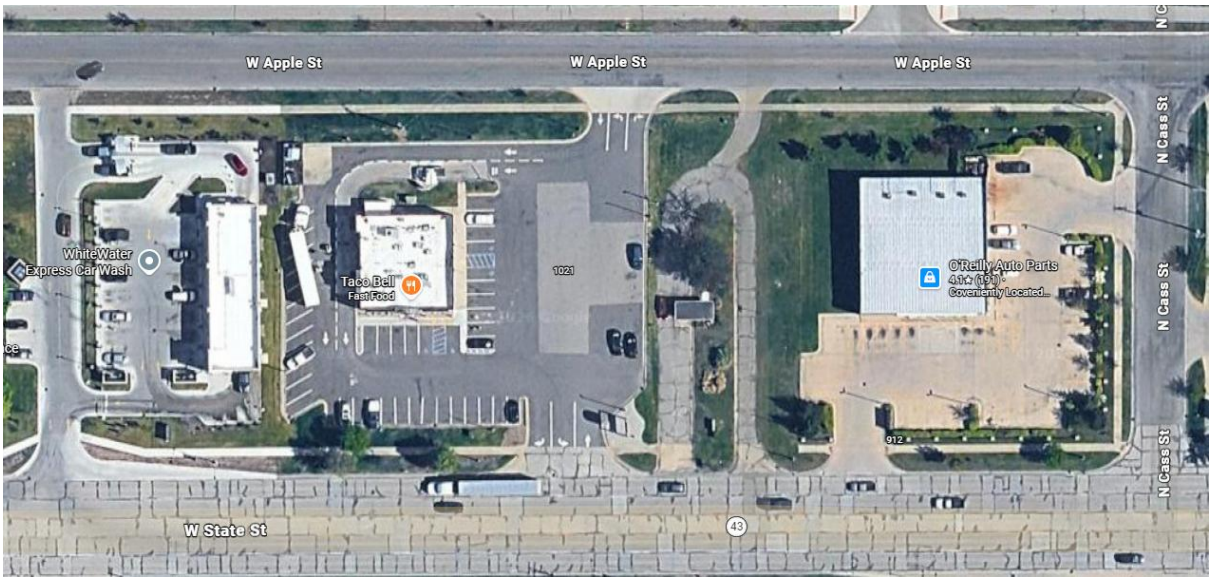


Figure 29: Driveway Spacing on State Street West of Cass Street (No Shared Access)

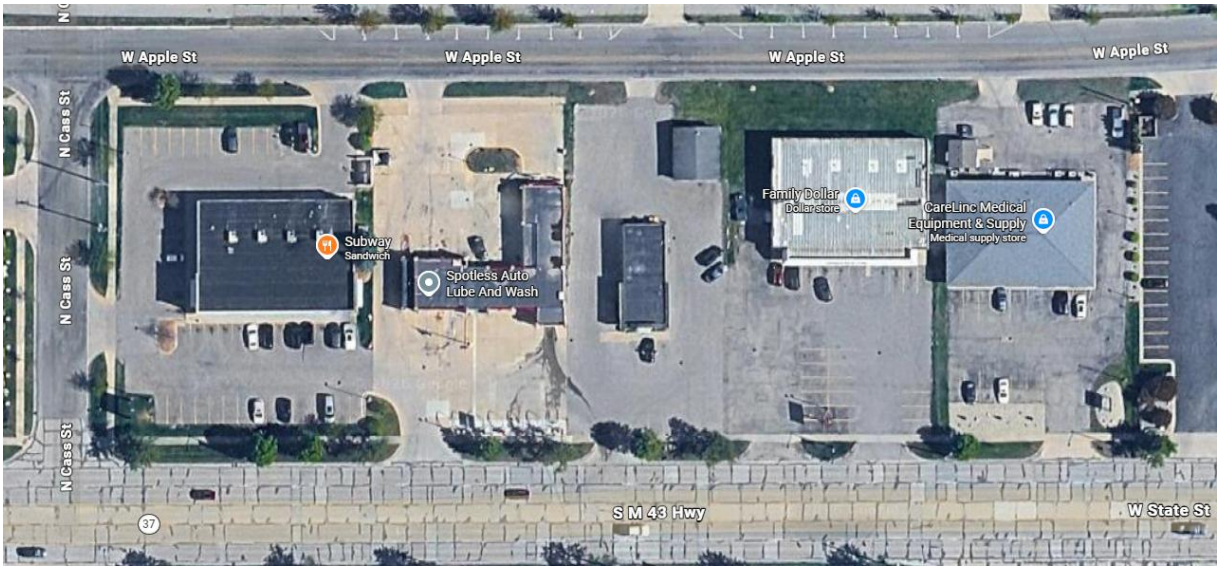


Figure 30: Driveway Spacing on State Street East of Cass Street (Shared Access)

4.3 SURROUNDING LAND USE OPPORTUNITIES

4.3.1 Expanding the Downtown Context West of Broadway Avenue

Emphasizing redevelopment opportunities, corridor enhancements, and opportunities to enhance connections along the segment of State Street between Market Street and Broadway Avenue is identified as an opportunity in the City's master plan.

Leveraging the success of the Tyden Lofts development, there is an opportunity to explore the expansion of the downtown context of Hastings to the west of Broadway Avenue toward Market Street. This approach would leverage the historic grid connectivity, large trees on the south side of State Street, and a slower, more pedestrian-friendly context. Street design elements or cross-sections should be thoughtfully designed in alignment with the anticipated and desired land use context of this corridor segment as an extension of the downtown core, rather than a transition zone between the downtown core and the suburban-style commercial context to the west.

Figure 31: Potential Downtown Context Expansion

4.3.2 Redevelopment Opportunities for the Family Fare Plaza

Phased redevelopment opportunities on parcels with strong redevelopment potential should be encouraged in order to illustrate opportunities for the creation of high-quality places. The primary site identified along the State Street corridor is the existing Family Fare Plaza, which includes a large, under-utilized parking area that acts as a barrier between the shopping complex and pedestrians for bicyclists seeking to access the area from State Street.

With reconstruction and investment in State Street, this parking area represents the largest potential development area, which has the potential to spur additional investment in the existing commercial building and promote continued occupancy and vibrancy of the area. If the owners of the property are interested in working with the City, the two could pursue a Request for Qualifications process with a developer to pursue development opportunities that align with State Street reconstruction.

4.3.3 Non-Motorized Connectivity

Although controlled pedestrian crossings are available at the signalized intersections of State Street with Industrial Park Drive and Broadway Avenue, spacing between crossings is significant, requiring a 15-minute walk between the two. Improving non-motorized crossings along the corridor through the provision of signal control at Market Street, pedestrian refuge islands, and beacons where appropriate and applicable, and adjustments to signal operations that limit pedestrian exposure to conflicting traffic, are recommended to increase comfort and safety for people walking or bicycling. Particular consideration should be given to adjusting signal operations at the intersection of State Street and Industrial Park Drive, which is a designated crossing between the Apple Street shared-use path and the proposed non-motorized route on State Street.

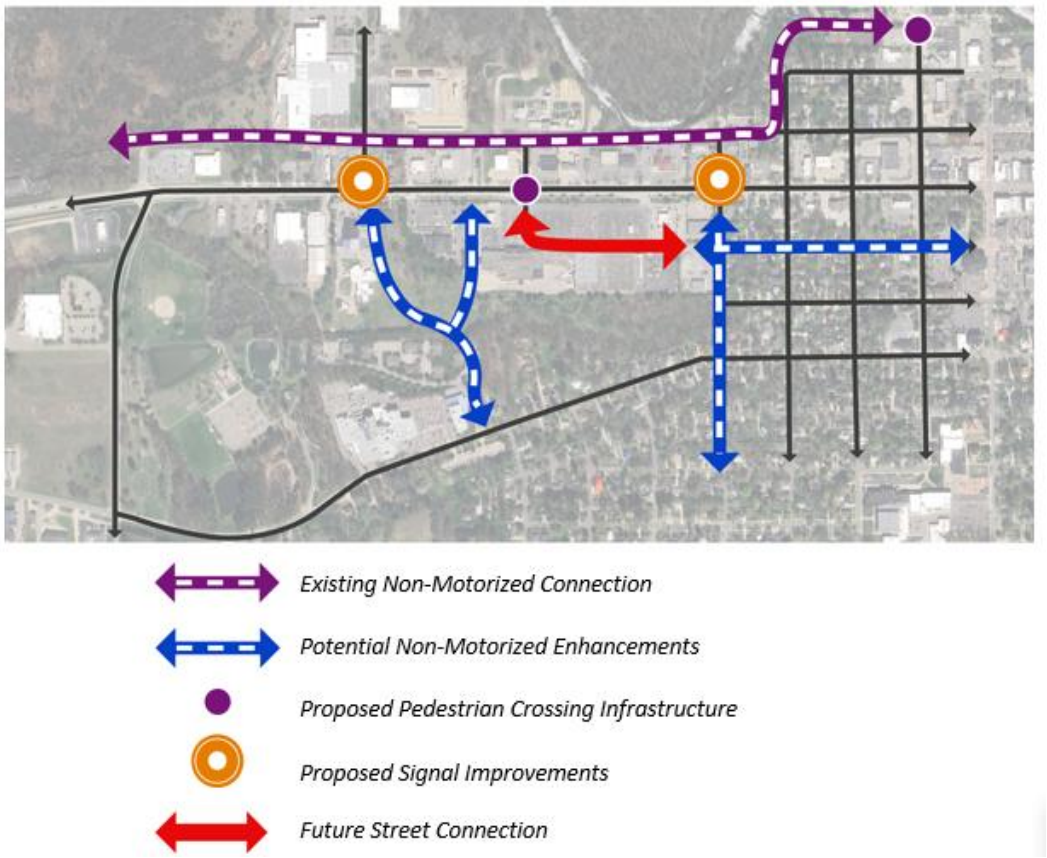


Figure 32: Proposed Non-Motorized Network Connections

5 ARRIVING AT TOMORROW: IMPLEMENTATION FRAMEWORK

The construction and implementation of all the improvements recommended in this plan simultaneously is unlikely. Development of great places happens over time and requires opportunities for community leaders, property owners, and residents to see and evaluate various solutions. This section identifies strategies to implement the plan gradually, as funding resources and new development opportunities allow, as well as the identification of design elements that may be incorporated into the scope of the MDOT reconstruction project programmed for 2028.

5.1 FUNDING RESPONSIBILITIES

Table 9 summarizes the funding responsibilities for each individual design element or other improvement opportunity, including an indication of whether the element can be incorporated into the reconstruction project programmed in 2028. A summary of applicable funding bodies and sources, including relevant grant programs, is provided below. Elements for which consensus regarding further analysis and pursuit is required for potential incorporation into the 2028 reconstruction project are indicated in Table 9 in **bold**.

1. **Michigan Department of Transportation (MDOT):** MDOT typically provides funding for the reconstruction of the vehicle travelway, including paved surfaces intended for use by private and commercial vehicles, as well as sidewalk ramps at driveways and intersections to maintain compliance with the Americans with Disabilities Act (ADA). MDOT is typically **not responsible** for the construction and maintenance of pedestrian facilities, including sidewalks or shared-use paths between intersections or driveways. Funding for modifications to signal operations, or construction of new traffic signals or intersection control, is typically provided by MDOT but may require local participation.
2. **City of Hastings (City):** The City of Hastings is the entity responsible for funding most improvements located outside of the curb-to-curb width of the roadway and may be responsible for incremental funding responsibilities for a roadway design that would cost more than the programmed amount. This generally includes the responsibility to pursue funding opportunities for access management, non-motorized facilities, streetscaping, and landscaping efforts. The City of Hastings is also responsible for pursuing land use or development projects in collaboration with private owners.
3. **City of Hastings Downtown Development Authority (DDA):** The DDA is a local authority with limited capital funding to support projects within its boundaries that are aligned with its Development Plan. As the DDA boundary includes the State Street corridor between Cook Road and Broadway Avenue, funding may be made available to advance improvements within the roadway curb-to-curb width, ROW, or adjacent properties and parcels.
4. **Highway Safety Improvement Program (HSIP):** A competitive grant program administered by MDOT, HSIP is a federal-aid program intended to achieve reductions in traffic fatalities and serious injuries. Funding for safety-related projects along the State Street corridor may be made available. This program requires a 20% local match for all funding awards.
5. **Transportation Alternatives Program (TAP):** A competitive grant program administered by MDOT, TAP is a federal-aid program intended to provide funding for projects that enhance intermodal transportation systems, including active transportation facilities. This program requires a 20% local match for all funding awards.
6. **Congestion Mitigation and Air Quality Program (CMAQ):** A competitive grant program administered by MDOT, CMAQ is a federal-aid program that provides a flexible funding source for transportation-related projects that help meet the requirements of the Clean Air Act. This program requires a 20% local match for all funding awards.

Table 9: Funding Options and Reconstruction Alignment

	Improvement Opportunity	Applicable Funding Source	Incorporation into Reconstruction Project	Additional Funding Opportunities
Roadway Improvement Opportunities	Three-Lane Cross Section	MDOT, City, DDA	Yes, but incremental funding requirements in excess of the programmed amount for roadway reconstruction may be required to be provided by the City or DDA.	HSIP
	Center Medians	MDOT, City, DDA	Yes, but incremental funding requirements in excess of the programmed amount for roadway reconstruction may be required to be provided by the City or DDA.	HSIP
	Pedestrian Crossing Opportunities	MDOT, City, DDA	Yes, but incremental funding requirements in excess of the programmed amount for roadway reconstruction may be required to be provided by the City or DDA.	HSIP
	Signal Progression and Timing Modifications	MDOT, City, DDA	Varies: Modifications to signal operations may be made as part of the reconstruction project scope, but installation of new signals would likely occur at a later date. MDOT will provide complete funding should signal installation be warranted	N/A
	Reduced Lane Widths	MDOT	Yes	N/A
Right-of-Way Improvement Opportunities	Shared-Use Path	City, DDA	Varies, depending on design timeline and funding commitment.	TAP
	Streetscaping	City, DDA	Yes	N/A
	Filling Gaps in the Sidewalk Network	City, DDA	Varies, depending on design timeline and funding commitment.	HSIP, TAP
	Access Management	City, DDA	Varies: Modifications to driveway locations and configurations can likely be incorporated into the scope of the reconstruction project, although property owner coordination will likely be required, impacting timelines	N/A
Surrounding Land Use Opportunities	Expanding the Downtown Context West of Broadway Avenue	City, DDA	N/A	N/A
	Redevelopment Opportunities for the Family Fare Plaza	City, DDA	N/A	N/A
	Non-Motorized Connectivity	City, DDA	Varies: Modifications to crossing locations can likely be incorporated into the scope of the reconstruction project, although exact design elements and funding responsibilities would be subject to further coordination.	TAP

5.2 PRIORITIES AND RECOMMENDATIONS FOR MOVING FORWARD

Priorities and recommendations for moving forward are provided below.

1. **Consider a Pilot Project.** A pilot project conducted in the summer and fall of 2026 can provide valuable insight into the potential operational and safety-related outcomes of modifications made to the roadway cross-section. A pilot project can be implemented to introduce a three-lane cross-section, or access-controlling 'medians' to the roadway through the use of temporary elements such as signage, pavement markings, delineators, or construction barrels. Although public perception of the need for a pilot project is likely to be negative, particularly if vehicular capacity along the corridor is reduced, implementation would provide a significant opportunity to collect data and solicit feedback to inform the feasibility of future, more permanent, modifications to roadway design and operations.
2. **Evaluate and Communicate Impacts of Designs on Users and Businesses:** The implementation of a center median or reductions in vehicular capacity will have different impacts on businesses and stakeholders along the corridor, depending on a variety of factors. During the final design process for any ROW improvement that will impact traffic flow, adjacent businesses and landowners should be consulted to ensure their concerns are reflected in the final design.
3. **Align Scheduling and Resources with MDOT:** MDOT has a planned reconstruction project for the State Street Corridor in 2028. This represents a significant opportunity to introduce corridor-wide improvements or modifications, such as a lane reduction or center median implementation.
4. **Set Annual Goals**: Moving forward, the City and MDOT should set annual goals for making incremental improvements to the corridor based on this plan as funding and local conditions allow. These goals can then be incorporated into the City's Capital Improvement Program and/or the DDA annual budget. Short-term goals may include:
    a. **Identify funding resources to match MDOT maintenance funds:** Solidify available funding from the City, the DDA, and applicable state/federal grant programs to match MDOT maintenance funds.
    b. **Prioritize access management opportunities:** Identify driveways that provide duplicative access that create the greatest hazard and work collaboratively with property owners to plan for closure of driveways while ensuring access is maintained during the upcoming reconstruction project.
5. **Ensure Commercial Vehicle & Emergency Vehicle Access:** State Street is a commercial corridor, and as such, access for delivery vehicles and trucks must be balanced along with pedestrians, bicyclists, and people in a passenger vehicle. State Street is also a major corridor that sees significant use for first responders. As roadway improvements are engineered and designed, the movements of delivery and emergency vehicles must be considered in coordination with local businesses and property owners.