QUINCY

REGIONAL TRANSPORTATION PLAN

Quincy City Council Adopted

September 15, 2020

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QUINCY

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TABLE OF CONTENTS

FIGURES & TABLES

FIGURES

FIGURES & TABLES

FIGURES & TABLES

TABLES

EXECUTIVE SUMMARY

The Quincy Regional Transportation Plan is a transportation evaluation of the City of Quincy and adjoining areas of Adams County, Illinois. The purpose is to provide an objective analysis of transportation and offer recommendations to serve as a roadmap of future projects and strategy implementations.

The scope of the Plan is comprehensive and includes assessments of roadways, transit, pedestrian and bicycle facilities, as well as freight and multi-modal connections. The Plan contents are organized around two geographic scales: Regional and Downtown.

The public was involved throughout the planning process, at multiple levels, and through several platforms, including the following:

- Two online public surveys
- Two community open houses
- One community pop-up event
- Media (social, TV, newspaper)
- Steering committee meetings
- Local industry stakeholder interviews

The Plan goals reflect community and stakeholder input in combination with overarching Federal and State transportation goals and priorities as well as the community's vision for the future articulated in the Quincy Next Strategic Plan. They involve the following thematic topics:

- Functionality
- Livability
- Economy
- Multi-Modal
- Equity/Sustainability

REGIONAL PLAN FINDINGS & RECOMMENDATIONS

Prioritize system preservation and improve upon existing infrastructure before building new.

Road Planning

New roads are identified for connectivity, corridor preservation, and land access purposes. However, new road implementations should be the subject of further analysis and justification, as the region should minimize unnecessary expansions, given the absence of population growth to support additional infrastructure.

Freight Planning

A 60% increase in total freight tonnage (water, rail, truck) being generated or received in Adams County is forecasted by 2045, primarily due to anticipated growth in food and food product industries. Projects are recommended to help accommodate this increase.

Transit Planning

A Comprehensive Transit Operations Analysis of QTL should be conducted to identify ways to improve efficiency and grow ridership.

Pause the concept of a Downtown Amtrak Station pending further clarification on flooding, impacts to the Burlington Junction Railroad, and a potential service extension into Missouri.

Bicycle & Pedestrian Planning

Establish a prioritization and schedule for implementation of the bicycle/trail network, including pursuing a new dedicated, local funding source for implementation.

Complement the bicycle/trail network implementation with programming and education to further interest in cycling.

Consider performing an ADA Transition Plan to quantify the City's compliance with the ADA and identify necessary steps to achieve compliance.

Conduct a formal sidewalk connectivity audit to identify gaps in the sidewalk network and prioritize their completion.

REGIONAL PROJECTS

Road Planning

Broadway Corridor Access Management Plan

Develop an access management plan that would identify strategies to reimagine Broadway as a multi-modal corridor that accommodates all modes of travel and supports evolutions in land uses over time.

48th St and State St Roundabout

Continue roundabout planning already underway.

Harrison St and 24th St Roundabout

Convert existing four-way stop into a single-lane roundabout to alleviate congestion.

Columbus Rd and 36th St Intersection

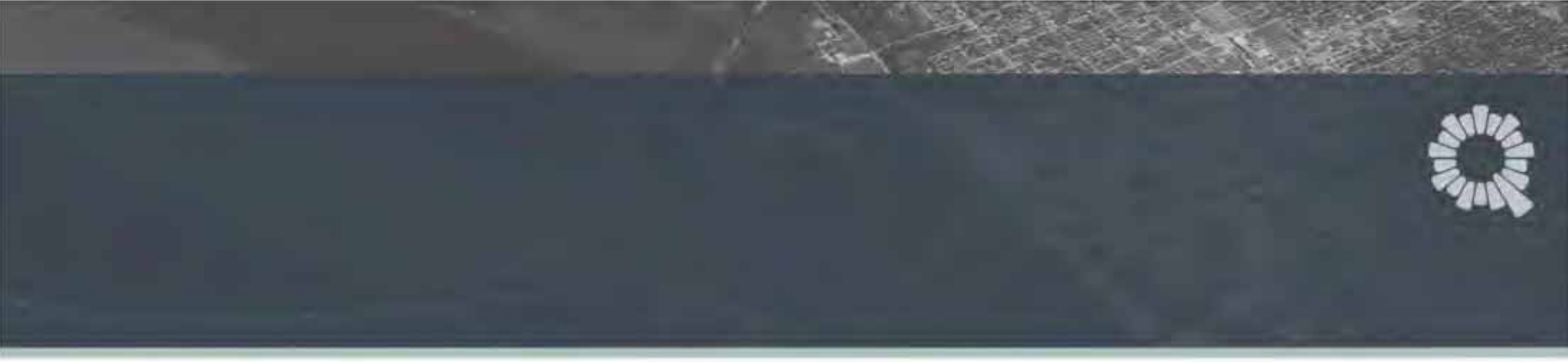
Convert existing four-way stop into a roundabout to alleviate congestion.

Broadway and 48th St Intersection

Update traffic signal timings as part of a Broadway SCAT project to improve safety and maximize capacity.

Broadway and 36th St Intersection

Update traffic signal timings as part of a Broadway SCAT project to improve safety and maximize capacity.



Maine St and 24th St Intersection
Analyze yellow clearance & all-red intervals, install "signal ahead" signage, and remove vegetation from sight distance triangles to improve safety.

Broadway and 25th St Intersection
Remove unwarranted traffic signal to improve traffic flow along Broadway.

Freight Planning
IL-57 Upgrade
Pursue upgrades to IL-57 from south of Downtown to I-172 to enhance access to the Quincy South Riverfront Industrial District and position the region to accommodate forecasted growth in freight tonnage over the next 25 years.

South Quincy Freight Corridor
Evaluate an upgraded 2-lane highway between IL-57 and I-172 at the Payson Rd interchange to further improve access to the South Quincy Riverfront Industrial District.

Transit Planning
Downtown Off-Street Transit Transfer Station
Proceed with planning for a new Downtown off-street transit transfer station.

Bicycle & Pedestrian Planning
State St Improvements
Upgrade State St from 24th St to 36th St to an urban cross-section with bike lanes, sidewalks, and a center turn lane.

Bicycle and Trail Network Priority Segments
Implement the following priority segments of the regional bicycle and trail network:

- Vermont St cycle track from the Riverfront to 16th St (see Downtown Plan)
- 16th St on-street corridor from Seminary Rd to Harrison St
- 48th St on-street corridor from Harrison St to Columbus Rd
- Bill Klingner Trail off-street east extensions
- College Rd on-street corridor from 16th St to 36th St
- York St on-street corridor connecting the new Mississippi River Bridge with 4th St.

DOWNTOWN PLAN FINDINGS & RECOMMENDATIONS
The traffic analysis concluded that Downtown traffic would not be significantly impacted by a new eastbound Mississippi River Bridge landing at York St.

It is feasible to convert 3rd and 4th St to two-way traffic in combination with the new Mississippi River Bridge provided that additional traffic and

intersection improvements are implemented Downtown.
Eight best practices for Downtown Transportation are recommended including:

- Reduce lane widths
- Prioritize sidewalks
- Maximize on-street parking
- Maintain street grid connectivity
- Enhance pedestrian crossings
- Implement multi-modal traffic signal operations
- Provide streetscaping elements
- Promote and accommodate alternative modes (transit and bicycling)

Street typologies specify each street's overarching role in the transportation network and include dimensional targets, design vehicles, and guidance for sidewalk and traffic space. Typologies are provided to inform street design upgrades, property owner requests for street modifications, and new developments.

DOWNTOWN PROJECTS

New River Bridge

Design the new eastbound Mississippi River Bridge to serve regional traffic while also complementing strategies for Downtown. This should include signalizing York St and 3rd St, designing the bridge approach to 3rd St with a 3% grade (or less), and providing a "free" right-turn onto southbound IL-57. Provide a pedestrian and bicycle path on the bridge that connects to the regional bicycle network via on-street bicycle lanes along York St.

3rd St and 4th St One-Way to Two-Way Conversion

Convert 3rd St and 4th St from one-way to two-way between York St and Broadway, with regional traffic (IL-57) consolidated on 3rd St and 4th St becoming a city street serving Downtown traffic.

Hampshire St and Vermont St One-Way to Two-Way Conversion

Convert Hampshire St and Vermont St from one-way to two-way between 8th St and 18th St to improve traffic circulation, enhance wayfinding, and support multi-modal transportation.

York St and Jersey St One-Way to Two-Way Conversion

Convert York St from 3rd St to 12th St and Jersey St from 4th St to 14th St from one-way to two-way to improve traffic circulation, enhance wayfinding, and support multi-modal transportation.

6th St and York St Corridor Activation

Create engaging and attractive corridors along 6th St between Maine St and Vermont St and along York St between 8th St and 10th St to reinforce both streets as destinations. This includes adding streetscape elements, slowing traffic and prioritizing pedestrians, and incorporating flexible spaces for special events.

Riverfront Shared Street and Maine St Connection

Redesign Front St between Broadway and Jersey St as a promenade and multi-modal shared street to activate the Riverfront and enhance connectivity between the Riverfront and Downtown via improvements to Maine St.

Vermont St Improvements

Add a protected two-way cycle track on Vermont St between the Riverfront and 16th St and improve the intersections of Vermont St with 8th St and with 12th St. The cycle track would serve as the east-west spine of the regional network of bicycle facilities and connect Downtown with destinations to the east.

4th St Improvements

Improve 4th St from Vermont St to York St to strengthen the connection between Downtown and the Hospitality District and Oakley-Lindsey Center and reinforce 4th St as a City street prioritizing walkability and bicycles.

Off-Street Downtown Transit Transfer Station

Provide an off-street transit transfer station in an accessible location Downtown to improve the experience of transit riders and enhance safety by further separating buses and moving traffic.

PROJECT IMPLEMENTATION

The Regional and Downtown Plan sections yielded a total of 25 project recommendations. These projects were prioritized based on their anticipated impact, in combination with stakeholder and public input. 12 of the 25 projects were selected as priority projects based on guidance from the consultant team and input from the Steering Committee. These 12 projects represent priorities for the community, which should be pursued for implementation in the short-term:

- Off-Street Downtown Transit Transfer Station
- Vermont St Cycle Track & Intersection Improvements
- Hampshire St and Vermont St One-Way to Two-Way
- 3rd St and 4th St One-Way to Two-Way Conversion
- York St & Jersey St One-Way to Two-Way Conversion
- 6th St Corridor Activation
- Broadway Corridor Access Management Plan
- Harrison St and 24th St Roundabout
- State St Improvements
- IL-57 Upgrade
- 48th St and State St Roundabout

25 performance measures are provided for periodic monitoring to track the community's progress towards achieving the Plan's goals. As recommendations are implemented and projects come online, improvements in key performance indicators should be realized.

Introduction

INTRODUCTION

The Quincy Regional Transportation Plan is a transportation evaluation of the City of Quincy and adjoining areas of Adams County, Illinois. The purpose is to provide an objective analysis of transportation and offer recommendations to serve as a roadmap of future projects and strategy implementations. The Plan is an outgrowth of the Quincy Next Strategic Plan and the recommendations provided aim to carry forward the goals of Quincy Next and help Quincy achieve its vision for a more prosperous future.

The scope of the Plan is comprehensive and includes assessments of roadways, transit, pedestrian and bicycle facilities, as well as freight and multi-modal connections. The Plan was developed with guidance from the community, steering committee, City staff, and existing plans. Extensive community and stakeholder engagement were performed. The Plan contents are organized around two geographic scales: Regional and Downtown. To that end, this report contains four sections as follows:

Section 1: Introduction

This Introduction section provides background on the City of Quincy and Adams County, summarizes the community engagement process and input, and introduces the project goals.

Section 2: Regional Transportation Plan

The Regional Plan reviews the regional transportation network and contains recommendations for road systems, pedestrian and bicycle infrastructure, freight corridors, and transit networks. Specific project recommendations focus on safety and capacity improvements, future corridor planning, and a proposed bike and trail network.

Section 3: Downtown Transportation Plan

The Downtown Plan reimagines the Downtown transportation system to more effectively balance regional transportation with broader community objectives outlined in Quincy Next. Specific emphasis areas include evaluating the impact of a new Mississippi River Bridge, converting one-way streets to two-way, establishing a network of street typologies, and providing best practices.

Section 4: Implementation Plan

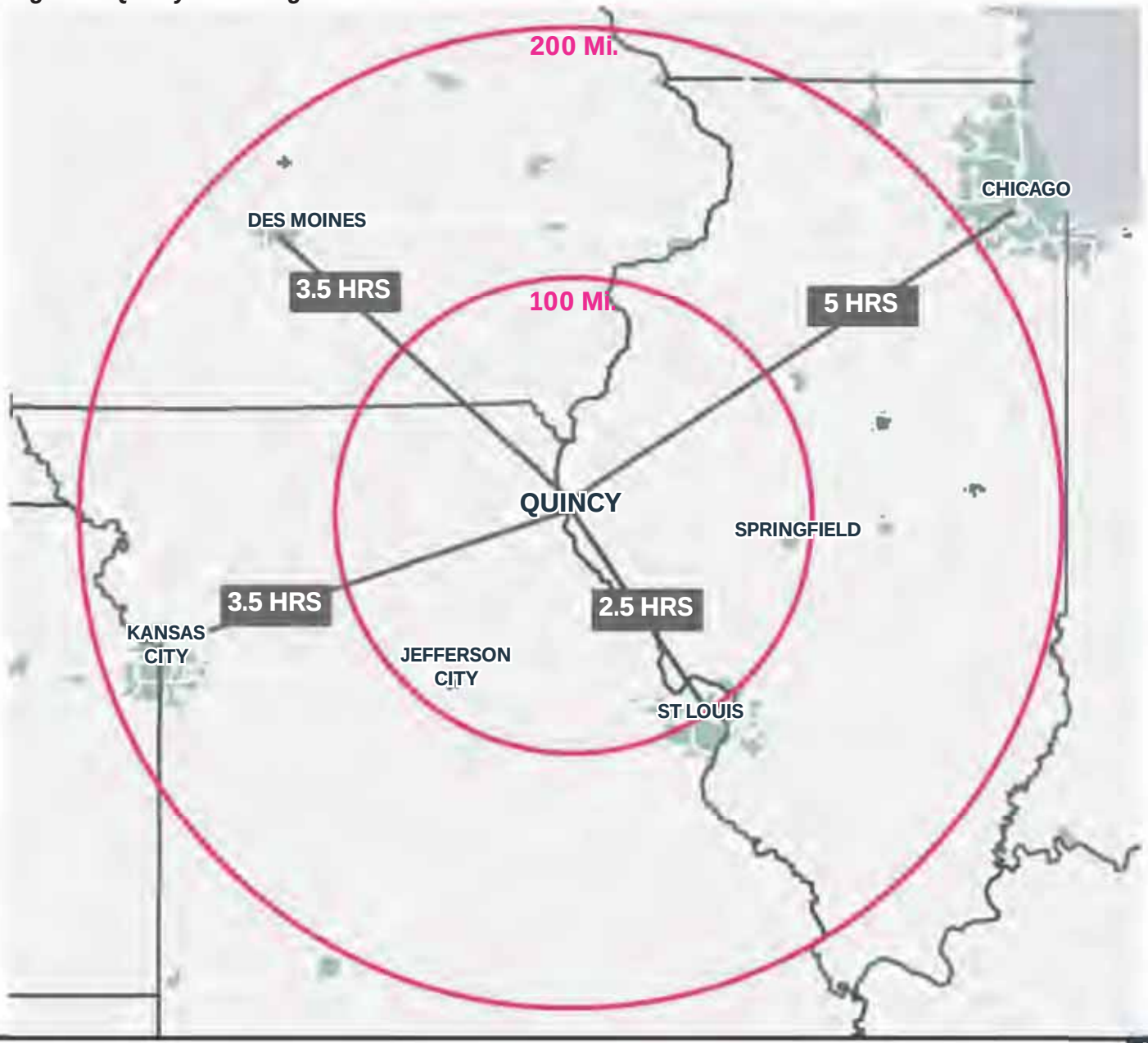
The Implementation Plan summarizes the prioritization of recommendations. Cost estimates for priority projects are provided and potential funding sources for implementation are detailed. Performance measures are provided for tracking the Plan's progress over time and achievement of overarching goals.

QUINCY IN THE REGION

The City of Quincy serves as the commercial hub of a multi-county region that includes both Illinois and Missouri. In fact, it is the largest city within 80 miles in any direction. People come to Quincy for business, shopping, medical care, and education. This places great importance on the transportation system of Quincy and surrounding Adams County.

Figure 1 shows Quincy's proximity to other major cities by 100 and 200 miles radii and time it takes to drive to and from Quincy.

Figure 1. Quincy in the Region



EXISTING TRANSPORTATION SYSTEM

Quincy is located near the crossroads of two major inter-state roadways. Interstate 72 located approximately 13 miles to the south of Downtown Quincy is the major east-west highway in the region. It connects east to Champaign, IL and west into Missouri where I-72 ends but the roadway continues to St. Joseph, MO as a four-lane expressway (US-36).

US Highway 61 also known as the Avenue of the Saints is a four-lane expressway linking St. Louis, MO with St. Paul, MN. The corridor runs north-south in Missouri approximately 6 miles west of Downtown Quincy.

Interstate 172 is a spur off I-72 that runs north-south along the eastern periphery of Quincy. This is the only interstate highway within Quincy proper and provides connectivity to I-72 to the south. The corridor continues north as a four-lane expressway (IL-336) connecting to Macomb, IL. This expressway is also part of IL-110, which is a multi-state route that ultimately connects Chicago, IL and Kansas City, MO.

US Highway 24 crosses the Mississippi River in Downtown Quincy. It connects the region with US-61 (Avenue of the Saints) in Missouri. US-24 runs east from Quincy to Peoria, IL as a two-lane highway.

IL-57 runs approximately 12 miles from Downtown to I-172. The mostly two-lane corridor is the most direct route from I-72 into Downtown. It also provides access to the Quincy South Riverfront Industrial District and serves as a major truck route connecting the District to I-172.

IL-104 is the primary east-west route within Quincy. Also known as Broadway, the corridor is a busy five-lane arterial connecting Downtown with newer commercial areas around I-172 4 miles to the east. **Figure 2** illustrates Quincy's transportation system.

Figure 2. Quincy Existing Transportation System

WORKFORCE TRANSPORTATION

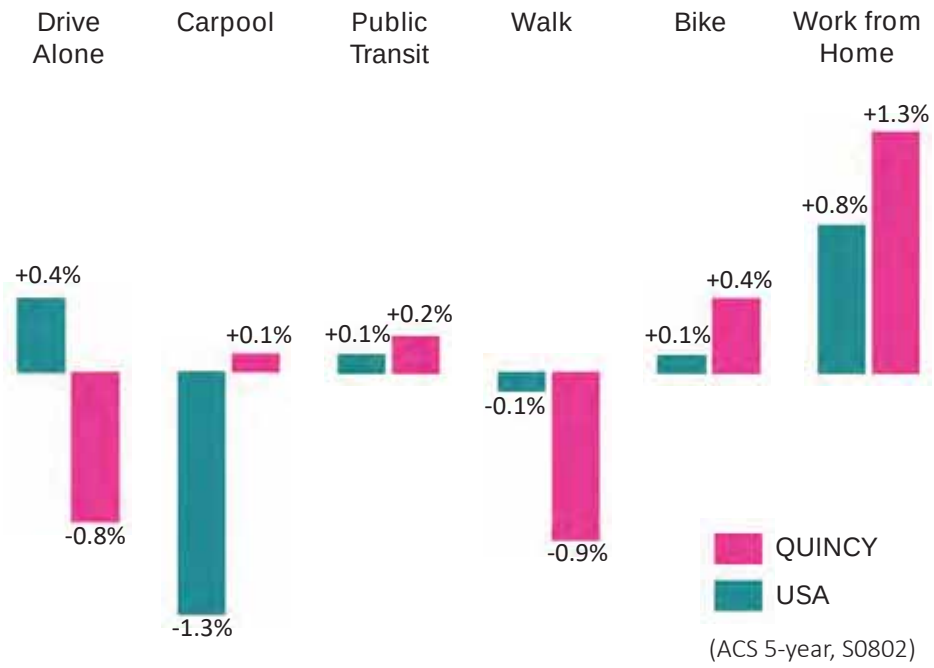
The mode share for Quincy journey to work trips is very similar to that of the United States overall, with the exception of drive alone to work which is 5% higher and bike to work which is 4% lower than the US average. Drive alone to work in Quincy has remained over 80% of all work trips since 2010. Walk and bike trips combined represent less than 5% of work trips. Since 2010, drive alone and walk trips have decreased in Quincy, while work from home and bike trips have increased. The reduction in drive alone trips is opposite the national average trend which reflects a minor increase. A summary of the comparison between Quincy and the US's mode share is found in **Table 1.** Car ownership per household in Quincy is consistent with the national average of 2 cars per household. Quincy's workforce commuting preferences from 2010 to 2018 as compared to the US are described in **Figure 3**.

Table 1. Quincy to US Workforce Mode Share, (2018)

MODE	USA	QUINCY
Drive Alone	76%	81%
Carpool	9%	9%
Public Transit	5%	5%
Walk	3%	3%
Bike	5%	1%
Work From Home	1%	1%

(ACS 5-year, S0802)

Figure 3. Quincy to US Workforce Mode Share, (% change 2010-2018)

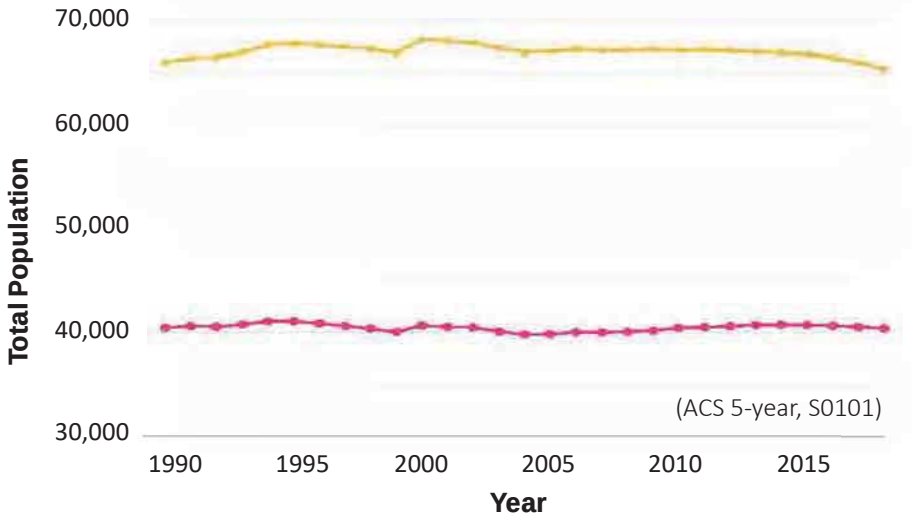


(ACS 5-year, S0802)

POPULATION GROWTH

Figure 4 shows the change in population from 1990 to 2018 for Quincy and Adams County. Both Adams County and Quincy's population has remained consistent: Quincy's around 40,000 and Adams County's around 66,000 from 1990 to 2018. In Quincy, as of 2018, the total population was 40,428.

Figure 4. Quincy & Adams County Population, 1990 - 2018

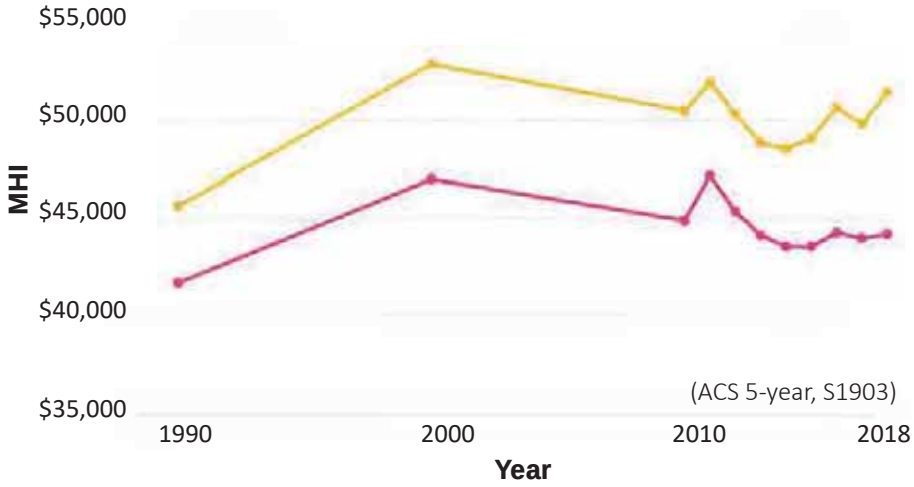


MEDIAN HOUSEHOLD INCOME (MHI)

Figure 5 shows the change in median household income (MHI) from 1990 to 2018. Adams County's MHI is consistently about $5,000 higher than Quincy's. The patterns of increase and decline for Adams County and Quincy mirror each other.

Quincy's MHI has remained around $40,500 since 2000. There was a spike in MHI for both the County and Quincy around 2011 but since then, the MHI has declined. As of 2018, Quincy's MHI was $44,249, which is a 2% decrease since 2010. By comparison, the United State's MHI in 2018 was $63,179 which was a 10.8% increase from 2010. Overall, Quincy's MHI reflects a stagnating economy. (ACS 5-year estimates, S1903)

FIGURE 5. Quincy & Adams County MHI, 1990 - 2018

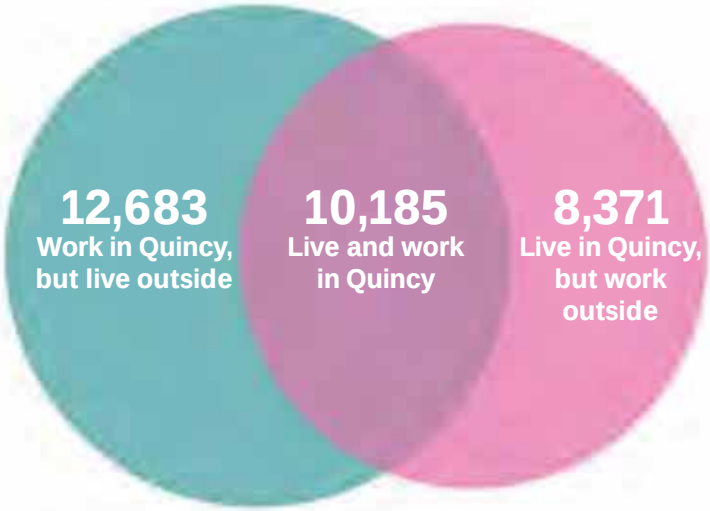


WORKFORCE MOVEMENT

Figure 6 describes the movement of workers in and out of Quincy. More people from outside Quincy work in Quincy (12,683) that those who live and work in Quincy (10,185). The number of people leaving Quincy for work is even smaller at 8,371. This reflects Quincy's status as a regional commercial hub, attracting its workforce from a broad area.

The workforce that lives in Quincy travels on average 14.1 minutes to get to their place of work. By comparison, the national average commute time is 27.1 minutes. Quincy residents enjoy the convenience of short commutes and are accustomed to uncongested traffic conditions.

Figure 6. Where People That Work in Quincy Live



US Census - LEHD On the Map

INDUSTRY SPECIALIZATION

Quincy is also a major industrial hub and destination for freight. Location Quotients (LQ) are used to measure industry specialization in a region by quantifying how concentrated a particular industry is in a region as compared to the nation. An industry with an employment location quotient over 1.2 is considered a specialized industry.

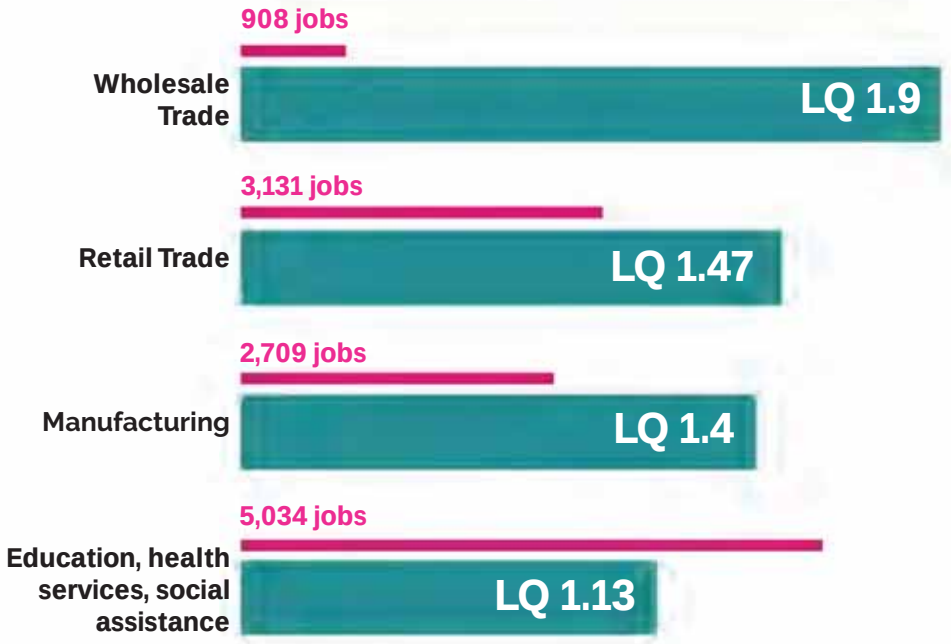
Based on the LQs by industry, Quincy is specialized in wholesale trade (LQ = 1.9), manufacturing (LQ = 1.4), and retail trade (LQ = 1.47). The cumulative employment of these three industries makes up 35% of all employed in Quincy. However, the industry responsible for the most employment in Quincy is "Educational services, and health care and social assistance" with a total of 5,034 employees or 26% of all employed in Quincy. Blessing Hospital, the K-12 public and private school systems, Quincy University, and John Wood Community College are all strong contributors to this industry. **Figure 7** illustrates the LQs and employment by major industry. Quincy's top 5 employers by total local employees are listed in **Table 2**.

Table 2. Quincy's Top 5 Employers by Local Employment

Company	Local Employment
Blessing Hospital*	2,914
Knapheide Manufacturing*	1,500
Quincy Public Schools	1100
Quincy Medical Group*	1036
Blue Cross Blue Shield	850

Great River Economic Development Foundation
*Headquartered in Quincy

Figure 7. Quincy Industry Specialization (LQ) and Total Jobs



Annual Economic Surveys Table AM1831BASIC01

INDUSTRY LOCATION

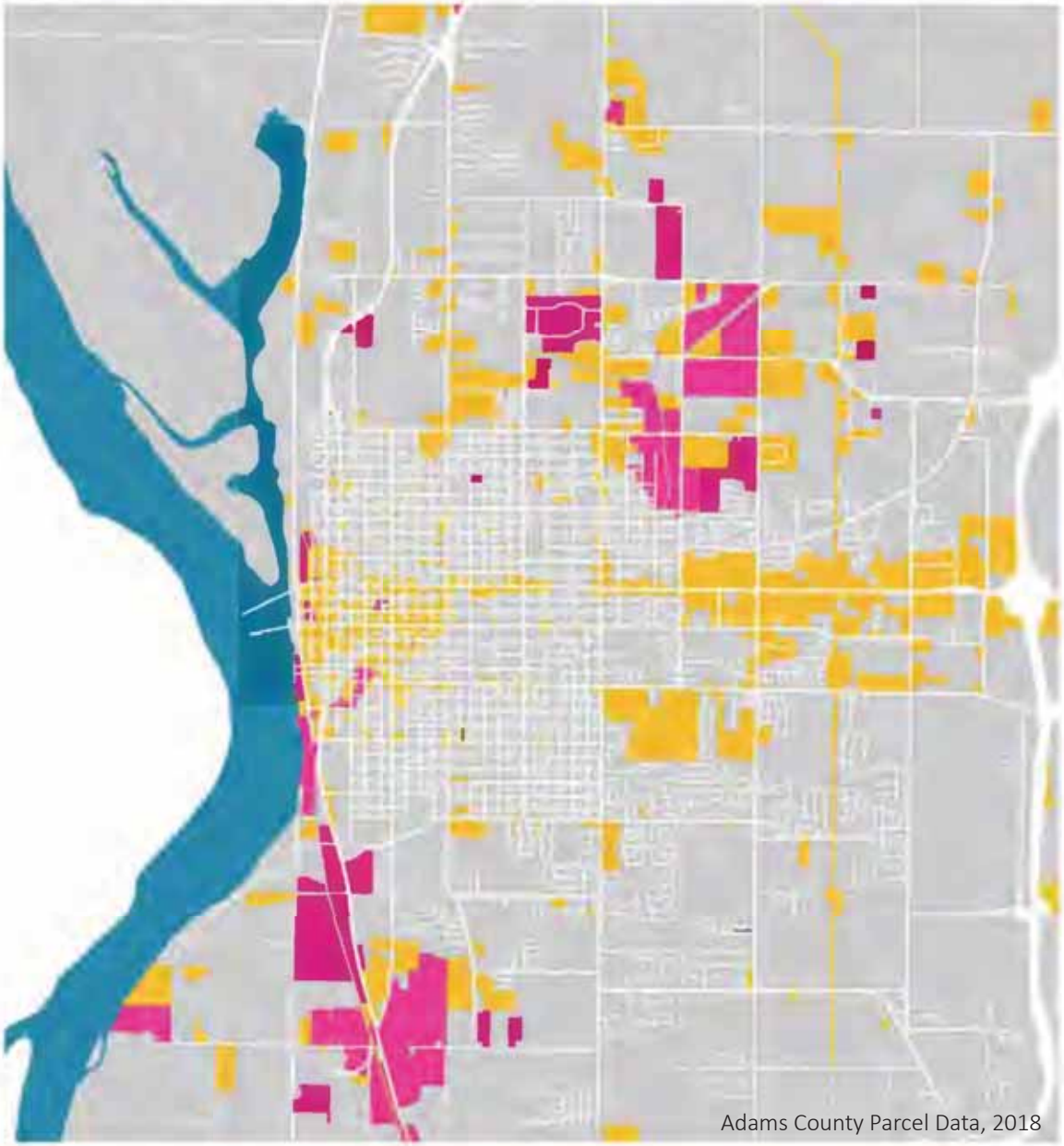
Quincy's industrial and commercial sectors employ a large portion of Quincy's workforce. The locations of commercial/retail and industrial (manufacturing and wholesale trade) are identified in **Figure 8**. The industrial land uses are clustered along IL-57 to the south and between 18th St and 36th St to the north. These locations offer access and connectivity to major highway corridors (IL- 57, US-24, and I-172), railroads, and barge facilities.

Commercial land uses mostly line Maine St and Broadway spanning from Downtown to I-172. As both destinations for employment and consumer spending, these clusters of businesses and industry generate transportation demands that impact traffic patterns both locally and regionally.

Commercial/Retail

Industrial

Figure 8. Quincy Industrial and Commercial Land Use Locations



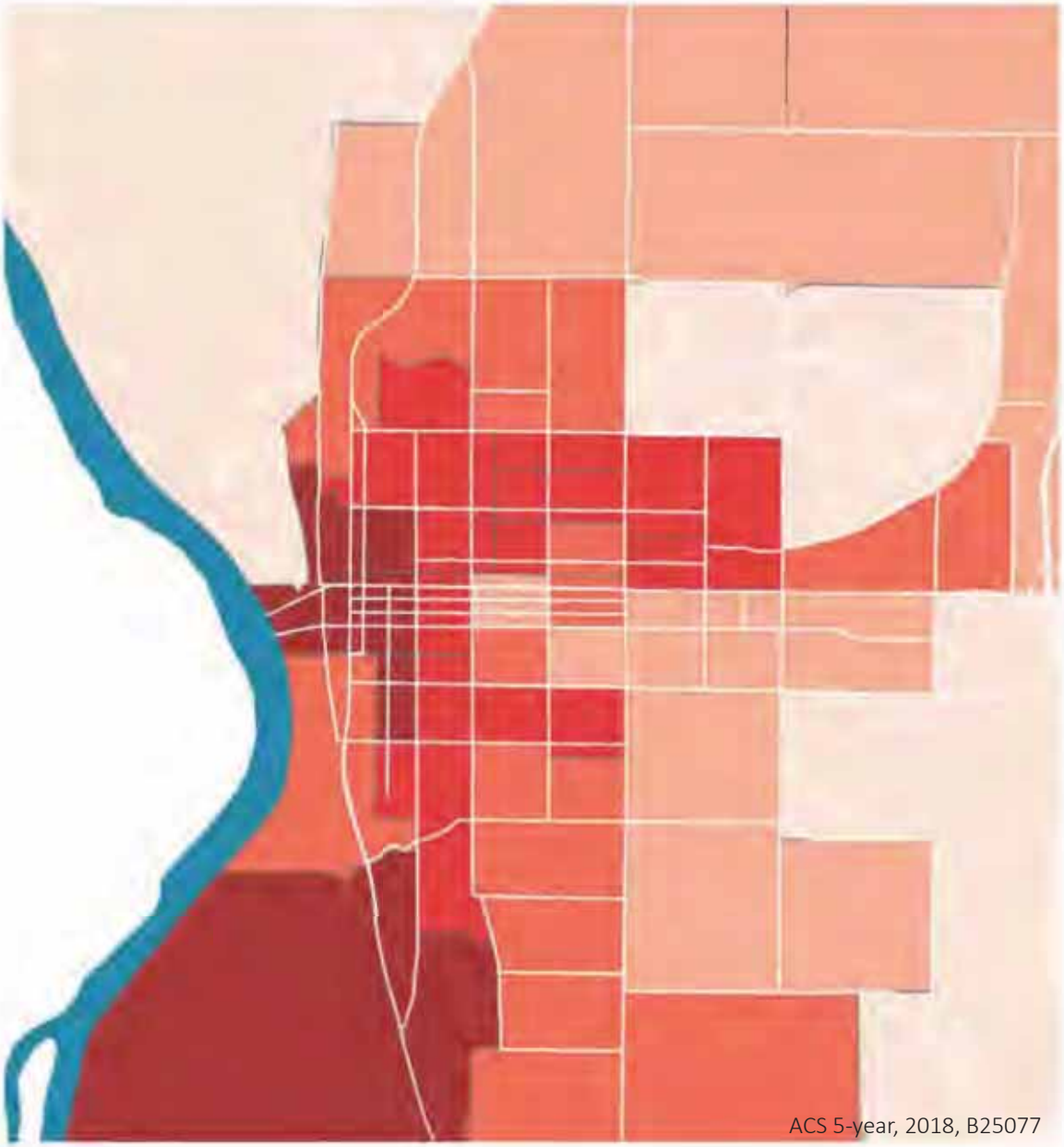
Adams County Parcel Data, 2018

MEDIAN HOME VALUE

The median home value in Quincy as of 2018 was $113,500 – a 7.4% increase since 2010. As shown in **Figure 9**, most census block groups with lower home values are adjacent to Downtown or directly north or south, indicating a need for reinvestment in these areas. Most higher value homes are located in far north, northeast, and southeast Quincy.

- >$200,000
- $150,000-$200,000
- $100,000-$150,000
- $35,000-$100,000
- <$35000

Figure 9. Quincy Median Home Value by Census Block Group



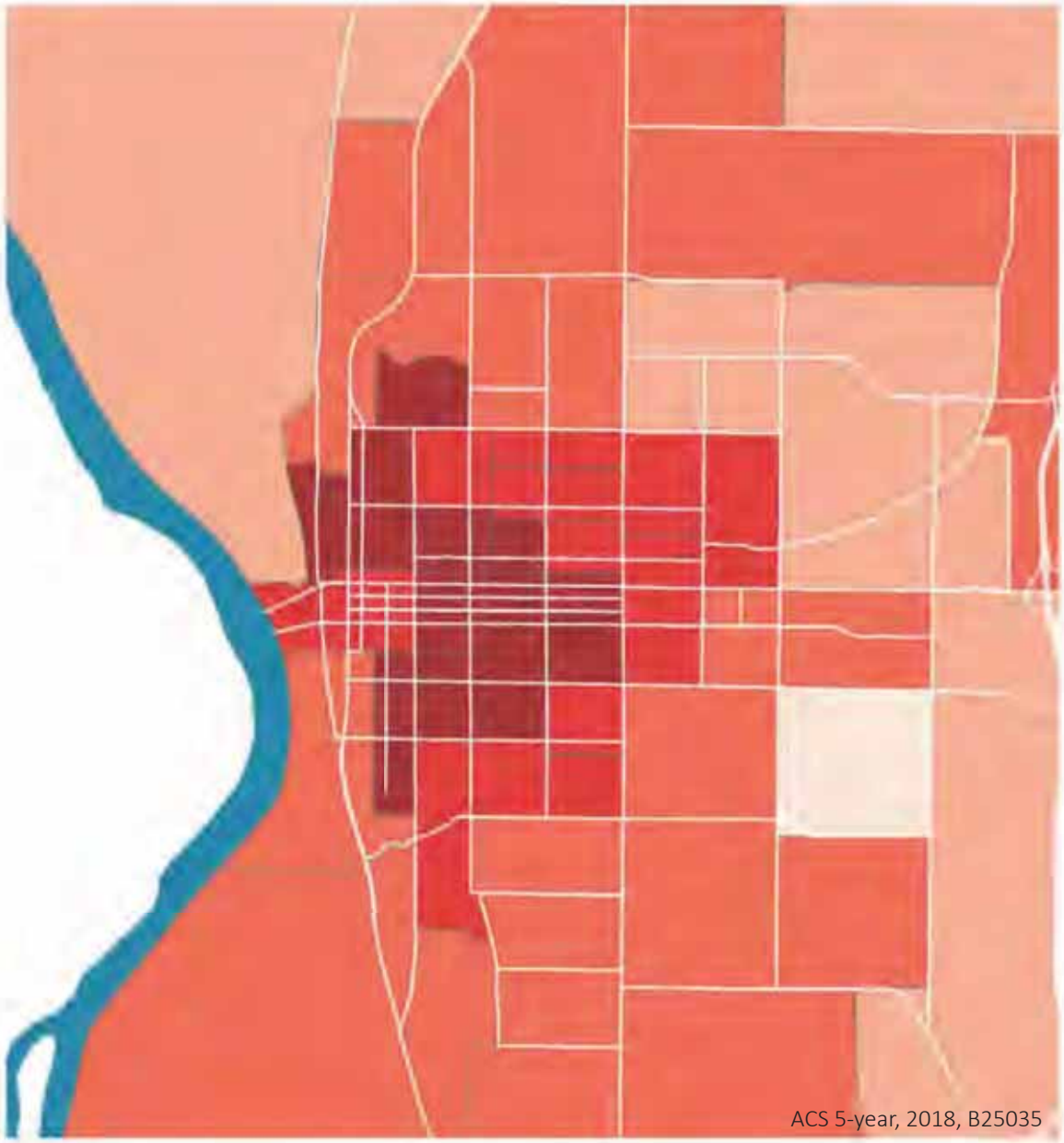
ACS 5-year, 2018, B25077

AGE OF HOUSING STOCK

The median age of structures by block group is shown in **Figure 10**. Most older structures and housing stock is located in Downtown Quincy or adjacent to Downtown. There is some correlation between home value and housing stock age, with lower values and older homes both being concentrated in the center of the city. An exception is the block groups east of Downtown that comprise older but high value homes.

Post-2000
1980-2000
1960-1980
1940-1960
Pre-1940

Figure 10. Quincy Median Year Structure Built by Census Block Group



COMMUNITY ENGAGEMENT

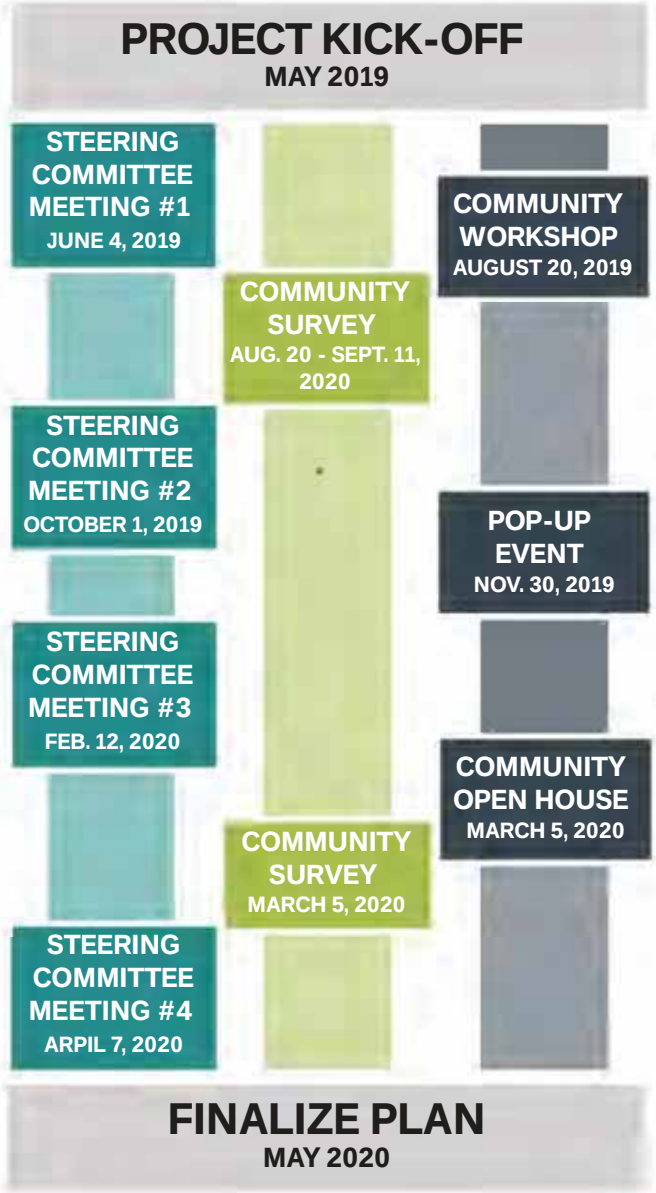
OVERVIEW

Public engagement is an essential component of any planning process. It must be done in a way that brings the public into the decision-making process as informed citizens with valued opinions and perspectives. For the Quincy Regional Transportation Plan, the public was involved throughout the planning process, at multiple levels, and through several platforms, including the following:

- Two online public surveys
- Two community open houses
- One community pop-up event
- Media (social, TV, newspaper)
- Steering committee meetings
- Local industry stakeholder interviews

This diversity in engagement approaches invited people to participate in the manner they felt most comfortable, whether via anonymous survey or in-person discussion. The public input that was gathered identified regional transportation priorities, problematic locations for more detailed analysis, and recommended project prioritization among other items. Interviews with local industry stakeholders helped complete knowledge gaps on the movement of freight. The Steering Committee provided guidance and input on the Plan's direction.

Figure 11. Community Engagement Timeline



ROLE OF COMMUNITY ENGAGEMENT

Figure 12. Community Engagement Typologies

	OPEN HOUSE	SURVEY	STEERING COMMITTEE	STAKEHOLDER INTERVIEWS
Description	Open houses are used to **engage** residents in an **open forum** usually in a central and neutral location.	Surveys allow residents to provide **anonymous and honest feedback** without fear of stigma or social pressure. A survey reduces the likelihood that louder voices have more power in the planning process.	Steering Committees **represent the community** from a variety of perspectives, experiences, and priorities. The steering committee **guides** the planning process directly.	Stakeholder interviews seek to better understand **complex issues and specific priorities** of certain groups. Sometimes these groups are difficult to engage in traditional settings, requiring **one on one** interaction.
Level of Engagement	**INFORM, CONSULT, & DISCUSS** Citizens participating in open houses are expected to learn, provide their perspectives, and discuss their priorities and vision with fellow community members.	**INFORM & CONSULT** Surveys can provide information for a respondent to review and understand as well as solicit feedback from the respondent. There is usually no opportunity for collaboration or discussion.	**INVOLVE & COLLABORATE** The steering committee is more intimately involved in the details of the planning process. They collaborate amongst each other and with the planning team to help produce the plan.	**INFORM, CONSULT, & DISCUSS** The most common reason to use stakeholder interviews is to gain information or insights into issues and priorities that otherwise would not come to the forefront.
Citizen Role	Residents participate to **become informed** and assert some **influence** in planning process and its outcomes. Some level of **collaboration** and relationship building could occur.	Residents participate to become **informed** and assert some **influence** in planning process and its outcomes.	Steering Committee members engage with and **advocate** for their priorities based on the groups they **represent**. They are asked to understand technical issues, define problems, and find solutions.	Provide **unique perspectives** on a particular group's needs and priorities. Assert power and agency into the planning process to **balance the field** of public engagement.

WHAT WE HEARD
ABOUT THE REGION

Results from the engagement process revealed that almost all people use a car as their primary mode of transportation (97%). One consistent theme from all public engagement platforms was the desire to focus on road maintenance. Only 10% of survey respondents think roads are in at least "good" condition.

There was strong support for improving sidewalk conditions and connectivity throughout Quincy as well. Several corridors and neighborhoods are missing sidewalk segments and residents made note of their desire for better sidewalks. Only 18% of survey respondents think the City's sidewalks and curb ramps are in at least "good" condition.

The top regional priorities identified by the public are maintain existing infrastructure, improve safety, reduce congestion, and improve pedestrian facilities. Most wanted to improve the functionality and operations of the road system as the highest priority, though improvements for alternative modes of transportation, particularly walking, were close behind.

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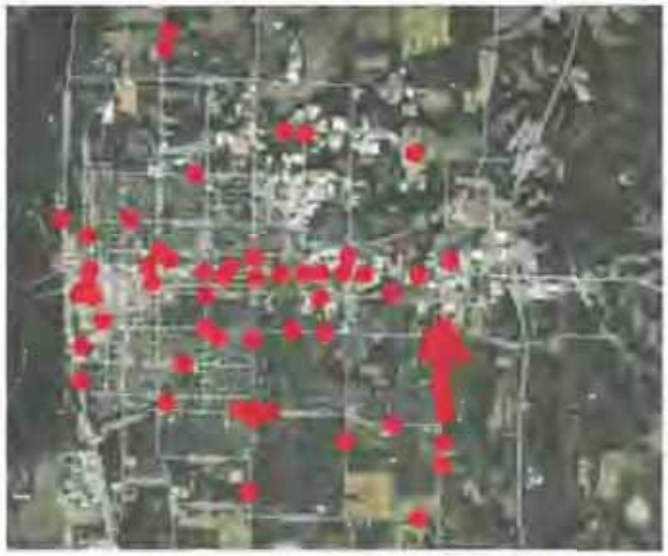
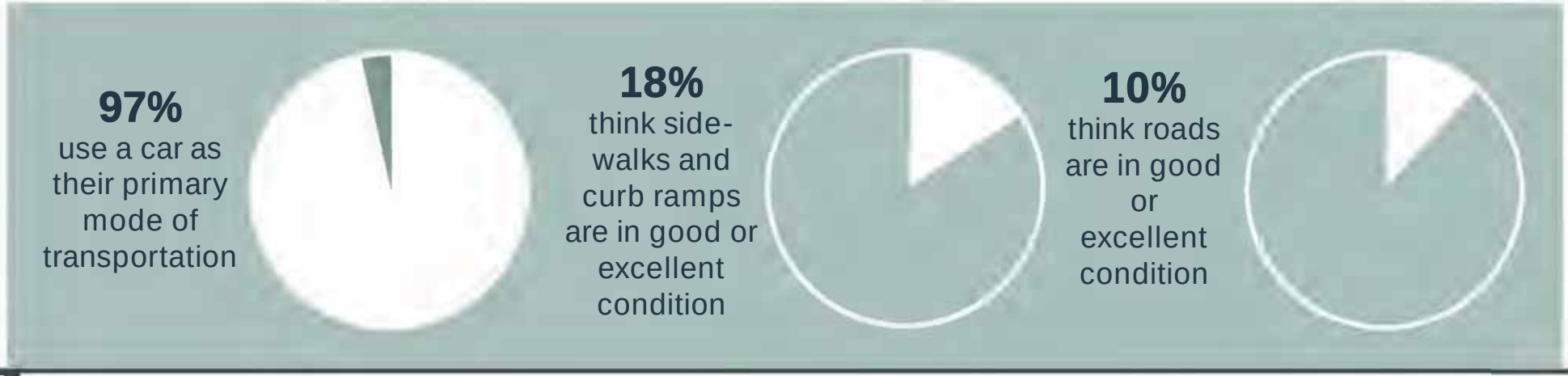


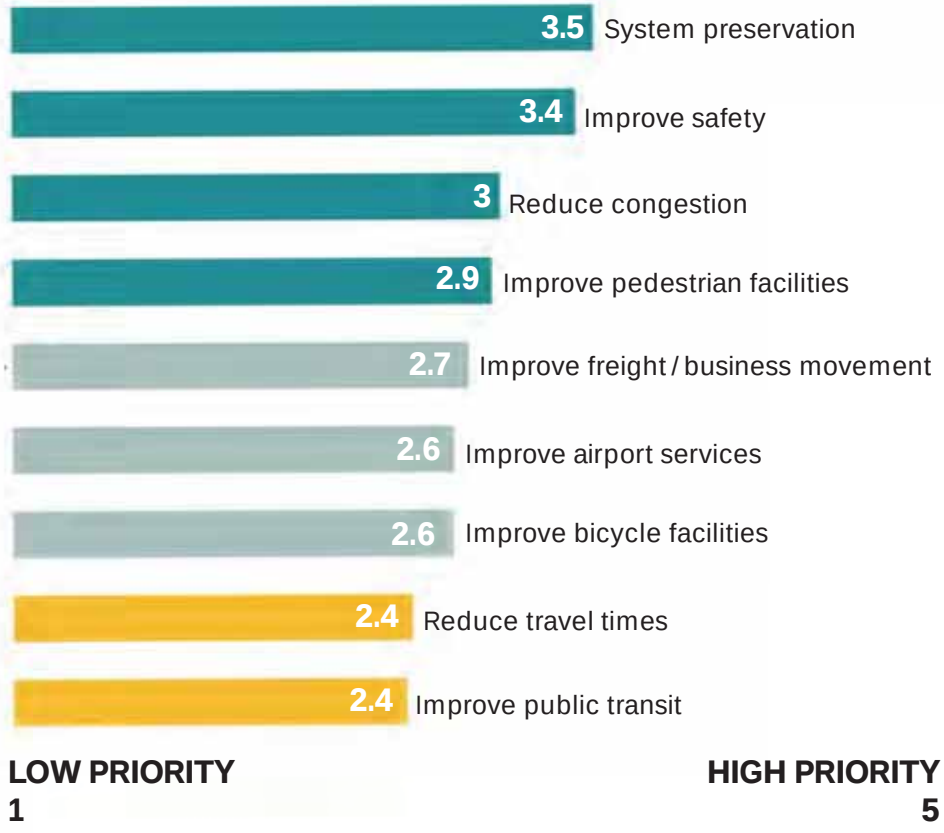
Open house participants identified safety issues in the region.

Figure 13. Public Input Regional Statistics



The top regional priorities identified by the public are maintain existing infrastructure, improve safety, reduce congestion, and improve pedestrian facilities. Most of the top priorities are oriented around improving the functionality and operations of the road system. Improving and investing in facilities for alternative modes of transportation, particularly walking, are also a part of the top regional priorities. **Figure 14** shows the score each potential priority received from the public from most to least important.

Figure 14. Regional Transportation Priorities (participants chose 3)



WHAT WE HEARD ABOUT DOWNTOWN

Almost all people use a car to get to Downtown. Not surprisingly the public revealed the most pressing challenges for Downtown to be vehicle mobility related. Parking availability was cited as the biggest challenge followed by one-way streets and road conditions.

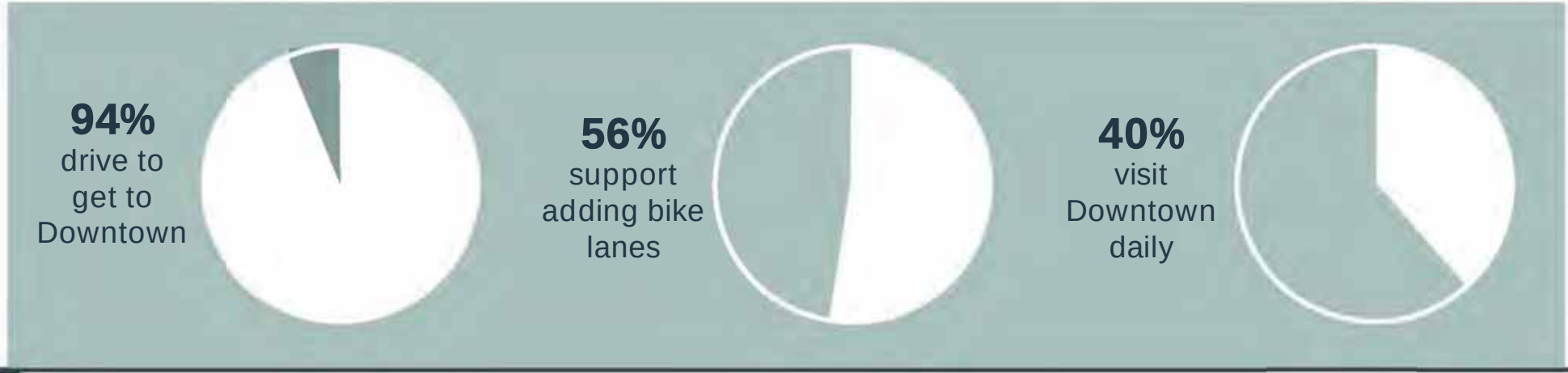
Participants also highlighted the need to improve walkability. Residents support creating a safer pedestrian environment through sidewalk and streetscape improvements. Furthermore, pedestrian and bike improvements may help address challenges related to vehicle travel. If more people walk or bike, the demand for parking may decline and the need for one-way streets to move traffic would be diminished.

While the biggest challenges were vehicle related, the public indicated walkability as the top priority for Downtown followed by converting one-way streets to two-way, managing freight traffic, and installing bicycle infrastructure. Interestingly, adding parking was a priority for fewer than 20% of participants.

The top priorities for Downtown are improving walkability by creating an enjoyable and comfortable pedestrian environment, converting one-way streets to two-way, redirecting freight traffic away from pedestrian oriented streets, and adding more bicycle infrastructure such as bike lanes and racks.

Figure 15. Top 5 Challenges for Downtown

Figure 16. Public Input Downtown Statistics



Top 3 Reasons to Travel in Downtown Quincy

People travel downtown mostly to shop, dine out, go to work, or access healthcare. Downtown is home to government functions like City Hall and the Adams County Courthouse as well as small retail and restaurant businesses, offices, recreation centers and private gyms.

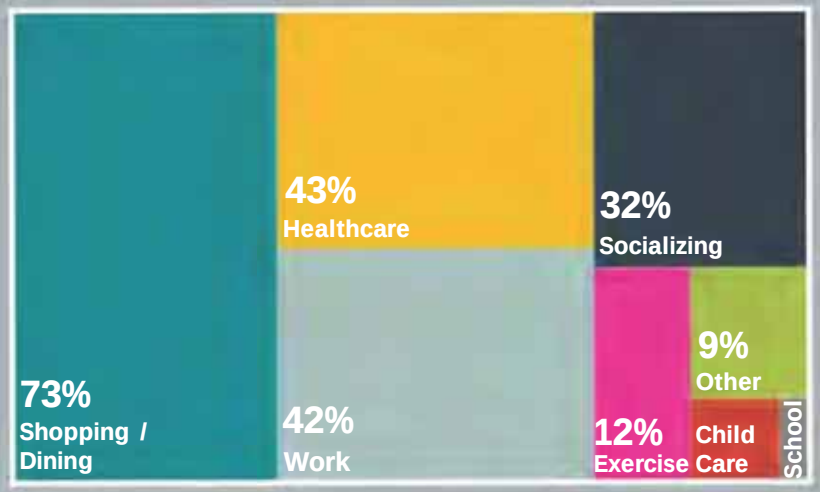
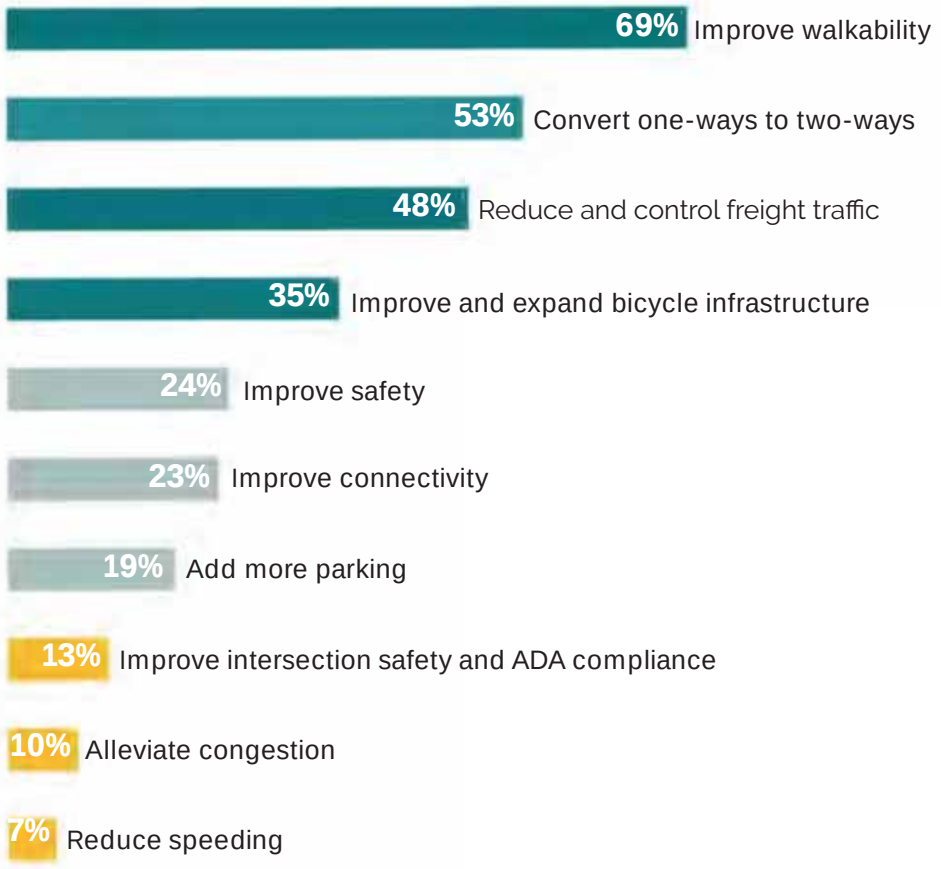


Figure 17. Downtown Transportation Priorities (participants chose 3)



PLAN GOALS

GOAL DEVELOPMENT

The goals of the Quincy Regional Transportation Plan reflect community and stakeholder input in combination with overarching Federal and State transportation goals and priorities as well as the community's vision for the future articulated in the Quincy Next Strategic Plan. Specific plans and documents that informed goal development include the following:

Federal

- FHWA and US DOT Strategic Plan FY 2019-2022

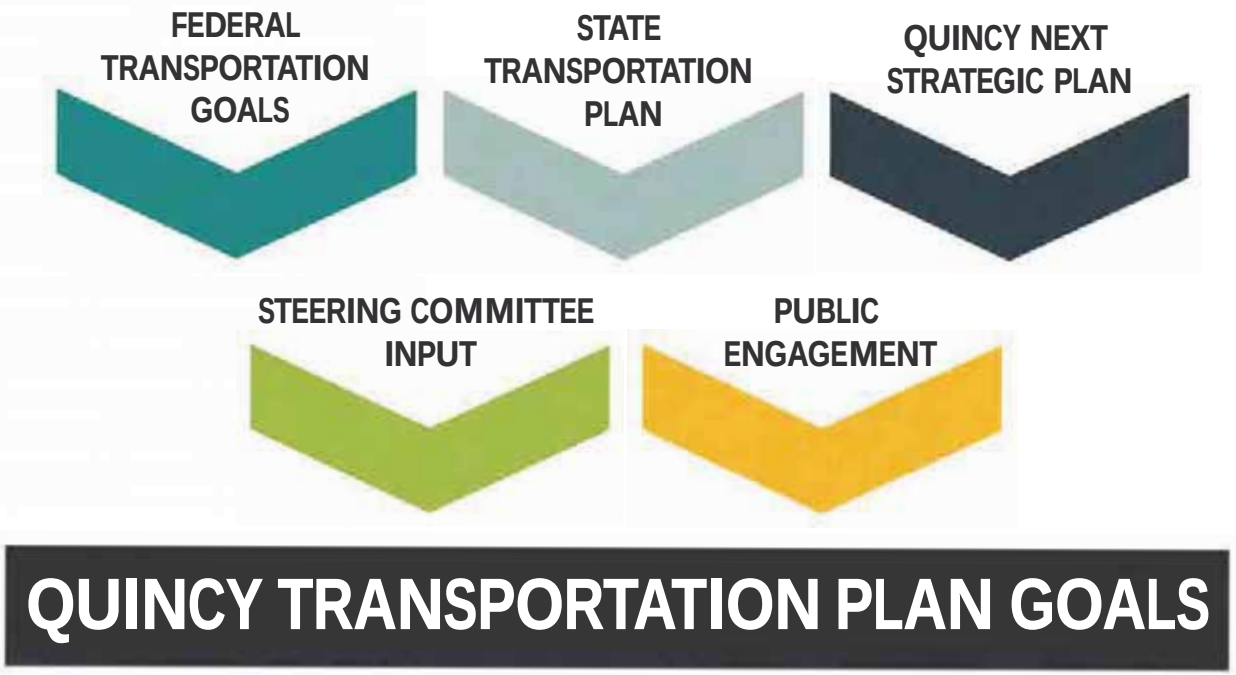
Illinois

- IDOT Long Range Transportation Plan (LRTP) 2019
- IDOT Transportation Access Management Plan (TAMP) 2019
- Illinois State Freight Plan (2017)
- Illinois Statewide Public Transportation Plan (2018)

Quincy

- Quincy Next Strategic Plan (2018)
- Quincy Greenway and Trails Plan (1999)
- Quincy Neighborhood Land Use Plan (2013)

Figure 18. Goal Development Process



PLAN GOALS

Functionality

The regional transportation system functions efficiently for all modes of travel by mitigating congestion, improving safety, and maximizing connectivity. A robust transportation system emphasizes preservation planning to fully leverage infrastructure investments.

Livability

The transportation system improves the quality of life for all by complementing adjacent land uses and infusing placemaking to establish destinations along key corridors. Transportation provides accessible recreational opportunities and promotes community cohesion and wellness.

Economy

The transportation system supports economic growth and activity by facilitating the movement of and access to the workforce, goods, and services, both locally and regionally.

Multi-modal

The transportation system encourages and facilitates multi-modal transportation options as viable and safe means of transportation. Quincy as a multi-modal community provides affordable and accessible opportunities for people to cycle, walk, or ride transit to reach their destinations.

Equity and Sustainability

The transportation system serves people of all mobilities and connects all residents to desirable destinations regardless of income, culture, or background. Transportation encourages the efficient use of resources, environmental sustainability, and opportunities to utilize renewable energy.


the of quincy
PEP

Regional Transportation Plan

INTRODUCTION

The Regional Plan proposes strategies to improve the transportation network considering the diverse functions and users of road system, including travel that reaches beyond Quincy's city boundaries. Quincy's economy relies upon strong connections to major highways on the region's periphery such as I-72 and US-61. As Quincy's urbanized area has expanded in the late 20th century, transportation within the City has become critical to connecting residents to centers of activity and employment.

The Quincy Next Strategic Plan recognized the importance of transportation in the region's future success. One of the plan's four primary goals is to Create An Accessible and Connected City for All. Core initiatives include creating better connections between different areas of Downtown and the rest of the City and creating a regional greenway system to promote active lifestyles and community health.

To accomplish the goals of Quincy Next, it is necessary to think holistically about Quincy's regional transportation system. This Regional Transportation Plan is a guide for implementing a well-functioning, connected, and multi-modal transportation system for all. Policies, best practices, and projects are proposed to enhance the functionality of the road system, improve the movement of freight, strengthen transit, and develop a robust network of pedestrian and bicycle facilities.

The Plan includes the following sections:

Road Planning
Evaluates existing roadway functional classifications, identifies road diet eligible corridors, presents a plan for new roads, and examines the safety and capacity needs of the transportation system.

Freight Planning
Summarizes existing freight movements in and out of the Quincy region and evaluates opportunities to improve access to major freight generating areas of the city.

Transit Planning
Reviews existing bus transit and Amtrak service in Quincy and examines the challenges of relocating the Amtrak station Downtown.

Bicycle and Pedestrian Planning
Examines existing bicycle and pedestrian infrastructure and proposes an updated bicycle and trail network and strategies for improving sidewalk conditions and connectivity.

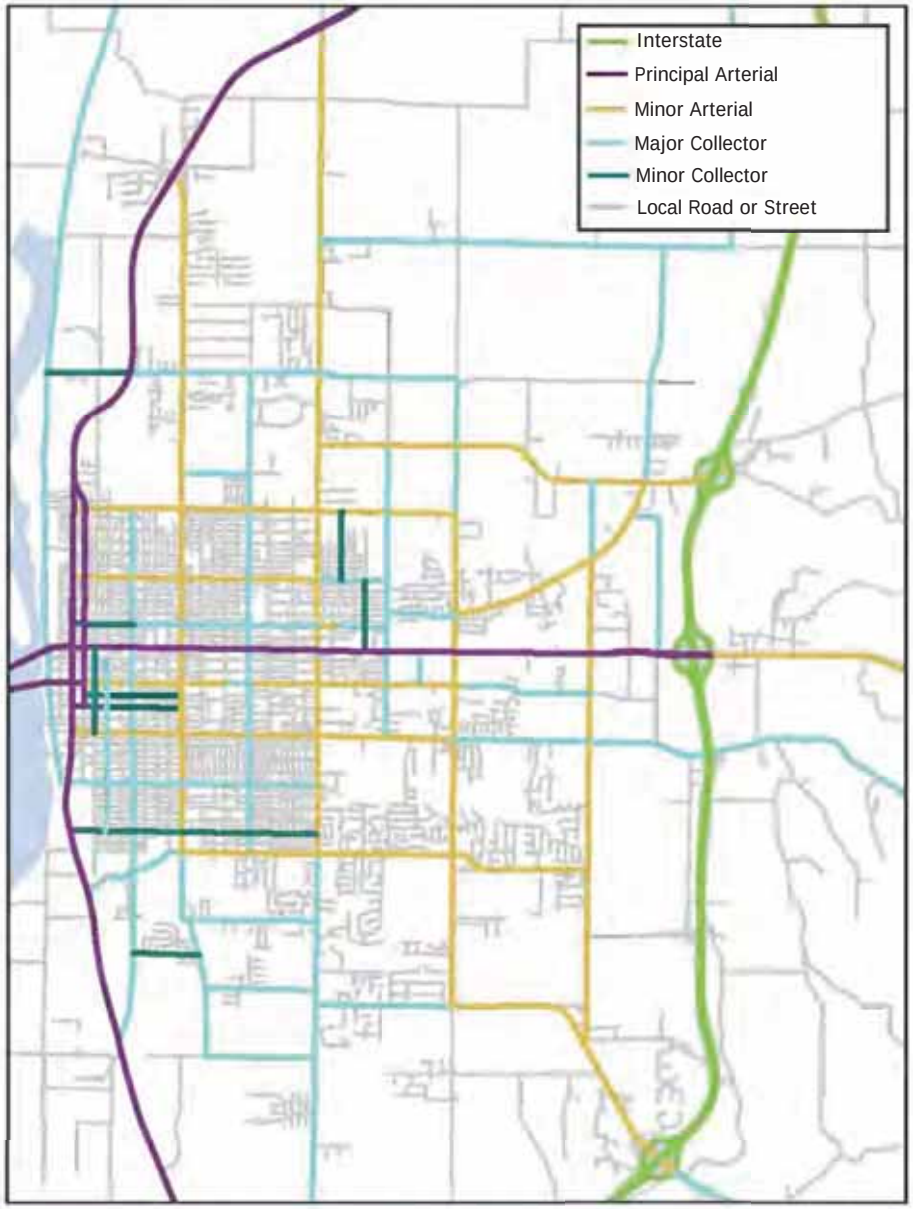
FUNCTIONAL CLASSIFICATION

Quincy's road system consists of local, collector, arterial, and interstate functional classification types. Functional classifications describe the character and function of roads within a road system. **Table 3** below from the 2013 Federal Highway Administration "Highway Functional Classification Concepts, Criteria and Procedures" describes the differences between local roads, collectors, and arterials. **Figure 19** shows how the roads are presently classified.

Table 3. Road Functional Classification Descriptions

Functional Classification	Distance Served (and length of routes)	Access Points	Speed Limit	Distance between Routes	Traffic Usage	Significance	Number of Travel Lanes
Arterial	Longest	Few	Highest	Longest	Highest	Statewide	More
Collector	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Local	Shortest	Many	Lowest	Shortest	Lowest	Local	Fewer

Figure 19. Quincy Current Functional Classification



Region

There are several road segments whose function and character would be better represented by a change in classification. It is recommended that the road segments highlighted in **Figure 20** be reclassified as follows:

1 - Chestnut St (1,450- 5,950 AADT)
Downgrade from Minor Arterial to Major Collector.

2 - Oak St (550- 625 AADT)
Upgrade to Major Collector from Minor Collector.

3 - Maine St (5,000-5,800 AADT)
Extend Minor Arterial classification east to 48th St. Upgrade Maine St east of 48th St from a Local Road to a Minor Collector.

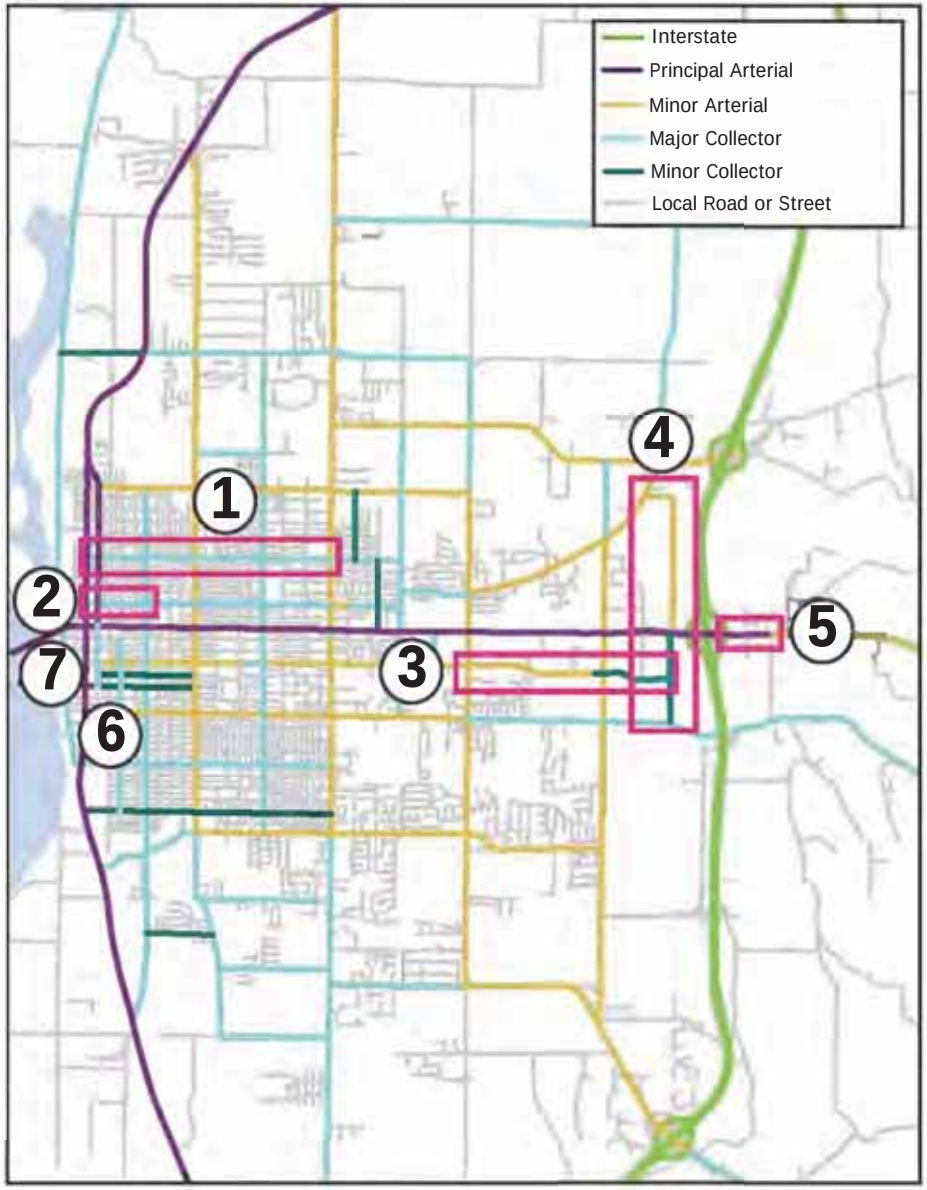
4 - 54th St (5,800 AADT)
Upgrade from Major Collector to a Minor Arterial north of Broadway. Upgrade from a local road to a Minor Collector between Broadway and State St.

5 - Broadway St (11,700 AADT)
Extend Principal Arterial Classification to 63rd St east of I-172 to reflect new commercial development between I-172 and 63rd St.

6 - 5th St (2,650 AADT)
Downgrade from a Major Collector to a Local Road.

7 - 4th St (11,200 AADT)
Downgrade 4th St from a Principal Arterial to a Major Collector.

Figure 20. Quincy Proposed Functional Classification



ROAD DIET CANDIDATES

Road diets involve reducing the number of vehicle travel lanes or the effective width of a road in order to improve safety, slow traffic, and provide multi-modal accommodations. Often, road diets are implemented by installing bike lanes or expanding sidewalks in lanes previously designated for cars.

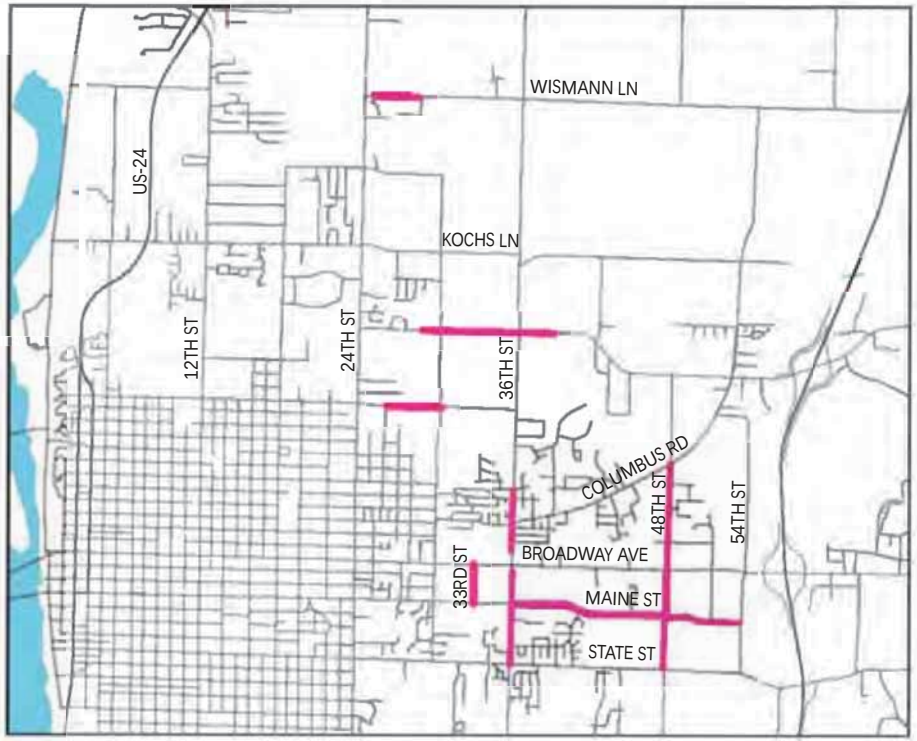
The most common road diet application is the conversion of a four-lane road to three lanes. Four lane roadways were reviewed to determine which are candidates for a potential road diet conversion to three lanes. Roads with less than 15,000 vehicles per day (vpd) were considered candidates since they typically function well with three lanes with minimal impacts to traffic.

The roads diet eligible roads highlighted in pink in **Figure 21** are as follows:

- 33rd St from Maine St to Broadway
- Maine St from 36th St to 54th St
- 48th St between State St and Columbus Rd
- 36th St north of Broadway to Melodie Ln
- 36th St from of Broadway to State St
- Wismann Ln from 30th St to 36th St
- Locust St from 26th St to 30th St

These roads should be considered opportunities for wider sidewalks, on-street bicycle facilities, or enhanced transit stops.

Figure 21. Road Diet Eligible Roads



Example Road Diet Configuration

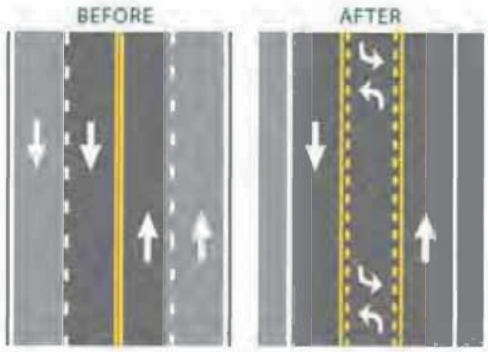


Image from FWHA Safety - US DOT

NEW ROAD EXTENSIONS

Planned road extensions focus on protecting and reinforcing Quincy's grid system, increasing connectivity, providing better land access to potential growth areas, and expanding freight corridors. Most extensions are consistent with the 2013 Neighborhood Land Use Plan. However, the proposed road extension map in **Figure 22** reflects recent planning efforts and expected growth patterns. The road extensions categories are described below:

Planned Corridors maintain and protect Quincy's grid system through undeveloped areas on the periphery of the city.

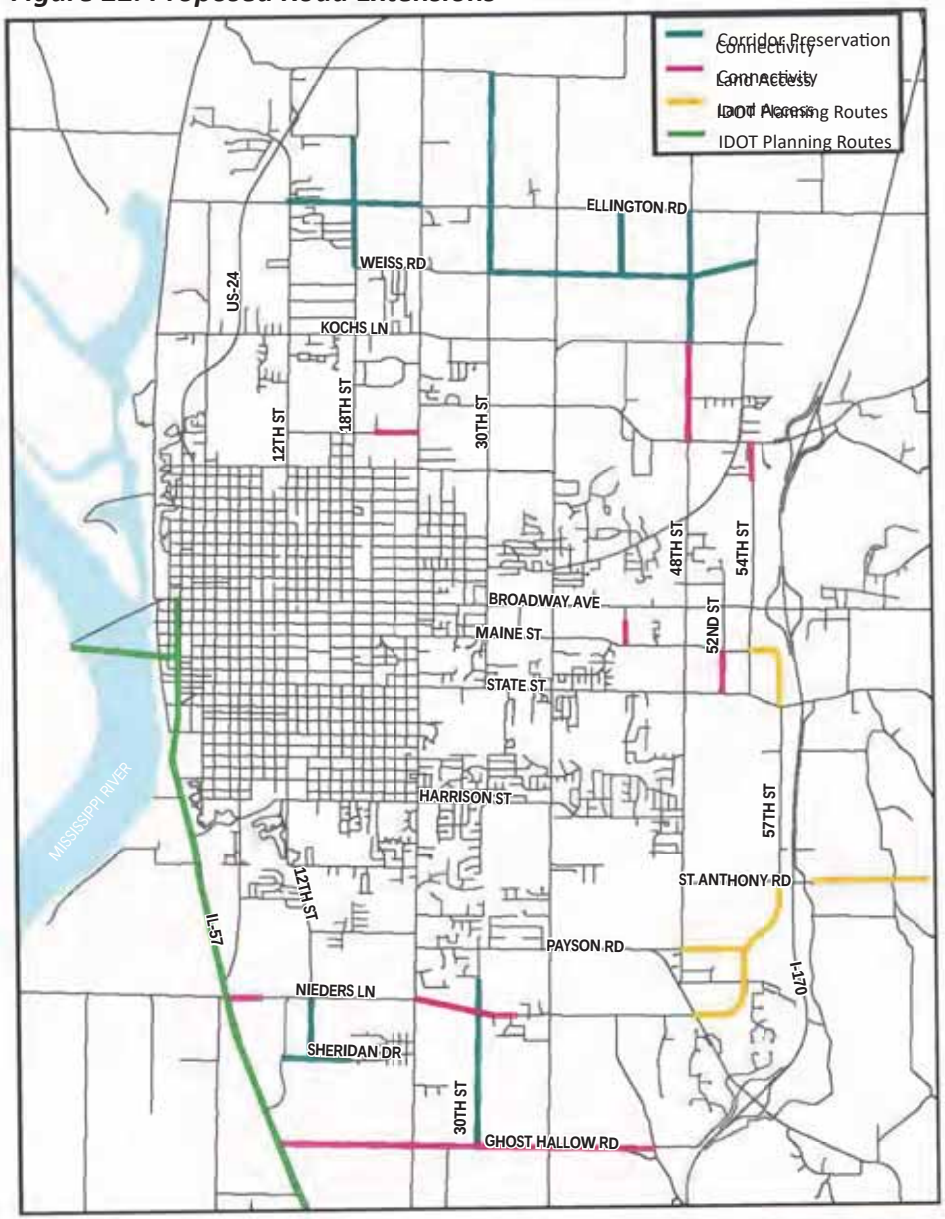
Connectivity road extensions complete gaps in the road network that would improve connectivity and reduce travel times.

Land Access road extensions are concentrated in anticipated growth areas, particularly along I-172. They provide access to land for purposes of development.

IDOT Planning Routes reflect ongoing planning efforts pertaining to the New Mississippi River Bridge and the IL-57 corridor.

The implementation of individual extensions should be the subject of further analysis and justification. Given the absence of population growth to support additional infrastructure, the region should minimize unnecessary road expansions in the future.

Figure 22. Proposed Road Extensions



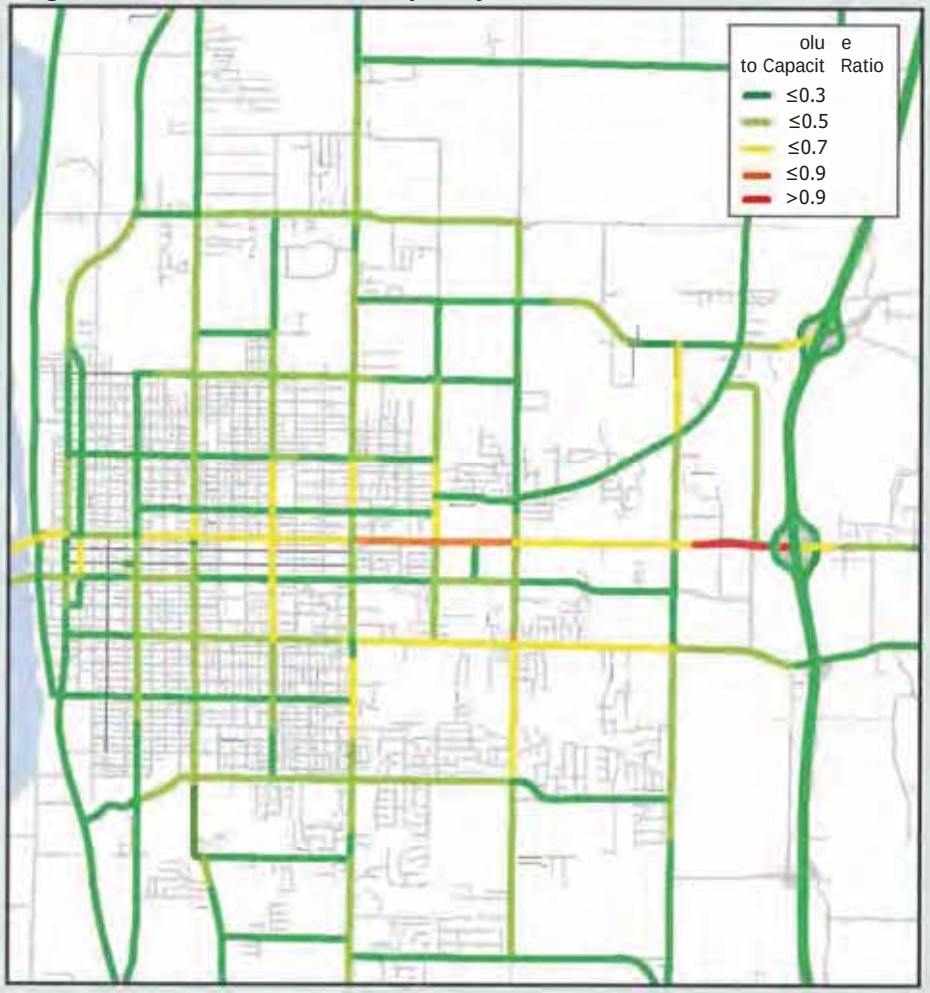
CAPACITY ANALYSIS
Urban Streets

Street segments within the Quincy urbanized area were evaluated to identify locations where volumes approach capacity and improvements may be needed to alleviate congestion. The basis of this planning-level assessment was each roadway segment's volume-to-capacity ratio, which is calculated using the following formula:

Volume / Capacity = Daily Traffic / Road Capacity

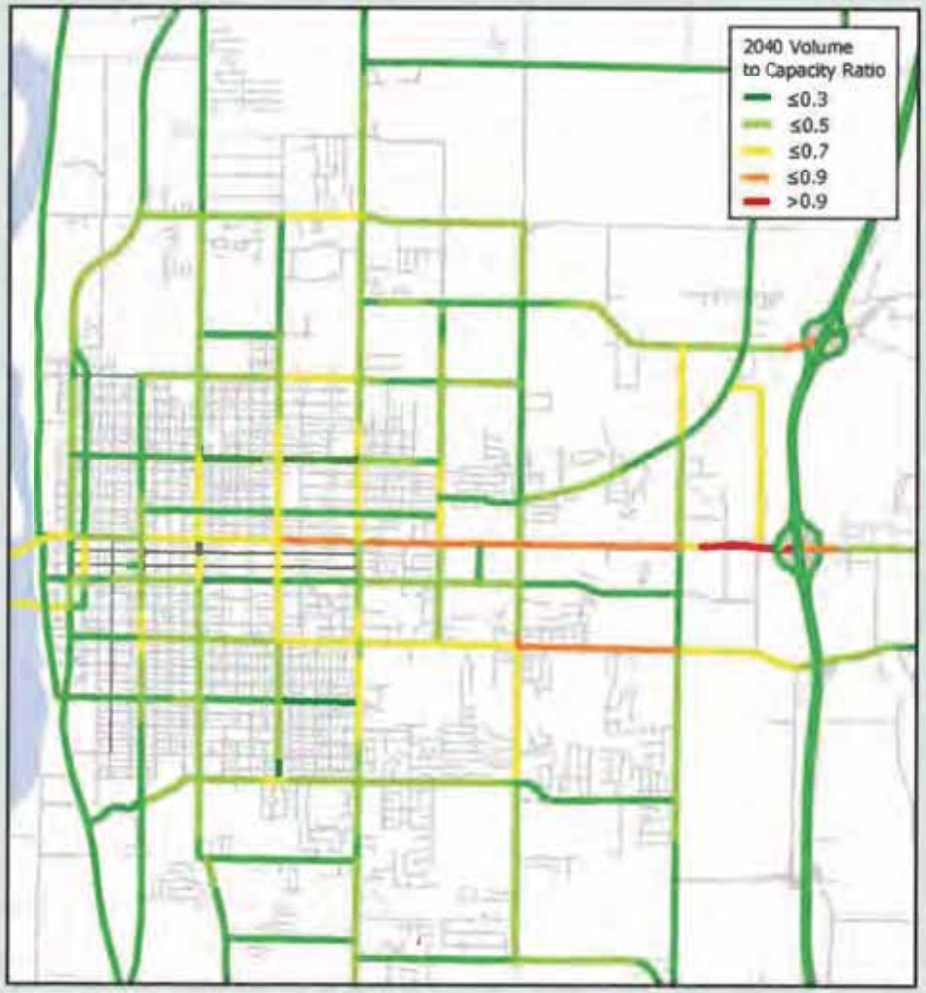
The volume-to-capacity ratio was calculated for both 2020 and 2040, which was selected as the future planning horizon. For most of the region, 2040 daily traffic volumes were forecasted to be approximately 10% higher than 2020 volumes based on historic growth trends and input from IDOT. For the area east of 36th St, an increase of 20% was forecasted due to greater growth potential by 2040.

Figure 23. 2020 Volume to Capacity Ratio



The 2020 volume to capacity analysis reveals the majority of streets function well below capacity. Only Broadway experiences volumes in excess of 70% of capacity. The majority of Quincy's major roads are functioning below capacity.

Figure 24. 2040 Volume to Capacity Ratio



By 2040, most streets will continue to function below capacity. However, increased congestion is expected on Broadway and on Maine St as shown.

Region

CAPACITY ANALYSIS
Intersections

A capacity analysis of five critical intersections was performed to provide more in-depth analysis. For each intersection, field observations and turning movement traffic counts were performed. Capacity analyses of existing and 2040 traffic volumes using Synchro revealed existing and anticipated issues. From the analyses, potential improvements were evaluated and recommendations were offered.

A list of critical intersections was generated by the Steering Committee based on input from the public open house combined with their own perspectives of congested locations. The following five intersections were selected:

1. **36th St and Broadway**
2. **24th St and Harrison St**
3. **36th St and Columbus Rd**
4. **25th St and Broadway**
5. **Kochs Ln and 12th St**

Figure 25. Quincy Capacity Analysis Intersections

Region

36th & Broadway

This signalized intersection is one of the busiest in Quincy. The intersection experiences some congestion, particularly during the afternoon peak hour when the overall intersection operates at LOS D and the northbound and southbound approaches function at LOS E.

Most of the congestion is concentrated on the northbound and southbound approaches as traffic flow is prioritized along Broadway. In fact, queues in the northbound left-turn lanes obstruct commercial driveways to the south of the intersection during the afternoon peak period.

Opportunities to alleviate northbound and southbound congestion are limited. The middle lane on both approaches serves both left-turn and through movements, which requires that both movements receive the same green time (split phasing). This is less efficient than typical phasing but this lane configuration appears to be optimal for the intersection's traffic.

An alternative is to widen the northbound and southbound approaches to provide two left-turn lanes and two through lanes that are fully separate. This would increase capacity and improve the efficiency of the signal, as each movement could receive green time proportional to its volume. However, the intersection footprint is constrained by the proximity of adjacent commercial buildings, such that any widening would be costly and impactful.

Recommendation: Update Signal Timings

It is recommended that a signal coordination & timing plan (SCAT) update be performed. This would require coordination with IDOT, which is the operating agency for Broadway. Signals functioning at maximum efficiency reduce delays and congestion, although at this location the improvement relative to the northbound and southbound approaches would likely be marginal.

24th & Harrison

This intersection is currently configured as an all-way stop. Each leg of the intersection has a single approach lane; there are no dedicated turn lanes. Field observations and capacity analyses reveal this intersection to be severely congested during the peak periods. The intersection operates at LOS E overall during the morning peak period and LOS F during the afternoon peak period. Volumes simply exceed the intersection's capacity.

The addition of dedicated left turn lanes would reduce delays but not materially improve levels of service. It is evident that upgraded traffic control is needed to fully alleviate the congestion. Signalization was considered but the relatively balanced traffic volumes in all four directions would not satisfy the standard signal warrants (based on Warrant 1 of the Manual on Uniform Traffic Control Devices).

Table 4. 24th and Harrison Roundabout LOS Impacts

Scenario	Intersection Level of Service / Delay (in seconds per vehicle)	
	AM Peak Period	PM Peak Period
Existing	E / 43.3	F / 74.3
Baseline 2040	F / 75.1	F / 114.4
Mitigated 2040 – Roundabout	A / 9.9	B / 10.7

Recommendation: Install a Roundabout

Reconfigure the intersection as a single lane roundabout. Given traffic volumes are balanced directionally, a roundabout is the optimal configuration. It would reduce peak period delays by 85%-90% and improve operations to LOS A and LOS B overall. A roundabout would also reduce crashes by 36% according to published research. A roundabout with an inscribed diameter of 130 feet is typical, which will require right-of-way acquisition.

36th & Columbus

The current intersection is very wide for an all-way stop intersection and includes multiple approach lanes on all four legs. This is compounded by the skew orientation at which Columbus Rd and College Ave intersect 36th St. The analysis reveals adequate capacity and minimal congestion during the peak periods. However, the overall intersection operates at LOS C during the peak periods, which would be expected to degrade to LOS D by 2040 absent of any improvements. These service levels are consistent with conditions at much busier intersections in Quincy and may contribute to perceptions that this intersection is congested.

Table 5. 36th and Columbus Roundabout LOS Impacts

Scenario	Intersection Level of Service / Delay (in seconds per vehicle)	
	AM Peak Period	PM Peak Period
Existing	C / 15.5	C / 20.3
Baseline 2040	C / 18.1	D / 26.8
Mitigated 2040 – Roundabout	A / 9.7	B / 11.1

Recommendation: Install a Roundabout

Replace the current all-way stop controlled intersection with a roundabout. Given the shape of the intersection and right-of-way limitations imposed by residential properties in the northwest and southeast quadrants, the roundabout may need to be a dog-bone or peanut configuration to fit within the available footprint. Impacts to overhead utilities are likely. A roundabout would improve peak period operations to LOS A/LOS B and reduce crashes by 36% according to published research.

Region

25th & Broadway

This is a rare traffic signal on Broadway located at a minor intersection. Intersecting traffic volumes on 25th St are low. The signal was originally installed to serve pedestrians crossing Broadway when a school was located nearby. The school has relocated and pedestrian crossings are now infrequent. Current intersection volumes do not meet the standard warrants for signalization (based on Warrant 1 of the Manual on Uniform Traffic Control Devices).

The signal is located less than 1,000 feet from the adjacent signal at 24th St. This contributes to challenges progressing traffic along Broadway through both intersections without stopping. In addition, the northbound and southbound movements on 25th St are hampered by the offset alignment between the north and south legs of the intersection, which makes turning maneuvers onto Broadway more difficult.

Alternative 1: Remove Signal

Remove the traffic signal and place stop signs on the 25th St approaches. This may elicit challenges from adjacent businesses and residents that currently benefit from the traffic signal. Coordination with IDOT will also be required.

Alternative 2: Modify Signal Operations

Retain the traffic signal but introduce separate phases for the northbound and southbound movements. While this is less efficient overall, it would reduce conflicting turning paths and improve safety for northbound and southbound traffic. The intersection would continue to operate at LOS A or B overall during the peak periods with this modification.

Region

12th & Kochs

This all-way stop intersection is located on the north side of Quincy. Peak period field observations and capacity analyses did not reveal existing congestion at this intersection. Forecasted traffic volumes in the future would also not result in congestion. The intersection reportedly experiences some congestion during the school afternoon dismissal peak period, due to the proximity of Iles Elementary. While this period was not evaluated, dismissal peak periods are typically short in duration lasting no more than 30 minutes. Therefore, it is common to accept some congestion at those times and not design the intersection for a brief period during the day.

Recommendation: Monitor Conditions Over Time

Make no intersection improvements at this time. Monitor traffic volumes as they change over time and periodically review the need for upgraded traffic control such as signalization or turn lane additions. Revisit the need for upgraded traffic control if pedestrian infrastructure such as sidewalks or bike facilities are added in the future.

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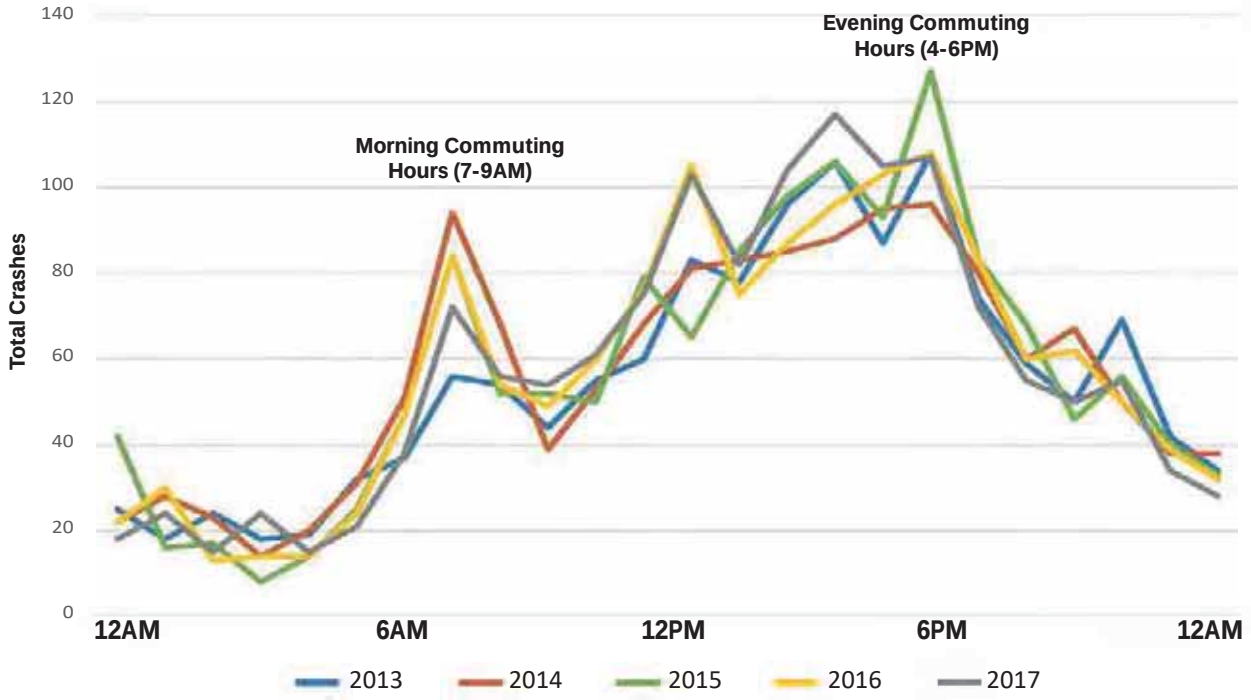
SAFETY ANALYSIS
Overview

Similar to capacity, a safety analysis was performed to identify crash trends and safety issues that may warrant attention. Based on crash data furnished by IDOT, annual crashes in Adams County remained stable between 1,328 and 1,385 with a five-year average of 1,371 crashes between 2013 and 2017. As shown in **Figure 26**, the morning and afternoon commuter peak periods experience the highest number of crashes throughout the day, as expected.

Figure 26. Total Crashes Each Hour by Year, Adams County



Statewide and Adams County percentages of crashes are summarized in **Table 6**. A slightly higher percentage of Adams County crashes resulted in fatalities or injuries. However, crashes that involved pedestrians or cyclists were a smaller proportion of crashes in Adams County as compared to the state.

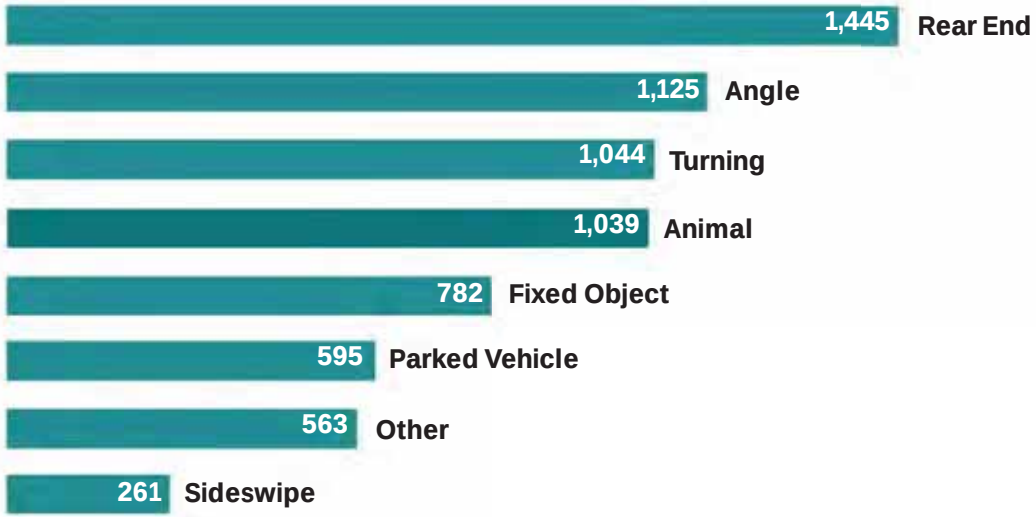
From 2013 to 2017, the most common crash type in Adams County was rear end, followed by angle and turning (see **Figure 27**). These crash types are representative of crashes at intersections, which are where the majority of crashes occur.

The analysis that follows evaluates safety for intersections and rural roads.

Table 6. Crash Comparison

Crash Type	Illinois	Adams County
Fatal	0.30%	0.46%
Injury	21.50%	23.40%
Pedestrian	0.90%	0.54%
Bicycle	1.58%	1.02%

Figure 27. Total Crashes by Type (2013-2017), Adams County



SAFETY ANALYSIS
Intersections

Intersection safety in Quincy was evaluated by comparing crash rates across all intersections with roadways classified as a collector and above. Comparing crashes rates as opposed to total crashes is appropriate because crash rates account for risk and exposure by normalizing traffic volumes. With this approach, the highest volume intersections may not have the highest crash rates. Using crash data from 2013-2017, IDOT's intersection crash rate formula was applied as summarized below:

$$\textit{Intersection Crash Rate} = \frac{\text{Total crashes at intersection x 100,000,000}}{\text{TEV(total entering vehicles) x 5(years) x 365(days)}}$$

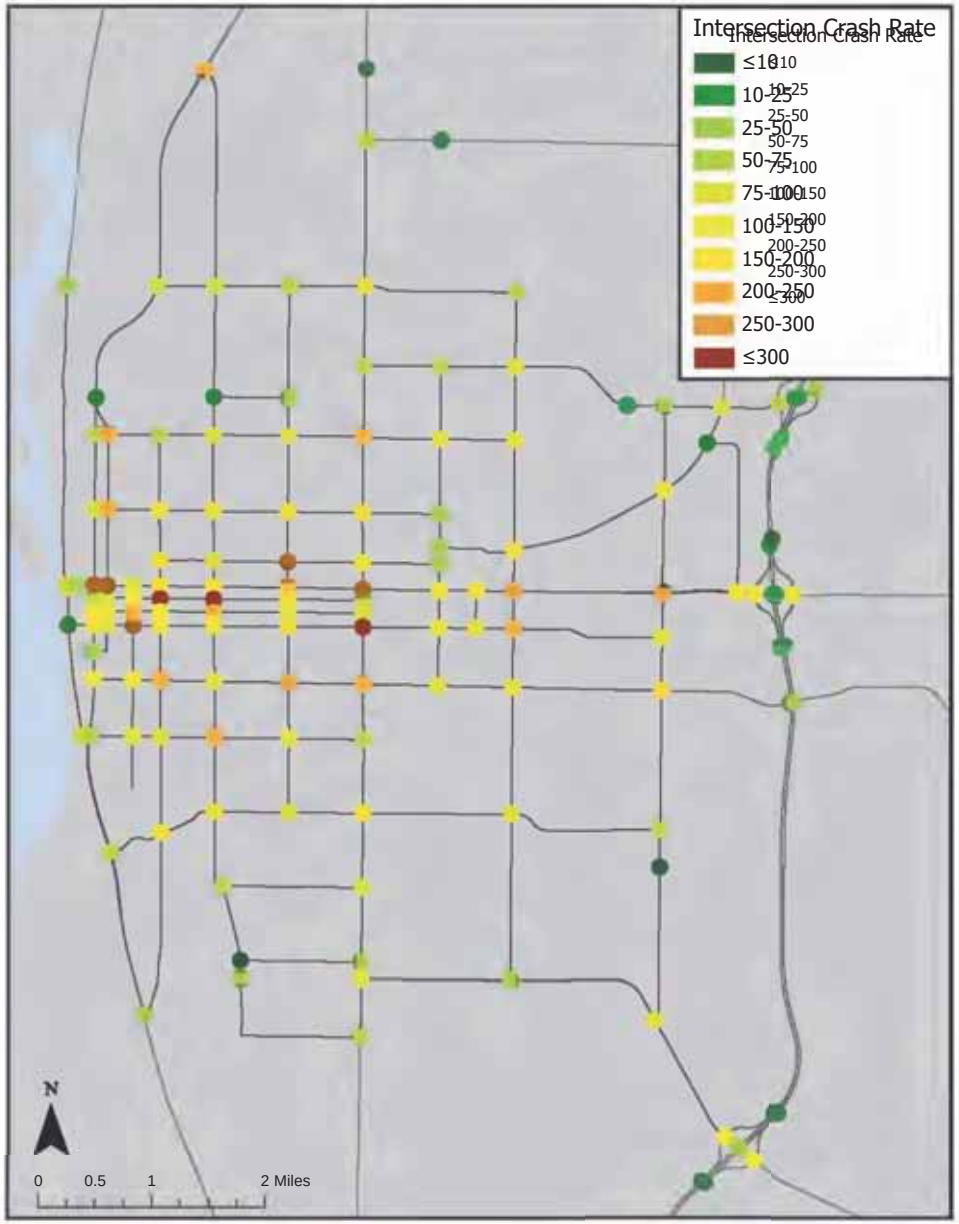
Figure 28 illustrates the results of the intersection crash rate analysis. The intersections with the highest crash rates are located in central Quincy (**Table 7**).

Table 7. Quincy Intersections with the Highest Crash Rates

Intersection	Total Crashes	TEV*	Crash Rate
8th St and Vermont St	26	2,583	551.55
12th St and Vermont St	31	4,906	346.24
24th St and Maine St	34	5,090	366.01
48th St and Broadway St	56	11,076	277.04
36th St and Broadway St	98	18,966	283.13

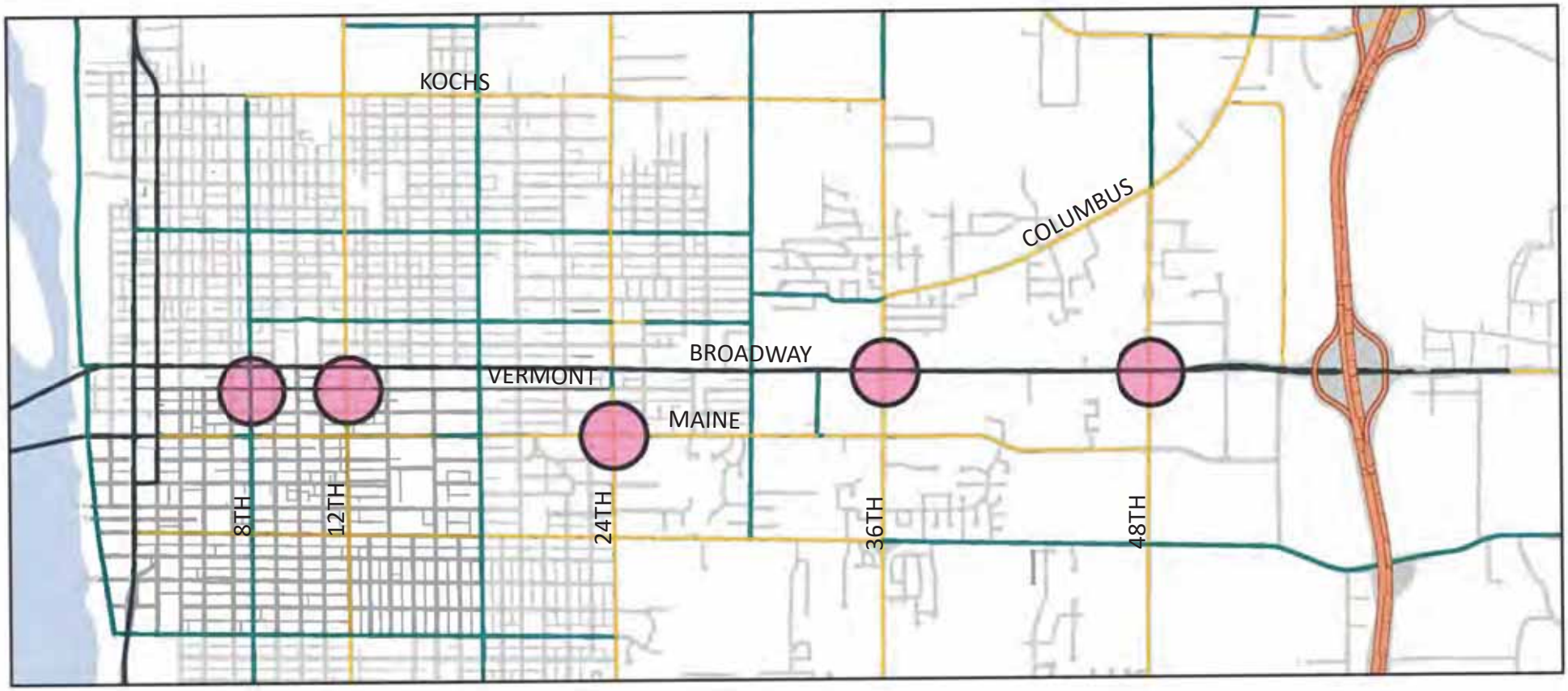
*TEV = Total Entering Vehicles

Figure 28. Quincy Intersection Crash Rates



Region

Figure 29. Quincy Safety Analysis Intersections



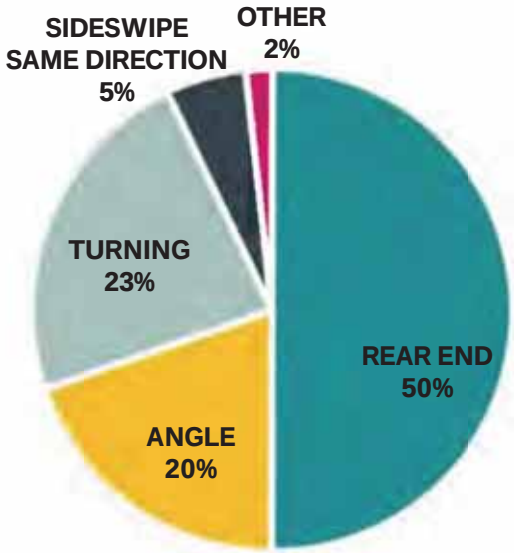
Detailed safety assessments were performed for five intersections in Quincy. For each intersection, existing issues were identified, potential safety countermeasures were evaluated, and recommendations were offered. Intersections with the highest crash rates were selected and the selections were confirmed by the Steering Committee. The following five intersection locations were selected:

1. **8th St and Vermont St**
2. **12th St and Vermont St**
3. **24th St and Maine St**
4. **48th St and Broadway St**
5. **36th Stand Broadway St**

48th & Broadway

This intersection had a crash rate of 277 with 56 crashes in five years. Of those 56, 28 were rear end crashes, 13 were turning-related crashes, and 11 were angle crashes. None of these crash types are surprising for a very busy, high-volume intersection such as 48th and Broadway. The intersection has a modern traffic signal, adequate sight lines for visibility, and pedestrian signal indicators and crosswalks, so physical upgrades do not appear to be warranted.

Figure 30. 48th and Broadway Crashes by Type



Recommendation: Update Signal Timings

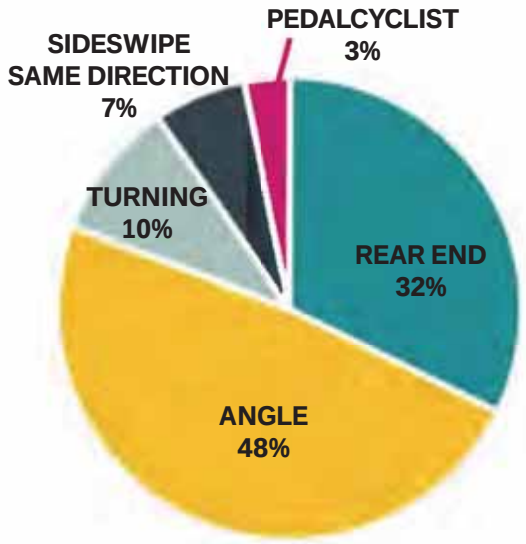
It is recommended that a signal coordination & timing plan (SCAT) update be performed along Broadway. This would require coordination with IDOT, which is the operating agency for Broadway. Signals functioning at maximum efficiency reduce delays and congestion, which could potentially contribute to fewer crashes. That update could consider the removal of permissive (yielding) left-turns in lieu of protected-only (turn on green arrow) left-turns. This would reduce turning-related and angle crashes but would also reduce efficiency and potentially increase congestion.

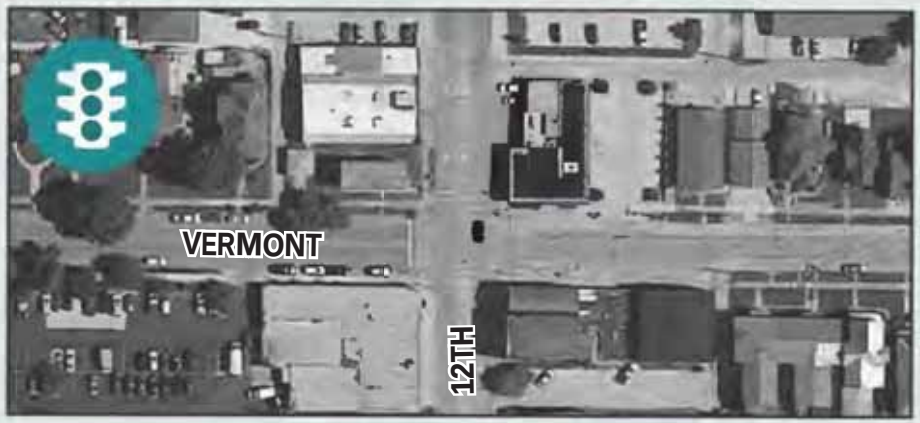
12th & Vermont

This intersection had a crash rate of 346 with 31 crashes in five years. Of those 31, 15 were angle crashes and 10 were rear end crashes. Typically, angle crashes are related to turning vehicles. However, in this location most of the angle crashes appear to be "T-Bone", involving vehicles traveling straight ahead from conflicting directions. This is typically indicative of vehicles running red lights. This can be caused by yellow intervals not being long enough or frustrated drivers waiting for a green when no other vehicles are present.

Field observations revealed queues on northbound 12th St at Broadway extending back to Vermont St. This could be a source of rear end crashes, as northbound vehicles on 12th may not be expecting slowing or stopped traffic just beyond the Vermont St intersection.

Figure 31. 12th and Vermont Crashes by Type





Recommendation: Analyze Yellow & All-Red Intervals
Lengthening yellow intervals and providing an appropriate all-red clearance interval could reduce straight ahead angle crashes. However, a detailed signal timing review was not performed.

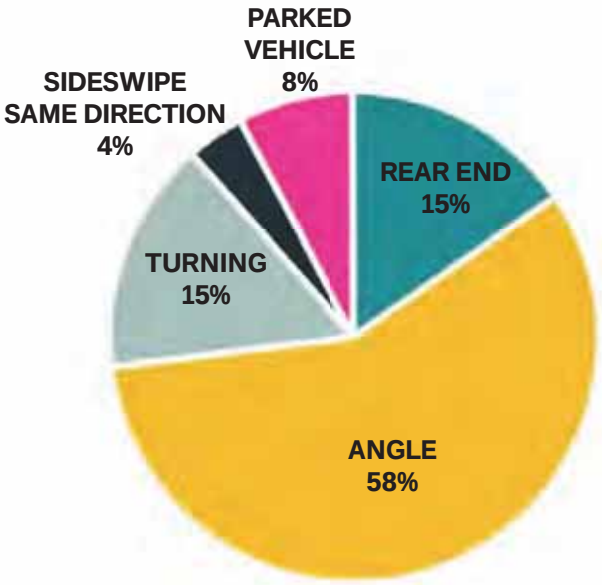
Recommendation: Coordinate Signal with Broadway / 12th
Coordinating this signal with the adjacent signal at Broadway and 12th St could help maintain traffic flow on 12th St between the intersections, thereby reducing queuing and unexpected slow traffic on 12th St.

Recommendation: Replace Signal
Existing traffic signal appears to be antiquated. The intersection would benefit from a new, modern signal with overhead indicators and vehicle detection capabilities that would allow the signal to react to vehicle demand in real time. This could reduce crashes.

8th & Vermont

This intersection had a crash rate of 552 with 26 crashes in five years. Of those 26, 15 were angle crashes. The high percentage of angle crashes could be indicative of red light running or turning conflicts. The intersection lacks dedicated northbound and southbound left-turn lanes. The signal provides permissive-only (yielding) phasing for these movements, meaning these left-turns do not receive a green arrow. Instead, they must wait for a gap in opposing traffic before turning, often trapping vehicles behind them while they wait. This can contribute to both rear-end and angle crashes. Lastly, Vermont St transitions from two-way (west leg) to one-way eastbound (east leg) at this intersection. This atypical configuration may confuse motorists and contribute to crashes.

Figure 32. 8th and Vermont Crashes by Type



Recommendation: Re-stripe 8th St

Provide dedicated northbound and southbound left-turn lanes. It would require removing some on-street parking on 8th St, but potentially no pavement widening. Published crash modification factors indicate this improvement could reduce intersection crashes by 12%.

Recommendation: Analyze Yellow & All-Red Intervals

Lengthening yellow intervals and providing an appropriate all-red clearance interval could reduce straight ahead angle crashes. However, a detailed signal timing review was not performed.

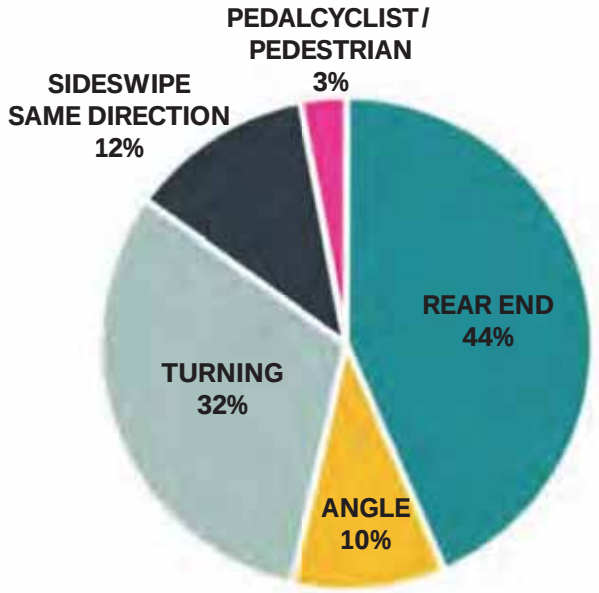
Recommendation: Replace Signal

Existing traffic signal appears to be antiquated. The intersection would benefit from a new, modern signal with overhead indicators and vehicle detection capabilities that would allow the signal to react to vehicle demand in real time. This could reduce crashes.

36th & Broadway

This intersection had a crash rate of 283 with 98 crashes in five years. Of those 98, nearly half were rear end crashes. Almost all of the rear end crashes were caused by a vehicle traveling straight ahead striking another vehicle that had slowed or was stopped due to traffic. These crashes are typically indicative of congested conditions. Field observations and volume data confirm that Broadway experiences congestion during both morning and afternoon peak periods. The intersection has a modern traffic signal, adequate sight lines for visibility, and pedestrian signal indicators and crosswalks, so physical upgrades do not appear to be warranted. Furthermore, intersection expansion for additional turning lanes is limited by constrained right-of-way and the proximity of adjacent commercial buildings.

Figure 33. 36th and Broadway Crashes by Type



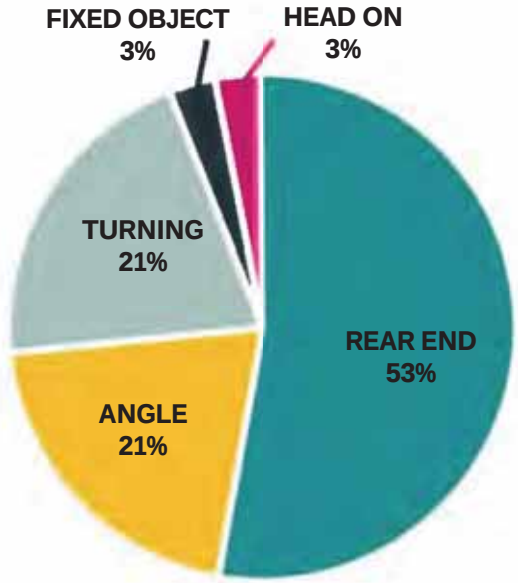
Recommendation: Update Signal Timings

It is recommended that a signal coordination & timing plan (SCAT) update be performed along Broadway. This would require coordination with IDOT, which is the operating agency for Broadway. Signals functioning at maximum efficiency reduce delays and congestion, which could potentially contribute to fewer crashes. That update could consider the removal of permissive (yielding) left-turns in lieu of protected-only (turn on green arrow) left-turns. This would reduce turning-related and angle crashes but would also reduce efficiency and potentially increase congestion.

24th St & Maine St

This intersection had a crash rate of 366 with 34 crashes in five years. Of those 34, 18 were rear end crashes. Almost all rear end crashes were caused by a vehicle traveling straight ahead striking another vehicle that had slowed or was stopped. A school in the northeast quadrant recently relocated. When this school was operational, congestion occurred at this intersection during the school's arrival and dismissal periods. The 5-year crash analysis period could be capturing school-related conditions, which may have subsided. The intersection has a modern traffic signal with dedicated left-turn lanes on all approaches as well as pedestrian signal indicators and crosswalks, so physical upgrades do not appear to be warranted.

Figure 34. 24th and Maine Crashes by Type



Recommendation: Analyze Yellow & All-Red Intervals
Lengthening yellow intervals and providing an appropriate all-red clearance interval could reduce straight ahead angle crashes. However, a detailed signal timing review was not performed.

Recommendation: Install Signal Ahead Signage
Given the absence of overhead traffic signal indicators and an extensive tree canopy, providing signal ahead signage should increase driver awareness of the signal and reduce rear end crashes.

Recommendation: Remove Vegetation from Sight Distance Triangles
Removing vegetation will improve visibility at the intersection, particularly for those making yielding right-turns on red.

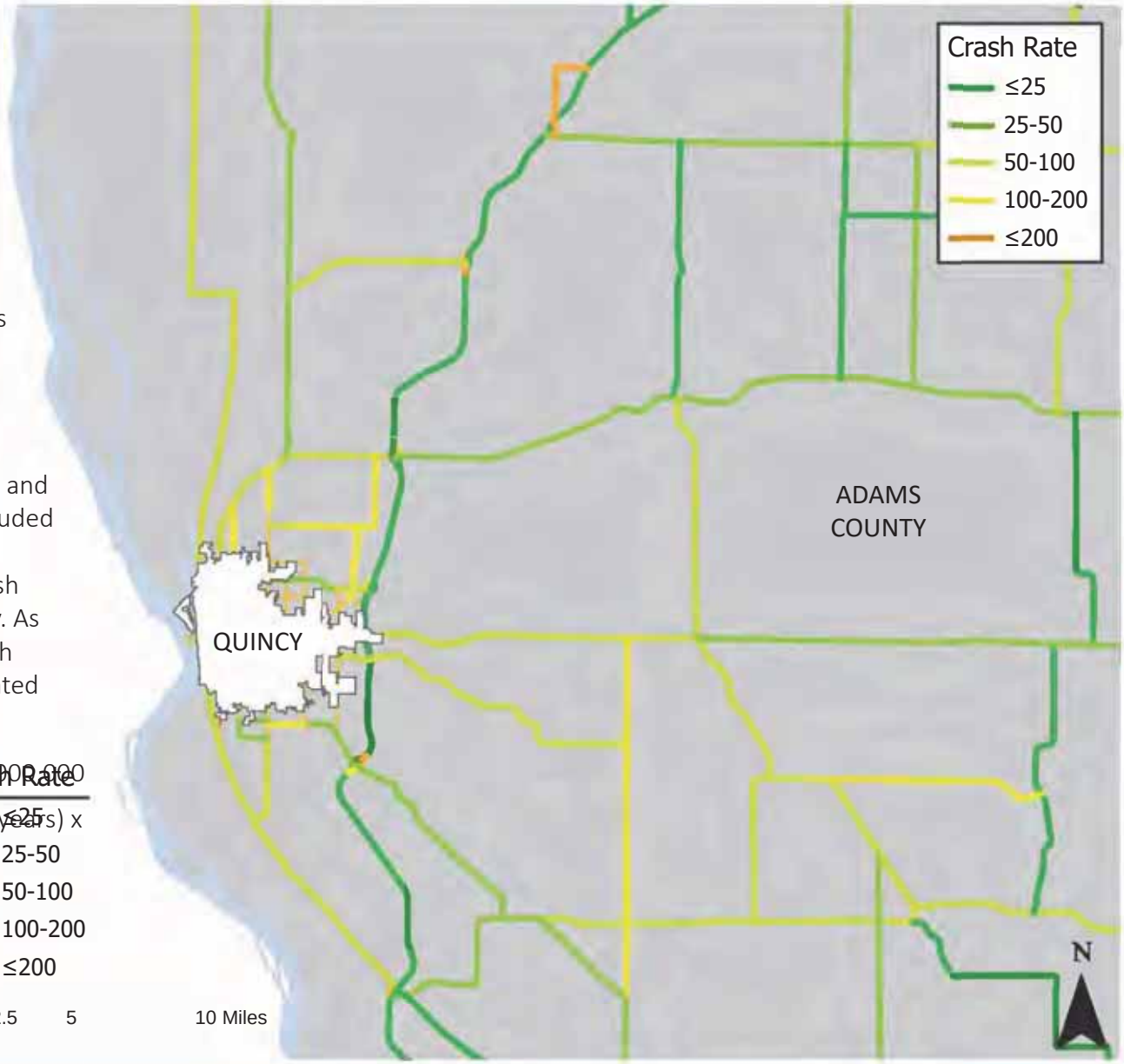
Region

SAFETY ANALYSIS
Rural Roads

Rural road safety in Adams County outside of Quincy was evaluated by calculating segment crash rates and comparing with averages for rural routes in IDOT District 6. Using crash data from 2013-2017, IDOT's District 6 rural major collectors have a segment crash rate of 120.6 and rural minor arterials have an average segment crash rate of 107.8. For rural routes in Adams County (excluding roads within the Quincy city limits), the average crash rate for major collectors is 58.9 and for minor arterials is 65.9. Therefore, it was concluded that rural roads in Adams County do not pose a systemic safety concern. **Figure 35** shows the crash rates by segment for rural roads in Adams County. As shown, the majority of rural corridors have a crash rate below 100. Segment crash rates were calculated using IDOT's formula:

$$\textit{Segment Crash Rate} = \frac{\text{Total Crashes (5 years)} \times 100,000,000}{\text{Seg. Length(miles)} \times \text{AADT} \times 5(\text{years}) \times 365(\text{days})}$$

Figure 35. Adams County Segment Crash Rates



BROADWAY CORRIDOR ACCESS MANAGEMENT PLAN

Broadway is the primary east-west corridor in Quincy. As such, it is a high-volume traffic artery providing access to a diversity of adjoining land uses and major destinations, including the Quincy Mall, Downtown, Blessing Hospital, and others (see **Figure 36**). Broadway also connects to the Mississippi River Bridges and I-172.

The street network analysis summarized previously identified Broadway as the most congested corridor in Quincy, and that congestion is expected to increase over time. Broadway was also targeted as an area for potential infill development by Quincy Next, which could place additional demands on the corridor.

An access management plan is recommended to not only improve existing traffic operations and safety, but also to position the corridor for the future. An access management plan would identify opportunities to reimagine Broadway as a more multi-modal corridor that accommodates all modes of travel and supports evolutions in land uses over time.

This would include evaluations of traffic signal operations, curb cut consolidations and backage roads, and pedestrian and bicycle accommodations. It should also include coordination with property owners and reflect evolving commercial development patterns and consumer preferences for shopping, dining, and entertainment.

Figure 36. Broadway Corridor Map

Region

FREIGHT

Quincy is an important region for the movement of goods. It benefits from its location proximate to I-72, US-61 (Avenue of the Saints), and I-172/IL-336/IL-110 (Chicago-Kansas City Highway). These corridors provide vital connections to major cities, including Chicago, St. Louis, Kansas City, Indianapolis, and Minneapolis-St. Paul. The region is also served by two Class 1 railroads (BNSF and Norfolk Southern) and has port facilities on the Mississippi River. According to the Illinois Statewide Freight Plan, Adams County generated or received 15.3 million tons of total freight in 2014 (water, truck, rail).

According to an IDOT study, waterway freight represented 2.3 million tons in 2017. According to the Federal Railroad Administration, the BNSF mainline serves 10 trains per day. I-72 and US-61 are the principal truck highways in the region, which places importance on the routes linking these corridors to Quincy, namely I-172 and US-24 crossing the Mississippi River. Traffic volumes on major highways are illustrated in **Figure 37.**

Within the region, the Quincy South Riverfront Freight District is a focal point for freight and logistics companies, given its highway, river, and railroad access. To learn more about this District, interviews were held with stakeholders and representatives of area businesses, as indicated in **Table 8**. One common theme from the discussions was the need to upgrade IL-57, which provides truck access to the District. Perspectives on the adequacy of port and railroad facilities were more varied.

Figure 37. Quincy Regional Traffic Volumes

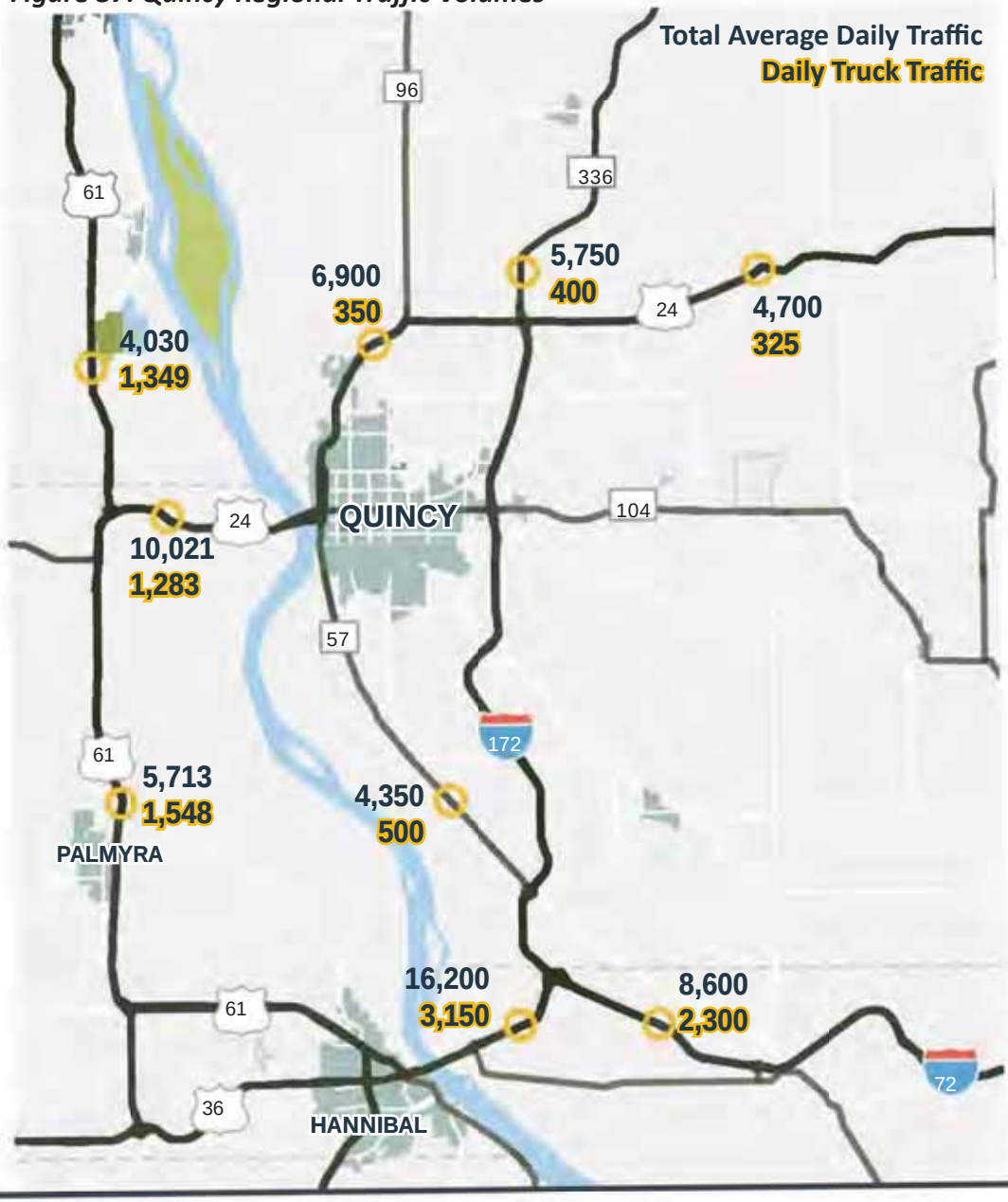


Table 8: Freight Stakeholder Interviews

Wholesale and Mid West controlled Storage	Rick Ehrhart
Burlington Junction Railway	Jonathon Wingate
Mid-America Port Authority	Charles Bell
McNay Truck Lines	Richard McNay
Sharkey Transportation Inc	Jack Sharkey

Quincy's Memorial Bridge
Image from TheWhig.com, photo by Katelyn Metzger

The Mid-America Port Authority has led several efforts to investigate infrastructure upgrades for the District, including a study by Quetica that evaluated enhanced rail and barge transload capabilities and a study that proposed roadway upgrades and a new port location south of the lock and dam. These projects are costly and their return on investment is difficult to predict, since their impact hinges on the decisions of private businesses.

Looking ahead to the future, the IDOT Statewide Freight Plan forecasts a 9.2 million increase in total tonnage (water, rail, truck) being generated or received in Adams County by 2045. This represents a 60% increase for a compound annual growth rate of 1.7%. This is due primarily to anticipated growth in food and food product industries, which have a significant presence in the Quincy region.

IL-57 Upgrade

State route 57 (IL-57) is a mostly 2-lane highway that connects Downtown Quincy with I-172 approximately 10 miles to the south. The corridor passes through the South Quincy Riverfront Industrial District and provides critical truck access for the District.

IL-57 is a source of frustration for many who use it. Pavement conditions are marginal. The inability to pass slower-moving trucks and speed limit reductions in places such as Marblehead extend travel times. Flooding occasionally affects the roadway in places. As the primary route between Downtown and the region's busiest interstate, it should perhaps be a more appealing and prominent highway.

IDOT has committed to studying alternatives for upgrading the route. Improvements appear to be warranted to not only sustain existing businesses but to also position the region for forecasted growth in freight tonnage. Widening the highway to 4 lanes from south of Downtown to I-172 is the most intuitive upgrade and is the project most often cited by stakeholders and the public, but it is also the most costly ($250 million has been estimated).

Existing traffic volumes on IL-57 average 4,350 vehicles per day, including 500 trucks. This volume is well below the capacity threshold for a 2-lane highway. In fact, IL-57 could accommodate 8,400 vehicles per day and maintain a level of service (LOS C) that is not only acceptable but commonly used as a design target. FHWA (Freight Analysis Framework) forecasts truck traffic to increase by 44% by 2045. Despite this increase, total volumes would be expected to remain below the capacity of the 2-lane highway.

It is recommended that upgrades to IL-57 be pursued. However, given the amount of traffic it carries and its cost, the 4-lane project may not be an immediate IDOT priority. It may be necessary to consider a project with reduced scope, such as a by-pass of Marblehead, truck passing lanes, right-of-way preservation or acquisition for the 4-lane project, full shoulders, and increased flood protection in order to enhance the benefit-cost and move the upgrade forward in a timely manner.

Nonetheless, an improved IL-57 would increase the accessibility and reliability of transportation to the Quincy South Freight District, and would therefore help position the area for future economic development opportunities.

Northbound in IL-57 towards Marblehead
Image from billburmaster.com

Quincy South Freight Corridor

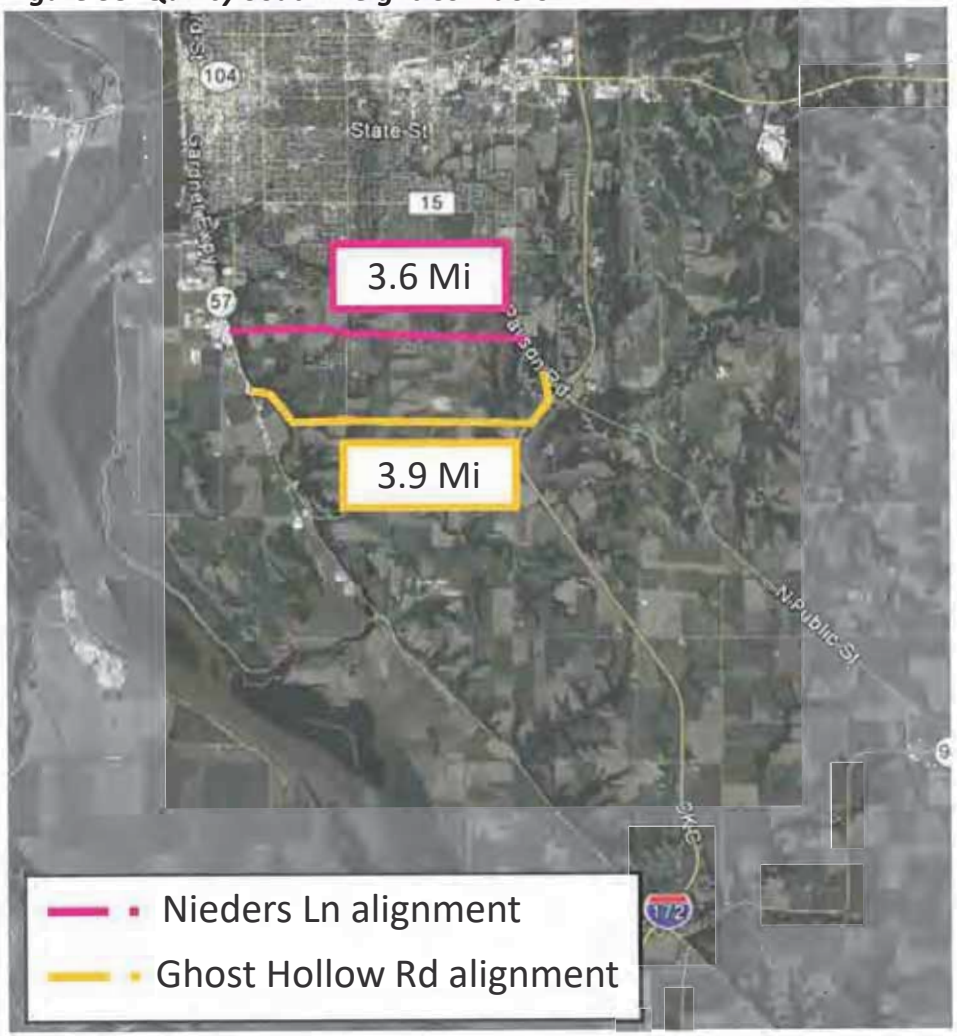
The Quincy South Freight Corridor would also improve access to the Quincy South Riverfront Industrial District, but by addressing east-west connectivity, rather than north-south along IL-57. Therefore, it could be considered a complementary project to the IL-57 Upgrade.

The South Freight Corridor would provide an upgraded 2-lane highway between IL-57 and I-172 at the Payson Rd interchange. This highway would be intended for trucks and would include wide shoulders and a 45 mph speed limit. Potential alignments along Nieders Ln and Ghost Hollow Rd are illustrated in **Figure 38**.

By connecting to I-172 due east from the District, this project has the potential to attract trucks oriented north on IL-336/IL-110 and east on US-24 as well as those destined to the south on I-172. Therefore, it could relieve truck traffic in Downtown Quincy as well as on US-24 (within the city) and on Broadway, which would help achieve additional goals of this Regional Transportation Plan.

Quincy also lacks a continuous, arterial route running east-west along the southern limits of the region. Additional street network connectivity in this area has been cited by previous plans and is included in this Plan's proposed street network. Hence, this project would serve broader community mobility needs, while also enhancing truck access to the District.

Figure 38. Quincy South Freight Corridors



QUINCY TRANSIT SYSTEM

The City of Quincy's transit system – Quincy Transit Lines (QTL) – offers fixed route transit services, paratransit services, and senior citizen transportation within the City limits. QTL operates Monday through Friday, 6:00 a.m. to 8:00 p.m. year-round and Saturday and Sundays, 6:45 a.m. to 5:00 p.m. QTL operates eight fixed-route buses Monday through Friday and two fixed-route buses on Saturday and Sunday. The fixed route system has four routes: yellow, green, red, and blue (**Figure 39**).

QTL also provides curb-to-curb paratransit service – known as Quincy Paratransit – to serve customers who are unable to use regular fixed route service, as required by the Americans with Disabilities Act (ADA) and Federal Transit Administration (FTA). QTL operates four paratransit buses and four senior citizen vans Monday through Friday and one paratransit bus on Saturday and Sunday.

Table 9 shows key summary statistics for QTL from its 2017 National Transit Database (NTD) report. The statistics are shown for both fixed route and paratransit service. QTL offers single ride fares as well as monthly ride passes, as shown in **Table 10**. The regular fare is $0.50 for a one-way trip. This includes transfers if more than one route is needed to reach the passenger's destination. Children age 1-4 ride free and those 5-18 ride for $0.25. Riders with a disability are eligible for a free fare if they have a disability and hold an Illinois State Circuit Breaker Card.

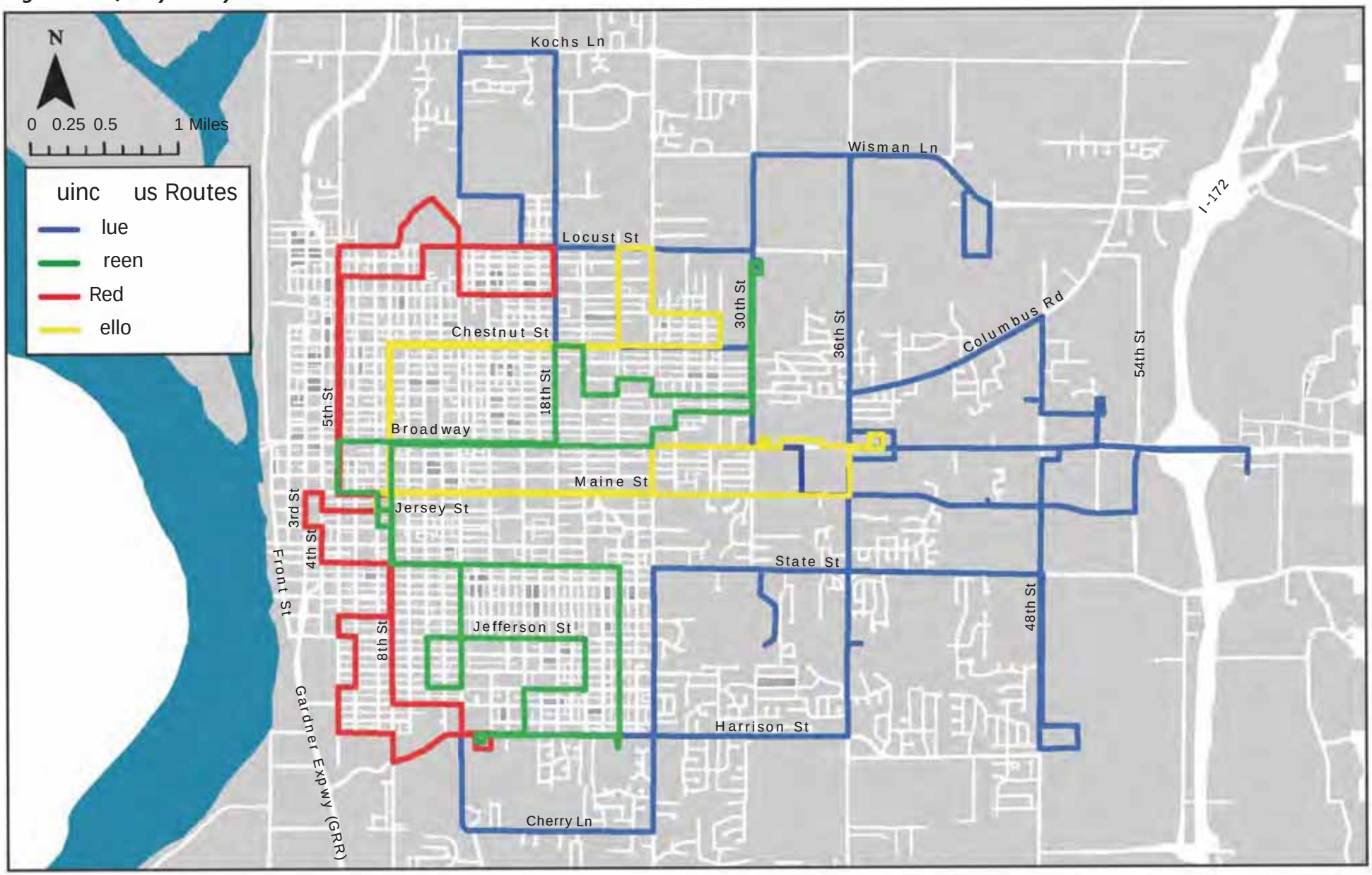
Table 9. Quincy Transit Lines Summary Statistics for 2017

Type	Fixed Route	Quincy Paratransit
Annual Ridership	341,465	142,698
Annual Revenue Miles	426,061	227,181
Annual Revenue Hours	31,702	19,634

Table 10. Fare Table

Single Ride Fares	
Regular Fare (ages 18+)	$0.50
Children (ages 1-4)	Free
Students (ages 5-18)	$0.25
Disabled with IL State Circuit Breaker Card	Free
Monthly Pass	
Regular Fare	$18.00
Student Fare (ages 5-18)	$10.00
Paratransit	
One-way trip- Age 60+	$2.50
One-way trip-ADA Approved	$1.00

Figure 39. Quincy Bus System Routes



Region

Tables 11 and **12** compare major fixed route operating statistics for QTL with four peer systems for the years 2012 through 2016. These are the five most recent years available in the Urban iNTD database. **Tables 13** and **14** compare Quincy Transit's funding sources and operating funds by source to its peer systems. Findings include:

- QTL's ridership is significantly higher than its peers, indicating solid utilization of the system.
- QTL's operating expenses per passenger are just marginally above the average of its peers.
- QTL's farebox recovery (the percentage of its operating expense covered by fares) is lowest among its peers.
- QTL benefits from a robust amount of local and state funding as compared to its peers which helps offset the low farebox recovery ratio.

In conclusion, further study of Quincy's transit system, including identifying ways to improve efficiency and grow ridership, is recommended. The City of Quincy is in the process of initiating a comprehensive transit operations analysis to do just that. As a component of that process, a new location and configuration for a Downtown off-street transit transfer station is being considered.

Table 11. Overall System Ridership and Operating Ratios – 2013 to 2017 NTD Average

Transit System	Passenger Trips	Revenue	Operating Expenses
Quincy Transit Lines (IL)	484,163	$433,314	$3,041,056
Peer System Average	239,151	150,155	1,344,350
City of Richmond (IN)	250,391	$188,855	$1,154,769
City of Manitowoc (WI)	325,471	$203,881	$1,938,237
City of Mason City (IA)	207,550	$145,206	$875,079
City of Galesburg, (IL)	173,192	$62,676	$1,409,315

Table 12. Per Passenger Ridership and Operating Ratios - 2013 to 2017 NTD Average

Transit System	Farebox Recovery	Revenue / Passenger Trip	Passenger Trips / Revenue Hour	Cost / Passenger Trip	Passenger Trips / Capita
Quincy Transit Lines (IL)	2.84%	$0.89	9.4	$6.28	12.0
Peer System Average	10%	$0.61	7.61	$5.74	7.98
City of Richmond (IN)	16.4%	$0.75	.82	$4.62	9.17
City of Manitowoc (WI)	10.5%	$0.62	14.5	$5.96	9.95
City of Mason City (IA)	9.72%	$0.70	7.7	$4.23	7.43
City of Galesburg, (IL)	4.48%	$0.36	7.4	$8.14	5.38

Table 13. Operating Funds by Funding Source - 2013 to 2017 NTD Average

Transit System	Fare Revenue	Local Funds	State Funds	Federal Funds	Other Funds	Total
Quincy Transit Lines (IL)	$86,663	$378,108	$1,975,325	$600,253	$707	$3,041,056
Peer System Average	$150,162	$223,669	$454,462	$512,346	$3,719	$1,344,350
City of Richmond (IN)	$188,885	$112,913	$344,569	$499,747	$8,685	$1,154,769
City of Manitowoc (WI)	$203,881	$610,039	$262,733	$861,585	$0	$1,938,237
City of Mason City (IA)	$145,206	$49,728	$294,490	$383,717	$1,937	$875,079
City of Galesburg, (IL)	$62,676	$121,995	$916,055	$304,335	$4,254	$1,409,315

Table 14. Operating Funds Percentages by Funding Sources - 2013 to 2017 NTD Average

Transit System	Fare Revenue	Local Funds	State Funds	Federal Funds	Other Funds
Quincy Transit Lines (IL)	2.8%	12.3%	64.9%	19.8%	0%
Peer System Average	12%	14%	36%	38%	0.3%
City of Richmond (IN)	16.4%	9.5%	29.9%	43.5%	0.7%
City of Manitowoc (WI)	10.5%	31.4%	13.6%	44.4%	0%
City of Mason City (IA)	16.3%	6.0%	33.6%	43.9%	0.2%
City of Galesburg, (IL)	4.4%	8.6%	65.0%	21.6%	0.3%

AMTRAK

Amtrak operates two roundtrips (Carl Sandburg and the Illinois Zephyr) daily between Quincy and Chicago – a 4 ½ hour trip one-way. The route spans 258 miles over tracks owned by the BNSF. Trains from Quincy to Chicago depart at 6:12AM and 5:30PM. Trains arrive in Quincy from Chicago at 12:00PM and 10:20PM. The service is punctual. In 2019, the average arrival delay at the Quincy station was 10 minutes, while the average departure delay was 1-2 minutes.

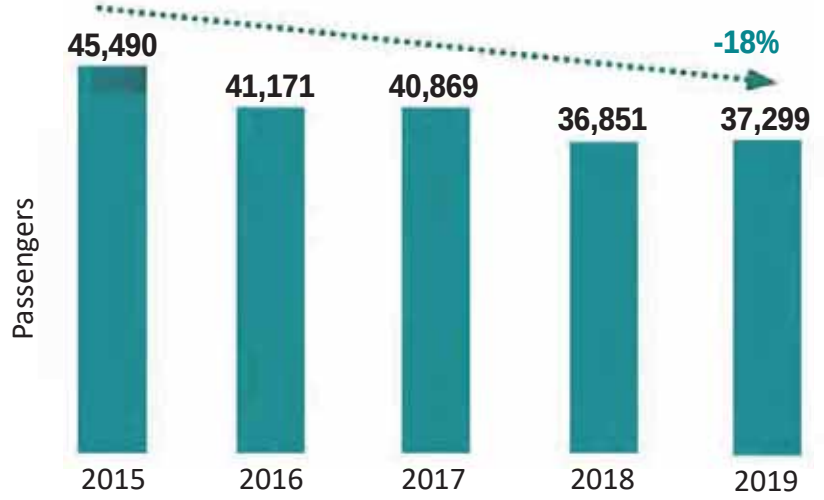
Ridership for Quincy's rail station has declined from 2015 to 2019 by 18% with a total of 37,527 riders in 2019 (see **Figure 40**). This contrasts with relative stable Amtrak ridership for Illinois overall, which reflects just a 1% decline over the same period.

Quincy's passenger rail station is located at the intersection of N 30th St and Wismann Ln on the northeast side of the city. While the station facility is serviceable, community interest in a Downtown station has persisted for some time. A Downtown station in the center of the City would represent a more logical station location and would likely contribute to increased activity Downtown, including increased pedestrian foot traffic.

The concept of a new Downtown Station was explored and determined to be a challenging proposition for the following reasons:

- Land in the desired station location on the riverfront is privately owned or owned by the BNSF (which owns the Burling Junction Railroad yard). Property would need to be acquired for both the station building and parking.

Figure 40. Quincy Passenger Rail Annual Passengers



- Potential conflicts with operations of the Burlington Junction Railroad would need to be addressed.
- The potential for flooding is a concern.
- New track connectivity with the BNSF mainline heading east would need to be established. While this connection appears to be feasible, it would come at a cost.
- A Downtown station is consistent with Quincy remaining a terminal station. It would conflict with an idea raised by Amtrak officials to potentially extend service into Missouri.

Therefore, it is recommended that the concept of a Downtown station be paused until additional clarity can be provided on the preceding issues.

PREVIOUS PLANS

Cycling in Quincy

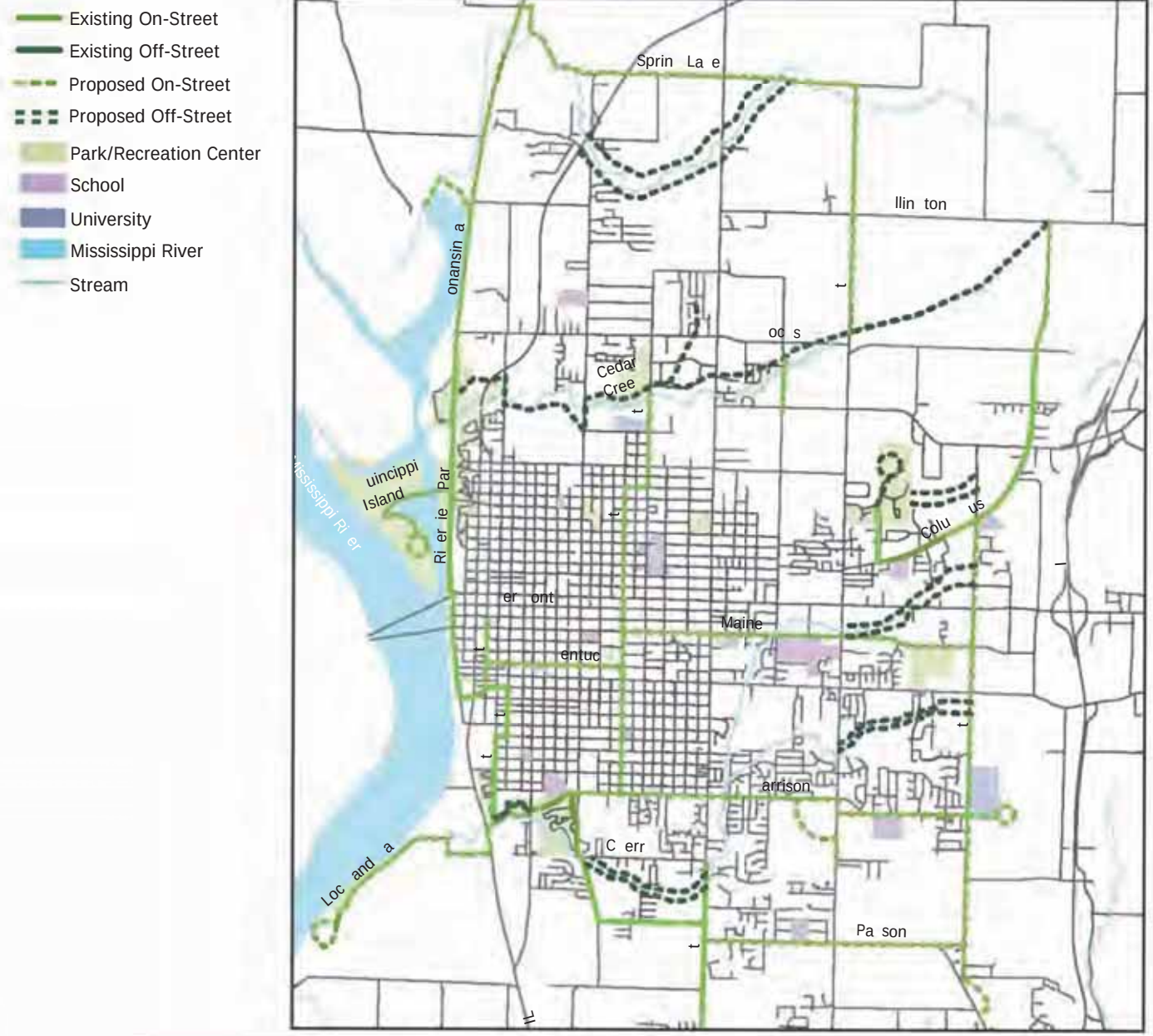
Quincy has a history of a strong bicycle culture. The Quincy Bicycle Club first organized in 1885 and while the Club dissolved in 1919, today Quincy has several cycling groups that still advocate for bike safety and access, including the Quincy Bicycle Club and Friends of the Trails.

Quincy Bicycle Club in Highland Park (1885) from the Historical Society of Quincy and Adams County

1999 Greenway and Trails Plan

In 1999, the Quincy Greenway and Trails Plan was developed to assist the City and the Quincy Park District in identifying and preserving potential greenways and integrating existing bike and walking paths into a city-wide network. The Plan proposed alignments for a new and expanded greenway and trail system with twelve primary corridors intended to connect residential areas to major attractions like Quincy University, Mississippi Riverfront Parkways, Schools, and other City parks. A pedestrian bridge across Broadway at 16th St was recommended to connect neighborhoods north and south and provide an alternative to crossing Broadway at grade. **Figure 41** shows the proposed greenway alignment from the 1999 Plan.

Figure 41. 1999 Proposed Network



EXISTING INFRASTRUCTURE
Bicycle

Quincy's existing bike and trail system includes only a fraction of the facilities identified by the 1999 Plan. There are several public parks with walking paths and trails, but they are not connected to a network of bike and pedestrian routes. Existing bike infrastructure includes a bike lane along 24th St south of Cherry Ln; a bike lane along Bonansinga Dr adjacent to the network of riverfront parks; shared use paths through Indian Mounds Park, Sunset Park, Gardner Park, and Riverview Park; the Bill Klingner Trail near Cedar Creek; and a short segment of on-street bike facilities south of the Cherry Ln and 12th St intersection.

Two cyclists navigating the Maine and 5th intersection

Bill Klingner Trail

Photo from Quincy Park District

Sidewalks

A high-level sidewalk inventory was performed to identify generalized areas of sidewalk connectivity and locations lacking sidewalks. The inventory is summarized in **Figure 43**. Pink lines indicate streets missing sidewalks on both sides. Blue lines indicate streets with sidewalks missing from just one side.

Sidewalks are generally located on both sides of all streets Downtown and in adjacent residential neighborhoods around the City center. Downtown sidewalks are typically 5 to 15 feet in width. The sidewalks along Maine St and around Washington Park have the most streetscape elements, including pedestrian scale lighting, street trees, and decorative planters.

Throughout the city, sidewalks are commonly 6 feet wide in the residential areas. Areas where sidewalks are missing or inconsistently located are generally north of College Ave, south of State St, and east of 22nd St, which typically reflect low-density areas. A lack of sidewalks in these areas is not uncommon.

Many intersections in Quincy require some form of repair or improvement to become ADA compliant. Some of the most common issues pertaining to sidewalks and intersection ADA compliance are illustrated on Page 72.

Figure 42. Community Perception Regarding Sidewalks

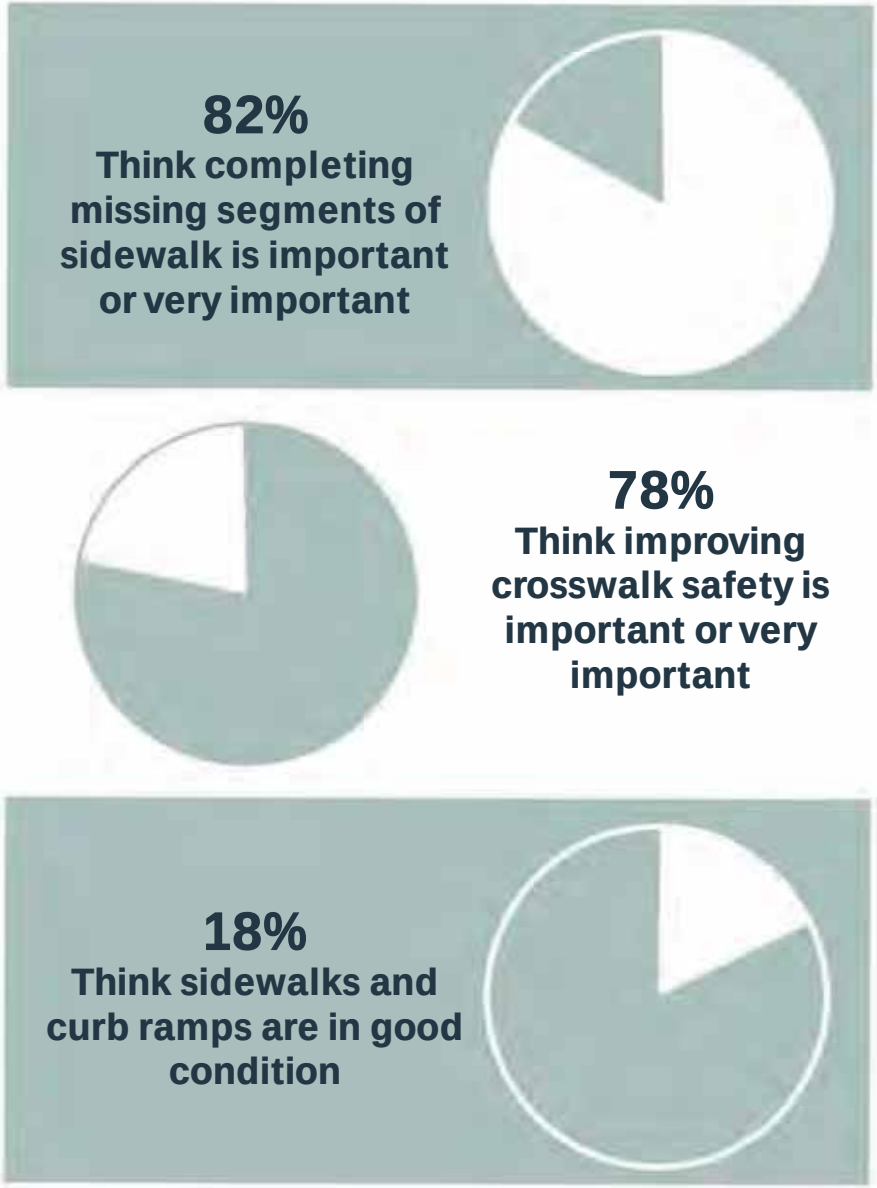
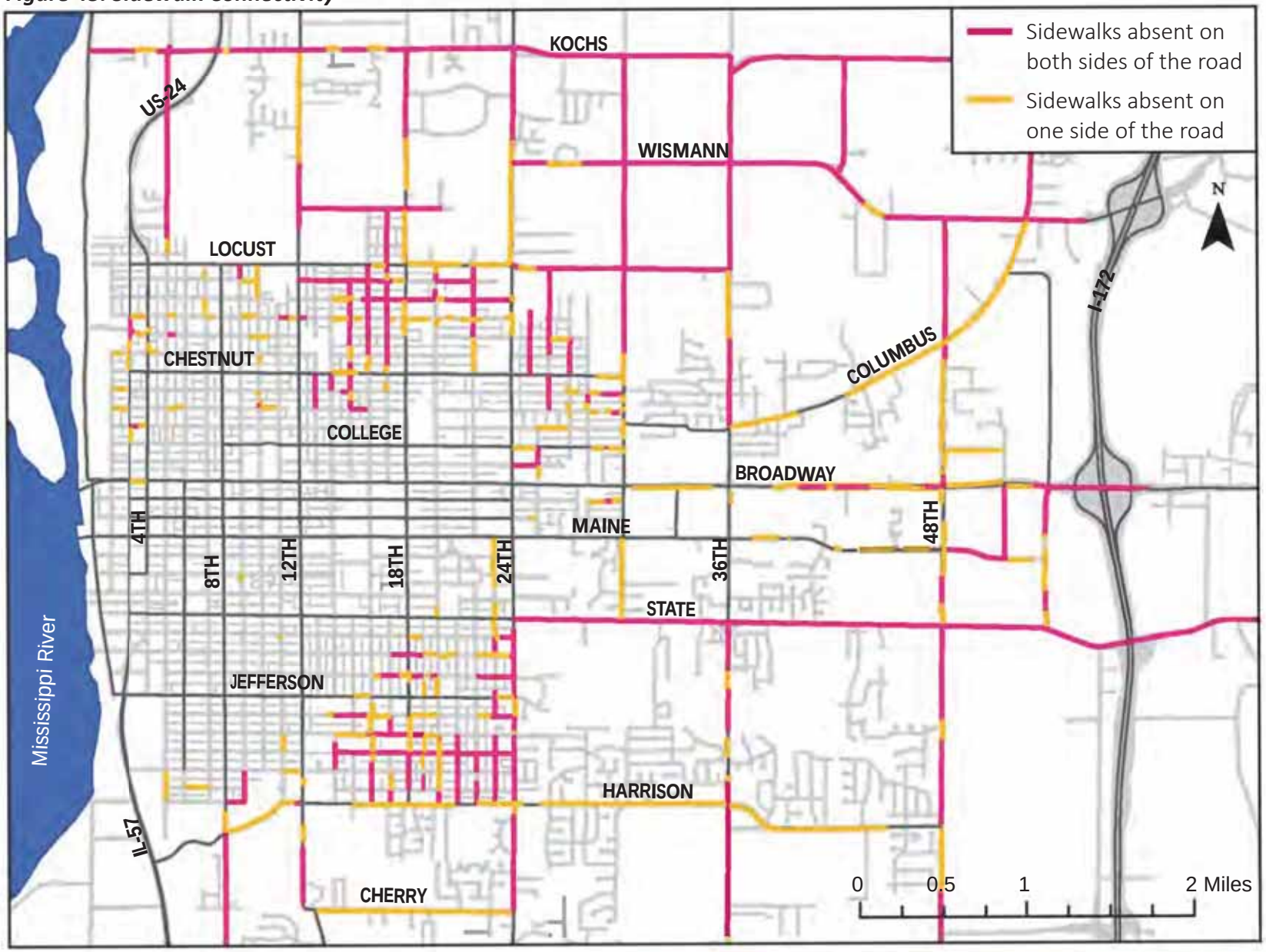


Figure 43. Sidewalk Connectivity



Installing ADA compliant sidewalks and intersections should be prioritized in high pedestrian traffic areas like Downtown, the Hospitality District south of Downtown, civic centers, healthcare facilities, senior care facilities, and public transit stops.

Most of Quincy's intersections require some form of repair or improvement to become ADA compliant. Some of the most common issues pertaining to sidewalks and intersection ADA compliance within the City of Quincy are the following:

Lack of striped crosswalks
Striped crosswalks visually direct pedestrians where to cross the street and they alert drivers to the potential for pedestrians.

Ramps are not present at intersections
At many intersections at least one corner is missing a ramp. Sometimes a crosswalk will lead directly into a curb without a ramp.

Crosswalks that do not align with existing ramps
Often ramps and crosswalks at intersections do not align with each other. This affects intersection safety for pedestrians.

Sidewalks in poor condition
Across the City sidewalk conditions vary. Sidewalks with uneven surfaces are especially unsafe for people with limited mobility.

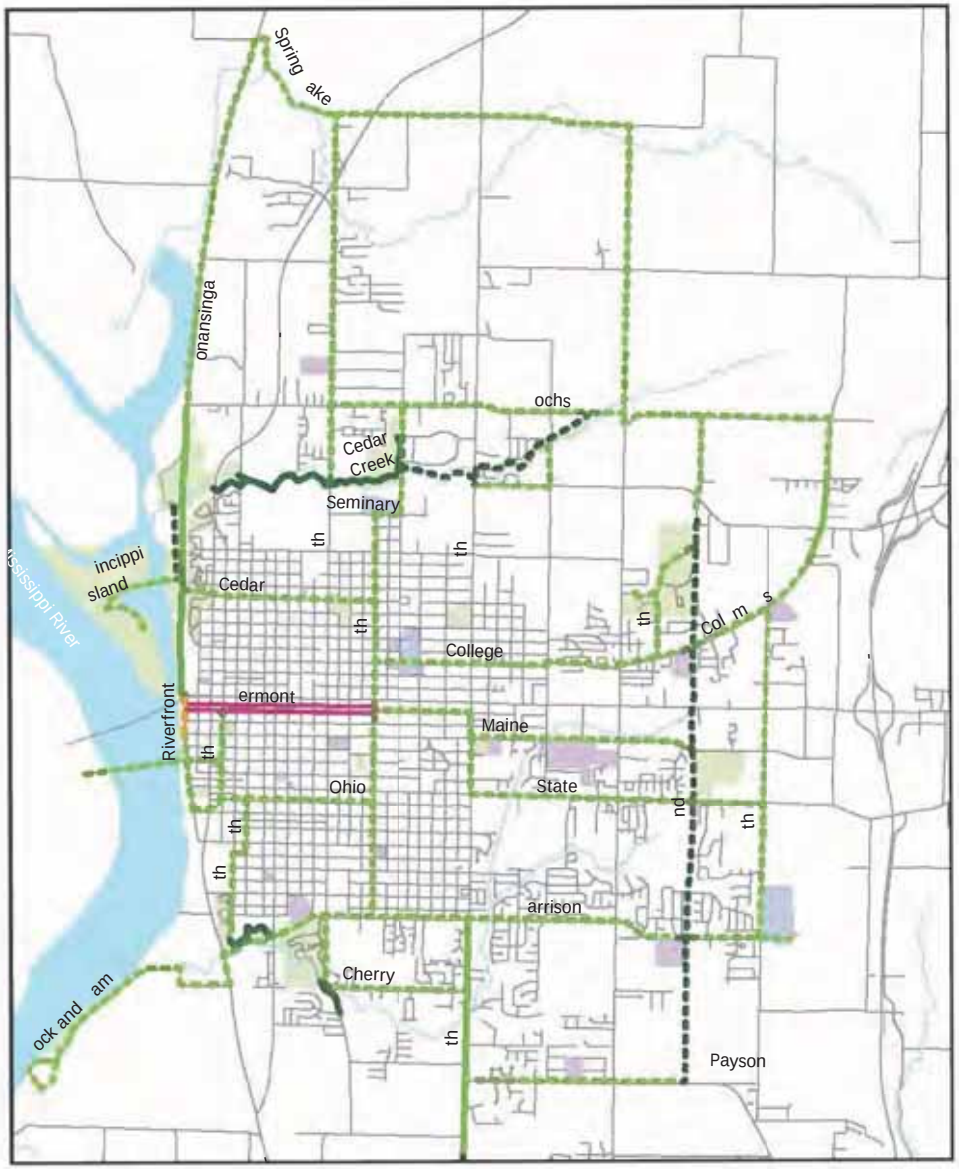
PROPOSED BICYCLE & TRAIL NETWORK

The proposed bike network in **Figure 44** modifies the 1999 Quincy Greenway and Trails Plan to reflect current best practices and community priorities for bike connectivity. The network reflects a loop and spoke form with several north-south and east-west corridors as well as various loops.

When developing routes, bicycle trip "generators" including residential neighborhoods, parks, schools, civic centers, cultural sites, and employment centers were emphasized. The network increases connectivity to these trip generators and accommodates different trip types such as leisure, recreation, and commuting.

The proposed network specifies two types of bicycle facilities : on-street and off-street. Given varying conditions and constraints along each route, the specific type of on or off-street facility is not prescribed. As individual projects are advanced, further planning and community engagement will be necessary to help determine what kind of facility is most appropriate. The goal should be to provide the safest facility possible.

Figure 44. Proposed Bicycle and Trail Network



BEST PRACTICES
Bicycle Facility Types

Bike lanes are defined as a portion of the roadway that has been designated by striping, signage, and pavement markings for the use of cyclists. Bike lanes should ideally run in the same direction of traffic, though they may run against traffic on low-volume corridors. Bike lanes should ideally be 6 feet wide and no less than 5 feet wide with a two-foot buffer. Wider lanes are preferred when there is adjacent on-street parking, high bicycle or vehicle volume, high vehicle speeds, or frequent truck traffic.

Bike lanes without a buffer should be used on roads with under 3,000-vehicle average daily traffic (ADT) and under 25 mph posted speed limits. Bike lanes without buffers should be 6 feet wide. On rural roads where a shoulder is intended for use by cyclists, the shoulder should be at least 4 feet wide and be a smooth, paved surface.

Sharrows are road markings used to indicate a travel lane to be shared by both bicycles and vehicles. Sharrows reinforce the legitimacy of bicycle traffic on the street, recommend proper bicyclist positioning, and offer directional and wayfinding guidance. Where sharrows are used, additional signage for vehicles that state "Bikes may use full lane" should also be installed. On roads with ADT over 2,000 and a posted speed limit of 30 mph or less, a sharrow lane should be 14 ft wide measured from the edge of the gutter pan to the center of the lane line

Figure 45. Buffered bike lane

Figure 46. Sharrow

All example rendering images come from the Seattle Right-of-Way Improvement Manual. Accessed January 7, 2020 via https://streetsillustrated.seattle.gov/design-standards/bicycle/neighborhood-greenways/

Cycle tracks are exclusive bike facilities that combine the user experience of a separated path with the on-street infrastructure of a conventional bike lane. Cycle tracks are meant to make casual and less experienced cyclists feel comfortable biking. In situations where on-street parking is allowed, cycle tracks are located on the curb-side of the parking (in contrast to bike lanes). Cycle tracks may be one-way or two-way, and may be at street level, sidewalk level, or an intermediate level. The desired width of a two-way cycle track is 12 feet (6 feet in each direction) with a desired buffer width of at least 3 feet.

Example of road grade, vertically buffered, two-way cycle track
Capital Crescent Trail

Photo from Bethesda Magazine article by Andrew Metcalf (November 7, 2014)

Figure 47. Road grade cycle track

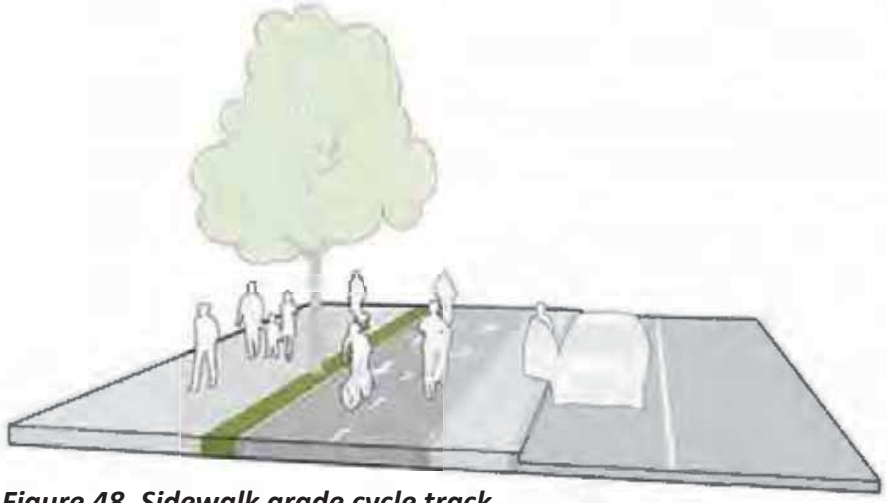


Figure 48. Sidewalk grade cycle track

All example rendering images come from the Seattle Right-of-Way Improvement Manual. Accessed January 7, 2020 via https://streetsillustrated.seattle.gov/design-standards/bicycle/neighborhood-greenways/

Shared use paths, often referred to as trails, are intended for all non-motorized forms of travel including but not limited to walking, biking, and skating. Shared use paths are separated from roadways and are a minimum of 10 feet wide and ideally 12 feet wide to allow for safe passing

Image of Olentangy Trail, Columbus, OH
Accessed via, http://www.experienceworthington.com/blog/the-olentangy-greenway-trail-a-pathway-to-worthington

Shared streets or "woonerfs" are intended for use by all modes of transportation including but not limited to walking, biking, skating, wheelchairs, and motorized vehicles. These streets do not have formal distinctions between spaces dedicated to pedestrians, cyclists, and motorized vehicles. All modes of travel are expected to operate under 15 mph on a shared street.

Image of shared street (woonerf) in Methleys, UK
Accessed via, http://methleys.headstogether.org/homezones/images

RECOMMENDATIONS

Establish a prioritization and schedule for implementation of the bicycle/trail network. Given the size of the network, completion will require dozens of projects over many years possibly even decades. Securing design and implementation funding will be critical. Implementing a new dedicated, local funding source to complete the network should be considered.

Complement the bicycle/trail network implementation with programming and education to further interest in cycling. Hosting events such as bike and helmet donation drives and community bike rides and providing educational opportunities regarding bicycle safety and rules of the road are just a few ways to celebrate the completion of a bike project and build additional awareness.

Consider performing an ADA Transition Plan to quantify the City's compliance with the ADA and identify necessary steps to achieve compliance. This would be the foundation for establishing a schedule to upgrade sidewalks and intersections city-wide to accommodate pedestrians of all ages and abilities.

Conduct a formal sidewalk connectivity audit to identify gaps in the sidewalk network and prioritize their completion. Consider implementations in conjunction with pavement resurfacing or other street maintenance or utility projects. Initially completing sidewalks along all roadways classified as a collector or higher would provide a base network of walkability upon which to expand to unserved local streets.

Region

State St Improvements

Community input identified State St between 24th St and 36th St as needing improvements. Specifically, this minor arterial is operated and maintained by IDOT as part of IL-96. It was built to a rural standard with one lane in each direction and no on-street parking. Sidewalks, curbs and gutter, and drainage systems are absent. Conversely, State St to the west is maintained by the City of Quincy. It was built to an urban cross-section with sidewalks, tree lawn buffer, curbs and gutter, and on-street parking.

It is recommended that this section of State St be upgraded to an urban cross-section to be more consistent with State St to the west. This would enable the street to effectively serve all modes of travel, particularly pedestrians and bicyclists. Specifically, the recommended improvements include the following as shown in **Figure 50**:

- Sidewalks along both sides of the street
- 3-lane street section with one lane in each direction and center two-way left-turn lane
- Buffered bike lanes

As the owner of the street, these improvements will need to be coordinated with IDOT.

Figure 49: State Street Existing Cross Section

Figure 50: State Street Proposed Cross Section

SUMMARY

REGIONAL PLAN FINDINGS & RECOMMENDATIONS

Prioritize system preservation and improve upon existing infrastructure before building new.

Road Planning

New roads are identified for connectivity, corridor preservation, and land access purposes. However, new road implementations should be the subject of further analysis and justification, as the region should minimize unnecessary expansions, given the absence of population growth to support additional infrastructure.

Freight Planning

A 60% increase in total freight tonnage (water, rail, truck) being generated or received in Adams County is forecasted by 2045, primarily due to anticipated growth in food and food product industries. Projects are recommended to help accommodate this increase.

Transit Planning

A Comprehensive Transit Operations Analysis of QTL should be conducted to identify ways to improve efficiency and grow ridership.

Pause the concept of a Downtown Amtrak Station pending further clarification on flooding, impacts to the Burlington Junction Railroad, and a potential service extension into Missouri.

Bicycle & Pedestrian Planning

Establish a prioritization and schedule for implementation of the bicycle/trail network, including pursuing a new dedicated, local funding source for implementation.

Complement the bicycle/trail network implementation with programming and education to further interest in cycling.

Consider performing an ADA Transition Plan to quantify the City's compliance with the ADA and identify necessary steps to achieve compliance.

Conduct a formal sidewalk connectivity audit to identify gaps in the sidewalk network and prioritize their completion.

REGIONAL PROJECTS

Road Planning

Broadway Corridor Access Management Plan

Develop an access management plan that would identify strategies to reimagine Broadway as a multi-modal corridor that accommodates all modes of travel and supports evolutions in land uses over time.

48th St and State St Roundabout

Continue roundabout planning already underway.

Harrison St and 24th St Roundabout

Convert existing four-way stop into a single-lane roundabout to alleviate congestion.

Columbus Rd and 36th St Intersection

Convert existing four-way stop into a roundabout to alleviate congestion.

Broadway and 48th St Intersection

Update traffic signal timings as part of a Broadway SCAT project to improve safety and maximize capacity.

Broadway and 36th St Intersection

Update traffic signal timings as part of a Broadway SCAT project to improve safety and maximize capacity.

Maine St and 24th St Intersection

Analyze yellow clearance & all-red intervals, install “signal ahead” signage, and remove vegetation from sight distance triangles to improve safety.

Broadway and 25th St Intersection

Remove unwarranted traffic signal to improve traffic flow along Broadway.

Freight Planning

IL-57 Upgrade

Pursue upgrades to IL-57 from south of Downtown to I-172 to enhance access to the Quincy South Riverfront Industrial District and position the region to accommodate forecasted growth in freight tonnage over the next 25 years.

South Quincy Freight Corridor

Evaluate an upgraded 2-lane highway between IL-57 and I-172 at the Payson Rd interchange to further improve access to the South Quincy Riverfront Industrial District.

Transit Planning

Downtown Off-Street Transit Transfer Station

Proceed with planning for a new Downtown off-street transit transfer station.

Bicycle & Pedestrian Planning

State St Improvements

Upgrade State St from 24th St to 36th St to an urban cross-section with bike lanes, sidewalks, and a center turn lane.

Bicycle and Trail Network Priority Segments

Implement the following priority segments of the regional bicycle and trail network:

- Vermont St cycle track from the Riverfront to 16th St (see Downtown Plan)
- 16th St on-street corridor from Seminary Rd to Harrison St
- 48th St on-street corridor from Harrison St to Columbus Rd
- Bill Klingner Trail off-street east extensions
- College Rd on-street corridor from 16th St to 36th St
- York St on-street corridor connecting the new Mississippi River Bridge with 4th St.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Downtown Transportation Plan

INTRODUCTION

Downtown Quincy is the center of cultural, social, and economic activities for the greater region. It is home to many small businesses, including numerous restaurants and retail stores. It is a center for government and the seat of Adams County. Blessing Hospital – a major medical center – is nearby. It is home to industries, many of which are located along 2nd St. It includes Washington Park, which serves as a prominent community gathering space and a Downtown focal point.

The Quincy Next Strategic Plan recognized the importance of Downtown. One of the plan's four primary goals is to Build Up Quincy's Downtown and Riverfront Assets by encouraging development and strengthening Downtown's connections to adjacent neighborhoods and the waterfront. Another primary goal is to Create an Accessible and Connected City for All through placemaking, walkability, and reduced auto-dependency.

Downtown also serves as the central node of the region's transportation network, including the only Mississippi River crossings. Broadway – a 5-lane arterial that forms the region's east-west spine – approaches from the east. IL-57 and US-24 run along 3rd St and 4th St and represent major arterials connecting Downtown, Broadway, and the Mississippi River Bridges to areas north and south, including the South Riverfront Industrial District.

While generally effective at serving regional traffic, these major traffic arteries can deter pedestrians and bicyclists and be an impediment to development. As high-capacity one-way streets, 3rd St and 4th St, in particular, convey a traffic flow emphasis and form a barrier between Downtown and the Riverfront. To accomplish the goals of Quincy Next, it is necessary to reimagine the Downtown transportation system to more effectively balance regional transportation with broader community objectives.

This Downtown Transportation Plan is intended to do just that. Best practices, policies, and projects are proposed to enhance the pedestrian and bicycle experience, make wayfinding and circulation more intuitive, and contribute to a sense of place by activating key corridors. Simultaneously, street system functionality for cars and trucks is maintained. Ultimately, the Plan aims to create a cohesive, multi-modal Downtown transportation system.

The Plan includes the following sections:

New River Bridge

Evaluates the impact of the planned replacement of the Quincy Memorial Bridge on the Downtown street system assuming a new eastbound bridge with a landing at York St.

3rd / 4th Street Two-Way

Summarizes the proposed conversion of 3rd St and 4th St from one-way to two-way traffic and the associated traffic impacts and street improvement needs.

Best Practices

Provides best practices for Downtown transportation, including a scorecard of Quincy's performance relative to key practices.

Street Typologies

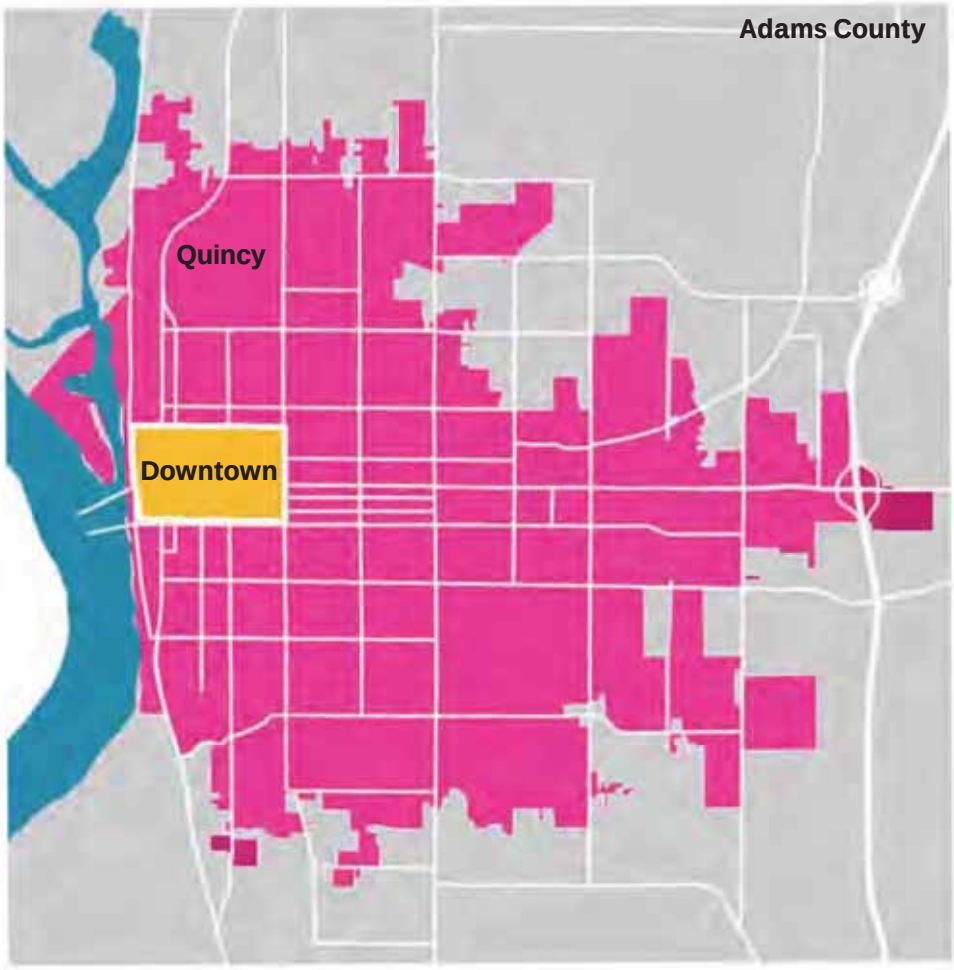
Assigns a typology to Downtown streets to guide functional and contextual street elements and aid future planning, development requests, and programming of improvements.

Project Recommendations

Identifies specific transportation projects to improve street functionality, enhance multi-modal connectivity, and activate Downtown destinations.

The Downtown area for purposes of this evaluation is defined as the area bounded by State St to the south, Broadway to the north, 12th St to the east, and the riverfront to the west, as indicated by **Figure 51**.

Figure 51. Downtown Reference Map



NEW RIVER BRIDGE

IDOT is planning a new Mississippi River Bridge for eastbound traffic to replace the existing Quincy Memorial Bridge. The new bridge landing location is proposed at York St. This is approximately 900 feet south of the current eastbound bridge landing at Maine St. Note that the Bayview Bridge serving westbound traffic from Broadway will not be replaced.

As an entrance to Illinois and the City of Quincy, the new bridge landing at York St should provide a welcoming impression. A gateway feature is recommended on York St (either at 3rd or at 4th) to provide that impression. Furthermore, the pedestrian and bicycle pathway planned for the new river bridge should be connected to the region's bike network via on-street bike lanes along York St.

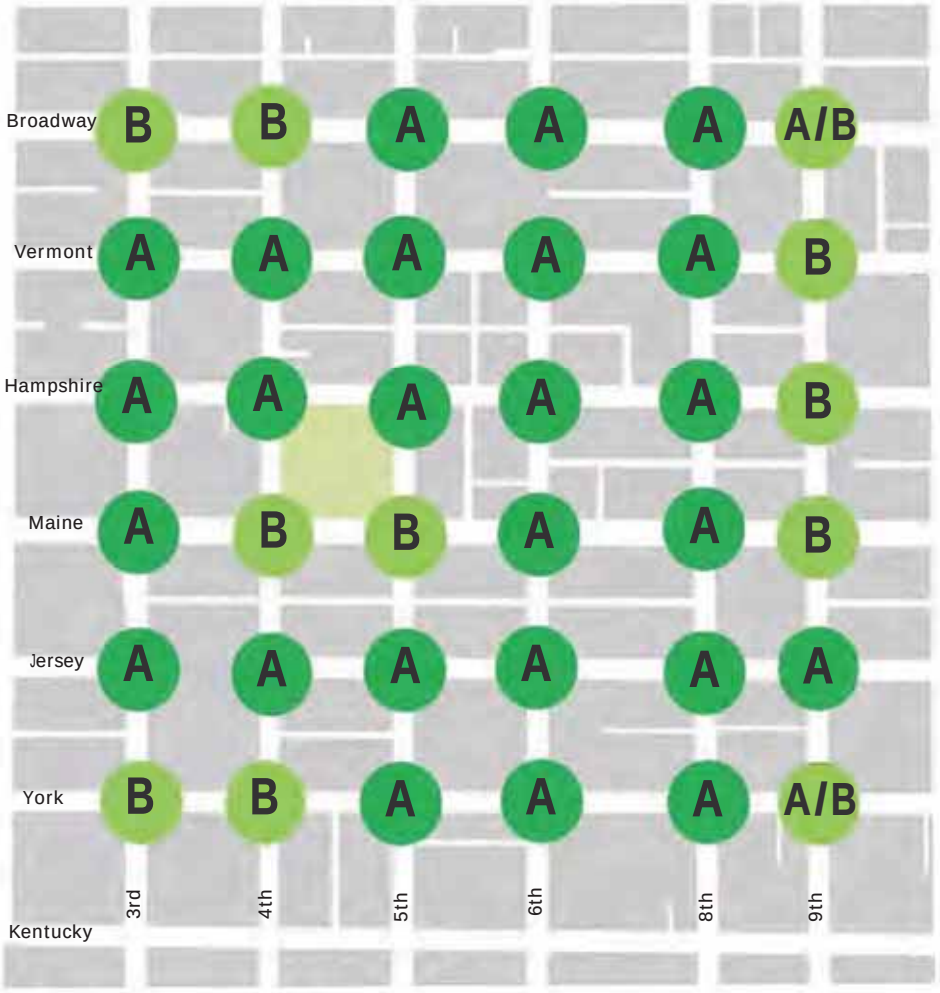
A major point of emphasis of the Downtown Plan is to determine the impact of the new river bridge on Downtown streets. A traffic analysis was performed to identify anticipated traffic pattern changes and to evaluate traffic operating conditions at Downtown intersections. Morning and afternoon commuter peak period traffic was evaluated for design year (2040) conditions well into the future.

The analysis concluded that Downtown traffic patterns would not be significantly altered with the new river bridge, though some meaningful volume adjustments are anticipated as follows:

- Traffic volumes would increase on eastbound York St, particularly between the bridge landing and 4th St;
- Traffic would increase on northbound 4th St between York St and Maine St, as it becomes part of eastbound US-24;
- Traffic on southbound 3rd St would decrease between Maine St and York St;
- Traffic on York St east of 4th St would increase by as much as 100 percent, although volumes in total would remain low and at a level appropriate for a City street;
- Traffic on eastbound Maine St would decrease, particularly between 2nd and 4th, due to the removal of the Quincy Memorial Bridge and resulting shift in traffic to York St.

Figure 52. Downtown River Bridges

Figure 53. Forecasted Intersection Levels of Service with York St Bridge



These traffic pattern changes could be accommodated with minor impacts to Downtown streets provided the following traffic improvements are implemented in combination with the new river bridge:

- Install a traffic signal at the new river bridge/York St intersection with 3rd St;
- Configure the new river bridge's eastbound approach to 3rd St to provide two through lanes and one right-turn lane and to have a maximum grade of 3 percent;
- Configure the eastbound right-turn from the new river bridge onto southbound 3rd St as a "free" right-turn with a dedicated receiving lane on southbound 3rd St;
- Improve the intersection of 4th St and York St to serve increased eastbound traffic – install a signal if 3rd St and 4th St remain one-way or a roundabout if they become two-way;
- Modify Maine St west of 4th St to be more consistent with Maine St to the east, with one through lane in each direction, a center left-turn lane, and on-street parking; and
- Optimize traffic signals throughout the Downtown street grid to accommodate the changing traffic patterns.

With the preceding improvements, all Downtown intersections would operate at Level of Service C or better during the peak periods. The traffic operational analysis details are summarized in the **Appendix**.

That said, regional traffic would continue to be routed on 4th St (US-24 and IL-57) and affect quality of life Downtown with truck noise, air quality concerns, and an unpleasant pedestrian experience.

3RD/4TH TWO-WAY

The City desires to alter the character of 3rd St and 4th St within Downtown by converting both streets from one-way traffic arteries to two-way. This was initially proposed by Quincy Next as a strategy to calm traffic and lower speeds, reduce traffic on 4th St adjacent to Washington Park, and improve placemaking and walkability, particularly between Downtown and the Riverfront.

The proposed concept intends for 3rd St to be the primary route for regional traffic and be maintained by IDOT as IL-57. 4th St would serve local traffic and become a City street. The conversion would apply to 3rd St and 4th St between Broadway and York St. As the major north-south route through central Quincy (and the route for eastbound traffic between Missouri and Broadway), the feasibility of converting these streets to two-way traffic was evaluated in-depth.

A traffic analysis was performed to determine if 3rd St and 4th St could accommodate forecasted traffic volumes assuming a two-way configuration in combination with a new river bridge at York St. The following impacts to Downtown traffic patterns were forecasted:

- 80 to 90 percent of southbound traffic would use 3rd St – this would be reinforced by a proposed left-turn restriction from York St onto southbound IL-57; and
- In the morning, 80 to 90 percent of northbound traffic would use 3rd St, but in the afternoon, this percentage would be lower (70 to 75 percent), as Downtown commercial uses and heavier commuter traffic on Broadway would draw more traffic to 4th St.

Figure 54. Existing 3rd St One-Way Lane Configuration

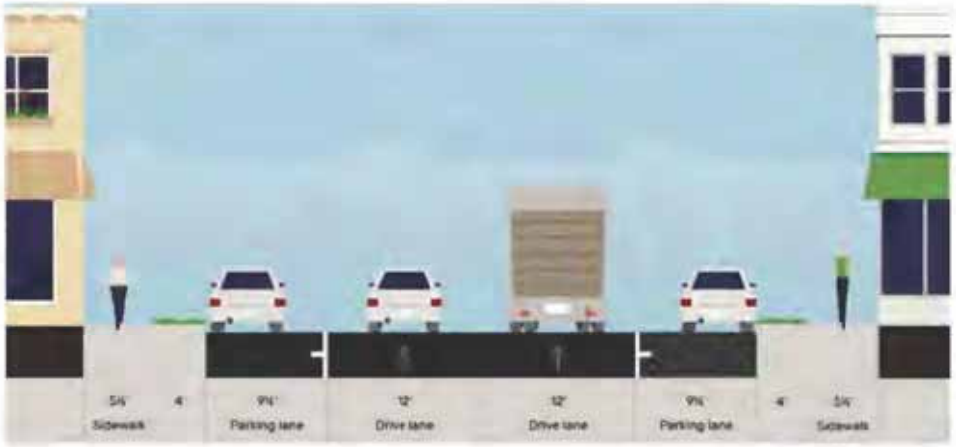
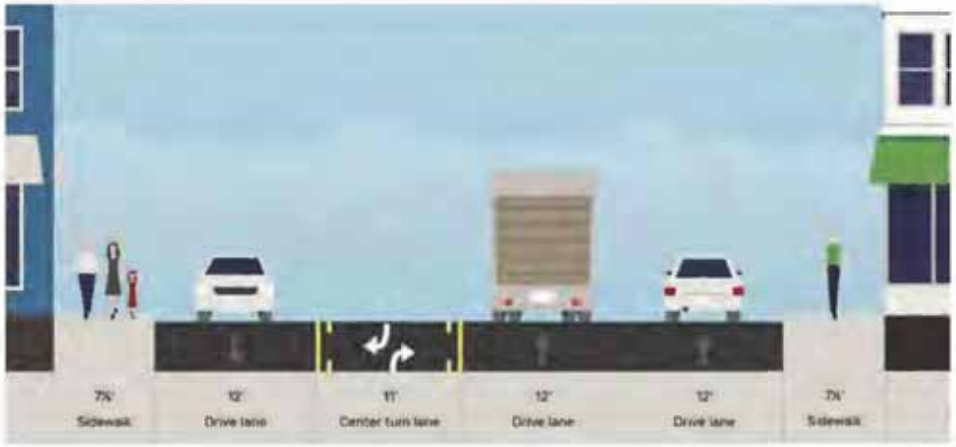


Figure 55. Proposed 3rd St Two-Way Lane Configuration

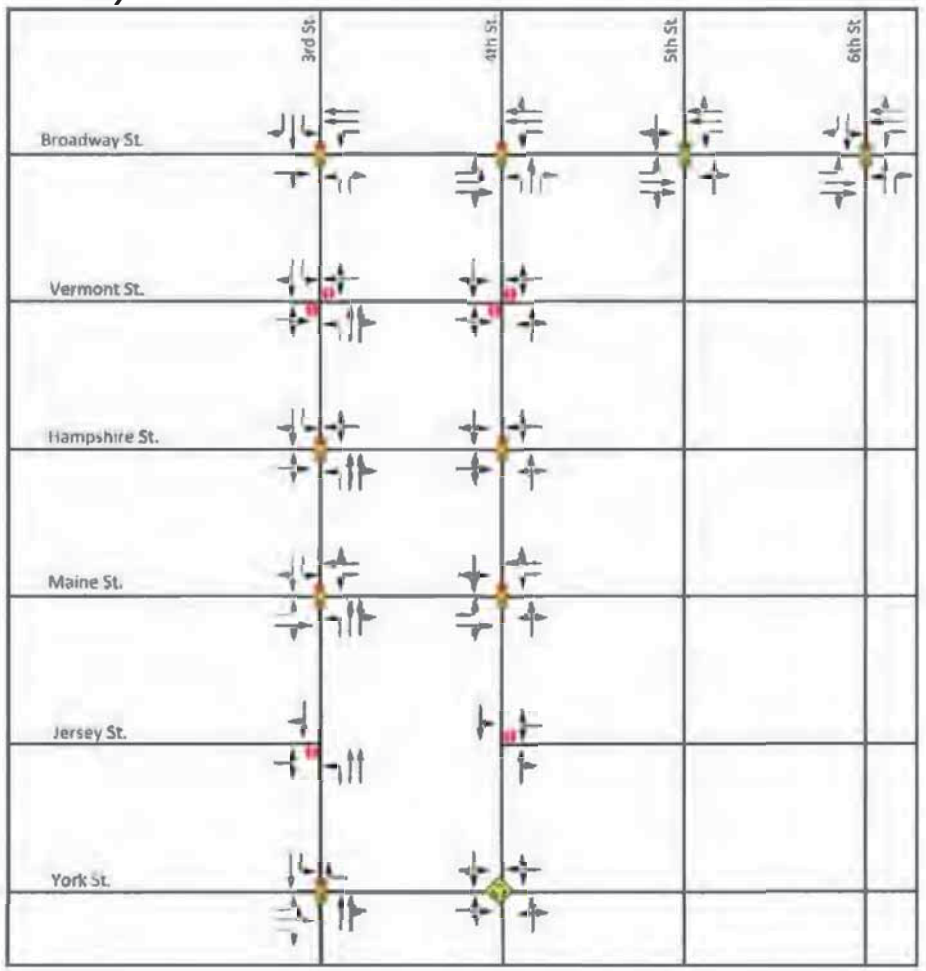


The analysis confirmed that acceptable levels of service could be maintained assuming the following improvements are implemented in combination with the one-way to two-way conversion:

- Configure 3rd St between York St and Broadway for 4 traffic lanes (one southbound lane, two northbound lanes, and one center two-way left-turn lane) – this will likely require the street to expand into the sidewalk space between Maine St and Broadway;
- Configure 4th St between York St and Broadway for 2 traffic lanes (one in each direction) plus on-street parking;
- Maintain the 3rd and 4th St one-way couple to the north of Broadway;
- Restrict westbound traffic on York St at 3rd St to right-turn only;
- Reduce the size of the 4th St and York St intersection to provide one approach lane from all directions and configure as a roundabout to discourage truck traffic;
- Install a traffic signal at 3rd and Hampshire St or at 3rd and Vermont St to accommodate pedestrian and bicycle crossings of 3rd St;
- Install a channelized right-turn movement for traffic on northbound 3rd St at Broadway;
- Convert the left-hand through lane on eastbound Broadway at 4th St to become a second dedicated left-turn lane to serve northbound traffic jogging from 3rd back to 4th St;
- Modify the northbound approach on 4th St at Broadway to provide one right-turn lane, one through lane, and one left-turn lane;
- Provide a dedicated left-turn lane and protected-plus-permissive phasing for the new westbound left-turn movement from Broadway to southbound 4th St; and
- Optimize traffic signals throughout the Downtown street grid to accommodate the changing traffic patterns.

With the preceding improvements, all Downtown intersections would operate at Level of Service C or better during the peak periods. The traffic operational analysis details are summarized in the Appendix.

Figure 56. Proposed Downtown Lane Configurations with 3rd/4th St Two-Way



BEST PRACTICES

Reduce Lane Widths

Narrower lanes slow traffic, creating a more welcoming environment for other modes of travel. Pedestrians involved in collisions with vehicles are less likely to be injured the slower the vehicle is traveling.

Prioritize Sidewalks

Wide sidewalks buffered from street traffic create a comfortable environment for pedestrians. Sidewalk "through" zones should be 8 to 12 feet wide plus additional space where needed for outdoor dining/street furniture.

Maximize On-Street Parking

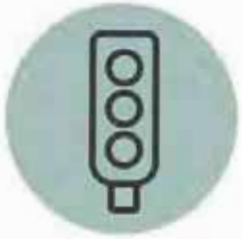
Street parking acts as a buffer between pedestrians and traffic. It slows traffic by increasing "street friction", while providing convenient parking for businesses.

Maintain Street Grid Connectivity

A robust grid of two-way streets maximizes connectivity, simplifies wayfinding, and reduces adverse travel due to circuitous routes.

Enhance Pedestrian Crossings

Crosswalks with continental-style markings in combination with ADA-compliant curb bump-outs at intersections provide high-visibility locations for safe pedestrian crossings, while minimizing crossing distances.



Implement Multi-Modal Traffic Signal Operations

Short traffic signal cycle lengths and fewer signal phases reduce pedestrian wait times. Leading pedestrian intervals and no right-turn on-red restrictions enhance pedestrian safety at intersections.

Provide Streetscaping Elements

Streetscaping adds character to streets and makes them more inviting places to be. Streetscaping should be deployed along priority corridors and include pedestrian-scale lighting, benches, trash cans, and landscaping.

Promote and Accommodate Alternate Modes of Transport (Bicycle and Transit)

Measures to increase transit awareness can boost ridership, including prominent signage and shelters. Dedicated bicycle infrastructure in appropriate locations should encourage bicycle trips by casual riders.

REPORT CARD

The following serves as a report card indicating how well Downtown Quincy is performing relative to key best practices.

Reduce Lane Widths

Most travel lanes are about 12 feet wide, which is wider than desired Downtown. Narrower lanes encourage slower speeds, creating a safer and more welcoming environment for pedestrians and bicyclists.

Prioritize Sidewalks

Sidewalks are provided throughout Downtown and most are an acceptable width for a comfortable pedestrian experience. ADA and surface condition upgrades are needed in many areas.

Maximize On-Street Parking

On-street parking is provided on both sides of almost every street Downtown. On-street parking helps support businesses, while protecting sidewalk areas from moving traffic.

Maintain Street Grid Connectivity

While Downtown has a strong street grid as its foundation, some blocks have been consolidated, reducing connectivity. The preservation of the street grid should be a priority moving forward.

Enhance Pedestrian Crossings

Many crosswalks and intersections Downtown should be upgraded with higher-visibility crosswalks, ADA-compliant curb ramps, and curb bump-outs.

Implement Multi-Modal Traffic Signal Operations

Traffic signals Downtown are antiquated and could be upgraded to improve the experience for both motorists and pedestrians by shortening signal cycles, modernizing controllers, and enhancing pedestrian indicators with countdown timers.

Provide Streetscaping Elements

Maine St and the streets around Washington Park have high-quality streetscapes with pedestrian-scale lighting, street trees, and frequently placed trash receptacles. Extending these features to other high-priority corridors would further improve the walkability of Downtown.

Promote and Accommodate Alternate Modes of Transport (Bicycle and Transit)

Downtown lacks dedicated bicycle lanes and bike racks. The existing Transit Transfer Station lacks dedicated spaces for buses and waiting riders protected from street traffic.

GOOD **WORKING ON IT** **NEEDS IMPROVEMENT**

STREET TYPOLOGIES

Street typologies represent a categorization of streets that extends beyond traditional functional classifications, which categorize streets according to their ability to move traffic and provide access to adjacent properties. Urban streets are much more complex and dynamic spaces that require both functional and character/context considerations. Similar to functional classifications, street typologies categorize streets but include more detailed guidance, starting with the street's overarching role in the transportation network. Dimensional targets, design vehicles, and guidance for sidewalk and traffic space are provided. **Figure 57** below depicts the proposed Downtown street typology assignments.

Figure 57. Downtown Road Typologies

Downtown

Regional Thoroughfare

Major Commercial

Logistic

Urban Thoroughfare

Minor Commercial

Neighborhood

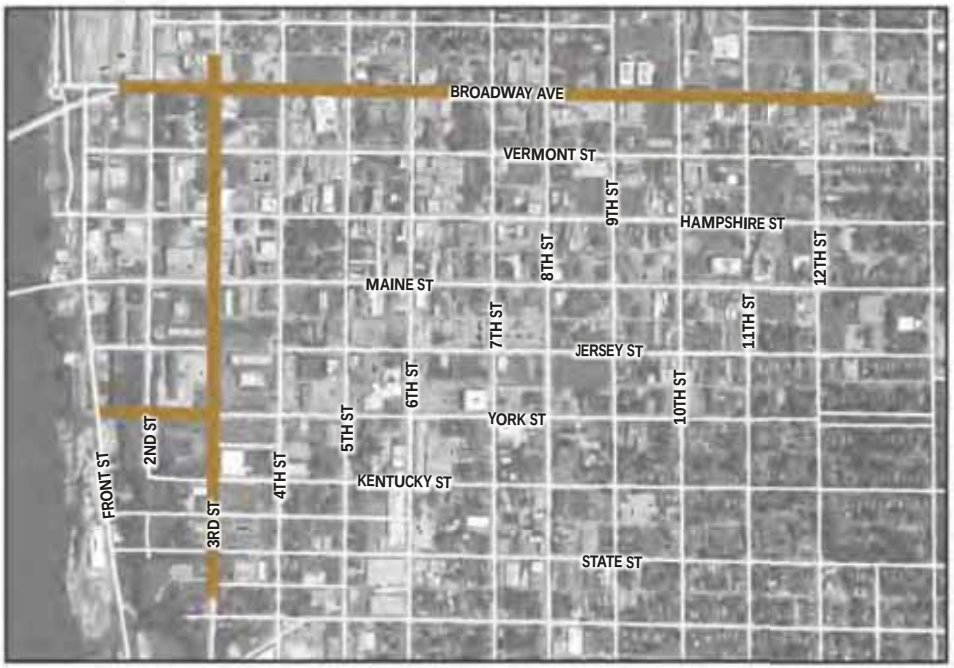
Entertainment

Downtown

Regional Thoroughfare

Regional thoroughfares such as Broadway and 3rd St prioritize the movement of vehicles and serve regional and inter-state travel as well as local trips. Trucks and freight use these streets to move through the Downtown area.

Purpose	Movement of regional traffic, including trucks, through Downtown
Target Speed	35 mph
Street Configuration	Lanes as warranted by traffic needs, typically without on-street parking
Sidewalk	8 ft plus buffer or tree lawn
Lane Width	12 feet
Traffic Signals	Prioritize movement of traffic
Design Vehicle Type	Semi-Truck



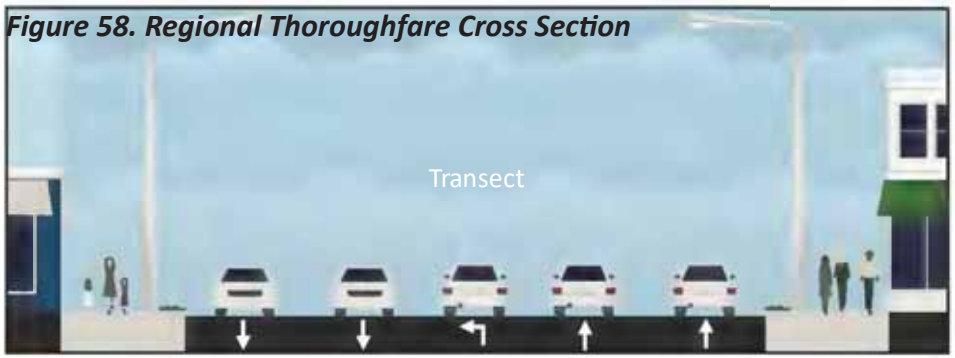


Figure 58. Regional Thoroughfare Cross Section

Urban Thoroughfare

Urban thoroughfares carry less traffic than regional thoroughfares, because they are less essential for regional transportation and are primarily intended to serve more localized traffic moving through the Downtown area.

Purpose	Movement of local traffic through the Downtown area
Target Speed	30 mph
Street Configuration	One traffic lane per direction, left-turn lanes at major intersections, and on-street parking
Sidewalk	8 ft + buffer of on-street parking or tree lawn
Lane Width	11 feet
Traffic Signals	Prioritize movement of traffic
Design Vehicle Type	City bus

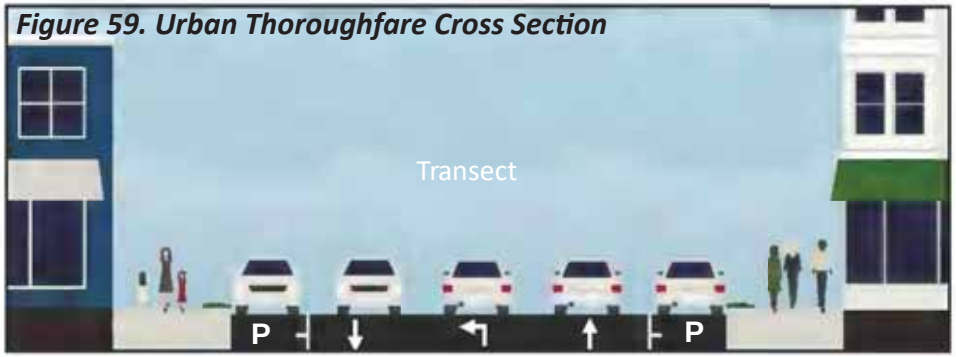
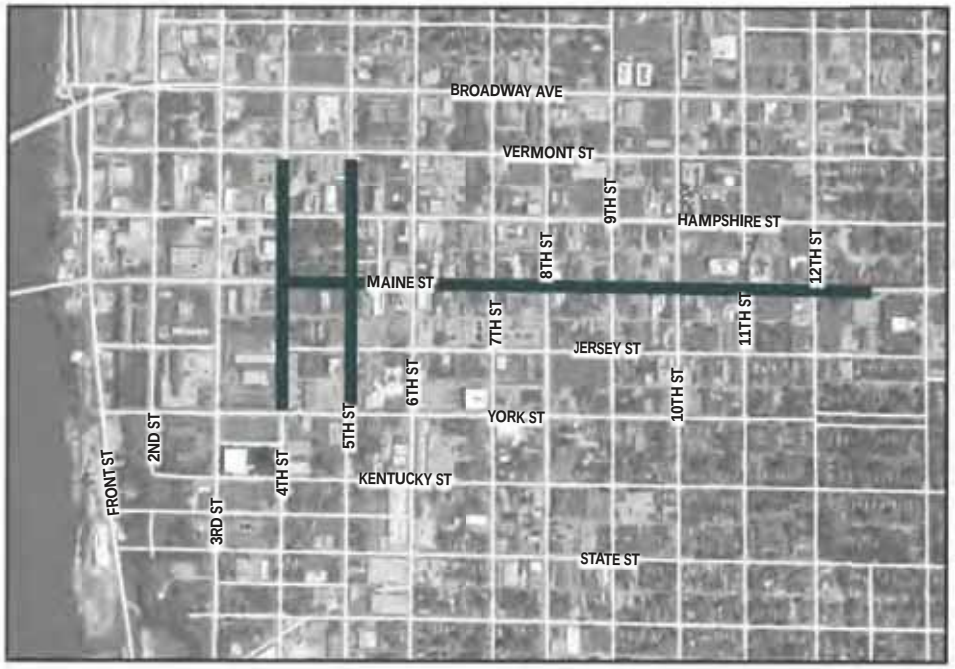


Figure 59. Urban Thoroughfare Cross Section

Major Commercial

Major commercial streets prioritize pedestrians over vehicles, as the overarching purpose of these streets is to promote commercial activity for adjoining, street-facing businesses. Streetscape elements, wide sidewalks, and on-street parking are prioritized.

Purpose	Prioritization of pedestrians and on-street parking to foster commercial activity
Target Speed	25 mph
Street Configuration	One traffic lane per direction, plus on-street parking
Sidewalk	Min. 12 ft + buffer on-street parking/tree lawn
Lane Width	10-11 feet
Traffic Signals	Prioritize pedestrians
Design Vehicle Type	Box truck



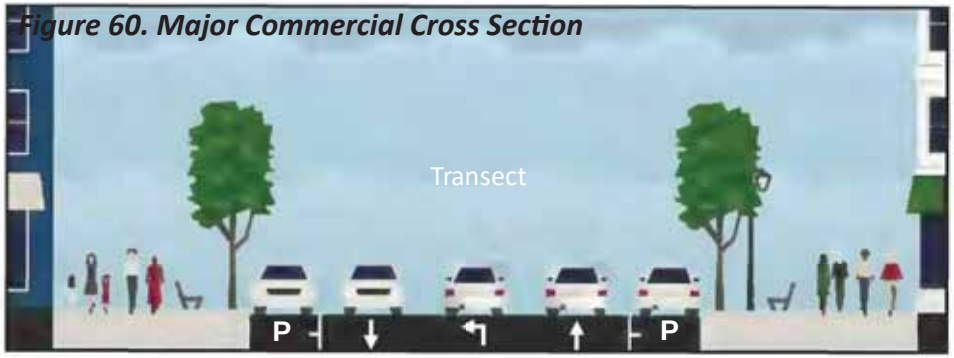
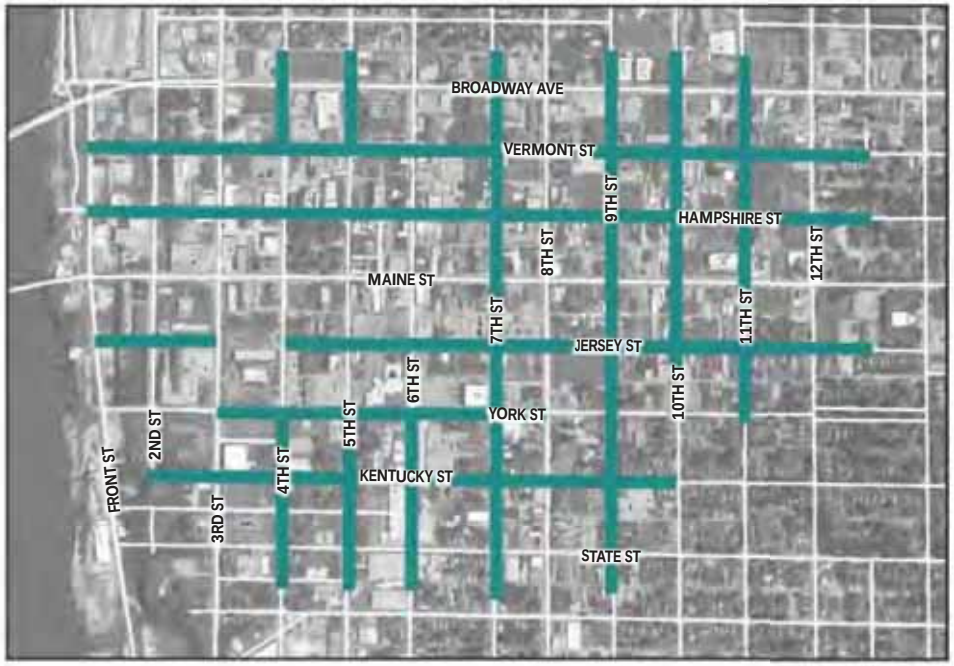


Figure 60. Major Commercial Cross Section

Minor Commercial

Minor commercial streets provide access to adjacent businesses and facilitate circulation within the Downtown street grid. Therefore, they strike a balance between vehicle mobility and pedestrian and bicycle elements.

Purpose	Local access to businesses and circulation
Target Speed	25 mph
Street Configuration	One traffic lane per direction plus on-street parking
Sidewalk	Min. 8 ft
Lane Width	10-11 feet
Traffic Signals	Prioritize pedestrians
Design Vehicle Type	Box Truck



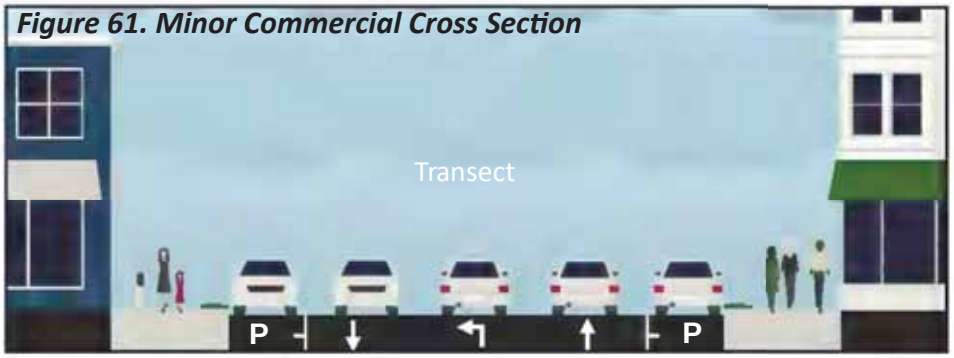


Figure 61. Minor Commercial Cross Section

Entertainment

Entertainment streets are intended as destinations with flexible spaces that can be easily adapted for special events, such as markets, concerts, or festivals. These streets have a limited mobility emphasis and are designed for low speed use by pedestrians, bicyclists, scooters, etc.

Purpose	Multimodal shared street experience subject to closure for events – limited mobility emphasis
Target Speed	15 mph or less
Sidewalk/Street Configuration	Flexible and multi-modal
Lane Width	10 feet
Traffic Signals	Prioritize pedestrians
Design Vehicle Type	Box truck

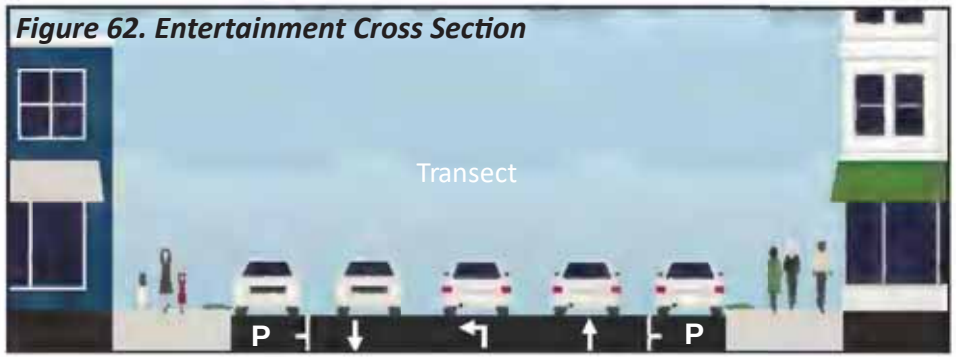


Figure 62. Entertainment Cross Section

Logistic

Logistic streets such as 2nd St prioritize local truck traffic. The street character accommodates loading and unloading activities to support the continued viability of adjacent businesses.

Purpose	Access and unloading/loading for adjacent businesses
Target Speed	25 mph
Street Configuration	One traffic lane per direction
Sidewalk	6 ft where practical
Lane Width	12 feet
Traffic Signals	Prioritize movement of freight traffic
Design Vehicle Type	Semi-truck

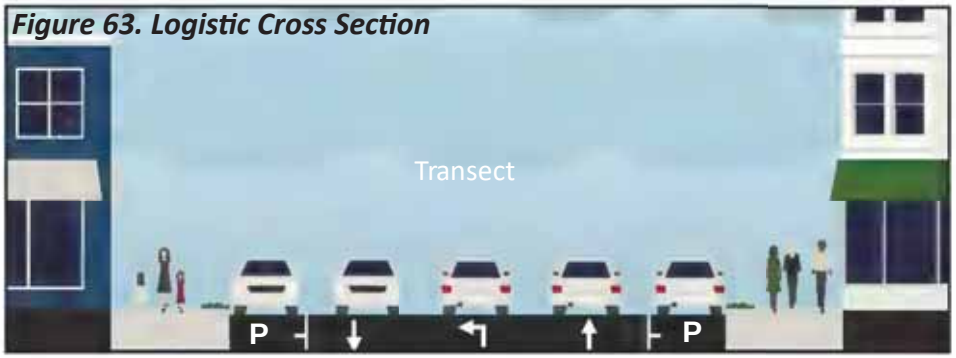
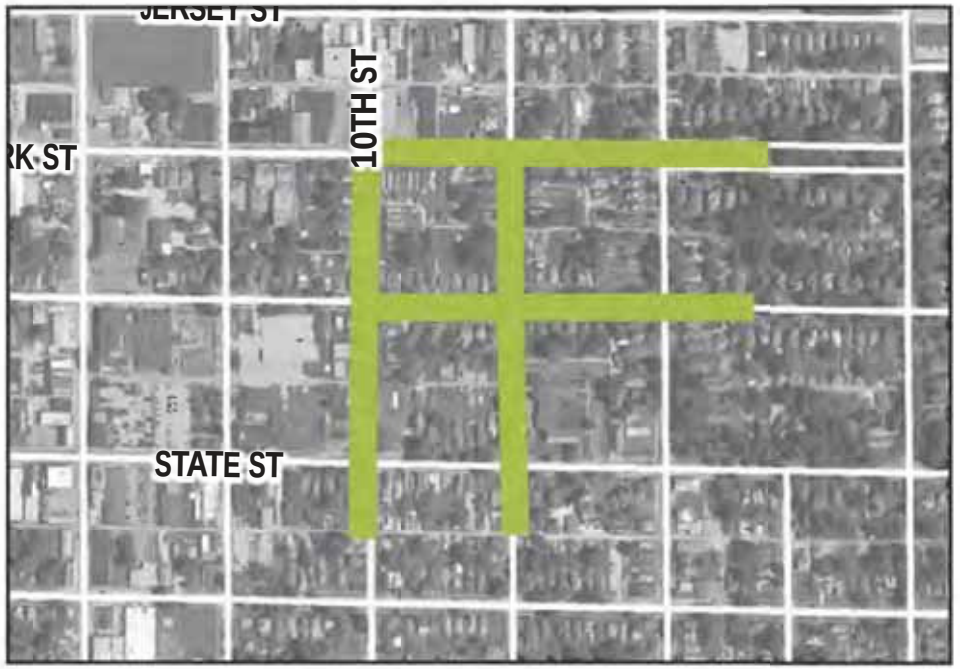


Figure 63. Logistic Cross Section

Neighborhood

Neighborhood streets have a residential land use context and primarily serve local traffic, providing access to homes, schools, and churches and low-speed circulation. Pedestrians and on-street parking are prioritized.

Purpose	Residential access / neighborhood circulation
Target Speed	25 mph
Street Configuration	One traffic lane per direction with on-street parking
Sidewalk	Min 6 ft plus buffer of on-street parking or tree lawn
Lane Width	10- 11 feet
Traffic Signals	Not applicable
Design Vehicle Type	Box truck



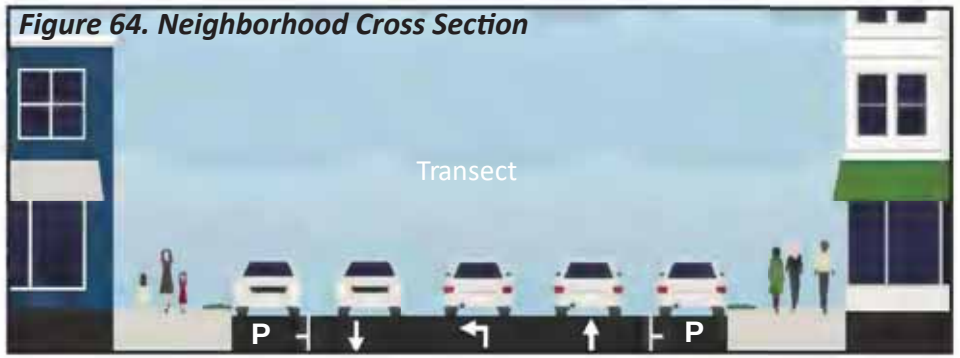


Figure 64. Neighborhood Cross Section

PROJECT RECOMMENDATIONS

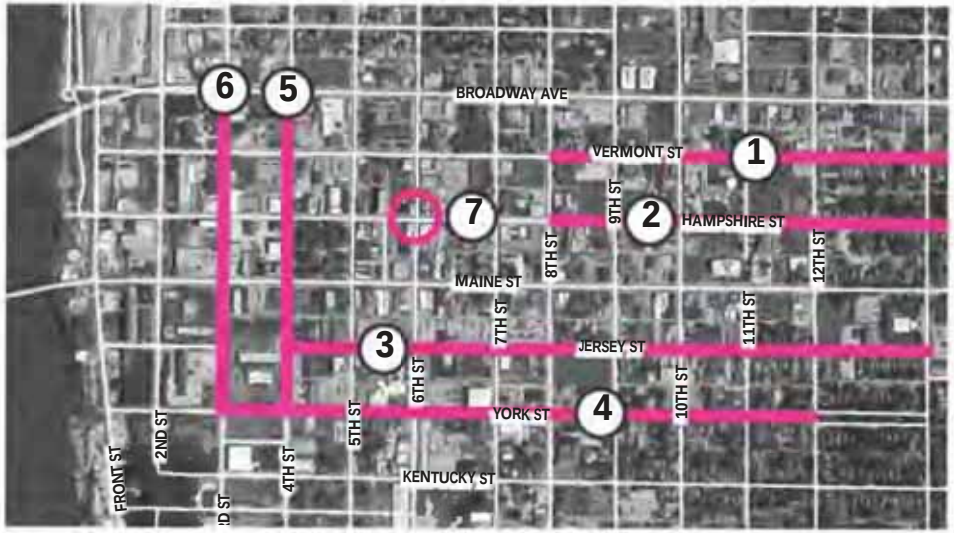
Given the preceding best practices and street typologies for an effective, multi-modal Downtown transportation system, a total of 13 projects were identified to bring key best practices and typology elements forward for implementation. In keeping with the goals of this plan, these projects are categorized as primarily addressing one of the following objectives:

- **Improving Functionality**
- **Enhancing Multi-Modal Connectivity**
- **Creating Community Destinations**

IMPROVE FUNCTIONALITY

1. **Vermont St One-Way to Two-Way Conversion**
   (8th St to 18th St with potential extension to 24th St)
2. **Hampshire St One-Way to Two-Way Conversion**
   (8th St to 18th St with potential extension to 24th St)
3. **Jersey St One-Way to Two-Way Conversion**
   (4th St to 14th St)
4. **York St One-Way to Two-Way Conversion**
   (3rd St to 12th St)
5. **4th St One-Way to Two-Way Conversion**
   (York St to Broadway St)
6. **3rd St One-Way to Two-Way Conversion**
   (York St to Broadway St)
7. **Remove Traffic Signal at 6th and Hampshire**
   (replace with all-way stop).

Figure 65. Improve Functionality Projects



ENHANCE MULTI-MODAL CONNECTIVITY

8. **Vermont St Cycle Track**
   Install a cycle track along Vermont St between Front St and 16th St to connect Downtown to regional destinations.
9. **4th St Improvements**
   Install bike lanes and enhance the streetscape along 4th St between State St and Vermont St.
10. **Off-Street Downtown Transit Transfer Station**
    Build a new transit transfer station Downtown that is safe and accessible. Move the boarding and alighting area off-street.

CREATE COMMUNITY DESTINATIONS

11. **Riverfront Improvements and Maine St Connection**
    Establish prominent pedestrian connection between Downtown and the Riverfront via Maine St. Reimagine Front St as a multi-modal riverfront promenade.
12. **6th St Activation**
    Redesign 6th St between Maine St and Vermont St as a flexible public space for activities and events.
13. **York St Activation**
    Redesign York St between 8th St and 10th St as a unique destination for brewery experiences and flexible space for events.

Figure 66. Enhance Multi-Modal Connectivity Projects

Figure 67. Create Community Destinations Projects

Downtown

IMPROVE FUNCTIONALITY

One-Way to Two-Way Conversions

Quincy's 1960 Comprehensive Plan advocated for one-way streets Downtown. One-way streets were thought to improve traffic circulation and direct traffic out of the Downtown business district. At that time, Jersey St, York St, Hampshire St, and Vermont St were heavily utilized traffic corridors. They were converted to one-way traffic in 1964.

Quincy's central business district revitalization plans in 1993 and 1995 recommended converting the one-way streets back to two-way, as traffic volumes on the one-way streets had diminished. In response, the City converted portions of Hampshire St and Vermont St to two-way (which remain two-way in those same sections today), but maintained one-way traffic on other sections and on the entirety of York St and Jersey St.

Figure 68. 1995 Quincy Central Business District Plan Map

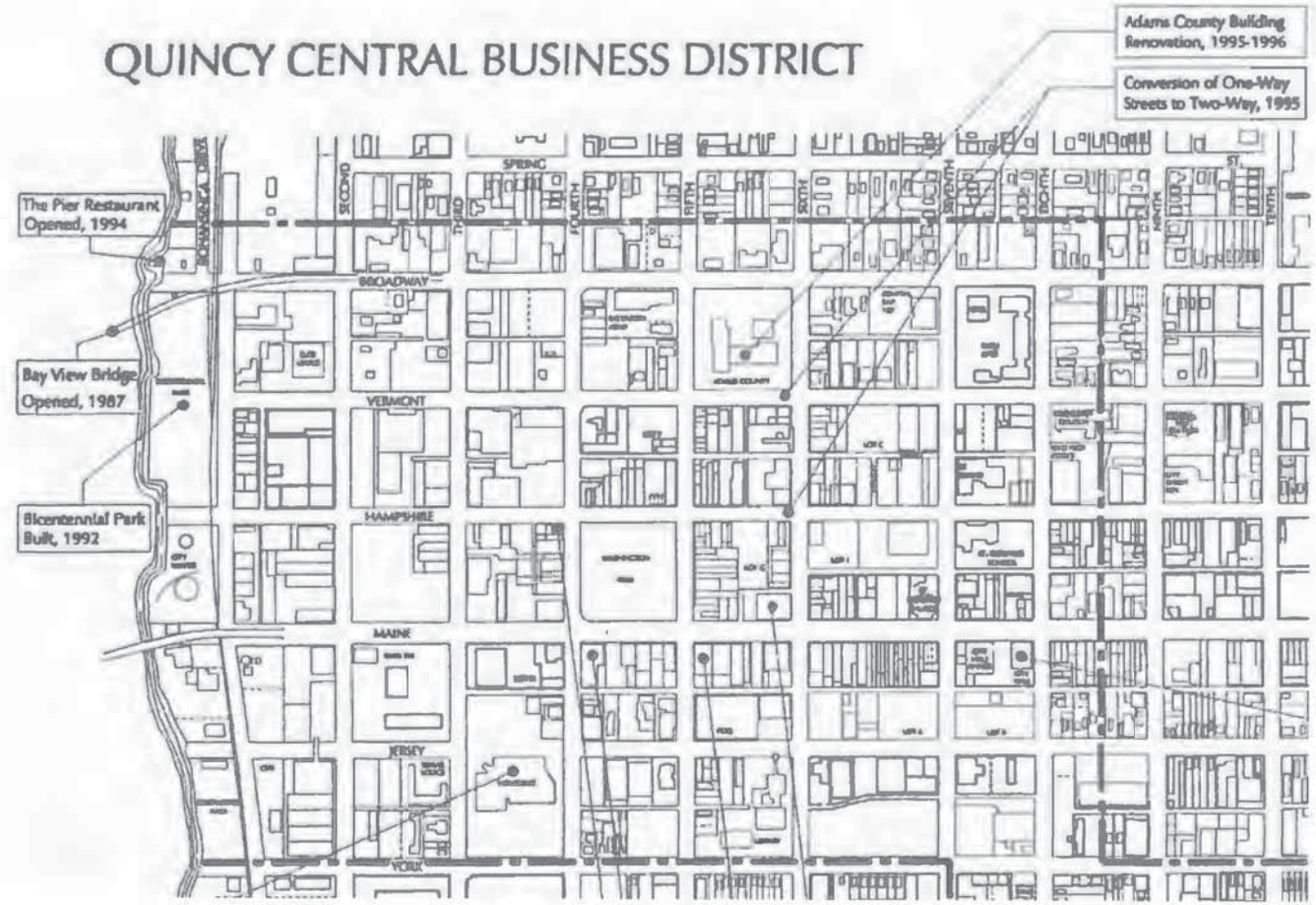
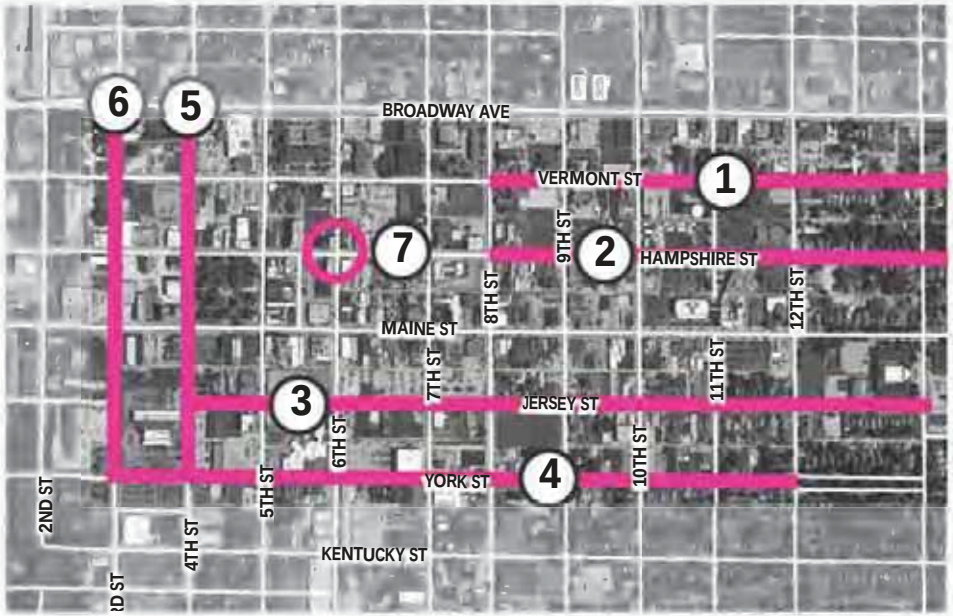


Image from Quincy CBD Revitalization Plan (1995)

Figure 65. Improve Functionality Projects



Today, communities across the country are removing one-way streets, propelled by a newfound understanding of the benefits of converting them to two-way, which include the following:

- One-way streets are commonly more dangerous and uncomfortable for pedestrians and bicyclists, as vehicles travel at faster speeds and motorists take fewer precautions due to no opposing traffic.
- One-way streets create a poor driving experience as they typically increase travel distances, hinder wayfinding and circulation, and create inefficiencies for emergency vehicles.
- One-way streets adversely affect businesses, particularly those that have storefronts and rely on foot traffic and street visibility to attract customers.

Following a conversion of one-way streets to two-way, the City of New Albany (IN) reports two-way to be "overwhelmingly" superior due to reduced vehicle speeds, fewer accidents involving pedestrians, and fewer injury crashes. One-way to two-way conversions in Quincy will create a safer pedestrian and bicycle environment, facilitate a more intuitive and convenient driving experience, and more effectively promote downtown businesses. The proposed one-way to two-way conversions include:

- 3rd St
- 4th St
- Jersey St
- York St
- Vermont St
- Hampshire St

Remove Signal Hampshire St & 6th St

6th St is attracting new investment and improving this intersection could benefit redevelopment efforts. It is recommended that the existing antiquated traffic signal be removed and replaced with a four-way stop. Only 4,650 total vehicles on average travel through this intersection daily, which does not require a traffic signal (see **Figure 69**). Removing unwarranted traffic signals has been associated with a 24% reduction in crashes. Moreover, an all-way stop prioritizes pedestrians in crosswalks, enhancing walkability.

Figure 69. ADT by Intersection Leg, Hampshire St and 6th St

8

MULTI-MODAL CONNECTIVITY
Vermont St Improvements

A two-way cycle track is recommended on Vermont St between Front St and 16th St. This would serve as the east-west spine of the regional network of bicycle facilities and connect Downtown with destinations to the east.

A cycle track is typically separated from traffic by a physical buffer, such as parked vehicles or a raised curb median. This protection improves bicycle safety and comfort, and therefore attracts casual and inexperienced riders to the facility.

The visibility and profile of this project would be expected to help stimulate interest and build awareness of bicycling as a viable mode of travel in Quincy and not just for recreation. Ideally, Vermont St would become a signature element of an emerging regional bicycle network.

Image from Masspaths.net

Existing Vermont Street Typical Cross Section

- The typical right-of-way width is 66 ft.
- 2 travel lanes and on-street parking fill 40 ft of curb-to-curb width.
- The remaining 26 ft is sidewalk and tree lawn.

Potential Vermont St Typical Cross-Section With Cycle Track

Low Cost Option (depicted)

- On-street parking is removed from one side of the street.
- Traffic lanes reduced to 10 ft (2-way traffic assumed but not required).
- 10 ft cycle track plus 2 ft concrete buffer fits within existing curb-to-curb width.
- Existing sidewalks and tree lawn remain.

Ideal Option

- Curb-to-curb width expands into tree lawn to increase cycle track buffer to 5 ft and provide 11 ft lanes.

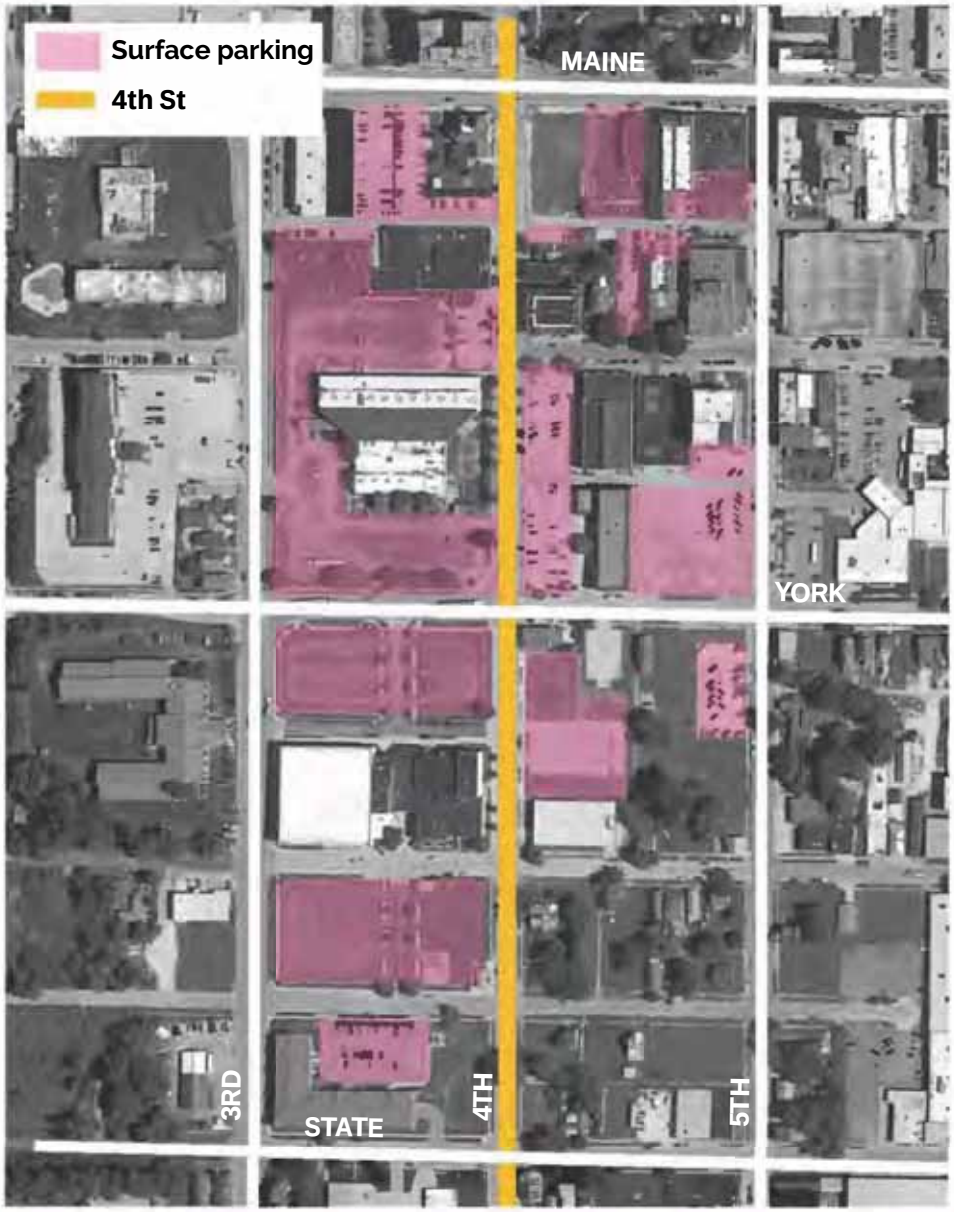
4th St Improvements

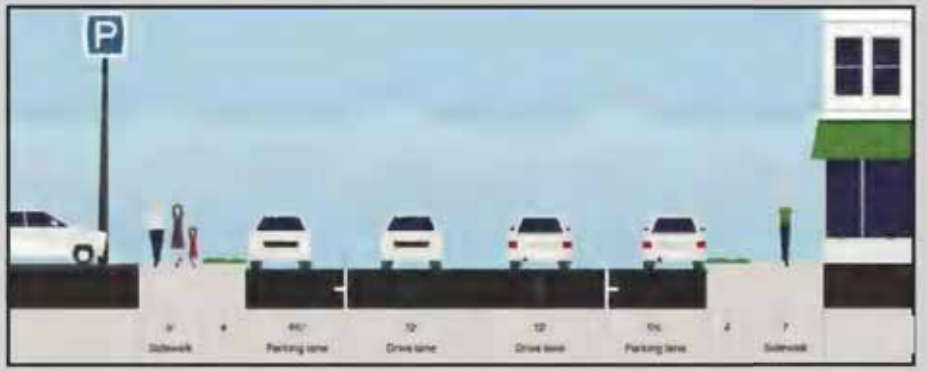
4th St connects the hospitality district and Oakley-Lindsay Center to the heart of Downtown and Washington Park. However, this connection is presently a state route (IL 57) that carries regional traffic, particularly trucks. The proposed conversion of 3rd and 4th St to two-way traffic and the consolidation of regional traffic on 3rd St presents the opportunity to reimagine 4th St as a commercial street operated and maintained by the City.

As a commercial street, 4th St should prioritize pedestrians and bicycles in an effort to strengthen the connection to the hospitality district. It is recommended that on-street bicycle lanes be added to expand bicycle access south from Vermont St to the hospitality district. Providing prominent, highly-visibility bike lanes would encourage tourists and visitors to see Quincy by bicycle. This would require the removal of on-street parking from one side of the street except adjacent to Washington Park.

4th St includes some street trees and pedestrian-scale lighting that should be enhanced or expanded to further encourage pedestrian trips between the Oakley-Lindsay Center, nearby hotels, and other areas of Downtown. However, walkability is presently undermined by numerous surface parking lots that line the corridor, as illustrated in **Figure 70**. Repairing gaps in the "street wall" of street-facing buildings through fencing, trees, art, etc. would contribute to a more welcoming pedestrian environment. Other upgrades should include ADA-compliant pedestrian infrastructure and street amenities, such as waste receptacles and benches.

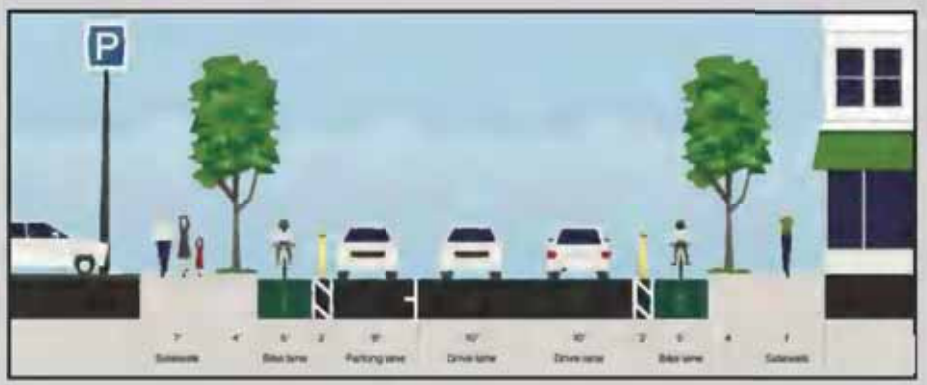
Figure 70. Surface Parking along 4th Street Corridor





Existing 4th St Typical Cross-Section

- The typical right-of-way width is 64 ft.
- 2 travel lanes and on-street parking fill 44 ft of curb-to-curb width.
- The remaining 22 ft is sidewalk and tree lawn or brick buffer.



Potential 4th St Typical Cross-Section

- On-street parking is removed from one side of the street
- Traffic lanes reduced to 10-11 ft
- Bikes lanes of 5 ft on each side with 2-3 ft striped buffer
- This section could fit within the existing curb-to-curb width.
- Existing sidewalks and tree lawn remain

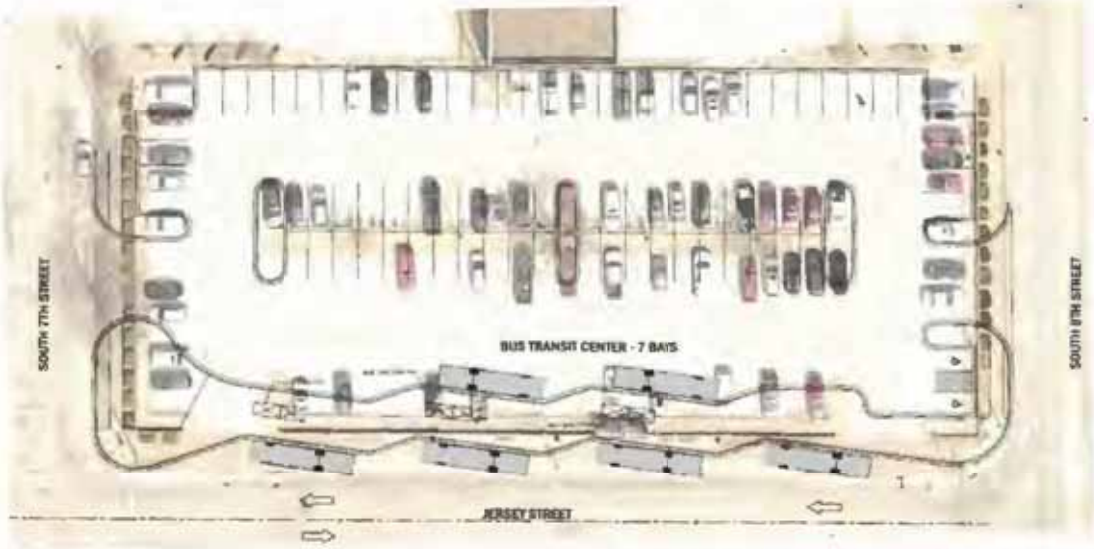
Downtown

Transit Transfer Station

Currently, transfers between QTL bus routes occur at an existing on-street bus stop located on Jersey St. The recommended conversion of Jersey St to two-way traffic and the provision of a single lane of traffic in each direction would result in more conflicts between bus operations and traffic.

An off-street transit transfer station in an accessible location Downtown would improve the experience of transit riders and enhance safety by further separating buses and moving traffic. One potential concept would be to reconfigure the existing surface lot north of Jersey St between 7th and 8th St as shown in **Figure 71**. Alternative sites could also be explored. Passenger amenities such as shelters, benches, heaters, etc. should be considered.

Figure 71. Potential Transit Transfer Station on Jersey St Surface Lot



COMMUNITY DESTINATIONS

Maine St to Riverfront Park

Maine St is the primary commercial corridor Downtown. The planned removal of the Quincy Memorial Bridge presents the opportunity to repurpose the west end of Maine St. Instead of functioning as a gateway for regional traffic from Missouri, it should become a multimodal gateway to the Riverfront from Downtown.

To accomplish this, the existing character and streetscape on Maine St east of 4th St should be extended west to make the corridor more inviting and comfortable for pedestrians. This would include pedestrian-scale lighting, trash receptacles, street trees, and wide sidewalks. The opportunity to provide a very unique, pedestrian experience exists between 2nd St and the Riverfront. The elevation change between 2nd St and Front St is severe. Further study and collaboration with the Riverfront master planning process is necessary to determine how best to overcome this challenge and provide an ADA-compliant experience accessible to all ages and abilities.

Potential ideas include a gateway feature, such as archway over Maine St, to draw attention to the street as a connection to the Riverfront. A portion of the Quincy Memorial Bridge could be retained as a pedestrian lookout over the Mississippi River. A landscaped, zig-zag stairwell and ramping system could help traverse the grade change.

There are many ways to reimagine Maine St west of 4th St. The intended outcome is to create a strong pedestrian connection between Downtown and the Riverfront.

Downtown

Maine St and 6th St intersection facing east

Riverfront Zig-Zag Walkway - Chattanooga, TN

Maine St and 4th St intersection facing west

High St Streetscape - Worthington, OH

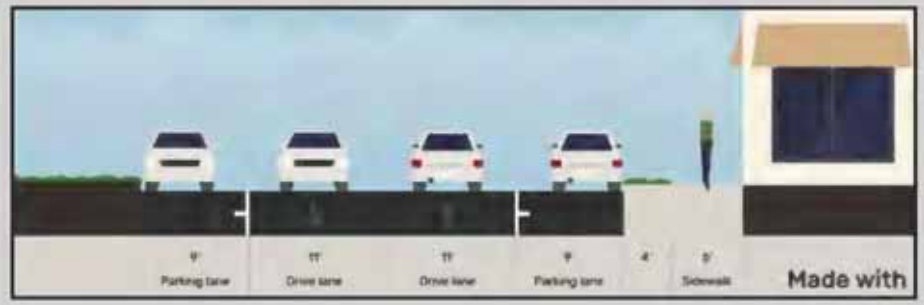
Front St Promenade and Shared Street

Today, Front St serves a variety of functions, including providing access to Riverfront Park, serving trucks for nearby industrial uses, connecting Bonansinga Dr with Downtown, and functioning as the “front door” to several restaurants and businesses located on the street.

To activate the Riverfront and enhance connectivity with the Downtown core, it is recommended that Front St between Broadway and Jersey St be reimagined as a promenade and multi-modal shared street. This would help establish Front St as a destination in and of itself and expand space available for public use by allowing the street’s right-of-way to be used for recreation and special events, such as festivals, markets, and concerts.

While multi-modal shared streets often comprise a single space for all modes, the ultimate configuration of Front St should be the subject of further study and collaboration with the Riverfront master planning process. Numerous challenges would need to be addressed, including possible conflicts with the adjacent active rail line, the potential for flooding, and coordination with local businesses regarding the diversion of some through traffic, particularly trucks, to 2nd St or elsewhere.

Regardless, it is intended for Front St to become a multi-modal, flexible street that would activate and help connect the Riverfront to Downtown.



Existing Front Street Typical Cross Section

- Varies considerably.
- 2 travel lanes throughout.
- On-street parking ranges from both sides of the street to none.
- Wide sidewalks in places on the east side only.

Potential Front Street Typical Cross Section

- Shared space between all modes of travel, thereby implying equal prioritization.
- Low speed traffic allowed; through traffic discouraged.
- Landscaping and architectural elements create a variety of spaces.

Shared Street in Leeds, UK
Image from Methleys Home Zone

12 13

6th St & York St Activation

6th St between Maine St and Vermont St and Jersey St from 8th St to 10th St are presently nodes of activity Downtown that have been activated by new businesses and the redevelopment of historic buildings. In the interest of furthering that activity, it is recommended that both streets be converted into flexible, multi-modal spaces to complement adjacent uses.

These activation corridors include slower moving traffic (up to 15 mph) along with enhanced streetscapes and amenities, such as trash and recycling receptacles, benches, wayfinding signage, bike racks, and street trees. Additional elements for consideration include decorative planters, public art (sculpture and murals), water features, alley activation, and pedestrian-scale lighting such as string lights or historic character lights.

The need for flexibility is important to satisfy competing interests for right-of-way. One example would be allowing space for on-street parking during the day to serve as expanded sidewalk space for dining and entertainment at night. For maximum flexibility, the streets could incorporate a curbless design, though further analysis is necessary to ensure proper stormwater drainage. Alternatively, a meandering design would slow traffic, create a unique experience, and reinforce each corridor as a destination.

Regardless of the ultimate design, the intent is to create active urban corridors that provide interesting environments and create opportunities for social interaction. Incorporating flexibility would help accommodate special events like concerts, markets, and festivals, which would further business and redevelopment interests in these areas.

Crowdus Park - Dallas, TX
Image from Ash + Lime

SUMMARY

DOWNTOWN PLAN FINDINGS & RECOMMENDATIONS

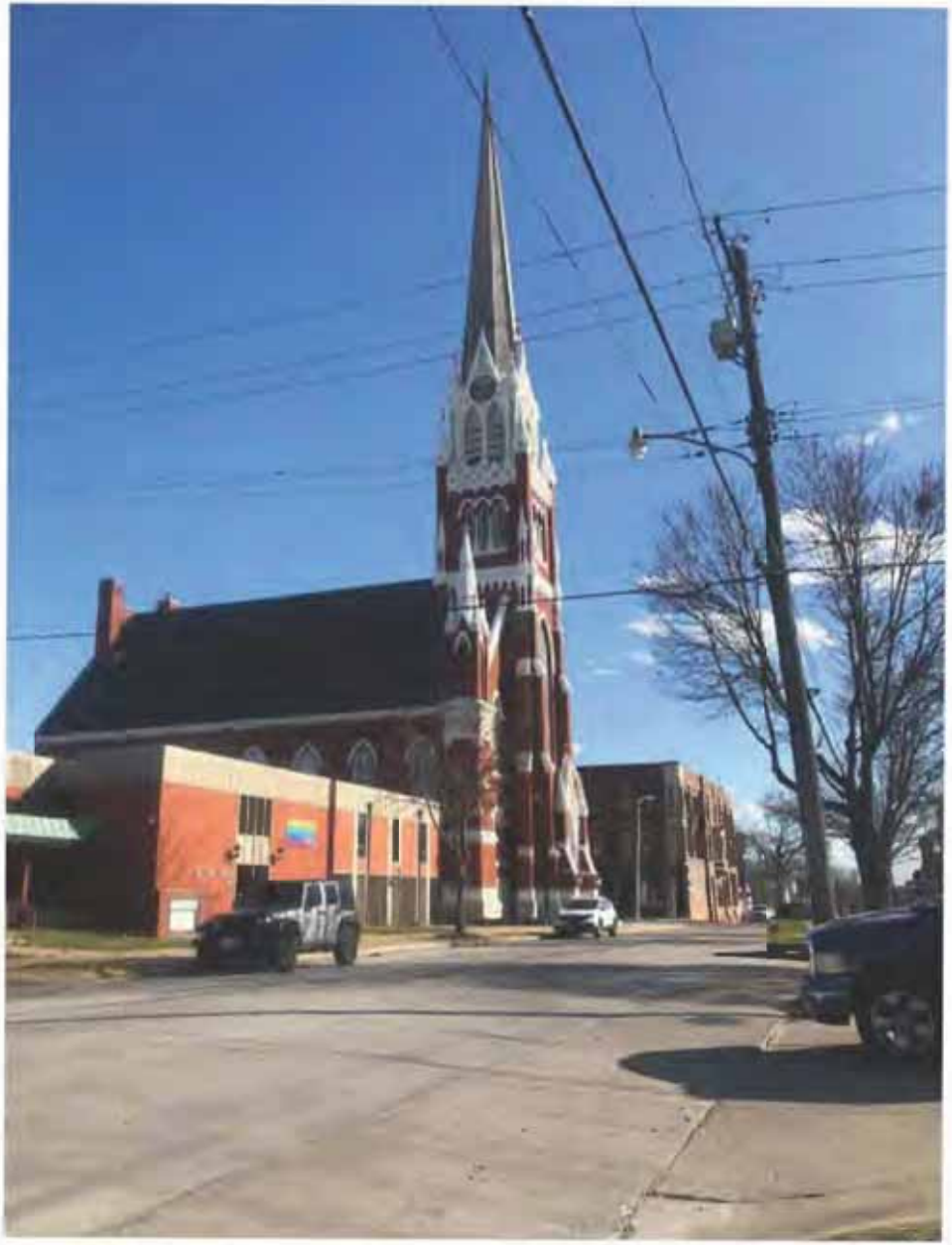
The traffic analysis concluded that Downtown traffic would not be significantly impacted by a new eastbound Mississippi River Bridge landing at York St.

It is feasible to convert 3rd and 4th St to two-way traffic in combination with the new Mississippi River Bridge provided that additional traffic and intersection improvements are implemented Downtown.

Eight best practices for Downtown Transportation are recommended including:

- Reduce lane widths
- Prioritize sidewalks
- Maximize on-street parking
- Maintain street grid connectivity
- Enhance pedestrian crossings
- Implement multi-modal traffic signal operations
- Provide streetscaping elements
- Promote and accommodate alternative modes (transit and bicycling)

Street typologies specify each street's overarching role in the transportation network and include dimensional targets, design vehicles, and guidance for sidewalk and traffic space. Typologies are provided to inform street design upgrades, property owner requests for street modifications, and new developments.



DOWNTOWN PROJECTS

New River Bridge

Design the new eastbound Mississippi River Bridge to serve regional traffic while also complementing strategies for Downtown. This should include signalizing York St and 3rd St, designing the bridge approach to 3rd St with a 3% grade (or less), and providing a "free" right-turn onto southbound IL-57. Provide a pedestrian and bicycle path on the bridge that connects to the regional bicycle network via on-street bicycle lanes along York St.

3rd St and 4th St One-Way to Two-Way Conversion

Convert 3rd St and 4th St from one-way to two-way between York St and Broadway, with regional traffic (IL-57) consolidated on 3rd St and 4th St becoming a city street serving Downtown traffic.

Hampshire St and Vermont St One-Way to Two-Way Conversion

Convert Hampshire St and Vermont St from one-way to two-way between 8th St and 18th St to improve traffic circulation, enhance wayfinding, and support multi-modal transportation.

York St and Jersey St One-Way to Two-Way Conversion

Convert York St from 3rd St to 12th St and Jersey St from 4th St to 14th St from one-way to two-way to improve traffic circulation, enhance wayfinding, and support multi-modal transportation.

Riverfront Shared Street and Maine St Connection

Redesign Front St between Broadway and Jersey St as a promenade and multi-modal shared street to activate the Riverfront and enhance connectivity between the Riverfront and Downtown via improvements to Maine St.

6th St and York St Corridor Activation

Create engaging and attractive corridors along 6th St between Maine St and Vermont St and along York St between 8th St and 10th St to reinforce both streets as destinations. This includes adding streetscape elements, slowing traffic and prioritizing pedestrians, and incorporating flexible spaces for special events.

Vermont St Improvements

Add a protected two-way cycle track on Vermont St between the Riverfront and 16th St and improve the intersections of Vermont St with 8th St and with 12th St. The cycle track would serve as the east-west spine of the regional network of bicycle facilities and connect Downtown with destinations to the east.

4th St Improvements

Improve 4th St from Vermont St to York St to strengthen the connection between Downtown and the Hospitality District and Oakley-Lindsey Center and reinforce 4th St as a City street prioritizing walkability and bicycles.

Off-Street Downtown Transit Transfer Station

Provide an off-street transit transfer station in an accessible location Downtown to improve the experience of transit riders and enhance safety by further separating buses and moving traffic.

Implementation Plan

PROJECT PRIORITIZATION

The Regional and Downtown Plan sections yielded a total of 25 project recommendations. These projects were prioritized based on their anticipated impact, in combination with stakeholder and public input. The 25 project recommendations are listed in **Table 15**.

As an initial step in providing input, the Steering Committee performed an exercise where the five Plan goals were weighted based on relative importance. Each member of the committee allocated a total of 10 points across the five goals: functionality, livability, economy, multi-modal, and equity/sustainability. **Figure 72** shows the results of this exercise, where Economy, Livability, and Functionality received the highest weighting.

The Steering Committee's composite weights were then used to compute a score for each project based on the Plan goals addressed by the project. Projects that score higher address the Plan goals to a greater degree than those scoring lower. This served as a preliminary list that informed further discussion with the Steering Committee. **Table 15** lists each project, which goals it supports, its composite score, and whether the project scope is Regional (R), Downtown (D), or both (D/R).

Figure 72. Steering Committee Plan Goals Relative Importance

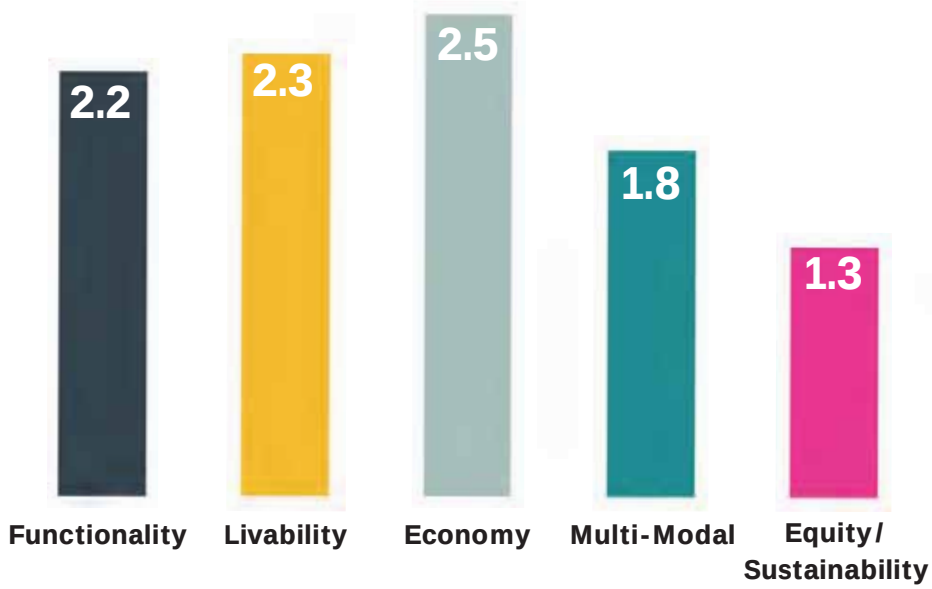


Table 15. Plan Projects and Goals

Project Description	Scale (D/R)	Score	Functionality	Livability	Economy	Multi-Modal	Equity/ Sustainability
Transit Transfer Station	D/R	10.1	■	■	■	■	■
Vermont St Cycle Track & Intersection Improvements	D/R	10.1	■	■	■	■	■
Riverfront Shared St and Maine St Connection	D	10.1	■	■	■	■	■
Hampshire St and Vermont St One-Way to Two-Way	D	8.8	■	■	■	■	
3rd St and 4th St One-Way to Two-Way Conversion	D	8.8	■	■	■	■	
York St & Jersey St One-Way to Two-Way Conversion	D	8.8	■	■	■	■	
Broadway Corridor Access Management Plan	R	8.8	■	■	■	■	
6th St Corridor Activation	D	7.9		■	■	■	■
4th St Improvements	D/R	7.9		■	■	■	■
York St Corridor Activation	D	7.9		■	■	■	■
Columbus St and 36th St Intersection	R	6.0	■		■		■
48th St and State St Roundabout	R	6.0	■		■		■
Harrison St and 24th St Roundabout	R	6.0	■		■		■
New Bridge Bike Connection	R	5.4		■		■	■
16th St On-Street Bicycle Facility	R	5.4		■		■	■
48th St On-Street Bicycle Facility	R	5.4		■		■	■
Bill Klingner Trail East Extension	R	5.4		■		■	■
Maine St On-Street Bicycle Facility	R	5.4		■		■	■
College St On-Street Bicycle Facility	R	5.4		■		■	■
State St Improvements	R	5.4		■		■	■
IL-57 Upgrade	R	4.7	■		■		
South Quincy Freight Corridor	R	4.7	■		■		
Broadway St and 25th St Intersection	R	4.7	■		■		
Broadway St and 48th St Intersection	R	4.7	■		■		
Broadway St and 36th St Intersection	R	4.7	■		■		
Maine St and 24th St Intersection	R	2.2	■				

PRIORITY PROJECTS

12 of the 25 projects were selected as priority projects based on guidance from the consultant team and input from the Steering Committee. The public was asked to express their support or opposition to the 12 projects by scoring each on a scale of 1 to 5, with 1 representing opposition and 5 being full support. The surveys were completed online or in person at the open house held in March 2020. Each project received a composite score of 3.33 or higher indicating broad public support.

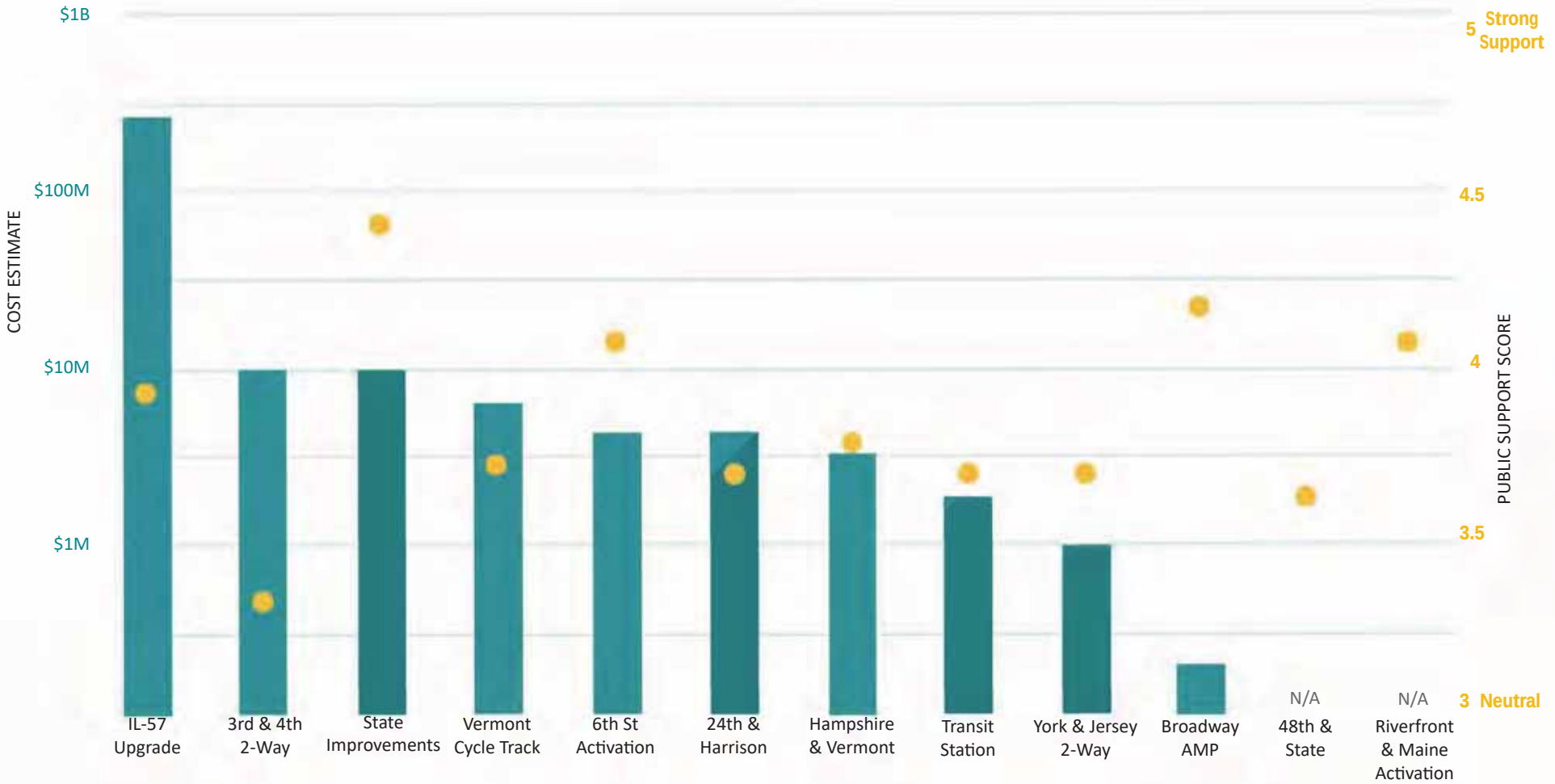
Of the 12 priority projects, planning-level cost estimates were prepared for 10 to indicate the magnitude of resources needed for implementations. Other planning processes were underway regarding the projects that were not costed. **Table 16** and **Figure 73** summarize the 12 priority projects, their anticipated cost, and level of public support from the open house and online survey.

These 12 projects represent priorities for the community, which should be pursued for implementation in the short-term. Projects involving IDOT routes or with state funding eligibility should be added to the Statewide Transportation Improvement Plan for funding and programming.

Table 16. 12 Priority Projects Cost Estimates and Level of Public Support

12 Priority Projects	Scale	Cost	Public Support Score (1=low, 5=high)
IL-57 Upgrade	Regional	$250M	3.79
State St Improvements	Regional	$8-10M	4.20
3rd St and 4th St One-Way to Two-Way Conversion	Downtown	$7-10M	3.56
Vermont St Cycle Track & Intersection Improvements	Downtown/Regional	$5-7M	3.61
Harrison St and 24th St Roundabout	Regional	$3-5M	3.56
Hampshire St and Vermont St One-Way to Two-Way	Downtown	$2.5-3M	3.66
6th St Corridor Activation	Downtown	$1-5M	3.90
Off-Street Downtown Transit Transfer Station	Downtown/Regional	$1-2M	3.57
York St & Jersey St One-Way to Two-Way Conversion	Downtown	$1M	3.56
Broadway Corridor Access Management Plan	Regional	$250K	3.97
48th St and State St Roundabout	Regional	N/A	3.53
Riverfront Shared St and Maine St Connection	Downtown	N/A	3.89

Figure 73. Priority Projects Cost and Public Support Graph



PERFORMANCE MEASURES

Performance measures should be monitored over time to track the community's progress towards achieving the Plan's goals. As recommendations are implemented and projects come online, improvements in key performance indicators should be realized.

Performance measures are provided for each Plan goal and include the performance measure, objective, source of information for the indicator, and its geographic scope (Downtown, City of Quincy, or Adams County) as indicated in **Table 17**. These measures should be revisited on a periodic basis, typically every 5 years.

Numerous measures are available through public sources. Others reflect information collected by the City of Quincy (i.e., sales tax receipts) and some require professional planning staff with GIS capabilities to calculate (i.e., miles of bicycle facilities). A commitment to ongoing monitoring places the region in compliance with federal transportation planning guidelines, and is advantageous when seeking funding for projects and for a potential transition to an MPO in the future.

Secondary Goals Legend

- Functionality
- Economy
- Livability
- Multi-Modal
- Equity/ Sustainability

Table 17. Performance Measures and Objectives

Primary Goal	Secondary Goals	Performance Measure	10-Year Objective	Source	Geographic Scale
Functionality		Percent of one-way streets	Reduce by 50%	City	Downtown
		Travel times major corridors	Reduce by 10%	City	City
		Annual crashes per VMT	Reduce by 20%	IDOT	City
		Annual fatal/injury crashes per VMT	Reduce by 15%	IDOT	City
	Multi-Modal	Annual pedestrian/bicycle crashes per VMT	Reduce by 20%	IDOT	City
Economy		Sales tax revenues	Increase by 10%	City	City
	Livability	Annual Visitors	Increase by 20%	C & VB	City
		Total GDP	Increase by 10%	BEA	City
		Median Household Income	Increase by 10%	BEA	City
		Employment	Increase by 5%	BEA	City

Table 17. Performance Measures and Objectives, cont.

Primary Goal	Secondary Goals	Performance Measure	10-Year Objective	Source	Geographic Scale
Livability		Number of corridor activation projects implemented	Complete 2 recommended projects	City	Downtown
		Percent of streets with streetscape elements (street trees, furniture, lighting, etc.)	Increase by 50%	City	Downtown
		Number of Downtown community events	Hold at least 20 events annually	City	Downtown
		Number of vacant housing units	Reduce by 20%	Census	City
		Number of retail, restaurant, & entertainment businesses	Increase by 30%	City	Downtown
Multi-Modal		Annual Amtrak ridership	Increase by 5%	Amtrak	Quincy Station
		Annual transit ridership	Increase by 5%	QTL	N/A
		Miles of ADA complaint sidewalks	70% of all sidewalks are ADA compliant	City	City
		Miles of on-street and off-street bicycle facilities	Add 25 miles of facilities	City	County
		Pedestrian and bicycle mode share %	Increase to 10%	Census	City
Equity / Sustainability		Air Quality Index	Maintain 0 days annually above 50	EPA	County
		VMT per capita	Reduce by 5%	IDOT	City
		Number of project implementations benefiting low-income areas	50% of all projects	Census	City
		Accessibility of low-income areas to transit stops/bicycle facilities	All low income areas within 0.5 mile walk of bus stop or bike route.	City	City
		Percent new infill development	At least 75% of new development is infill	City	City

FUNDING SOURCES

The following represent potential funding sources for project implementation:

FEDERAL

National Highway Performance Program (NHPP)

(estimated $24.236B in funding for 2020)

NHPP funding can be used for state or local projects on the National Highway System (NHS) or NHS connector routes for roads, bridges, tunnels, ferry boat facilities, transit facilities, truck parking facilities, bicycle transportation facilities, pedestrian walkways, ITS, bus terminal facilities and commuter parking facilities.

FASTLANE Grants

(authorized $1B in funding for 2020)

A competitive grant program of $4.5 billion over five years to provide financial assistance to nationally and regionally significant highway, rail, port, and intermodal freight and highway projects. States, large MPOs, Tribes, localities, and Federal land management agencies may apply for grants for projects, which generally must have a total cost of at least $100 million. Each year, a minimum amount of funds must be used for rural projects (25 percent) and projects under the $100 million cost threshold (10 percent).

Surface Transportation Block Grant Program (STBG)

(estimated $12.137B in funding for 2020)

The objective of the STBG program (formerly the Surface Transportation Program) is to provide Federal-aid for improvements to roads within the National Highway System (NHS). The Program allows for flexibility in determining transportation solutions and enhanced planning and management systems to the states and local governments. The STBG program also may be used for environmental provisions, ADA compliance upgrades, infrastructure-based intelligent transportation system capital improvements, and privately owned inter-city bus terminals and facilities.

Highway Safety Improvement Program (HSIP)

(estimated $2.407B in funding for 2020)

HSIP has a goal of achieving a significant reduction in traffic fatalities and serious injuries on all public roads. HSIP funds may also be used for system-wide, systemic, safety improvements. These may include items such as signage, pavement markings, rumble strips, chevrons, guardrail improvements / upgrades, guardrail end terminal upgrades, etc.

National Highway Freight Program (NHFP)

(authorized $1.5B in funding for 2020)

Generally, NHFP funds must contribute to the efficient movement of freight on the National Highway Freight Network and be identified in a freight investment plan included in the State's freight plan. In addition, a State may not use more than 10% of its total NHFP apportionment each year for freight intermodal or freight rail projects.

Federal Transit Administration

The Federal Transit Administration offers funding for bike and pedestrian facilities within a certain catchment area of transit stops and stations. For pedestrian facilities, the catchment area is a half mile. For bike facilities, the catchment area is 3 miles. Programs administered by the FTA that fund these kinds of improvements include TOD Planning Pilot Grants, Formula Grants for Rural Areas, Enhanced Mobility of Seniors and Individuals with Disabilities, and Bus and Bus Facilities Formula Grants, among others. See **Figure 74** for a map of areas eligible for funding in Quincy and Adams County.

COVID-19 Supplemental Appropriations (March 6, 2020)

Transportation Relevant Funding:

- $10 billion for block grants to states;
- $10 billion for airports; and
- $20 billion for public transportation emergency relief

COVID-19 CARES Act (March 27, 2020)

Transit - $1.6B to Illinois transit agencies, nearly all to RTA Chicago, for operations, not capital.

Airports - $10B in funding through the Airport Improvement Program (AIP) grant program, with $9.5B available for "any purpose airport revenues may lawfully be used." $100M for general aviation airports.

Passenger Rail- Amtrak will receive over $1B. State supported routes are included.

General Fund Stabilization- $150B directed to states to stabilize their budgets. Illinois will receive $5B and 45% of that will go to local governments.

Figure 74. Areas Eligible for FTA Funding for Bicycle and Pedestrian Facilities

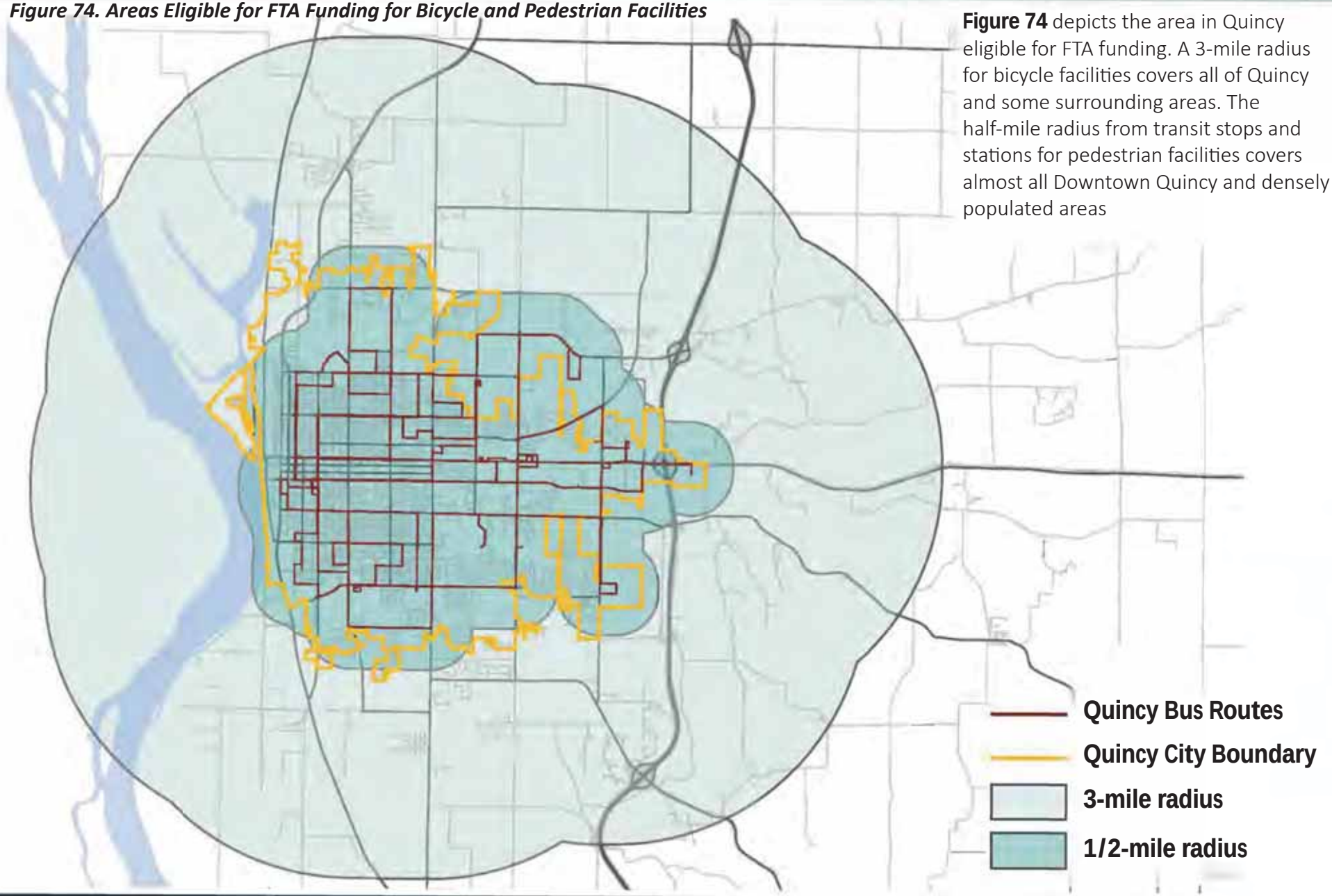


Figure 74 depicts the area in Quincy eligible for FTA funding. A 3-mile radius for bicycle facilities covers all of Quincy and some surrounding areas. The half-mile radius from transit stops and stations for pedestrian facilities covers almost all Downtown Quincy and densely populated areas

STATE

Illinois Department of Transportation

Rebuild Illinois

In June 2019, Illinois passed Rebuild Illinois, a 6-year infrastructure bill that includes $44.8 Billion in funding, of which $33.2 Billion is dedicated to transportation as follows in **Table 18**:

Table 18. Rebuild Illinois Funding Allocations

Total 6-Year Funding	$33.2 B
Roads & Bridges	$25.3 B
Mass Transit	$4.6 B
Rail	$1 B
Misc. Transportation	$679 M
Aeronautics	$558 M
Create	$492 M
Grade Crossing Protection	$312 M
Ports	$150 M

Illinois Safe Routes to School

Funding for SRTS is provided as 80% federal/20% local match and operates as a reimbursement program through IDOT. The SRTS has three main goals:

1. To enable and encourage children, including those with disabilities, to walk and bicycle to school;
2. To make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and
3. To facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity (within 2 miles) of primary and middle schools (grades K-8).

SRTS projects must focus on students in grades Kindergarten through 8th grade. All public schools that serve these ages are eligible. Each school district is limited to one infrastructure and one non-infrastructure project application.

SRTS projects are considered either infrastructure or non-infrastructure projects. Infrastructure projects have a funding range of $25,000-$200,000 while non-infrastructure projects have a smaller range of $5,000-$50,000. Types of eligible infrastructure projects include sidewalk improvements, traffic calming, pedestrian and bicycle crossing improvements and on or off-street bicycle facilities. Non-infrastructure projects include education, enforcement, encouragement, and evaluation related to bicycle and pedestrian activity and safety.

The Illinois Department of Natural Resources (IDNR)

The IDNR provides funding for bike facilities under their Recreational Trails Program and Illinois Bike Path Grant Program. The Recreational Trails Program (RTP) is a reimbursement grant program that provides 80% of project funding with a required 20% local match. This grant program is federally funded and is administered by the IDNR in cooperation with the Federal Highway Administration (FHWA). The funds can be used to assist government agencies and trail groups in the rehabilitation, development, maintenance, and acquisition of recreational trails and related facilities. The trails may be motorized, non-motorized, or multiple use trails. RTP funds can also be used for environmental protection and safety education projects related to trails. The program generally has $1.5 million available for grants, with a maximum development grant amount of $200,000. There is no maximum on acquisition grants.

The Illinois Bicycle Path Grant Program (Bike Path)

Provides financial assistance to eligible governments for the acquisition, construction, and rehabilitation of public off-road, non-motorized bicycle paths and directly related facilities. Project applications are limited to land acquisition or trail development along a single trail corridor. On-street bicycle routes sharing existing roadway surfaces are not eligible. The Bike Path program will reimburse up to 50% of total approved project costs up to the maximum allowable cost. The remainder of the costs will be borne by the project sponsor. The program generally has $1.5 million available for grants, with a maximum development grant amount of $200,000. There is no maximum on acquisition grants.

Statewide Planning and Research (SPR)

Support planning and research activities throughout the State. Eligible activities include:

- Planning studies
- Data purchase, collection, and/or analysis
- Research activities
- Program development activities
- Performance management activities
- Coordination/outreach activities

IDOT evaluates proposed projects based on the following criteria:

- Studying or implementing a goal strategy or objective within the state's Long Range Transportation Plan or one of the Department's associated plans.
- Implementing a performance based program development process.
- Implementing asset management.
- Benefiting a disadvantaged/economically distressed community.

A 20% match is required to obtain these funds. There are no minimum or maximum project cost limitations. Illinois allocates approximately $20 million annually for the SPR program.

LOCAL

Quincy

The City of Quincy's local funding for transportation-related projects primarily includes bond sales, capital project funds, and Motor Fuel Tax (MFT). Other sources of revenue include public transit fares, the park district budget (for greenways and trails projects), and private donations. The 5-year Capital Improvement Plan (CIP) for the period of May 1, 2020 – April 30, 2025, issued March 26, 2020, details $45 million for infrastructure projects, and notes that expected revenues are close to $12.5 million. To fill this gap in funding, the City sold $19 million in bonds in the Fall of 2019 to be used to finance major street improvement projects. Funds from the water and sewer enterprise funds are to be used to make contemporaneous improvements to buried utilities as a part of the street improvement projects.

The funding sources within the CIP are listed in **Table 19**. Quincy could also consider passing a small sales tax to help fund implementation and better leverage state and federal funds

Table 19. Quincy CIP Budget 2020-2025

2019 Bond Funds	$18,500,000
Sewer Enterprise Funds	$13,902,500
Water Enterprise Funds	$9,566,500
Home Rule Sales Taxes	$8,323,000
Motor Fuel Taxes	$4,162,000
Federal (FAU) Funds	$1,408,000
Total	**$55,862,000**

Adams County

Adams County is responsible for the construction, maintenance, and repair of the 247 miles of roadways on the County Highway System, including Quincy. Adams County receives an allotment of the state motor fuel tax, which is used to finance road and bridge construction and maintenance. The expected MFT fund allotment for Adams County in 2020 is $1.4 million and the expected expenditures are $1.98 million. The Township Road District in Adams County also receives a state MFT allotment. The expected 2020 allotment for the Township Road District is $1.7 million.

Appendix

LOCHMUELLER GROUP
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St. Louis, Missouri 63101
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MEMORANDUM

To: Illinois Department of Transportation

From: Chris Beard, PE, PTOE

Date: Updated April 24, 2020
Original December 5, 2019

Subject: Technical Memorandum
Quincy Downtown Traffic Study
Lochmueller Project 418-0039-0TP

Lochmueller Group completed a Traffic Study of Downtown Quincy, Illinois. This study is a component of the overall Quincy Regional Transportation Plan (RTP), which is an outgrowth of the Quincy Next Strategic Plan. Quincy Next recommended strategies for achieving broad community goals for the future. One such goal is the creation of an accessible and connected city for all, through transportation, infrastructure, and safety. The Downtown is a focus area, where ease of circulation, wayfinding, and enhanced walkability would contribute to placemaking and a more vibrant regional center.

Simultaneously, the Illinois Department of Transportation (IDOT) is planning for a new Mississippi River Bridge to replace the existing Quincy Memorial Bridge, which serves eastbound traffic crossing the river on US 24 and currently lands at Maine Street. The landing point of the new bridge has implications for regional traffic flows within Downtown, in particular truck traffic. As informed by IDOT, this study assumed a new bridge landing at York Street.

The emphasis of the Quincy RTP within the Downtown is to determine the feasibility of key transportation strategies aimed at achieving the goals of Quincy Next, while also evaluating the traffic impacts of the new Mississippi River Bridge. The purpose is to provide a cohesive plan for Downtown transportation that both advances Quincy Next and accommodates regional traffic. In particular, the feasibility of converting 3rd and 4th Streets from one-way to two-way traffic is a pivotal strategy of Quincy Next specifically addressed by this study.

This technical memorandum summarizes the Downtown Plan elements pertaining to IDOT routes and includes supporting traffic forecasts and traffic operational performance measures. The study area includes 3rd and 4th Streets (IL 57/US 24) between York Street & Broadway as well as Broadway (IL 104) between 3rd and 8th Streets. Each of these routes, in addition to Maine Street west of 4th Street and York Street between 3rd and 4th Streets, is operated and maintained by IDOT.

The Downtown Traffic Study evaluated traffic conditions during the weekday morning (AM) and afternoon (PM) peak hours. If streets can accommodate traffic during these peak periods, it stands to reason that adequate capacity would be available throughout the remainder of the day. The AM and PM peak hours were determined from traffic counts to be from 7:30 AM to 8:30 AM and from 4:30 PM to 5:30 PM.

The study addressed 5 analysis scenarios, including various combinations of future conditions both with and without the new Mississippi River Bridge and 3rd/4th Street conversions. These scenarios are summarized in **Table 1**. As is common in transportation planning, the analysis focused on conditions 20 years into the future. Traffic volumes for the 2040 "Design Year" were forecasted by increasing existing traffic volumes at a rate of 0.5 percent per year. This results in a 10 percent increase in traffic over the 20-year horizon. This was deemed conservative, given the absence of population growth in the region in recent decades, and was applied at the direction of IDOT.

Table 1: Study Scenarios

Scenario	Year	New Bridge	3rd/4th Streets Two-Way
Scenario 1	Existing	No	No
Scenario 2	2040	No	No
Scenario 3	2040	Yes	No
Scenario 4	2040	Yes	Yes
Scenario 5	2040	No	Yes

The traffic analysis was performed using Synchro 10, which is based upon the "Highway Capacity Manual" (HCM) published by the Transportation Research Board. Transportation system performance was graded by Levels of Service (LOS), which are measures of traffic flow that consider factors such as speed, delay, interruptions, safety, and driver comfort and convenience.

The HCM establishes six levels of service ranging from LOS A ("free flow") to LOS F ("oversaturated"). LOS C is commonly used for design purposes and represents a roadway with volumes utilizing 70 to 80 percent of its capacity. While LOS D is typically considered acceptable for peak period conditions in major urbanized areas, LOS C is suggested as a target LOS for Downtown Quincy, given lower perceived tolerances for traffic congestion in the region.

Level of service criteria vary depending upon the roadway component being evaluated. Intersections are most commonly evaluated, since roadway capacity is typically dictated by the number of vehicles that can be served at critical intersections. For intersections, the LOS criteria are based on delay and the type of control (i.e., whether it is signalized or unsignalized/roundabout). The thresholds for intersection levels of service are summarized in **Table 2**.

Table 2: Intersection Level of Service Thresholds

Level of Service	Delay per Vehicle (sec/veh)	
	Signalized	Unsignalized
A	< 10	0-10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	> 80	> 50

Scenario 1 – Existing Conditions

The purpose of evaluating existing conditions was to benchmark traffic operations as they exist, prior to any changes to the street network. This scenario provides context in terms of levels of service, congestion, and delays experienced today.

The existing street network routes eastbound traffic from Missouri across the Quincy Memorial Bridge through Downtown Quincy, landing at Maine Street. To continue east on IL 104 (Broadway) or north on US 24, traffic must proceed east on Maine to 4th Street, where vehicles turn left to proceed north to Broadway. This configuration, in combination with the 3rd/4th Street (IL 57) one-way couple, places regional traffic within the heart of the Downtown. It also contributes to wayfinding difficulties and unintuitive routes/circulation patterns.

Existing traffic volumes were obtained from turning movement counts collected at major intersections. Volumes at intersections not counted were assumed using engineering judgement and volume balancing from adjacent intersections. The existing morning and afternoon peak hour traffic volumes are summarized in **Appendix A**.

Broadway, 3rd Street, and 4th Street are designated truck routes, and the Downtown area serves as a crossroads for truck traffic using IL 57, US 24, and IL 104. Truck volumes were obtained from vehicle classification counts performed as part of this study and from the online IDOT traffic count database. Existing truck volumes and relative percentages on major corridors leading into and out of Downtown are summarized in **Table 2**. As shown, the heaviest truck traffic is on IL 57 to the south of Downtown and crossing the Mississippi River.

Table 2: Existing Truck Volumes (Two-Way)

	AM Peak Hour		PM Peak Hour	
Location	**Volume**	**%**	**Volume**	**%**
Broadway at 8th Street	41	15%	35	17%
Mississippi River Bridges	82	30%	42	20%
US 24 at Locust Street	65	24%	42	20%
IL 57 at Jefferson Street	85	31%	89	43%
Totals	**273**		**208**	

The existing lane configurations at the study intersections are illustrated in **Appendix B**. Existing operating conditions are summarized in **Table 3** and in greater detail in **Appendix C**. As shown, each study intersection operates favorably at LOS A or LOS B overall during the peak hours. Instances of congestion are very minimal and are generally limited to minor queuing on northbound 4th Street at Maine Street, on northbound 4th Street at Broadway, and on eastbound Maine Street (Quincy Memorial Bridge) at 3rd Street. However, our field observations revealed that queues typically cleared during a single green phase at each location. Overall, existing traffic congestion Downtown does not appear to be a concern.

Table 3: Existing Operating Conditions

Intersection		AM Peak Hour	PM Peak Hour
East/West Street	North/South Street	Overall LOS	Overall LOS
Broadway	3rd	B	B
Broadway	4th	A	A
Broadway	5th	A	A
Broadway	6th	A	A
Broadway	7th	B	B
Broadway	8th	A	B
Vermont	3rd	A	A
Vermont	4th	A	A
Hampshire	3rd	A	A
Hampshire	4th	A	A
Maine	3rd	B	B
Maine	4th	B	B
Jersey	3rd	A	A
Jersey	4th	A	A
York	3rd	A	A
York	4th	B	A

Scenario 2 – 2040 Baseline Conditions

The purpose of evaluating 2040 baseline conditions without changes to the transportation network was to benchmark traffic operations as they would be expected for the future design year, assuming only background traffic growth. This scenario serves as a baseline from which to directly compare scenarios with changes to the street network. As noted previously, 2040 traffic volumes were forecasted by applying a 0.5 percent annual growth rate to existing volumes. The 2040 Baseline morning and afternoon peak hour traffic volumes are summarized in **Appendix A**.

The 2040 baseline lane configurations at the study intersections are illustrated in **Appendix B**. 2040 baseline operating conditions are summarized in **Table 4** and in greater detail in **Appendix C**. As shown, each study intersection would continue to operate acceptably at LOS C or better overall during the peak hours, with most locations remaining very favorable at LOS A/B. In fact, overall levels of service would remain unchanged from existing, except for 3 intersections. This is indicative of residual capacity in the existing street network, which enables a 10 percent increase in traffic to be accommodated by 2040 without significant impacts to levels of service.

Table 4: 2040 Baseline Operating Conditions

Intersection		AM Peak Hour	PM Peak Hour
East/West Street	North/South Street	Overall LOS	Overall LOS
Broadway	3rd	B	B
Broadway	4th	A	B
Broadway	5th	A	A
Broadway	6th	A	A
Broadway	7th	B	B
Broadway	8th	A	B
Vermont	3rd	A	A
Vermont	4th	A	A
Hampshire	3rd	A	A
Hampshire	4th	A	A
Maine	3rd	B	B
Maine	4th	B	B
Jersey	3rd	A	A
Jersey	4th	A	A
York	3rd	A	A
York	4th	C	B

Scenario 3 – 2040 Forecasted Conditions New Bridge Only

For Scenario 3, 2040 forecasted conditions were evaluated assuming a new eastbound Mississippi River Bridge landing at York Street. The existing westbound bridge would be retained, and 3rd and 4th Street would remain a one-way couple. Improvements to the Downtown street system were limited to those necessary to accommodate the new bridge. 2040 traffic forecasts for Scenario 3 reflect the influence of the new eastbound Mississippi River Bridge and are summarized in **Appendix A**.

Downtown traffic patterns would not be significantly altered with the new river bridge, though some meaningful volume adjustments are anticipated as follows:

- Traffic volumes would increase on eastbound York Street, particularly between the bridge landing and 4th Street;
- Traffic would increase on northbound 4th Street between York Street and Maine Street, as it becomes part of eastbound US 24;
- Traffic on southbound 3rd Street would decrease between Maine Street and York Street; and
- Traffic on eastbound Maine Street would decrease, particularly between 2nd and 4th Streets, reflecting the removal of the existing Quincy Memorial Bridge and the relocation of eastbound traffic to York Street.

In order to accommodate these traffic pattern changes, the following traffic improvements are recommended to the Downtown street network:

- Install a traffic signal at the intersection of 3rd Street and York Street, which is the location of the new bridge landing;
- Configure the eastbound approach from the new river bridge to provide two through lanes and one right-turn lane at the 3rd Street and York Street intersection;
- Configure the eastbound right-turn movement from the new river bridge onto southbound 3rd Street as a "free" right-turn with a dedicated receiving lane on southbound 3rd Street – although a signalized pedestrian crossing of the "free" movement may be required;
- Install a traffic signal at the intersection of 4th Street and York Street to serve increased eastbound traffic and also to facilitate safer pedestrian crossings in the vicinity of the Oakley-Lindsay Center;
- Maintain the existing lane configuration at the intersection of 4th Street and York Street (with the exception of potential modifications to the east leg to accommodate 2-way traffic as part of a separate City project to convert York Street to two-way);
- Modify Maine Street between 2nd Street and 4th Street to establish a cross-section more consistent with Maine Street to the east, with one through lane in each direction, a center left-turn lane, and on-street parking (where feasible) – excess medians should be removed and traffic signals should be modified accordingly; and
- Optimize traffic signals throughout the Downtown street grid to accommodate the changing traffic patterns.

In addition, this scenario and those following assume that York Street and Jersey Street would be converted to two-way traffic east of 4th Street. The conversion of these City streets is an additional recommendation of the Downtown traffic study, aimed at furthering the goals of Quincy Next. The recommended lane configurations at the study intersections are illustrated in **Appendix B**.

Assuming the implementation of the preceding recommendations, acceptable traffic operations would be maintained throughout the study area. 2040 forecasted operating conditions with the new eastbound river bridge are summarized in **Table 5** and in greater detail in **Appendix C**.

As shown, all intersections would operate at LOS B or better overall during the peak hours, which would exceed the target level of service (LOS C) for this area. The intersections along Broadway would remain effectively unchanged as compared to 2040 baseline conditions. The intersection of 3rd Street and York Street would operate acceptably overall during the morning peak hour as the new river bridge landing. This intersection would not perform as efficiently as others in the Downtown due to the introduction of eastbound bridge traffic in combination with northbound traffic on IL 57 turning right onto York Street (towards 4th Street). However, installing a traffic signal and configuring the intersection as indicated would result in acceptable traffic flows.

Table 5: 2040 Forecasted Operating Conditions New Bridge Only

Intersection		AM Peak Hour	PM Peak Hour
East/West Street	North/South Street	Overall LOS	Overall LOS
Broadway	3rd	B	B
Broadway	4th	A	A
Broadway	5th	A	A
Broadway	6th	A	A
Broadway	7th	B	B
Broadway	8th	A	B
Vermont	3rd	A	A
Vermont	4th	A	A
Hampshire	3rd	A	A
Hampshire	4th	A	A
Maine	3rd	A	A
Maine	4th	B	B
Jersey	3rd	A	A
Jersey	4th	A	A
York	3rd	B	B
York	4th	B	B

Scenario 4 – 2040 Forecasted Conditions New Bridge + One-Way Conversions

For Scenario 4, 2040 forecasted conditions were evaluated assuming a new eastbound Mississippi River Bridge landing at York Street and the conversion of 3rd and 4th Street from one-way to two-way traffic. 3rd Street was assumed to become the state route for IL 57, whereas 4th Street would become a City street. The intent would be for regional traffic including trucks to utilize 3rd Street, while 4th Street would primarily serve local traffic. Note that 3rd and 4th Street would be two-way to the south of Broadway only. Heavier traffic on 3rd Street north of Broadway could adversely impact quality of life for residents living along 3rd. Hence, eliminating the one-way couple to the north is not recommended at this time.

2040 traffic forecasts for Scenario 4 reflect both the influence of a new eastbound Mississippi River Bridge as well as the impact of the one-way to two-way street conversions and are summarized in **Appendix A**. The primary traffic volume adjustment anticipates approximately 80 percent of all north-south traffic in the combined 3rd/4th Street corridor gravitating to 3rd Street assuming a two-way configuration. The remaining 20 percent was assumed to use 4th Street.

Scenario 4 confirms that the recommended one-way to two-way street conversions would function acceptably in combination with a new river bridge landing at York Street. However, the following traffic improvements are recommended to the Downtown street network in order to accommodate the resulting changes in traffic patterns and maintain adequate levels of service:

- Configure 3rd Street between York Street and Broadway for 4 traffic lanes (one southbound lane, two northbound lanes, and one center two-way left-turn lane);
- Configure 4th Street between York Street and Broadway for 2 traffic lanes (one in each direction) plus on-street parking;
- Install a traffic signal at the intersection of 3rd Street and York Street with the following lane configuration:
    - Eastbound: one left-turn lane, one shared left-turn/through lane, and one right-turn lane for a "free" right-turn movement onto southbound IL 57
    - Westbound: one right-turn lane (left-turns prohibited)
    - Northbound: two through lanes and one right-turn lane
    - Southbound: one left-turn lane and one through lane
- Restrict westbound traffic on York Street at 3rd Street to right-turn only (with a channelizing island) to operate as an overlap phase with the protected southbound left-turn movement, as this would facilitate efficient cycling of the traffic signal;
- Provide pedestrian crosswalks and signalization across the west, south, and east legs of the 3rd Street and York Street intersection – this will require a signalized pedestrian crossing of the "free" eastbound right-turn movement;
- Reduce the size of the 4th Street and York Street intersection to provide one approach lane from all directions and configure as a roundabout to discourage truck traffic;
- Consider installing a traffic signal at 3rd Street and Hampshire Street or at 3rd Street and Vermont Avenue to accommodate pedestrian and bicycle crossings of 3rd Street as part of enhancing connectivity between Downtown and the riverfront – this should be subject of further coordination with the ongoing Riverfront Master Plan;
- Install a channelized right-turn movement for traffic on northbound 3rd Street at Broadway to accommodate regional traffic between IL 57 and IL 104, including trucks (right-of-way acquisition in the intersection's southeast quadrant appears necessary);

- Convert the left-hand through lane on eastbound Broadway (IL 104) at 4th Street to become a second dedicated left-turn lane to serve northbound traffic jogging from 3rd Street back to 4th Street, given the continuation of the one-way couple to the north of Broadway;
- Modify the northbound approach on 4th Street at Broadway to provide one right-turn lane, one through lane, and one left-turn lane in order to accommodate the introduction of southbound traffic on 4th Street;
- Provide a dedicated left-turn lane and protected-plus-permissive phasing for the new westbound left-turn movement from Broadway to southbound 4th Street; and
- Optimize traffic signals throughout the Downtown street grid to accommodate the changing traffic patterns.

The recommended lane configurations at the study intersections are illustrated in **Appendix B**. Assuming the implementation of the preceding recommendations, acceptable traffic operations would be maintained throughout the Downtown street grid. 2040 forecasted operating conditions with the new eastbound river bridge and one-way to two-way street conversions are summarized in **Table 6** and in greater detail in **Appendix C**.

As shown, all study intersections would operate at the target level of service (LOS C) or better during the peak hours. Most intersections would continue to operate favorably at LOS A or LOS B. LOS C operations would be limited to the 3rd Street and York Street intersection as well as intersections on Broadway at 3rd Street and at 4th Street. These intersections would experience additional turning movements and more complex signal operations as a result of the street modifications, though each would operate at acceptable levels of service during the peak hours.

Table 6: 2040 Forecasted Operating Conditions New Bridge + One-Way Conversions

Intersection		AM Peak Hour	PM Peak Hour
East/West Street	North/South Street	Overall LOS	Overall LOS
Broadway	3rd	C	C
Broadway	4th	C	B
Broadway	5th	A	A
Broadway	6th	A	A
Broadway	7th	B	B
Broadway	8th	A	B
Vermont	3rd	A	A
Vermont	4th	A	A
Hampshire	3rd	A	A
Hampshire	4th	B	B
Maine	3rd	B	A
Maine	4th	B	B
Jersey	3rd	A	A
Jersey	4th	A	A
York	3rd	C	B
York	4th	A	A

Scenario 5 – 2040 Forecasted Conditions One-Way Conversions Only

For Scenario 5, 2040 forecasted conditions were evaluated assuming only the conversion of 3rd and 4th Streets to two-way traffic. The existing Quincy Memorial Bridge, with its landing at Maine Street, was assumed to remain in place. This scenario is envisioned as a potential interim condition, where the one-way street conversions are implemented prior to the completion of the new river bridge.

2040 traffic forecasts for Scenario 5 reflect the influence of the one-way to two-way street conversions assuming the existing Mississippi River bridges and are summarized in **Appendix A**. Eastbound traffic from Missouri would continue to land at Maine Street. However, the regional traffic from Missouri destined to the north on US 24 or the east on IL 104 would turn left at 3rd Street instead of at 4th Street as they do today. 4th Street was assumed to carry more local traffic as a City street.

Scenario 5 confirms that the recommended one-way to two-way street conversions would function acceptably in an interim condition assuming the existing Quincy Memorial Bridge remains in place. However, the following traffic improvements are recommended to the Downtown street network in order to accommodate the resulting changes in traffic patterns and maintain adequate levels of service:

- Configure 3rd Street between York Street and Maine Street for 3 traffic lanes (one through lane in each direction plus a center alternating left-turn lane) with on-street parking prohibited;
- Configure 3rd Street between Maine Street and Broadway for 4 traffic lanes (one through lane southbound, a center alternating left-turn lane, and two through lanes northbound) with on-street parking prohibited;
- Configure 4th Street between York Street and Broadway for 2 traffic lanes (one in each direction) plus on-street parking;
- Reduce the size of the 4th Street and York Street intersection to provide one approach lane from all directions and configure as an all-way stop or roundabout in anticipation of the future river bridge landing at York Street;
- Convert York Street between 3rd Street and 4th Street to two-way traffic with one through lane in each direction plus a center alternating left-turn lane;
- Convert the northbound 3rd Street approach to York Street from dual right-turn lanes to one through lane and one right-turn lane and remove the raised median in the intersection;
- Reconfigure the eastbound approach of Maine Street (from the Quincy Memorial Bridge) at 3rd Street to include one dedicated left-turn lane, one through lane, and one right-turn lane and provide protected-plus-permissive phasing for all left-turn movements;
- Consider installing a traffic signal at 3rd Street and Hampshire Street or at 3rd Street and Vermont Avenue to accommodate pedestrian and bicycle crossings of 3rd Street as part of enhancing connectivity between Downtown and the riverfront – this should be subject of further coordination with the ongoing Riverfront Master Plan;
- Install a channelized right-turn movement for traffic on northbound 3rd Street at Broadway to accommodate regional traffic between IL 57 and IL 104, including trucks (right-of-way acquisition in the intersection's southeast quadrant appears necessary);
- Convert the left-hand through lane on eastbound Broadway (IL 104) at 4th Street to become a second dedicated left-turn lane to serve northbound traffic jogging from 3rd Street back to 4th Street, given the continuation of the one-way couple to the north of Broadway;

- Modify the northbound approach on 4th Street at Broadway to provide one right-turn lane, one through lane, and one left-turn lane in order to accommodate the introduction of southbound traffic on 4th Street;
- Provide a dedicated left-turn lane and protected-plus-permissive phasing for the new westbound left-turn movement from Broadway to southbound 4th Street; and
- Optimize traffic signals throughout the Downtown street grid to accommodate the changing traffic patterns.

The recommended lane configurations at the study intersections are illustrated in **Appendix B**. Assuming the implementation of the preceding recommendations, acceptable traffic operations would be maintained throughout the Downtown street grid. 2040 forecasted operating conditions with the one-way to two-way street conversions are summarized in **Table 7** and in greater detail in **Appendix C**.

As shown, all study intersections would operate at the target level of service (LOS C) or better during the peak hours. Most intersections would continue to operate favorably at LOS A or LOS B. LOS C operations would be limited to the Broadway intersections with 3rd Street and 4th Street as well as Maine Street at 3rd Street. These intersections would experience additional turning movements and more complex signal operations, though each would operate at acceptable levels of service during the peak hours.

Table 7: 2040 Forecasted Operating Conditions One-Way Conversions Only

Intersection		AM Peak Hour	PM Peak Hour
East/West Street	North/South Street	Overall LOS	Overall LOS
Broadway	3rd	C	C
Broadway	4th	C	B
Broadway	5th	A	A
Broadway	6th	A	A
Broadway	7th	B	B
Broadway	8th	A	B
Vermont	3rd	A	A
Vermont	4th	A	A
Hampshire	3rd	A	A
Hampshire	4th	B	B
Maine	3rd	C	C
Maine	4th	B	B
Jersey	3rd	A	A
Jersey	4th	A	A
York	3rd	A	A
York	4th	A	A

Conclusion

This technical memorandum summarizes the Downtown Plan elements pertaining to IDOT routes and included supporting traffic forecasts and traffic operational performance measures. The study area includes 3rd and 4th Streets (IL 57/US 24) between York Street & Broadway as well as Broadway (IL 104) between 3rd and 8th Streets. The Downtown Traffic Study evaluated traffic operating conditions during the weekday morning (AM) and afternoon (PM) peak hours. The study includes 5 analysis scenarios, including various combinations of future conditions both with and without the new Mississippi River Bridge and 3rd/4th Street conversions to two-way traffic.

The following was concluded from the study:

- Each study intersection currently operates favorably at LOS A or LOS B overall during the peak hours. Instances of Downtown congestion are very minimal. Based on this information, a target of LOS C or better was established for the study area for future scenarios.

- 2040 forecasted conditions were evaluated assuming a new eastbound Mississippi River Bridge landing at York Street and 3rd and 4th Streets remaining a one-way couple. Assuming the implementation of traffic improvements primarily along York Street itself, the study concludes that the new river bridge could be accommodated at York Street without adversely impacting traffic within the Downtown area.

- 2040 forecasted conditions were evaluated assuming a new eastbound Mississippi River Bridge landing at York Street AND the conversion of 3rd and 4th Street from one-way to two-way traffic. The study confirms the recommended one-way to two-way street conversions would function acceptably in combination with the new river bridge landing at York Street. However, a more extensive set of traffic improvements would be required to accommodate the resulting changes in traffic patterns and maintain adequate levels of service.

- As a potential interim condition, 2040 forecasted conditions were evaluated assuming only the conversion of 3rd and 4th Streets from one-way to two-way traffic. The existing Quincy Memorial Bridge, with its landing at Maine Street, was assumed to remain in place. The study confirms the recommended one-way to two-way street conversions would function acceptably in combination with the existing eastbound bridge remaining at Maine Street. The traffic improvements needed to maintain adequate levels of service would be similar to those required for the new bridge at York Street.

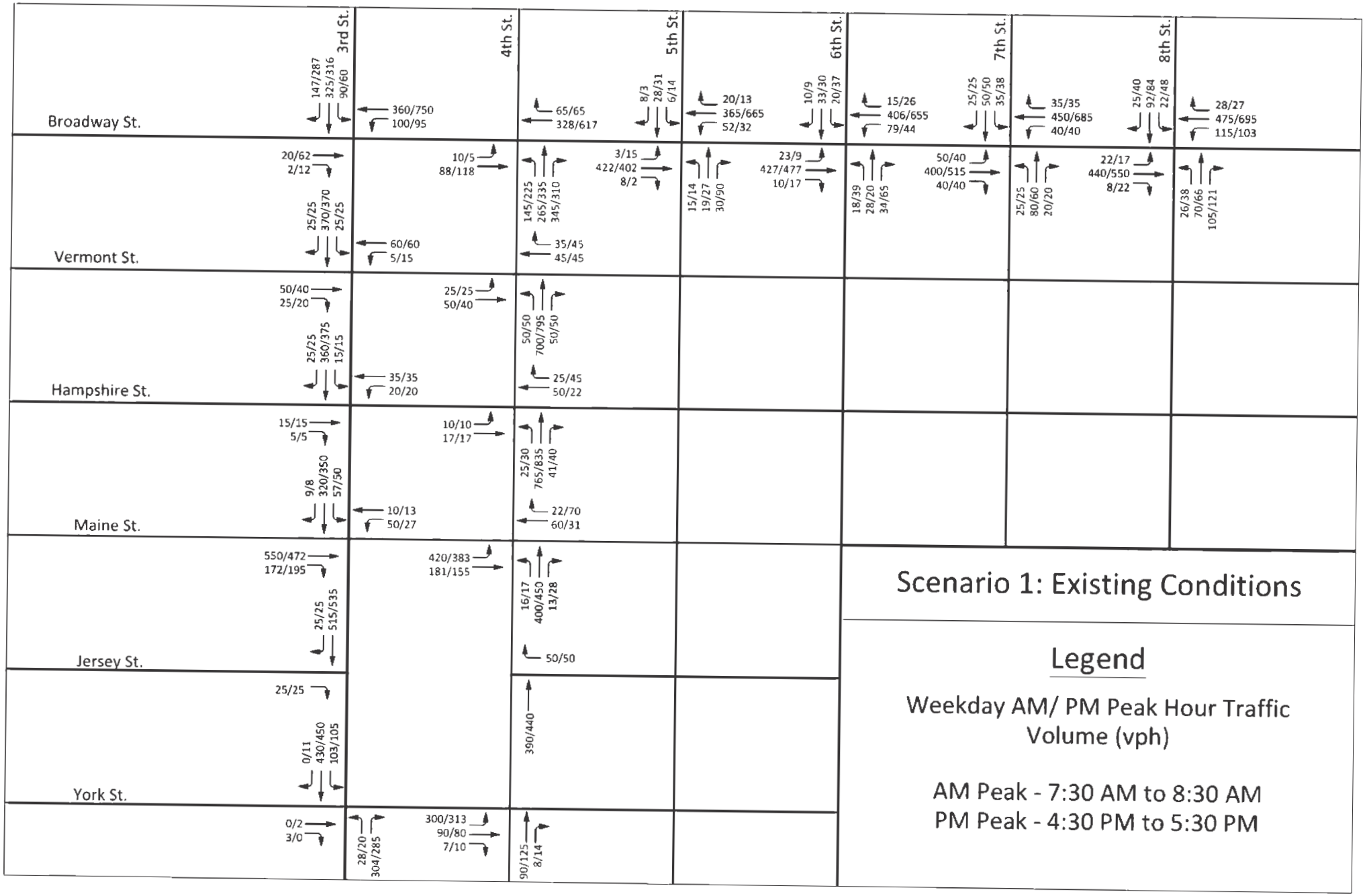
In light of the preceding findings, **this study recommends the conversion of 3rd and 4th Streets from one-way to two-way traffic between York Street and Broadway (IL 104)**. Additionally, this study finds the new eastbound Mississippi River Bridge to function adequately at York Street and to not impact Downtown traffic flows, provided that the improvements recommended for Scenario 3 are implemented.

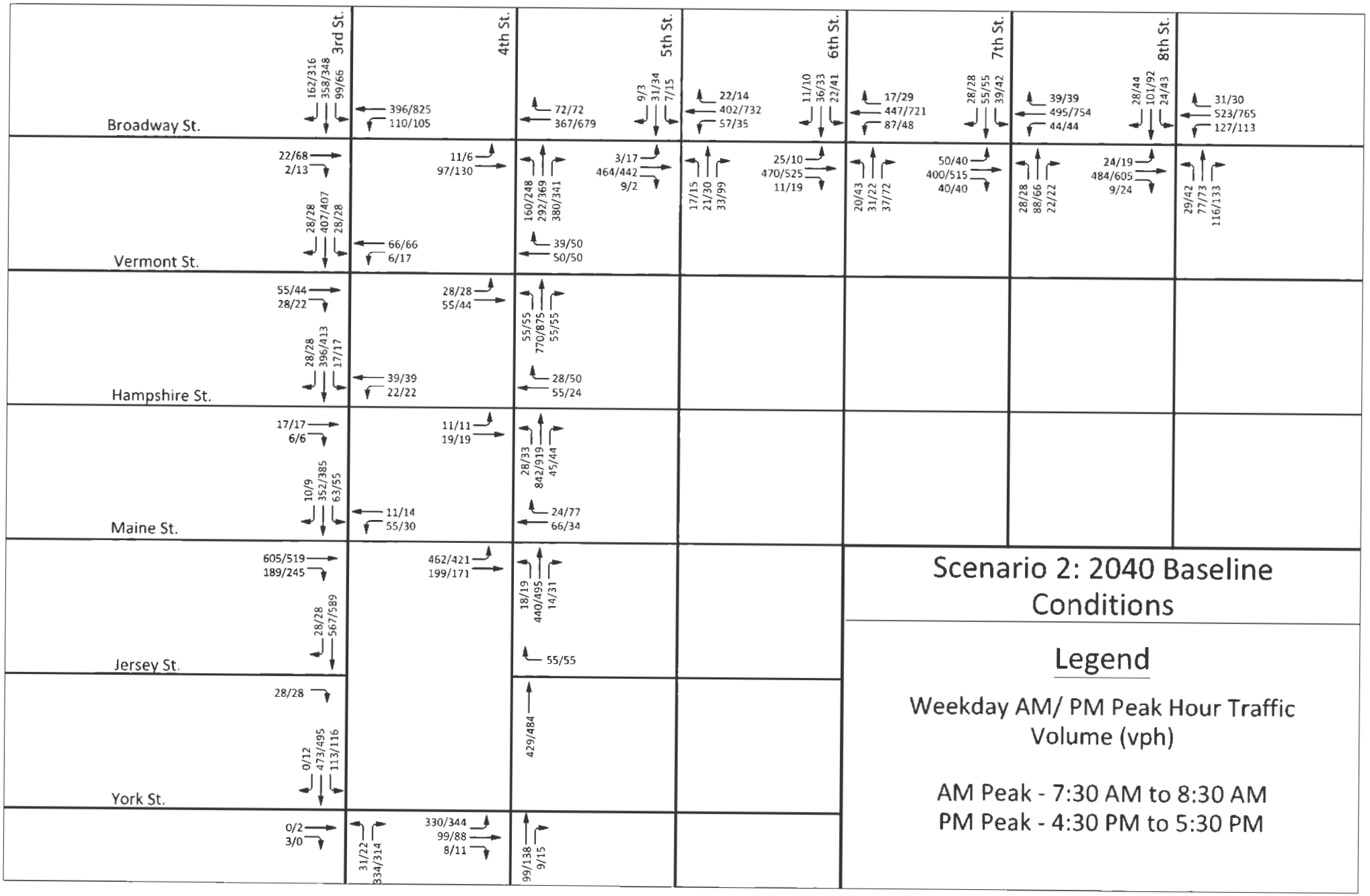
APPENDIX

Appendix A: Traffic Volume Exhibits

Appendix B: Lane Configuration Graphics

Appendix C: Intersection Operating Conditions


3rd St.
4th St.
5th St.
6th St.
7th St.
8th St.
Broadway St.
Vermont St.
Hampshire St.
Maine St.
Jersey St.
York St.
147/287
325/316
90/60
360/750
100/95
65/65
328/617
8/3
28/31
6/14
20/13
365/665
52/32
10/9
33/30
20/37
15/26
406/655
79/44
25/25
50/50
35/38
35/35
450/685
40/40
25/40
92/84
22/48
28/27
475/695
115/103
20/62
2/12
25/25
370/370
25/25
10/5
88/118
60/60
5/15
145/225
265/335
345/310
3/15
422/402
8/2
35/45
45/45
15/14
19/27
30/90
23/9
427/477
10/17
18/39
28/20
34/65
50/40
400/515
40/40
25/25
80/60
20/20
22/17
440/550
8/22
26/38
70/66
105/121
50/40
25/20
25/25
360/375
15/15
25/25
50/40
35/35
20/20
50/50
700/795
50/50
25/45
50/22
15/15
5/5
9/8
320/350
57/50
10/10
17/17
10/13
50/27
25/30
765/835
41/40
22/70
60/31
550/472
172/195
25/25
515/535
420/383
181/155
16/17
400/450
13/28
50/50
25/25
0/11
430/450
103/105
390/440
0/2
3/0
28/20
304/285
300/313
90/80
7/10
90/125
8/14
Scenario 1: Existing Conditions
Legend
Weekday AM/ PM Peak Hour Traffic Volume (vph)
AM Peak - 7:30 AM to 8:30 AM
PM Peak - 4:30 PM to 5:30 PM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Broadway St.
Vermont St.
Hampshire St.
Maine St.
Jersey St.
York St.
162/316
358/348
99/66
396/825
110/105
72/72
367/679
9/3
31/34
7/15
22/14
402/732
57/35
11/10
36/33
22/41
17/29
447/721
87/48
28/28
55/55
39/42
39/39
495/754
44/44
28/44
101/92
24/43
31/30
523/765
127/113
22/68
2/13
28/28
407/407
28/28
66/66
6/17
11/6
97/130
160/248
292/369
380/341
39/50
50/50
3/17
464/442
9/2
17/15
21/30
33/99
25/10
470/525
11/19
20/43
31/22
37/72
50/40
400/515
40/40
28/28
88/66
22/22
24/19
484/605
9/24
29/42
77/73
116/133
55/44
28/22
28/28
396/413
17/17
39/39
22/22
28/28
55/44
55/55
770/875
55/55
28/50
55/24
17/17
6/6
10/9
352/385
63/55
11/14
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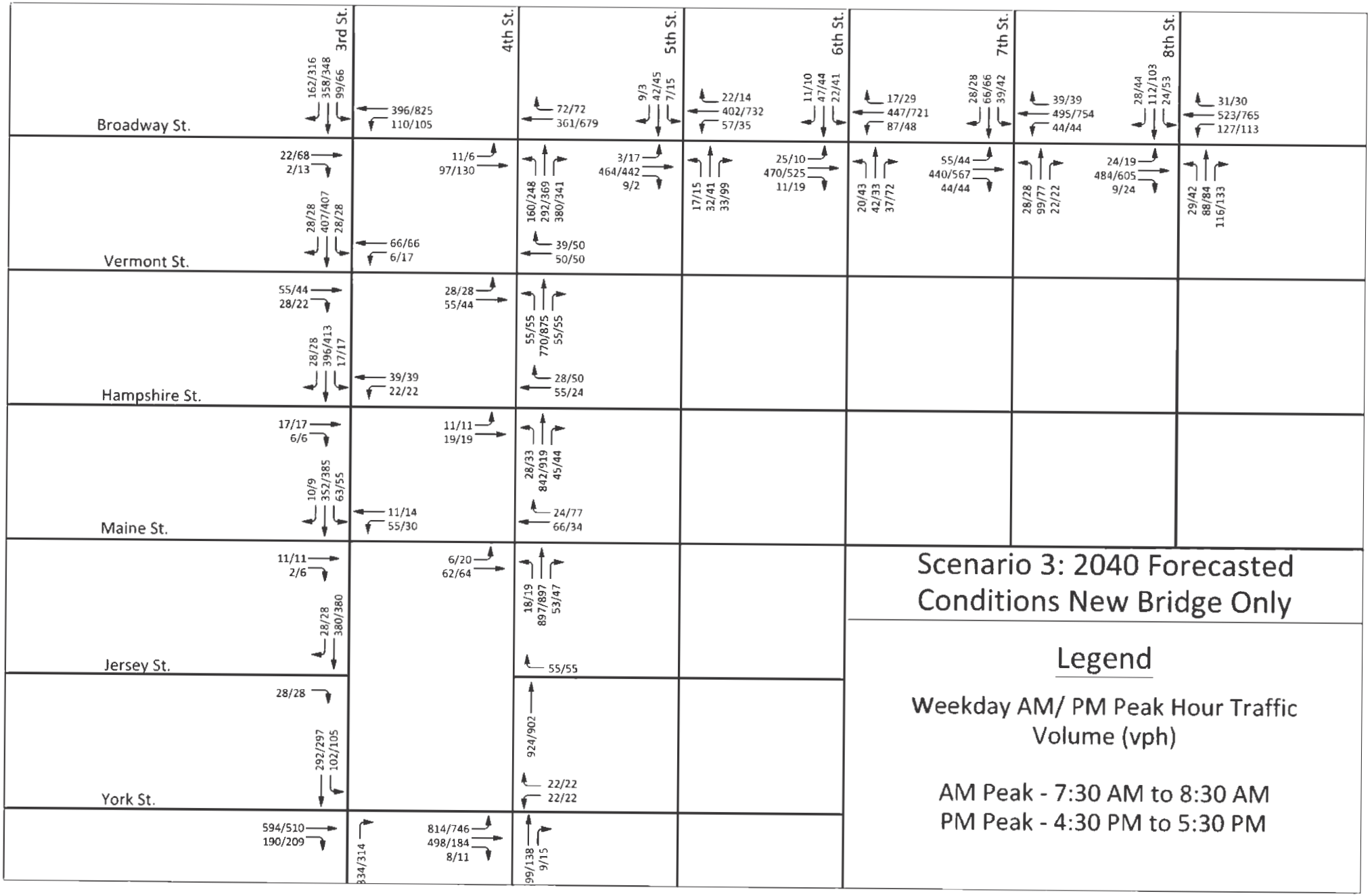
11/11
19/19
28/33
842/919
45/44
24/77
66/34
605/519
189/245
28/28
567/589
462/421
199/171
18/19
440/495
14/31
55/55
28/28
0/12
473/495
113/116
429/484
0/2
3/0
31/22
334/314
330/344
99/88
8/11
99/138
9/15
Scenario 2: 2040 Baseline Conditions
Legend
Weekday AM/ PM Peak Hour Traffic Volume (vph)
AM Peak - 7:30 AM to 8:30 AM
PM Peak - 4:30 PM to 5:30 PM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Broadway St.
Vermont St.
Hampshire St.
Maine St.
Jersey St.
York St.
162/316
358/348
99/66
396/825
110/105
72/72
361/679
9/3
42/45
7/15
22/14
402/732
57/35
11/10
47/44
22/41
17/29
447/721
87/48
28/28
66/66
39/42
39/39
495/754
44/44
28/44
112/103
24/53
31/30
523/765
127/113
22/68
2/13
28/28
407/407
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160/248
292/369
380/341
39/50
50/50
3/17
464/442
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17/15
32/41
33/99
25/10
470/525
11/19
20/43
42/33
37/72
55/44
440/567
44/44
28/28
99/77
22/22
24/19
484/605
9/24
29/42
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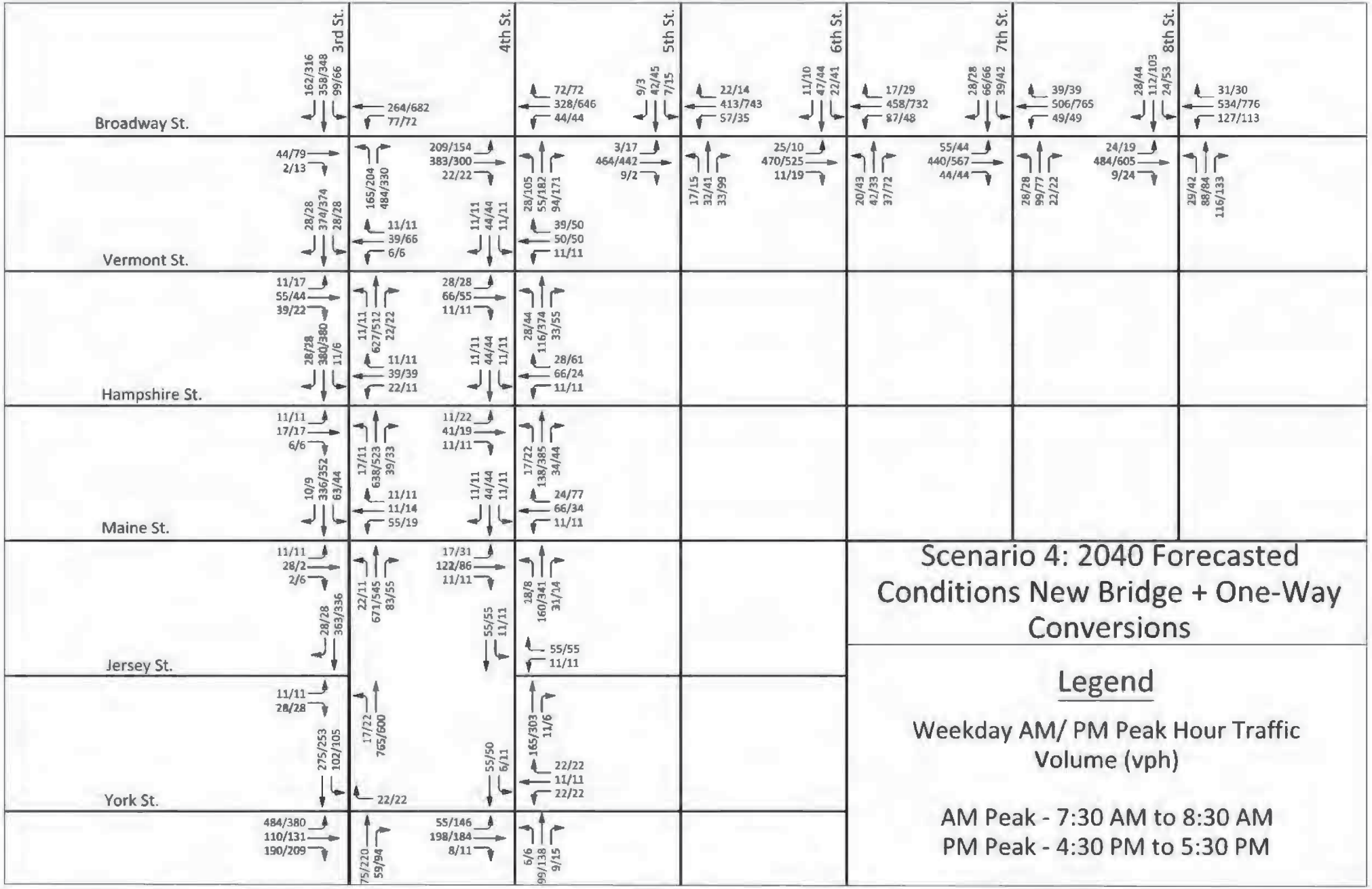
11/11
2/6
28/28
380/380
6/20
62/64
18/19
897/897
53/47
55/55
28/28
292/297
102/105
924/902
22/22
22/22
594/510
190/209
334/314
814/746
498/184
8/11
99/138
9/15
Scenario 3: 2040 Forecasted Conditions New Bridge Only
Legend
Weekday AM/ PM Peak Hour Traffic Volume (vph)
AM Peak - 7:30 AM to 8:30 AM
PM Peak - 4:30 PM to 5:30 PM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6th St.
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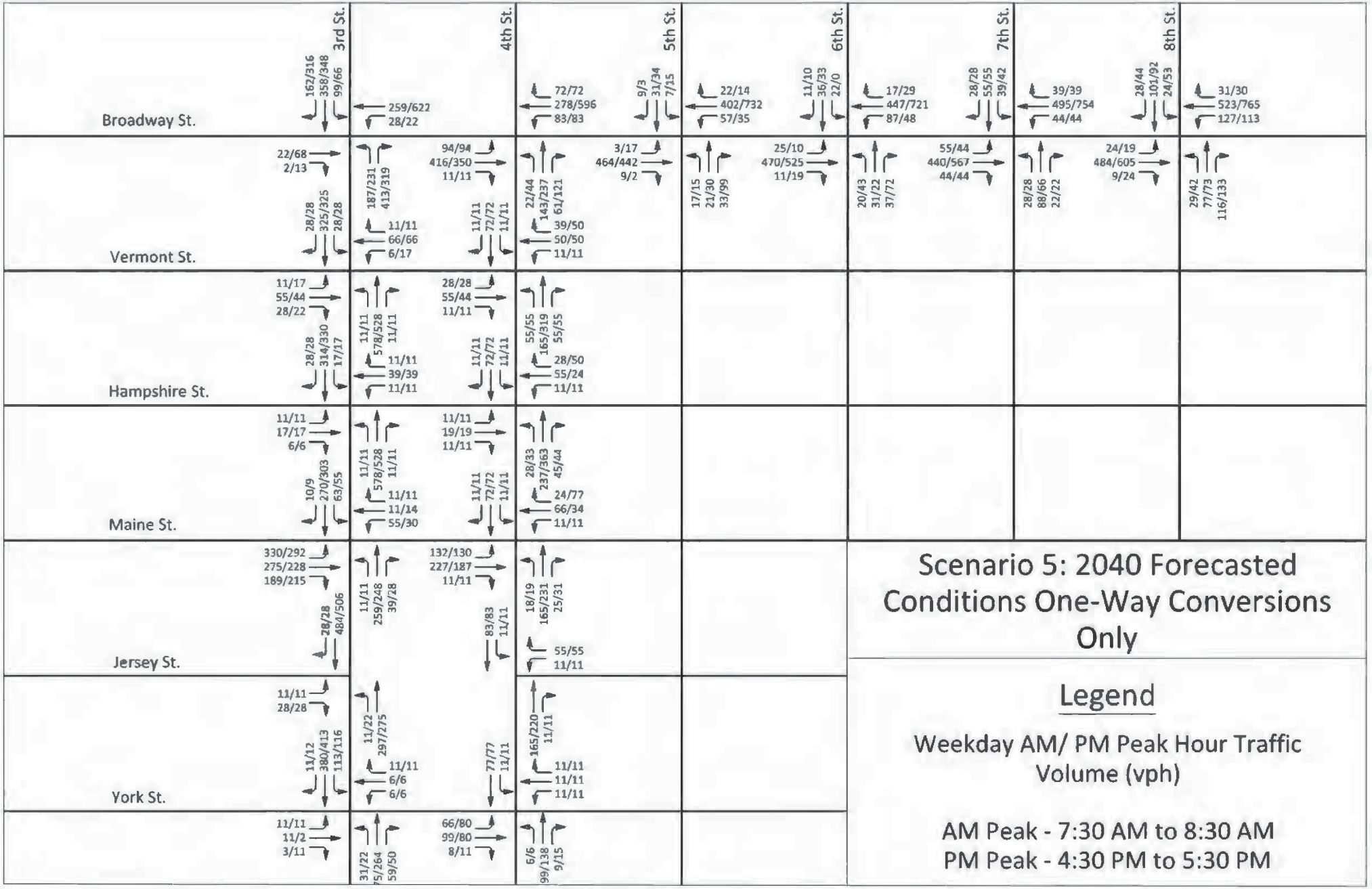
8th St.
Broadway St.
Vermont St.
Hampshire St.
Maine St.
Jersey St.
York St.
Scenario 4: 2040 Forecasted Conditions New Bridge + One-Way Conversions
Legend
Weekday AM/ PM Peak Hour Traffic Volume (vph)
AM Peak - 7:30 AM to 8:30 AM
PM Peak - 4:30 PM to 5:30 PM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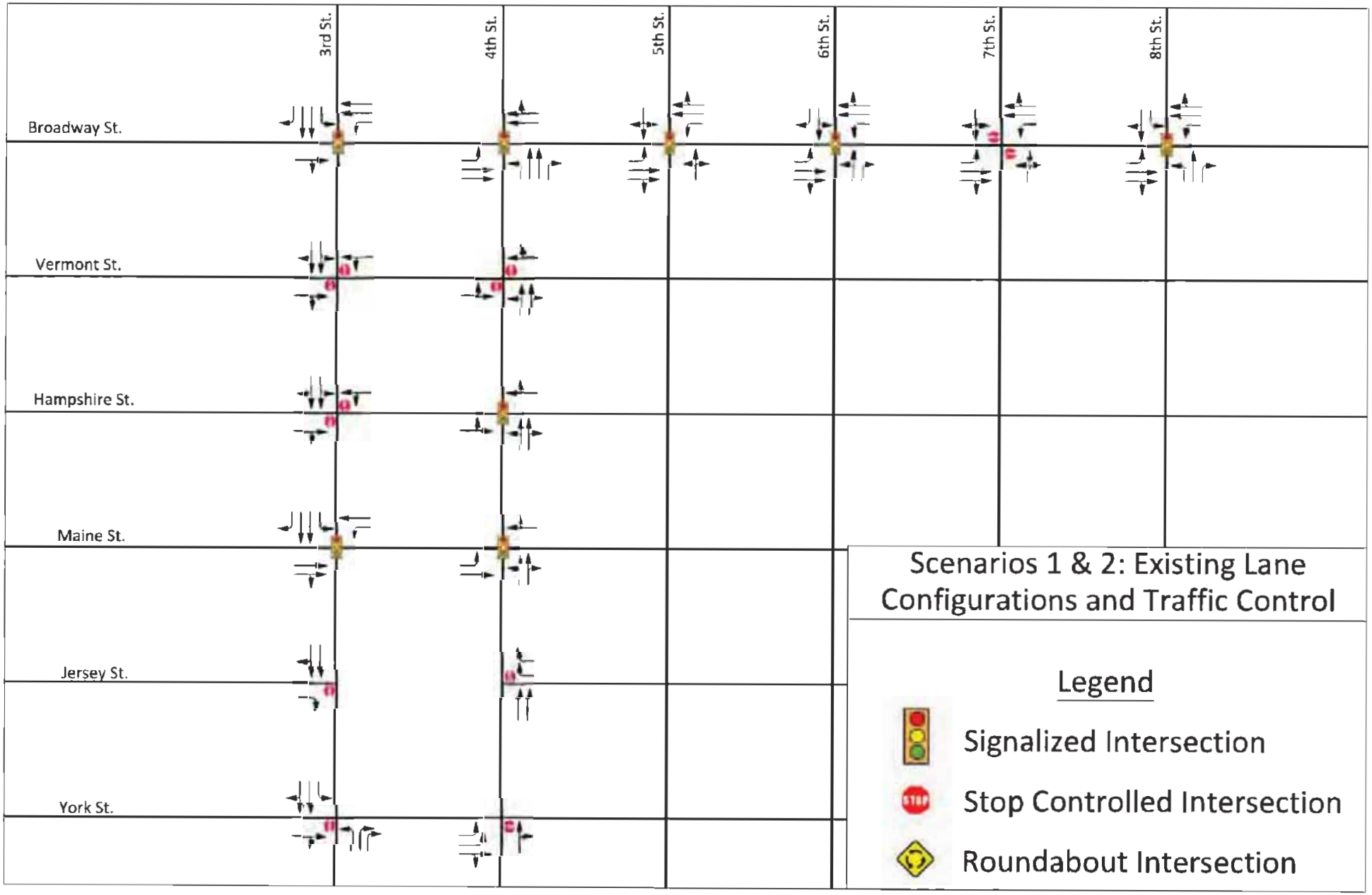
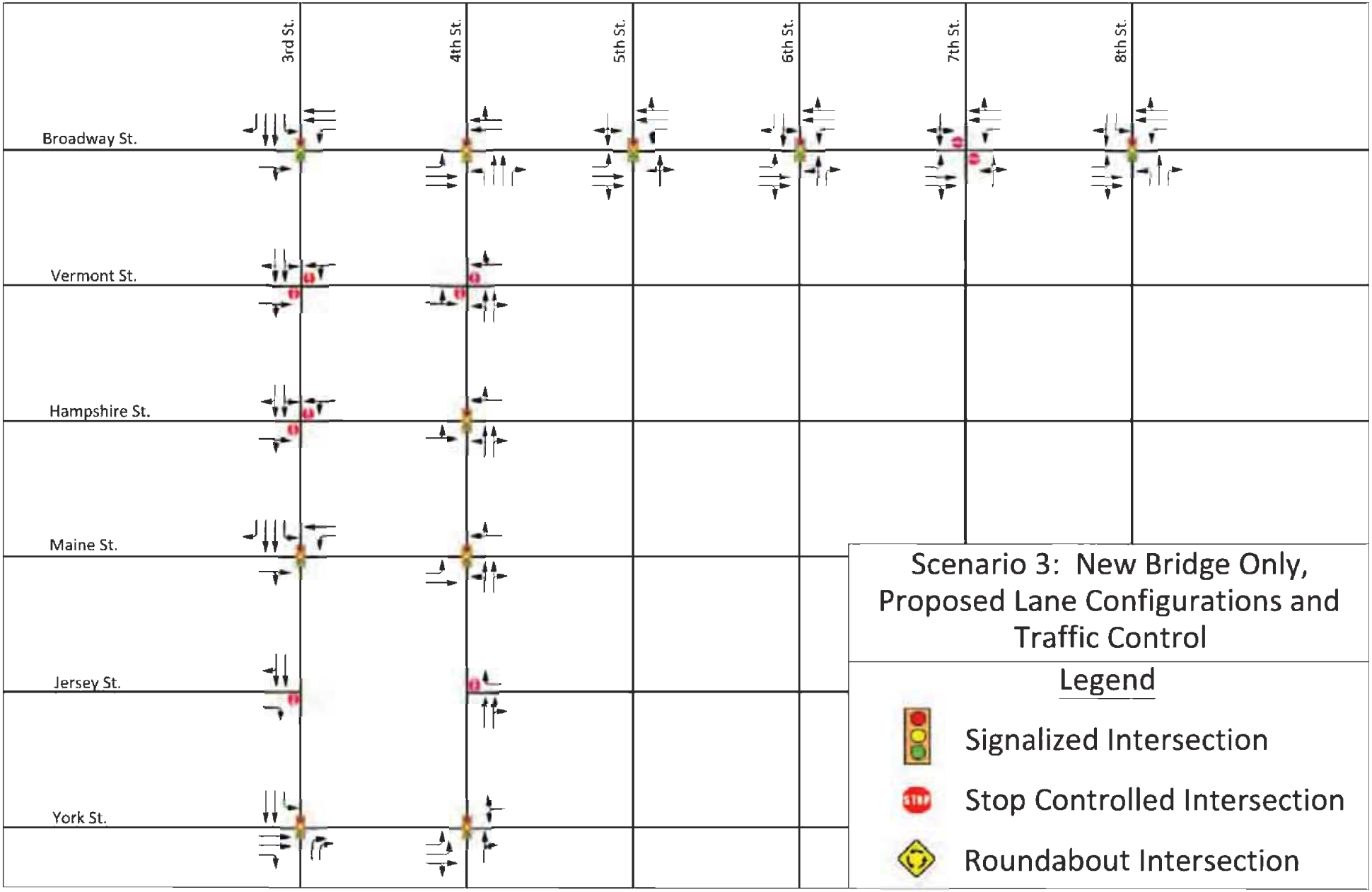
5th St.
6th St.
7th St.
8th St.
Broadway St.
Vermont St.
Hampshire St.
Maine St.
Jersey St.
York St.
Scenario 5: 2040 Forecasted Conditions One-Way Conversions Only
Legend
Weekday AM/ PM Peak Hour Traffic Volume (vph)
AM Peak - 7:30 AM to 8:30 AM
PM Peak - 4:30 PM to 5:30 PM


3rd St.
4th St.
5th St.
6th St.
7th St.
8th St.
Broadway St.
Vermont St.
Hampshire St.
Maine St.
Jersey St.
York St.
Scenarios 1 & 2: Existing Lane Configurations and Traffic Control
Legend
Signalized Intersection
Stop Controlled Intersection
Roundabout Intersection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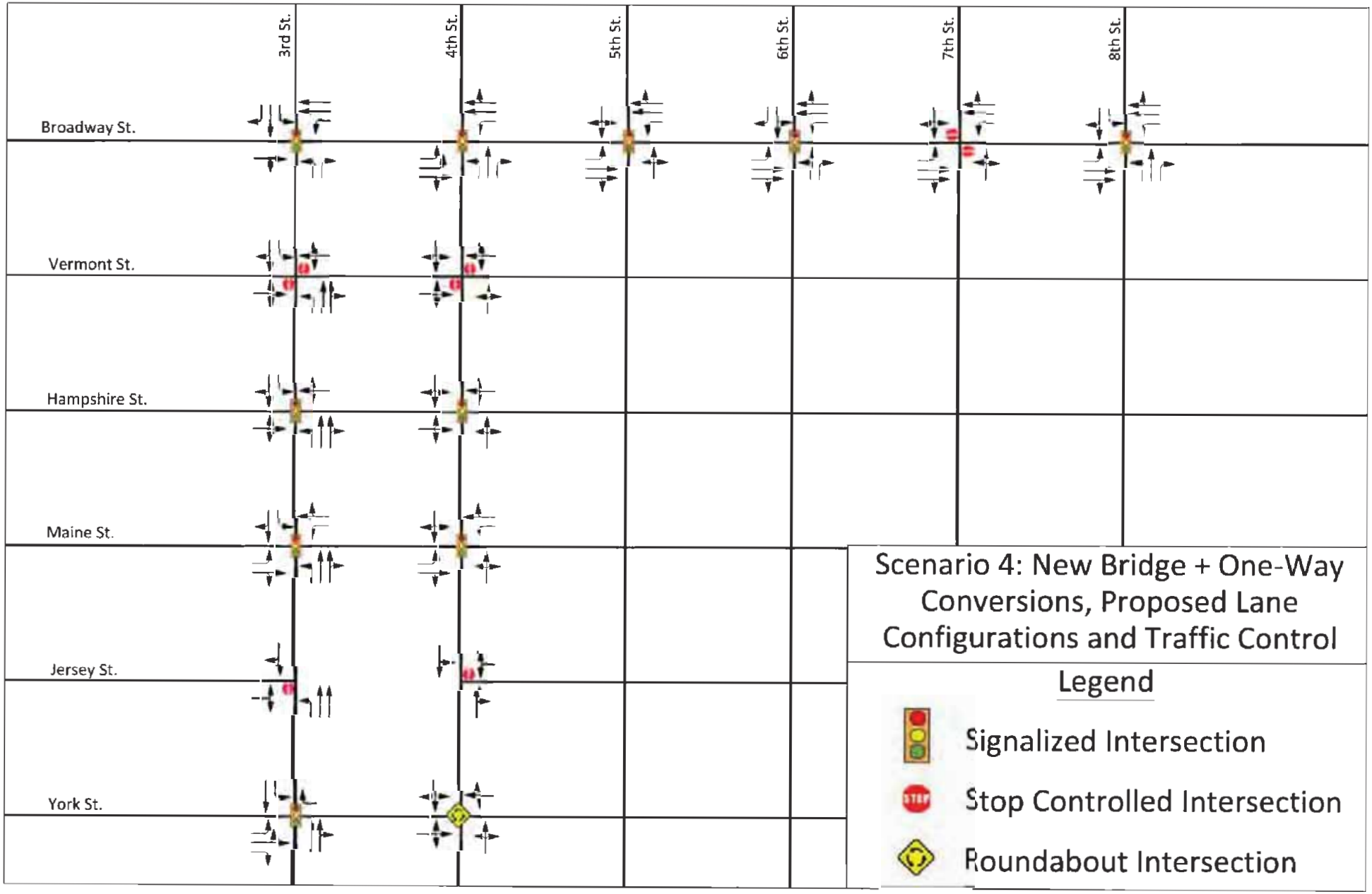
4th St.
5th St.
6th St.
7th St.
8th St.
Broadway St.
Vermont St.
Hampshire St.
Maine St.
Jersey St.
York St.
Scenario 3: New Bridge Only, Proposed Lane Configurations and Traffic Control
Legend
Signalized Intersection
Stop Controlled Intersection
Roundabout Intersection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5th St.
6th St.
7th St.
8th St.
Broadway St.
Vermont St.
Hampshire St.
Maine St.
Jersey St.
York St.
Scenario 4: New Bridge + One-Way Conversions, Proposed Lane Configurations and Traffic Control
Legend
Signalized Intersection
Stop Controlled Intersection
Roundabout Intersection

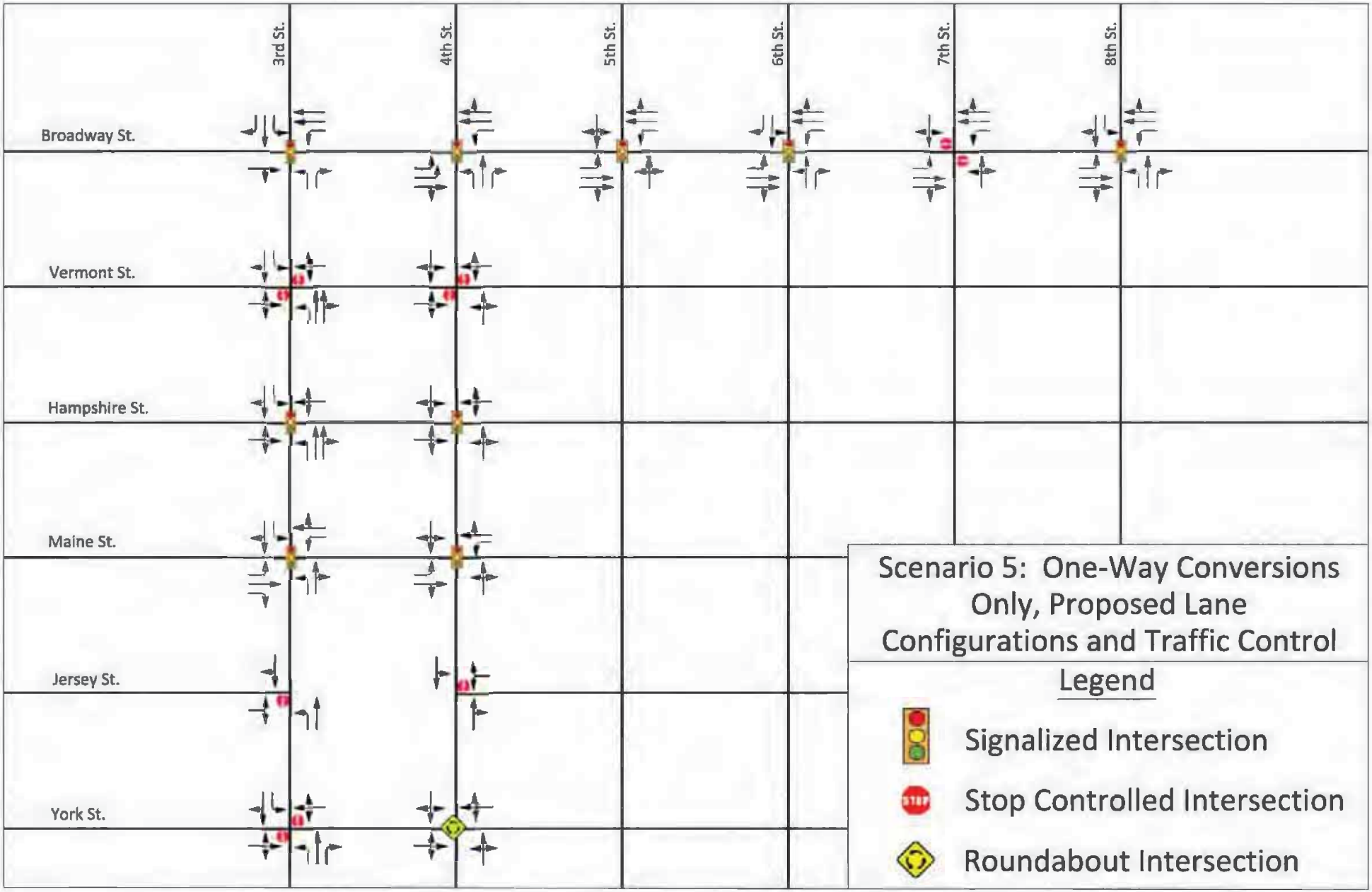
3rd St.
4th St.
5th St.
6th St.
7th St.
8th St.
Broadway St.
Vermont St.
Hampshire St.
Maine St.
Jersey St.
York St.
Scenario 5: One-Way Conversions Only, Proposed Lane Configurations and Traffic Control
Legend
Signalized Intersection
Stop Controlled Intersection
Roundabout Intersection

Table A1: Scenario 1 Existing LOS, Delay, and 95th Queue Length								
Intersection	Approach	Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (sec)	95% Queue (ft)	LOS	Delay (sec)	95% Queue (ft)
Broadway Street & 3rd Street	EB	TR	C	20.8	22	C	28.3	58
		Overall	C	20.8	22	C	28.3	58
	SB	L	B	17.1	51	B	15.6	38
		R	A	5.5	22	C	23.0	118
		T	B	19.6	76	B	19.3	76
		Overall	B	15.5	76	C	20.6	118
	WB	L	B	11.9	46	B	19.1	72
		T	A	7.3	41	A	8.3	111
		Overall	A	8.3	46	A	9.5	111
	Overall		B	12.9	76	B	15.7	118
Broadway Street & 4th Street	EB	L	A	2.9	3	B	11.2	7
		T	A	3.0	7	B	14.0	44
		Overall	A	3.0	7	B	13.9	44
	NB	L	B	13.0	86	C	22.2	134
		R	A	7.1	108	A	5.9	56
		T	B	11.5	70	B	15.8	90
		Overall	A	9.8	108	B	13.9	134
	WB	TR	A	3.6	8	A	2.2	10
		Overall	A	3.6	8	A	2.2	10
	Overall		A	7.3	108	A	9.3	134
Broadway Street & 5th Street	EB	L	A	2.3	1	A	2.1	2
		TR	A	6.4	63	A	5.6	60
		Overall	A	6.4	63	A	5.5	60
	NB	LTR	B	15.4	41	B	15.2	61
		Overall	B	15.4	41	B	15.2	61
	SB	LTR	B	19.1	35	C	25.6	46
		Overall	B	19.1	35	C	25.6	46
	WB	L	A	1.5	5	A	1.2	3
		TR	A	1.7	13	A	2.0	18
		Overall	A	1.7	13	A	2.0	18
	Overall		A	5.4	63	A	5.3	61
Broadway Street & 6th Street	EB	L	A	3.7	8	A	1.6	1
		TR	A	7.2	45	A	3.4	30
		Overall	A	7.0	45	A	3.4	30
	NB	LT	C	22.6	41	C	28.3	55
		R	A	2.5	0	A	7.6	0
		Overall	B	14.1	41	B	17.4	55
	SB	LT	C	23.1	46	C	28.8	61
		R	A	0.6	0	A	0.7	0
		Overall	B	19.5	46	C	25.4	61
	WB	L	A	2.7	6	A	1.8	4
		TR	A	3.8	46	A	4.7	87
		Overall	A	3.6	46	A	4.5	87
	Overall		A	6.7	46	A	6.4	87

Table A1: Scenario 1 Existing LOS, Delay, and 95th Queue Length								
Intersection	Approach	Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (sec)	95% Queue (ft)	LOS	Delay (sec)	95% Queue (ft)
Broadway Street & 8th Street	EB	L	A	1.1	2	A	2.0	1
		TR	A	5.8	54	A	8.3	60
		Overall	A	5.6	54	A	8.1	60
	NB	L	C	22.9	29	C	28.6	41
		R	A	3.8	25	A	4.2	29
		T	C	23.5	57	C	26.9	59
		Overall	B	13.2	57	B	14.9	59
	SB	L	C	22.3	24	C	29.3	46
		TR	C	25.0	74	C	29.0	82
		Overall	C	24.6	74	C	29.1	82
	WB	L	A	4.4	25	A	4.0	22
		TR	A	5.5	81	A	6.4	127
		Overall	A	5.3	81	A	6.1	127
	Overall		A	8.5	81	B	10.2	127
Hampshire Street & 4th Street	EB	LT	C	21.6	29	E	70.1	51
		Overall	C	21.6	29	E	70.1	51
	NB	LTR	A	1.7	32	A	3.7	160
		Overall	A	1.7	32	A	3.7	160
	WB	TR	C	21.4	49	D	35.8	65
		Overall	C	21.4	49	D	35.8	65
	Overall		A	3.9	49	A	7.7	160
Maine Street & 3rd Street	EB	TR	B	19.2	175	B	19.4	140
		Overall	B	19.2	175	B	19.4	140
	SB	L	A	9.9	19	B	14.4	37
		R	A	0.1	0	A	0.4	1
		T	B	10.4	37	B	14.4	94
		Overall	B	10.1	37	B	14.1	94
	WB	L	C	20.6	20	C	31.1	20
		T	B	15.4	5	C	28.8	10
		Overall	B	19.7	20	C	30.3	20
	Overall		B	16.0	175	B	17.7	140
Maine Street & 4th Street	EB	L	A	5.7	9	A	6.7	16
		T	A	1.8	4	A	2.9	7
		Overall	A	4.5	9	A	5.6	16
	NB	LTR	C	34.5	122	C	28.9	141
		Overall	C	34.5	122	C	28.9	141
	WB	TR	B	17.7	52	B	14.1	51
		Overall	B	17.7	52	B	14.1	51
	Overall		B	18.0	122	B	17.3	141

Table A2: Scenario 2 2040 Baseline Conditions LOS, Delay, and 95th Queue Length								
Intersection	Approach	Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (sec)	95% Queue (ft)	LOS	Delay (sec)	95% Queue (ft)
Broadway Street & 3rd Street	EB	TR	C	21.0	23	C	29.6	62
		Overall	C	21.0	23	C	29.6	62
	SB	L	B	16.8	55	B	15.3	41
		R	A	5.4	22	C	25.4	137
		T	B	19.4	84	B	18.9	83
		Overall	B	15.3	84	C	21.4	137
	WB	L	B	12.8	54	B	20.0	77
		T	A	7.4	44	A	9.4	131
		Overall	A	8.6	54	B	10.6	131
	Overall		B	12.8	84	B	16.7	137
Broadway Street & 4th Street	EB	L	A	2.8	4	B	11.3	8
		T	A	2.9	7	B	14.2	48
		Overall	A	2.9	7	B	14.1	48
	NB	L	B	14.0	95	C	26.4	161
		R	A	7.6	117	A	6.5	66
		T	B	12.4	74	B	17.5	108
		Overall	B	10.5	117	B	15.9	161
	WB	TR	A	3.5	10	A	2.3	10
		Overall	A	3.5	10	A	2.3	10
	Overall		A	7.7	117	B	10.4	161
Broadway Street & 5th Street	EB	L	A	2.3	1	A	2.1	2
		TR	A	6.8	66	A	5.4	74
		Overall	A	6.8	66	A	5.3	74
	NB	LTR	B	15.6	44	B	15.5	66
		Overall	B	15.6	44	B	15.5	66
	SB	LTR	B	19.4	39	C	26.0	48
		Overall	B	19.4	39	C	26.0	48
	WB	L	A	1.5	4	A	1.2	3
		TR	A	1.6	13	A	2.0	20
		Overall	A	1.6	13	A	2.0	20
	Overall		A	5.6	66	A	5.2	74
Broadway Street & 6th Street	EB	L	A	3.8	8	A	1.4	1
		TR	A	7.3	50	A	3.4	33
		Overall	A	7.1	50	A	3.4	33
	NB	LT	C	23.0	45	C	28.9	60
		R	A	2.8	0	A	9.0	0
		Overall	B	14.6	45	B	18.5	60
	SB	LT	C	23.3	49	A	0.7	0
		R	A	0.7	0	C	24.8	35
		Overall	B	19.7	49	B	19.2	35
	WB	L	A	2.6	7	A	1.9	4
		TR	A	4.3	50	A	4.9	97
		Overall	A	4.0	50	A	4.7	97
	Overall		A	7.0	50	A	5.9	97

Table A2: Scenario 2 2040 Baseline Conditions LOS, Delay, and 95th Queue Length								
Intersection	Approach	Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (sec)	95% Queue (ft)	LOS	Delay (sec)	95% Queue (ft)
Broadway Street & 8th Street	EB	L	A	1.2	2	A	2.2	2
		TR	A	6.8	60	A	9.4	72
		Overall	A	6.5	60	A	9.2	72
	NB	L	C	23.6	31	C	30.6	45
		R	A	3.7	26	A	4.1	30
		T	C	23.9	61	C	27.4	64
		Overall	B	13.3	61	B	15.5	64
	SB	L	C	22.5	25	C	30.4	50
		TR	C	26.6	81	C	32.1	90
		Overall	C	26.0	81	C	31.6	90
	WB	L	A	4.8	28	A	4.3	23
		TR	A	6.9	91	A	6.7	144
		Overall	A	6.5	91	A	6.4	144
	Overall		A	9.6	91	B	11.0	144
Hampshire Street & 4th Street	EB	LT	C	21.6	30	E	69.7	55
		Overall	C	21.6	30	E	69.7	55
	NB	LTR	A	2.4	20	A	5.3	187
		Overall	A	2.4	20	A	5.3	187
	WB	TR	C	21.5	52	D	35.4	69
		Overall	C	21.5	52	D	35.4	69
	Overall		A	4.5	52	A	9.1	187
Maine Street & 3rd Street	EB	TR	B	19.3	211	B	19.3	156
		Overall	B	19.3	211	B	19.3	156
	SB	L	B	10.3	20	B	15.5	40
		R	A	0.1	0	A	0.3	1
		T	B	11.3	44	B	16.0	107
		Overall	B	10.9	44	B	15.6	107
	WB	L	C	24.1	48	C	32.3	29
		T	B	18.5	15	C	29.5	17
		Overall	C	23.2	48	C	31.4	29
	Overall		B	16.5	48	B	18.3	156
Maine Street & 4th Street	EB	L	B	13.4	101	B	10.6	35
		T	A	2.4	9	A	3.7	16
		Overall	B	10.1	9	A	8.6	35
	NB	LTR	C	23.8	121	C	24.3	145
		Overall	C	23.8	121	C	24.3	145
	WB	TR	B	15.3	52	B	10.5	48
		Overall	B	15.3	52	B	10.5	48
	Overall		B	16.2	121	B	16.2	145

Table A3: Scenario 3 2040 Forecasted Conditions New Bridge Only LOS, Delay, and 95th Queue Length								
Intersection	Approach	Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (sec)	95% Queue (ft)	LOS	Delay (sec)	95% Queue (ft)
Broadway Street & 3rd Street	EB	TR	C	21.0	23	C	29.6	62
		Overall	C	21.0	23	C	29.6	62
	SB	L	B	15.1	47	B	15.3	41
		R	A	4.7	19	C	25.0	136
		T	B	17.7	71	B	19.0	83
		Overall	B	13.9	71	C	21.3	136
	WB	L	C	20.3	94	C	26.8	81
		T	A	7.2	95	A	8.8	160
		Overall	B	10.1	95	B	10.8	160
	Overall		B	12.6	95	B	16.7	160
Broadway Street & 4th Street	EB	L	B	11.9	14	C	22.7	11
		T	B	12.9	31	C	23.1	55
		Overall	B	12.8	31	C	23.1	55
	NB	L	B	14.2	70	B	11.6	72
		R	A	6.8	55	A	3.9	14
		T	B	12.8	51	A	9.6	44
		Overall	B	10.3	70	A	8.1	72
	WB	TR	B	11.7	127	B	18.1	70
		Overall	B	11.7	127	B	18.1	70
	Overall		B	11.0	127	B	13.3	72
Broadway Street & 5th Street	EB	L	A	4.0	1	A	1.5	6
		TR	A	8.1	51	A	3.3	86
		Overall	A	8.1	51	A	3.2	86
	NB	LTR	B	17.1	51	B	17.1	50
		Overall	B	17.1	51	B	17.1	50
	SB	LTR	C	20.3	45	C	27.1	39
		Overall	C	20.3	45	C	27.1	39
	WB	L	A	1.5	4	A	1.1	15
		TR	A	1.6	13	A	2.0	132
		Overall	A	1.6	13	A	2.0	132
	Overall		A	6.6	51	A	5.1	132
Broadway Street & 6th Street	EB	L	A	3.6	11	A	2.5	5
		TR	A	6.1	64	A	6.9	75
		Overall	A	6.0	64	A	6.8	75
	NB	LT	C	23.6	52	C	29.9	46
		R	A	1.0	3	A	7.4	18
		Overall	B	15.2	52	B	19.0	46
	SB	LT	C	24.0	56	A	0.2	0
		R	A	0.2	0	C	25.3	30
		Overall	C	20.7	56	C	20.6	30
	WB	L	A	2.7	7	A	1.9	33
		TR	A	4.4	51	A	4.9	246
		Overall	A	4.1	51	A	4.7	246
	Overall		A	6.9	64	A	7.4	246

Table A3: Scenario 3 2040 Forecasted Conditions New Bridge Only LOS, Delay, and 95th Queue Length								
Intersection	Approach	Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (sec)	95% Queue (ft)	LOS	Delay (sec)	95% Queue (ft)
Broadway Street & 8th Street	EB	L	A	1.2	2	A	2.3	17
		TR	A	6.1	64	B	12.4	184
		Overall	A	5.9	64	B	12.1	184
	NB	L	C	24.0	31	C	32.0	31
		R	A	3.7	26	A	4.1	38
		T	C	24.5	68	C	28.2	50
		Overall	B	14.1	68	B	16.4	50
	SB	L	C	22.6	25	C	30.6	35
		TR	C	28.5	89	D	36.1	65
		Overall	C	27.6	89	C	34.6	65
	WB	L	A	4.8	28	A	4.3	51
		TR	A	6.9	91	A	6.7	223
		Overall	A	6.5	91	A	6.4	223
	Overall		A	9.8	91	B	12.5	223
Hampshire Street & 4th Street	EB	LT	C	24.7	31	E	75.0	62
		Overall	C	24.7	31	E	75.0	62
	NB	LTR	A	1.2	18	A	1.3	13
		Overall	A	1.2	18	A	1.3	13
	WB	TR	C	21.3	51	D	35.4	69
		Overall	C	21.3	51	D	35.4	69
	Overall		A	3.5	51	A	5.6	69
Maine Street & 3rd Street	EB	TR	C	23.5	18	C	22.8	21
		Overall	C	23.5	18	C	22.8	21
	SB	L	A	3.5	21	A	2.4	13
		R	A	0.0	0	A	0.0	0
		T	A	2.9	40	A	2.1	33
		Overall	A	2.9	40	A	2.1	33
	WB	L	D	38.7	52	C	28.9	29
		T	C	33.3	16	C	26.7	16
		Overall	D	37.8	52	C	28.2	29
	Overall		A	7.5	52	A	4.8	33
Maine Street & 4th Street	EB	L	B	17.3	12	C	21.4	20
		T	C	20.1	59	C	23.4	46
		Overall	B	19.9	59	C	22.9	46
	NB	LTR	A	8.8	205	A	8.7	200
		Overall	A	8.8	205	A	8.7	200
	WB	TR	C	22.6	58	B	16.0	53
		Overall	C	22.6	58	B	16.0	53
	Overall		B	10.3	205	B	10.2	200
York Street & 3rd Street	EB	R	A	2.3	28	A	0.3	25
		T	B	11.1	151	A	9.3	110
		Overall	A	9.0	151	A	6.7	110
	NB	R	B	15.4	22	A	8.5	0
		Overall	B	15.4	22	A	8.5	0
	SB	L	A	5.4	27	A	6.1	29
		T	C	27.6	102	C	29.4	112
		Overall	C	21.8	102	C	23.3	112
	Overall		B	14.0	151	B	11.7	112

Table A3: Scenario 3 2040 Forecasted Conditions New Bridge Only LOS, Delay, and 95th Queue Length								
Intersection	Approach	Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (sec)	95% Queue (ft)	LOS	Delay (sec)	95% Queue (ft)
York Street & 4th Street	EB	L	A	10.0	127	B	12.3	200
		TR	A	7.6	71	A	8.4	80
		Overall	A	9.5	127	B	11.5	200
	NB	TR	D	44.0	107	D	44.5	140
		Overall	D	44.0	107	D	44.5	140
	WB	LR	A	3.2	0	A	3.2	0
		Overall	A	3.2	0	A	3.2	0
	Overall		B	12.0	127	B	15.0	200

Table A4: Scenario 4 2040 Forecasted Conditions New Bridge + One-Way Conversions LOS, Delay, and 95th Queue Length								
Intersection	Approach	Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Total Delay (sec)	95% Queue (ft)	LOS	Total Delay (sec)	95% Queue (ft)
Broadway Street & 3rd Street	EB	TR	D	38.9	57	D	45.0	96
		Overall	D	38.9	57	D	45.0	96
	NB	L	C	20.9	93	C	29.3	173
		R	C	20.1	398	B	15.0	106
		Overall	C	20.3	93	C	20.5	173
	SB	L	A	10.0	47	A	9.2	33
		R	A	4.8	23	B	18.3	137
		T	D	37.9	264	D	35.6	253
		Overall	C	24.8	264	C	25.7	253
	WB	L	E	61.1	98	D	35.8	71
		T	B	10.2	34	B	11.6	71
		Overall	C	21.7	98	B	13.9	71
	Overall		C	22.9	264	C	21.6	253
Broadway Street & 4th Street	EB	L	D	36.1	89	D	38.1	74
		TR	C	20.7	272	B	10.4	129
		Overall	C	25.9	272	B	19.4	129
	NB	L	C	24.7	33	C	30.8	98
		R	A	3.5	13	A	8.9	56
		T	C	24.8	53	D	36.5	154
		Overall	B	13.5	53	C	24.9	154
	WB	L	A	9.8	26	A	6.9	24
		TR	C	21.9	127	B	16.7	222
		Overall	C	20.7	127	B	16.1	222
	Overall		C	22.7	272	B	19.5	222
Broadway Street & 5th Street	EB	L	A	3.3	2	A	3.3	6
		TR	A	8.1	83	A	6.7	78
		Overall	A	8.1	83	A	6.6	78
	NB	LTR	B	17.1	51	B	17.1	74
		Overall	B	17.1	51	B	17.1	74
	SB	LTR	C	20.3	45	C	27.1	56
		Overall	C	20.3	45	C	27.1	56
	WB	L	A	1.5	4	A	1.1	3
		TR	A	1.6	13	A	2.0	20
		Overall	A	1.6	13	A	2.0	20
	Overall		A	6.5	83	A	6.1	78
Broadway Street & 6th Street	EB	L	A	3.0	7	A	2.7	3
		TR	A	6.2	47	A	6.2	70
		Overall	A	6.0	47	A	6.1	70
	NB	LT	C	23.6	52	C	29.9	68
		R	A	1.0	3	A	7.4	27
		Overall	B	15.2	52	B	19.0	68
	SB	LT	C	24.0	56	A	0.2	0
		R	A	0.2	0	C	25.3	43
		Overall	C	20.7	56	C	20.6	43
	WB	L	A	2.6	7	A	1.9	4
		TR	A	4.4	53	A	4.9	97
		Overall	A	4.1	53	A	4.7	97
	Overall		A	6.8	56	A	7.1	97

Table A4: Scenario 4 2040 Forecasted Conditions New Bridge + One-Way Conversions LOS, Delay, and 95th Queue Length								
Intersection	Approach	Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Total Delay (sec)	95% Queue (ft)	LOS	Total Delay (sec)	95% Queue (ft)
Broadway Street & 8th Street	EB	L	A	1.2	2	A	2.1	2
		TR	A	6.3	57	B	11.0	95
		Overall	A	6.1	57	B	10.7	95
	NB	L	C	24.0	31	C	32.0	46
		R	A	3.7	26	A	4.1	30
		T	C	24.5	68	C	28.2	71
		Overall	B	14.1	68	B	16.4	71
	SB	L	C	22.6	25	C	30.6	50
		TR	C	28.5	89	D	36.1	99
		Overall	C	27.6	89	C	34.6	99
	WB	L	A	4.8	28	A	4.3	23
		TR	A	6.9	93	A	6.8	147
		Overall	A	6.5	93	A	6.5	147
	Overall		A	9.8	93	B	12.1	147
Hampshire Street & 3rd Street	EB	LTR	C	33.4	43	C	35.0	44
		Overall	C	33.4	43	C	35.0	44
	NB	L	A	0.6	1	A	0.7	1
		TR	A	0.9	14	A	0.9	12
		Overall	A	0.9	14	A	0.9	12
	SB	L	A	0.5	0	A	0.5	0
		TR	A	0.9	9	A	0.9	10
		Overall	A	0.9	9	A	0.9	10
	WB	LTR	E	60.4	71	D	43.6	67
		Overall	E	60.4	71	D	43.6	67
	Overall		A	5.0	71	A	4.4	67
Hampshire Street & 4th Street	EB	LTR	C	31.9	61	D	38.9	48
		Overall	C	31.9	61	D	38.9	48
	NB	LTR	A	5.5	93	A	5.7	206
		Overall	A	5.5	93	A	5.7	206
	SB	LTR	A	5.0	30	A	2.8	17
		Overall	A	5.0	30	A	2.8	17
	WB	LTR	D	39.9	97	C	25.1	63
		Overall	D	39.9	97	C	25.1	63
	Overall		B	17.9	97	B	10.8	206
Maine Street & 3rd Street	EB	L	C	34.5	21	D	39.2	23
		TR	C	30.8	22	C	30.6	27
		Overall	C	32.5	22	C	33.9	27
	NB	L	A	1.9	2	A	2.5	3
		TR	A	5.6	55	A	3.2	97
		Overall	A	5.5	55	A	3.2	97
	SB	L	A	1.9	4	A	1.1	4
		TR	A	2.4	40	A	1.6	36
		Overall	A	2.3	40	A	1.5	36
	WB	L	D	40.4	74	D	36.1	33
		TR	B	17.1	28	C	23.8	34
		Overall	C	33.9	74	C	29.1	34
	Overall		A	6.4	74	A	4.3	97

Table A4: Scenario 4 2040 Forecasted Conditions New Bridge + One-Way Conversions LOS, Delay, and 95th Queue Length								
Intersection	Approach	Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Total Delay (sec)	95% Queue (ft)	LOS	Total Delay (sec)	95% Queue (ft)
Maine Street & 4th Street	EB	L	C	24.4	15	C	22.7	28
		TR	C	33.5	90	C	23.9	62
		Overall	C	32.5	90	C	23.6	62
	NB	LTR	A	5.5	79	A	7.3	153
		Overall	A	5.5	79	A	7.3	153
	SB	LTR	A	3.1	19	A	4.6	29
		Overall	A	3.1	19	A	4.6	29
	WB	L	C	34.5	22	D	36.9	22
		TR	C	34.6	88	C	22.5	68
		Overall	C	34.6	88	C	23.8	68
	Overall		B	17.7	90	B	12.6	153
York Street & 3rd Street	EB	L	C	20.3	207	C	20.5	178
		LT	C	20.3	207	C	20.5	184
		R	A	0.3	0	A	0.3	0
		Overall	B	15.4	207	B	14.6	184
	NB	TR	C	24.6	243	C	24.5	95
		Overall	C	24.6	243	C	24.5	95
	SB	L	C	35.0	116	B	14.3	41
		T	C	21.5	215	B	12.9	108
		Overall	C	25.2	215	B	13.3	108
	WB	R	A	0.8	0	A	0.4	0
		Overall	A	0.8	0	A	0.4	0
	Overall		C	20.0	243	B	16.7	184

Table A5: Scenario 5 2040 Forecasted Conditions One-Way Conversions Only LOS, Delay, and 95th Queue Length								
Intersection	Approach	Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (sec)	95% Queue (ft)	LOS	Delay (sec)	95% Queue (ft)
Broadway Street & 3rd Street	EB	TR	C	34.9	34	D	42.8	85
		Overall	C	34.9	34	D	42.8	85
	NB	L	C	25.6	137	D	36.3	191
		R	B	12.9	82	B	11.8	86
		Overall	B	16.9	137	C	22.1	86
	SB	L	A	9.9	47	A	9.2	33
		R	A	4.8	23	B	18.3	137
		T	D	37.9	264	D	35.6	253
		Overall	C	24.8	264	C	25.7	253
	WB	L	E	57.1	47	D	41.6	27
		T	B	10.5	35	A	9.5	48
		Overall	B	15.0	47	B	10.6	48
	Overall		C	20.4	264	C	21.2	253
Broadway Street & 4th Street	EB	L	C	31.3	45	C	33.9	43
		TR	C	24.7	286	B	14.0	220
		Overall	C	25.9	286	B	17.6	220
	NB	L	C	22.3	27	C	22.8	38
		R	A	1.0	4	A	4.0	21
		T	C	25.9	129	C	34.7	190
		Overall	B	18.8	129	C	24.1	190
	WB	L	B	11.6	42	A	8.5	42
		TR	C	20.6	108	B	17.0	213
		Overall	B	18.9	108	B	16.1	213
	Overall		C	22.4	286	B	18.5	220
Broadway Street & 5th Street	EB	L	A	3.3	2	A	3.3	6
		TR	A	8.1	83	A	6.7	78
		Overall	A	8.1	83	A	6.6	78
	NB	LTR	B	15.6	44	B	15.5	66
		Overall	B	15.6	44	B	15.5	66
	SB	LTR	B	19.4	39	C	26.0	48
		Overall	B	19.4	39	C	26.0	48
	WB	L	A	1.5	4	A	1.2	3
		TR	A	1.6	13	A	2.0	20
		Overall	A	1.6	13	A	2.0	20
	Overall		A	6.2	83	A	5.7	78
Broadway Street & 6th Street	EB	L	A	3.0	7	A	2.7	3
		TR	A	6.2	47	A	6.3	71
		Overall	A	6.0	47	A	6.2	71
	NB	LT	C	23.0	45	C	28.9	60
		R	A	1.0	3	A	7.4	27
		Overall	B	13.8	45	B	17.6	60
	SB	LT	C	23.3	49	A	0.2	0
		R	A	0.2	0	C	24.8	35
		Overall	B	19.6	49	B	19.0	35
	WB	L	A	2.6	7	A	1.9	4
		TR	A	4.3	50	A	4.9	97
		Overall	A	4.0	50	A	4.7	97
	Overall		A	6.5	50	A	6.8	97

Table A5: Scenario 5 2040 Forecasted Conditions One-Way Conversions Only LOS, Delay, and 95th Queue Length								
Intersection	Approach	Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (sec)	95% Queue (ft)	LOS	Delay (sec)	95% Queue (ft)
Broadway Street & 8th Street	EB	L	A	1.2	2	A	2.1	2
		TR	A	6.3	57	B	11.0	95
		Overall	A	6.1	57	B	10.7	95
	NB	L	C	23.6	31	C	30.6	45
		R	A	3.7	26	A	4.1	30
		T	C	23.9	61	C	27.4	64
		Overall	B	13.3	61	B	15.5	64
	SB	L	C	22.5	25	C	30.4	50
		TR	C	26.6	81	C	32.1	90
		Overall	C	26.0	81	C	31.6	90
	WB	L	A	4.8	28	A	4.3	23
		TR	A	6.9	91	A	6.7	144
		Overall	A	6.5	91	A	6.4	144
	Overall		A	9.4	91	B	11.5	144
Hampshire Street & 3rd Street	EB	LTR	C	33.4	43	C	33.4	43
		Overall	C	33.4	43	C	33.4	43
	NB	L	A	1.3	1	A	0.9	1
		TR	A	1.2	19	A	0.9	12
		Overall	A	1.2	19	A	0.9	12
	SB	L	A	1.2	1	A	1.0	1
		TR	A	1.2	20	A	1.2	21
		Overall	A	1.2	20	A	1.2	21
	WB	LTR	D	45.1	86	D	47.8	83
		Overall	D	45.1	86	D	47.8	83
	Overall		A	5.2	86	A	5.4	83
Hampshire Street & 4th Street	EB	LTR	D	37.3	49	C	34.3	51
		Overall	D	37.3	49	C	34.3	51
	NB	LTR	A	4.5	101	A	3.4	91
		Overall	A	4.5	101	A	3.4	91
	SB	LTR	A	3.1	22	A	2.6	22
		Overall	A	3.1	22	A	2.6	22
	WB	LTR	D	37.9	88	C	26.8	61
		Overall	D	37.9	88	C	26.8	61
	Overall		B	12.6	101	A	8.2	91
Maine Street & 3rd Street	EB	L	C	31.2	226	D	36.3	205
		R	A	0.2	0	A	0.2	0
		T	D	45.8	245	D	41.5	201
		Overall	C	28.9	245	C	27.3	205
	NB	L	B	14.5	14	B	12.9	13
		TR	C	28.3	260	C	22.8	226
		Overall	C	27.8	14	C	22.4	226
	SB	L	A	7.6	17	A	6.6	17
		TR	B	11.0	176	B	10.9	257
		Overall	B	10.4	176	B	10.3	257
	WB	L	C	21.8	53	B	17.7	27
		TR	C	23.4	25	C	22.6	24
		Overall	C	22.2	53	B	19.9	27
	Overall		C	23.8	245	C	21.4	257

Table A5: Scenario 5 2040 Forecasted Conditions One-Way Conversions Only LOS, Delay, and 95th Queue Length								
Intersection	Approach	Lane Group	AM Peak Hour			PM Peak Hour		
			LOS	Delay (sec)	95% Queue (ft)	LOS	Delay (sec)	95% Queue (ft)
Maine Street & 4th Street	EB	L	A	4.5	18	A	7.0	28
		TR	A	4.8	30	A	6.7	37
		Overall	A	4.7	30	A	6.8	37
	NB	LTR	C	27.6	155	C	28.3	202
		Overall	C	27.6	155	C	28.3	202
	SB	LTR	C	21.1	74	B	16.1	59
		Overall	C	21.1	74	B	16.1	59
	WB	L	C	23.8	18	C	24.5	18
		TR	C	20.9	73	B	11.0	57
		Overall	C	21.2	73	B	12.2	57
	Overall		B	15.4	155	B	16.6	202