



THE RAPID'S TRANSIT IMPROVEMENT PLAN



THE RAPID

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8/8/2018



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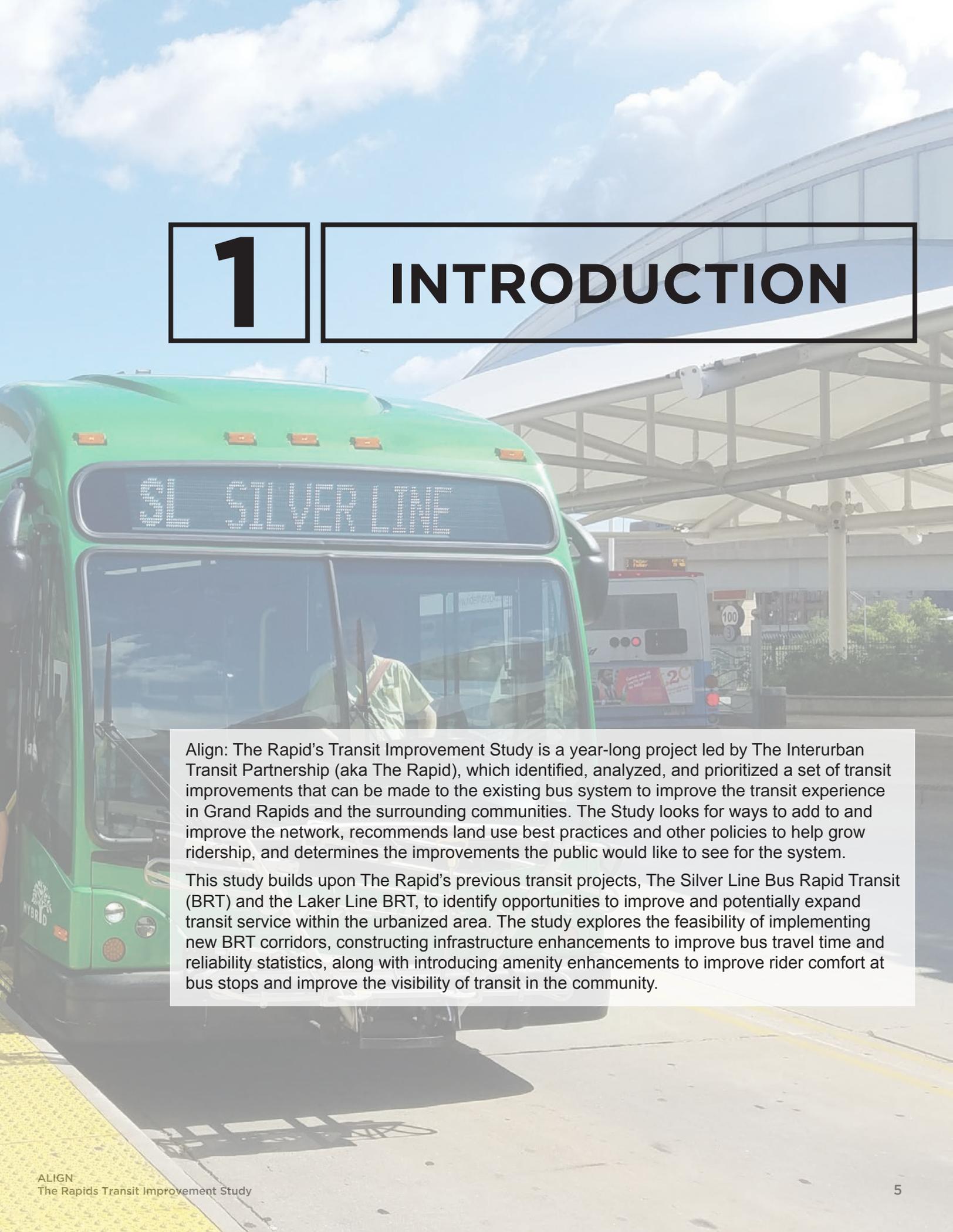


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Emergency

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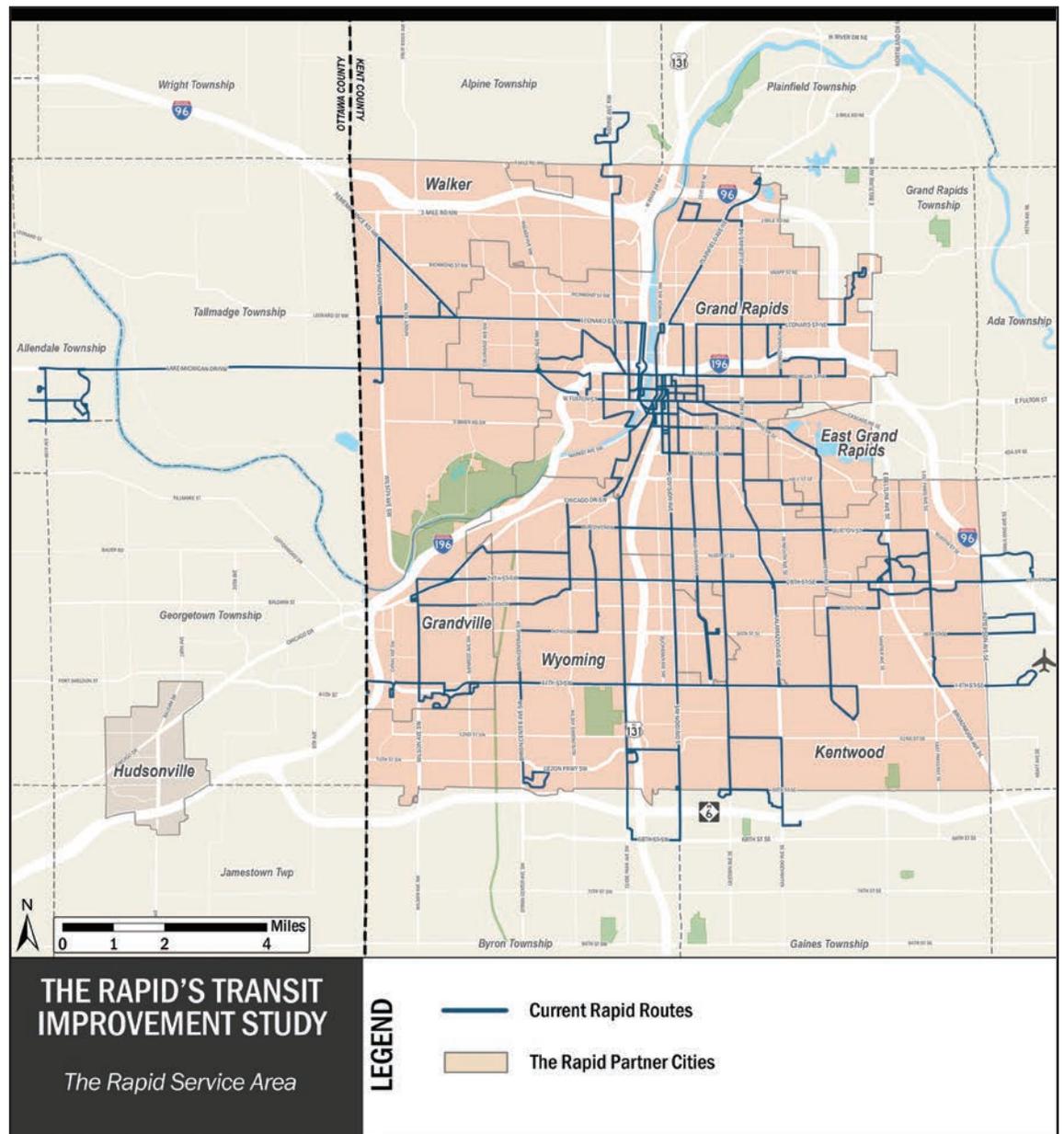
INTRODUCTION

A green bus is stopped at a transit station. The destination sign on the bus reads "SL SILVER LINE". The bus is a hybrid vehicle, as indicated by the "HYBRID" logo on the front. The station has a modern, white, curved roof structure. In the background, another bus is visible, and a speed limit sign for 100 is posted. The sky is blue with scattered white clouds.

Align: The Rapid's Transit Improvement Study is a year-long project led by The Interurban Transit Partnership (aka The Rapid), which identified, analyzed, and prioritized a set of transit improvements that can be made to the existing bus system to improve the transit experience in Grand Rapids and the surrounding communities. The Study looks for ways to add to and improve the network, recommends land use best practices and other policies to help grow ridership, and determines the improvements the public would like to see for the system.

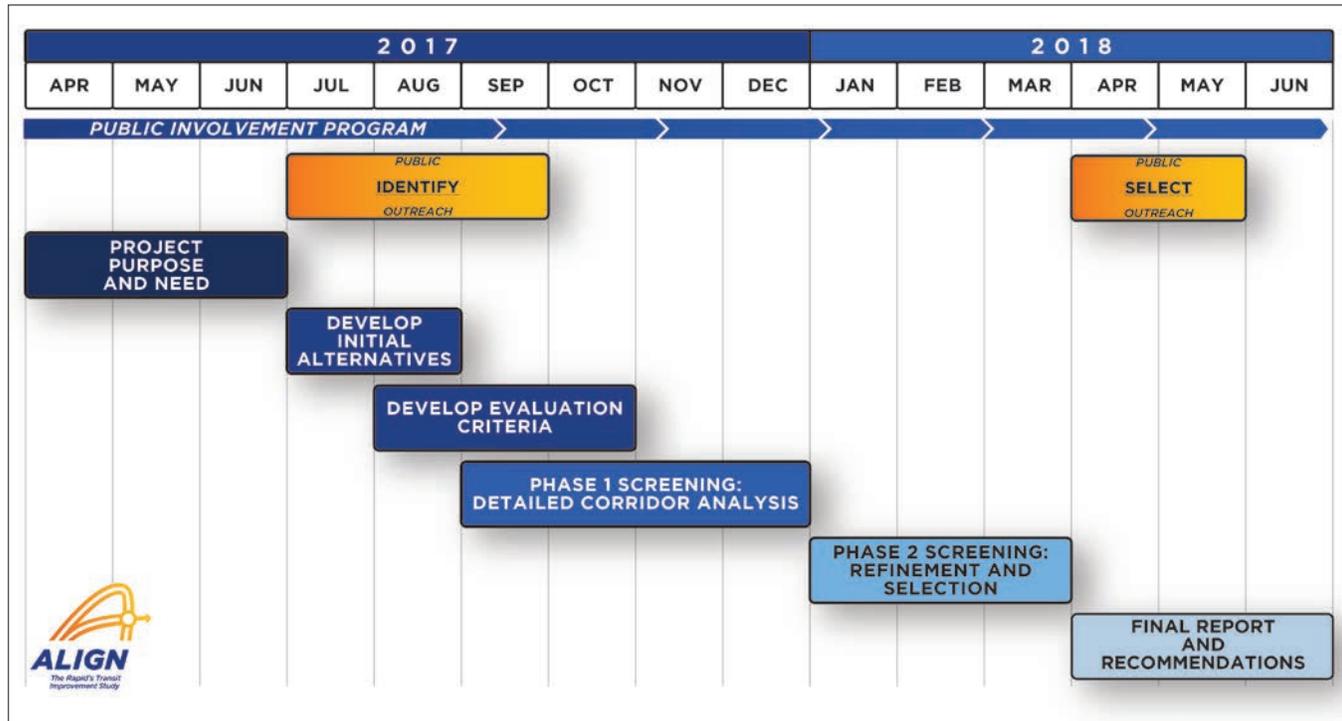
This study builds upon The Rapid's previous transit projects, The Silver Line Bus Rapid Transit (BRT) and the Laker Line BRT, to identify opportunities to improve and potentially expand transit service within the urbanized area. The study explores the feasibility of implementing new BRT corridors, constructing infrastructure enhancements to improve bus travel time and reliability statistics, along with introducing amenity enhancements to improve rider comfort at bus stops and improve the visibility of transit in the community.

The Rapid's current Service Area consists of Grand Rapids and the five cities that surround it; Walker, East Grand Rapids, Kentwood, Wyoming, and Grandville. The project Study Area includes these six cities but pursues a regional approach to transit investment by considering the entire Grand Rapid Urbanized Area (UZA) boundary. The UZA extends north to the City of Rockford and west into Ottawa County and includes Hudsonville, Georgetown Township, and Allendale Township. The map below shows the six cities that make up the Interurban Transit Partnership, along with the adjacent communities considered for new transit enhancements.



Introduction

The Study followed a multi-step process to determine the needs, identify potential solutions, evaluate the solutions, and refine the recommendations into a set of action items that can be implemented in the near future as The Rapids continues to improve service. The graphic below shows the general path that the Align Study followed.



Downtown office workers exit a Rapid bus on their way to work. Source: MLive



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PROJECT GOALS AND EVALUATION

The goals and objectives for Align reflect The Rapid's priorities in planning for the system's future. Ridership has leveled off since 2015 and identifying ways to attract riders is a main driver of Align. Potential opportunities to increase ridership include adding new enhanced transit services, like Bus Rapid Transit, increasing service in areas with a high density of potential users, and implementing new technology, like transit signal priority, to help optimize existing operations.

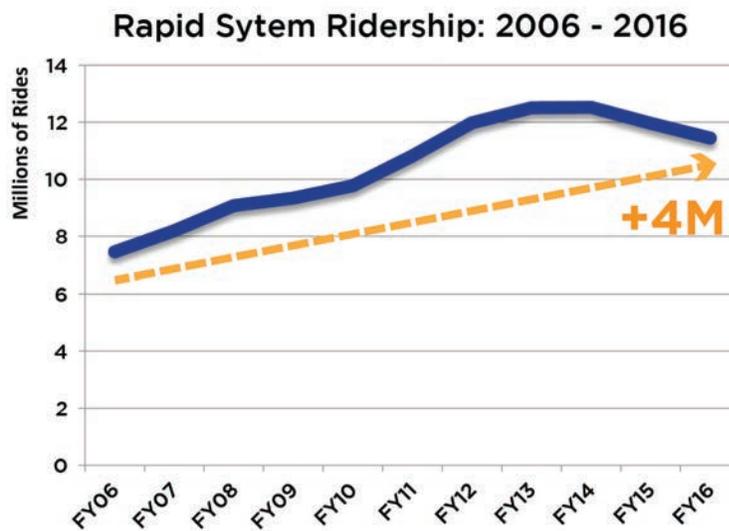
Additionally, The Rapid would like to increase access to transit in areas of the region that are typically underserved. The region wants to continue to drive economic growth, particularly within the urban core, and transit can be used as a catalyst for economic development. Finally, all of the improvements recommended as a part of this plan need to be supported by the community. Having broad community support is a great way to encourage those same community members to use the services.

The five goals and related objectives for Align are detailed in this section. These goals were used to develop the evaluation criteria to analyze the projects identified for the study.

State of The Rapid System

Over the past decade, The Rapid has significantly increased the amount of transit service that operates in the Grand Rapids region. This increase in service has led to a large amount of growth in ridership on the system. This, along with increases in population and employment in the region, is why ridership has grown by nearly 4 million passengers in the past ten years. Additionally, the share of commuting trips by transit has increased in most of the member communities since then.

In the past three years, however, there has been a slight decline in ridership, consistent



Ridership has increased by 4 million riders per year since 2006. Source: AECOM

with most other transit agencies throughout the county. A number of factors are contributing to this, including low gas prices, improved economic conditions, and the rise of other transportation modes. With Align, The Rapid is looking for ways to keep riders on their buses regardless of economic conditions because transit is the most convenient way to travel through the Region.

A recent success The Rapid has had is the implementation of the Silver Line Bus Rapid Transit (BRT) line in 2014.



The Laker Line will start providing BRT service in 2020. Source: The Rapid

The Silver Line is Michigan's first BRT and it provides service on Division Avenue, the busiest transit corridor in the service area. Since its inception, service has improved, with a 25% faster travel time than the standard bus route and has grown in ridership. A second BRT line, the Laker Line, is set to open in 2020 and will provide service between Grand Valley State University and Downtown Grand Rapids.

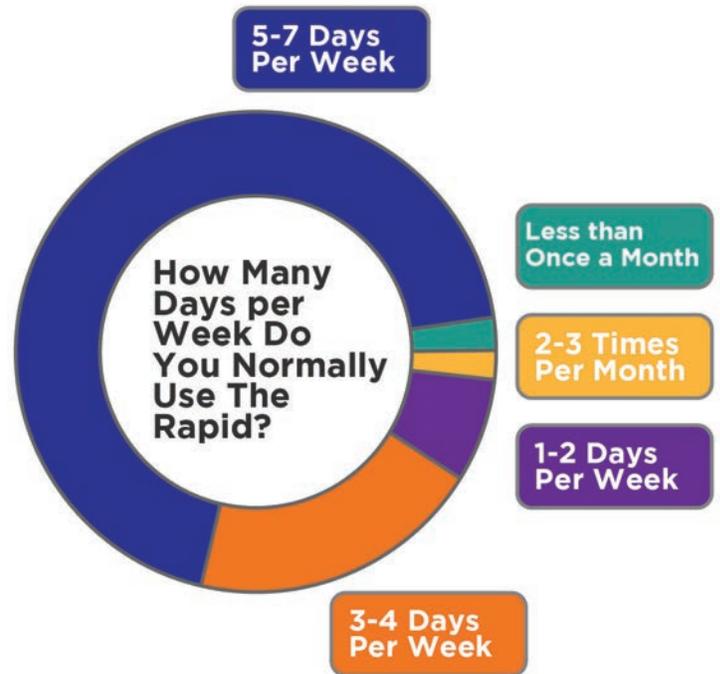
The Rapid employs a number of design considerations and technologies to speed up service on these routes, including transit signal priority, fewer stations, off-board fare collection, and dedicated transit travel lanes.

Ridership on The Rapid system is primarily made up of frequent customers. These riders are using the system three or more days per week, according to the 2017 Rapid Rider Survey. These riders account for about 85% of the total ridership on the system. Additionally, most customers are highly reliant on transit as their main mode of transportation. 78% of the respondents to the Rider Survey said they have no access to a private vehicle.

Currently, The Rapid system consists of 28 routes serving six member cities and Grand Valley State University. Of those 28, 15 routes operate service with 15 minute headways during the peak hours (6 - 9 AM and 3 - 6 PM). These routes are the backbone of the system and account for 76% of all the ridership on the system. This presents an opportunity for The Rapid and their partner communities to continue to drive ridership by implementing quality service on high frequency routes.

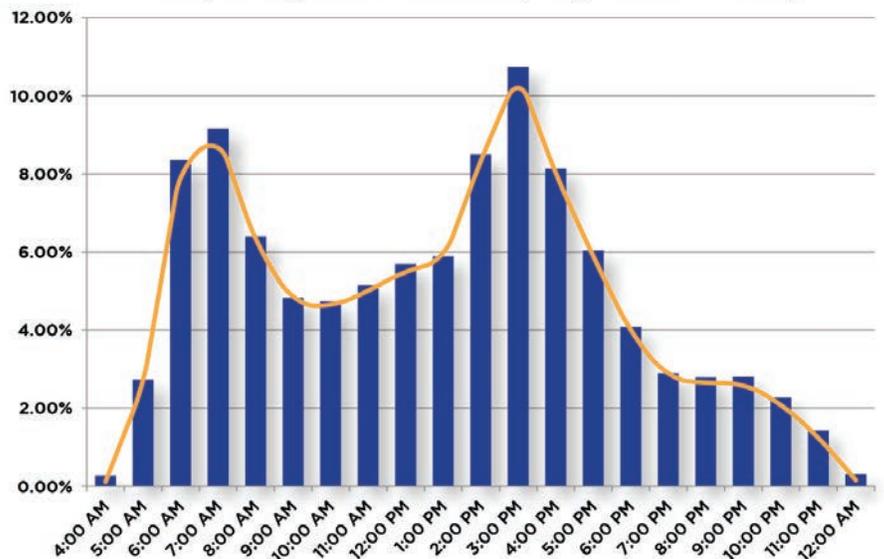
Although The Rapid operates high frequency service during the peak hours, there appears to be a sustained amount of ridership demand throughout the midday period from 9 AM to 3 PM. The morning ridership peak occurs around 7 AM, while the afternoon ridership peak occurs at 3 PM, which both coincide with the existing peak hour service. There is, however little drop off in ridership during the midday hours. In fact, over 80% of all rides each day are taken between 6 AM and 6 PM. Outside of these hours, ridership drops off dramatically.

The existing conditions and trends of The Rapid system were used to help inform the goals and objectives for the Align Study. The goals and objectives were conceived to guide the development of recommendations that will help improve the transit system in the areas where issues exist.



Results of the 2017 Rapid Rider Survey

Rapid System Ridership By Time of Day



Align Project Goals

The goals developed for Align were based on a variety of sources and each group's ideas of how to improve the system. Needs were identified using input from The Rapid's staff, Rapid Board members, riders, the public, and local stakeholders. This input was summarized into five distinct goals, each with corresponding objectives that helped determine improvements that would address the goals. The goals are focused on a number of different categories; transit efficiency, equity, regional impact, economic development, and public support.



Goal 1: Provide enhanced transit service options to grow ridership and improve reliability

- Identify feasible new corridors for enhanced transit operations such as BRT, express bus, limited-stop services, etc
- Locate areas where new transfer stations or hubs could be established
- Improve pedestrian and bicycle access to the transit system
- Leverage infrastructure and technology to improve reliability and reduce travel time
- Optimize the route network and schedules to maximize connectivity at transfer points
- Create a more user-friendly rider experience to encourage transit use



Enhanced transit services like the Silver Line can help boost ridership. Source: The Rapid

Project Goals

Goal 2: Improve equitable access to transit services

- Increase mobility and accessibility for transit-dependent populations
- Identify service gaps and infrastructure needs in underserved neighborhoods



Expanding transit in underserved communities will improve the transit experience for all members of the community. Source: The Rapid

Goal 3: Prioritize future transit enhancement projects that maximize positive regional impact

- Consider prioritizing transit projects that:
 - Connect transit services to high density neighborhoods
 - Connect transit services to major employment centers and regional destinations
- Serve high activity transit stops
- Provide frequent, direct transit connections between key regional activity centers



Goal 4: Foster transit supportive land use policies and encourage economic development

- Position The Rapid as an added feature and benefit to future economic development initiatives
- Use the Vital Streets Plan as a guide for the location of new transit investments
- Develop policies and encourage municipal support for transit friendly land use and zoning
- Encourage municipalities and developers to integrate transit friendly design features into new developments
- Identify areas where transit oriented development is feasible from both a market and planning perspective



New developments are being catalyzed by transit routes, like this new Meijer store and attached apartments located along Routes 9, 18, and 19. Source: Rockford Development

Goal 5: Develop and select implementable investments that have community support

- Define and select investment corridors and enhancement projects with strong public, stakeholder, and agency support
- Define and select investment corridors and enhancement projects that are cost-effective and financially feasible in both the short- and long-term
- Define and select investment corridors and enhancement projects that are competitive for Federal and State grant funding



A participant at the Align Platform Event gives suggestions about where transit improvements should be focused.

Public Engagement

The Align study gathered extensive public input throughout the year-long planning process. A wide variety of engagement methods were utilized in order to reach The Rapid's diverse and geographically-large service area. Both digital and in-person engagement efforts gathered the concerns, ideas, and aspirations of transit riders and non-riders alike.

Getting the Word Out

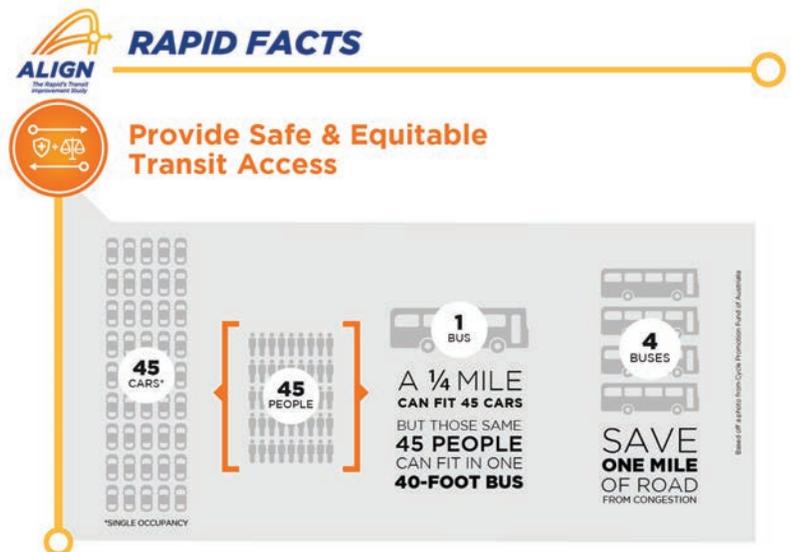
Announcement of the commencement of the Align study was made by mail notification to local elected leaders within The Rapid's six partner city area, as well as stakeholder organizations through the Grand Rapids metropolitan region. To further spread the word the project team issued press releases to local television and print media outlets throughout the region who published articles and segments detailing information about the purpose of the study and ways the public could get involved.

Steering Committees

To ensure the study received continuous guidance from the public, two steering committees were formed; a Technical Advisory Committee comprised of individuals representing key stakeholder organizations and municipalities with decision-making authority who are knowledgeable about land use policy, transportation, and employment needs; and a Citizen Task Force comprised of transit supporters and riders from various communities and backgrounds throughout the metro region. Both groups were integral in providing the expertise and on-the-ground user experience to guide the study's engagement efforts and recommendations.

"Rapid Facts"

Understanding that the public as a whole may not be aware of the full range of The Rapid's services and benefits to the community, a public education effort called "Rapid Facts" was developed. Rapid Facts included several visually appealing infographics and included "did you know?" types of information. The Rapid Facts were widely distributed using The Rapid's social media feeds and were used to frame a larger community conversation surrounding mobility, equity, accessibility, and environmental and social benefits of transit.



Focus Group Meetings

Focus group meetings were held with members of the project team and staff from municipalities and key stakeholder organizations across the region. In total, 20 meetings were held throughout the Summer of 2017 and the project team received feedback individuals at each organization. Two of the focus group meetings were “Breakfast with Businesses” events where project team members met with local chambers of commerce and business owners to get a firmer grasp on employers’ and employees’ transit needs. Real-time survey tools were used to collect input regarding the stakeholder’s priorities.

Platform Events

An all-day event was held on the Rapid Central Station platform on September 15, 2017 from 5:00am to 6:00pm to capture feedback from The Rapid’s core ridership base. The event included interactive stations designed to better understand riders’ opinions, priorities for improvements, and needs. Riders were able to discuss their specific concerns, ideas, and aspirations with members of the project team and Rapid staff. A similar event was held the follow week at the Woodland Mall Transfer Station.



Project Website

A project website was created to establish a central location for information regarding the ALIGN study. The website contains information and updates concerning the project, Rapid Facts, a background and FAQ regarding the purpose and goals of the study, links to documents and reports developed throughout the course of the planning process, and links to the online survey and mapping platform.

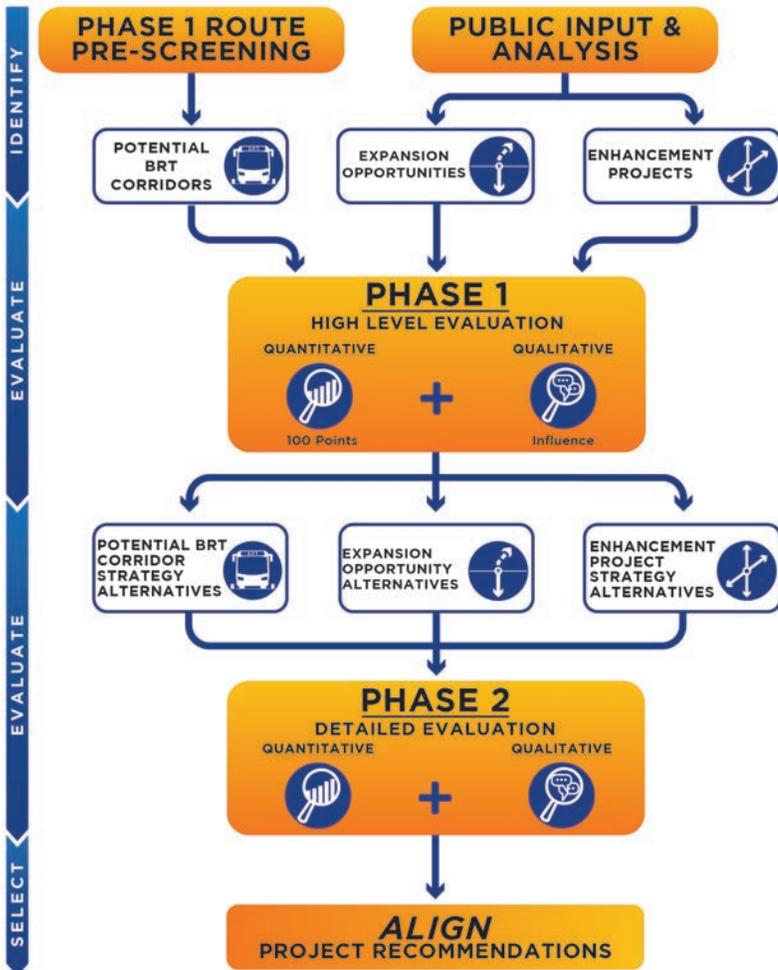
Surveys

Three separate surveys were distributed during the planning process. An on-board rider survey gathered information in April 2017 regarding rider’s opinions on Rapid service and other travel pattern information. In an effort to partner with other local organizations with overlapping goals, a digitally available bus stop improvement survey was developed with MobileGR. A third survey released in late 2017 was issued utilizing a robust engagement platform called MetroQuest. This engagement platform included several survey questions focused on the types of improvements most desired by the public such as when to increase frequency, when to extend hours of operation, and locations where service should be improved or extended. Additionally, an interactive mapping tool was available which allowed the public to identify specific concerns, issues, or ideas pertaining to certain stops, routes, and areas.

Project Evaluation Process

As part of Align, a large number of potential improvements were identified. However, due to limited financial resources, only a select number will be recommended for implementation in the near- to mid-term. In order to determine which improvements will be ultimately recommended, an evaluation process was used to prioritize the recommended improvements based on an assessment of costs, benefits, and impacts.

Using the project goals and objectives, an evaluation program was developed to better understand which projects would deliver the greatest impact to the region. Two phases of evaluation were performed. In the first phase, a more generalized evaluation was used to identify the top performing projects. In the second phase of evaluation, the projects carried forward were defined in greater detail and a second round of more detailed analysis was carried out on these to identify those improvements that make the most sense to implement first.

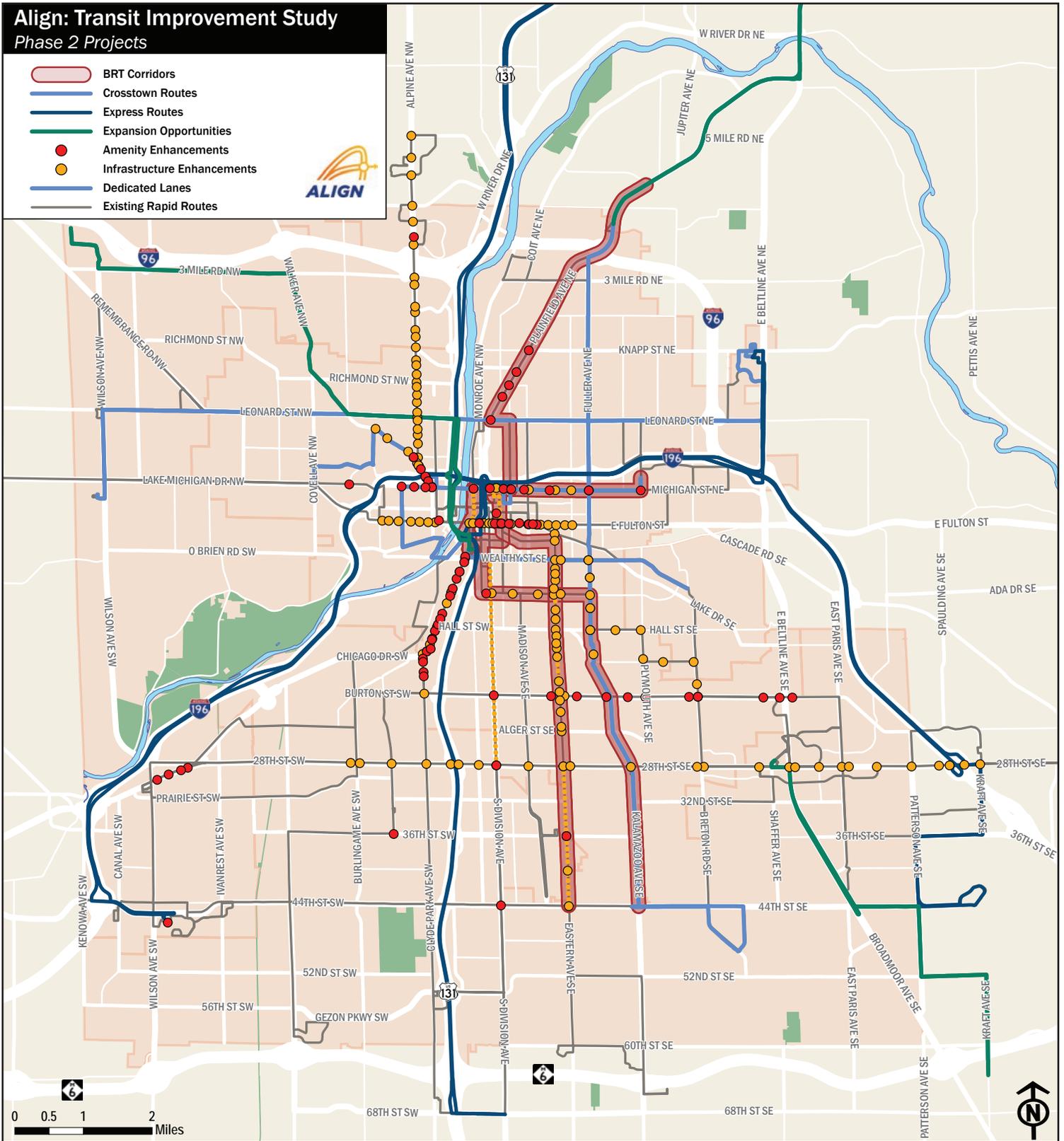


In the first phase of the two phase process, the project goals were used to link the evaluation criteria to the goals and objectives and ensure the evaluated improvements were assessed based on the community's preferences. Quantitative metrics assessed the overall viability and attractiveness of potential improvements, while community support and preference played a significant role in developing the alternatives and helped to influence their performance in the evaluation. The projects were also subjected to a qualitative analysis that helped identify improvements that were important to the region, but may not have scored as high on the quantitative evaluation.

For the Phase Two Evaluation, the projects carried forward from Phase One were evaluated using more specific measures based on the project goals and objectives. These projects were refined to determine specific design considerations, locations, and routing in order to more accurately calculate some of the measures in the Phase Two Evaluation. The refined projects were subjected to the evaluation measures, which were focused on the estimated cost, ridership and usage, demographics, surrounding land use, and implementation challenges. The project types detailed in Section 3 are the outcome of the evaluation process. The map on the next page shows the locations of the recommended projects.

Align: Transit Improvement Study Phase 2 Projects

-  BRT Corridors
-  Crosstown Routes
-  Express Routes
-  Expansion Opportunities
-  Amenity Enhancements
-  Infrastructure Enhancements
-  Dedicated Lanes
-  Existing Rapid Routes



The 61 projects identified during the Align Study are spread throughout The Rapid's Service Area and include a mix of service and capital projects.



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PROJECT TYPES



As part of the Align Study, a number of project types were identified to help The Rapid achieve the goals of the study. These projects and their locations were identified as a way to improve the functionality and reliability of The Rapid based on the input received from the public, project stakeholders, and the Align Citizen's and Technical Advisory Committee. The projects were then categorized into three different project categories: Potential BRT Corridors, Expansion Opportunities, and Enhancement Projects.

The Potential BRT Corridors are intended to be the potential next bus rapid transit corridor in The Rapid System and to build upon the Silver Line and Laker Line BRTs. The Expansion Opportunities are areas in the Grand Rapids region that are currently lacking transit service, but are experiencing growing transit demand. The Enhancement Projects are smaller scale improvements intended to improve the system's functionality and rider experience at individual locations. The Enhancement Projects are subcategorized into the three following categories: Amenity Enhancements, Infrastructure Enhancements, and Service Enhancements.

Improvement Project Categories

Following recent implementation of the Silver Line Bus Rapid Transit (BRT) Corridor and forthcoming Laker Line Bus Rapid Transit Corridor, The Rapid is interested in exploring the feasibility additional BRT routes in the system. The Division Avenue and Lake Michigan Drive corridors were the most logical initial BRT corridors due to their high transit ridership, but the next is not as apparent.

In addition to the Potential BRT Corridors, additional, smaller projects were identified to help meet the goals of the Align Study. These projects look to improve comfort, reliability, and service options throughout the entire service area with targeted investments in specific areas. The identified projects fall under the following enhancement types: Amenity, Infrastructure, and Service Enhancements.

The Amenity Enhancements are The Infrastructure Enhancements look to a Service Enhancements fall into two categories, Individual Enhancements and System Wide Service Enhancements. Finally, the Expansion Opportunities are areas that were considered for improved transit service and accessibility, and may take the form of expanded fixed-route service or other first-mile and last-mile connections from the existing route network.



POTENTIAL BRT CORRIDORS

Existing Rapid Routes with Potential for BRT Investment based on the existing conditions and operations characteristics

AMENITY ENHANCEMENTS

Improvements to rider comfort and experience and attempt to address the equitable access, enhanced transit, and land use needs.

INFRASTRUCTURE ENHANCEMENTS

Helps address the enhanced transit and land use needs identified for the study, and are designed to improve travel time and reliability.

SERVICE ENHANCEMENTS

Consists of two categories; Individual Service Enhancements include express bus service and crosstown routes, and System Wide Service Enhancements are increases in frequency and operating hours that would be implemented system wide.

EXPANSION OPPORTUNITIES

Zones and corridors within The Rapid's service area, or just outside of it, where there is current demand or an indication of need for greater transit service.



BUS RAPID TRANSIT



Greater Cleveland RTA

Bus Rapid Transit (BRT) adds a higher level of service to the transit system by adding amenities and infrastructure similar to those found on a rail transit service. BRT typically includes dedicated travel lanes, larger stations with more amenities, transit signal priority, and more frequent service. A new BRT route would likely increase the ridership and efficiency of the corridor it is implemented on due to the increased frequency, improved travel time, and additional amenities.

DESIGN FEATURES

- Dedicated Travel Lanes
- Transit Signal Priority
- Enhanced Stations
- Higher Capacity Vehicles
- Off-Board Fare Payment

NEEDS ADDRESSED



RECOMMENDED LOCATIONS

- Eastern Avenue
- Kalamazoo Avenue
- Plainfield Avenue
- Laker Line BRT Extension



BUS SHELTERS



Wikimedia Commons

Shelters only exist at 9% of the stops in The Rapid service area. As a way to improve waiting conditions, make transit more visible to the community, and facilitate multi-modal connections, a number of new shelter locations were identified as part of Align. The shelters were recommended for corridor with high ridership and multiple routes and should be visually appealing, have seating, and wind breaks.

DESIGN FEATURES

- Covered with Walls or Wind Breaks
- Match Existing Shelters
- Bike Racks
- System Maps and Route Maps
- Pedestrian Wayfinding

NEEDS ADDRESSED



RECOMMENDED LOCATIONS

- E. Fulton Street
- Grandville Avenue/
Clyde Park Avenue
- Burton Street
- Michigan Street
- Stocking Avenue
- Bridge Street
- Plainfield Avenue
- Chicago Drive



MOBILITY HUBS



Mobility hubs attempt to provide a number of additional mobility options for the Grand Rapids region. The hub would connect multiple bus routes to a centrally located area with dedicated staging area for taxis, car share, and bike storage. Bus layover areas would be available to facilitate transfers and upgraded stations would be shared between all of the routes serving the hub.

DESIGN FEATURES

- Enhanced Stations
- Bus Layover Area
- Car Share Parking
- Taxi/Ride Hailing Parking
- Bike Parking/Bike Share Station
- Pedestrian Wayfinding

NEEDS ADDRESSED



RECOMMENDED LOCATIONS

- Grand Valley State University Pew Campus
- RiverTown Crossings Mall



SUPER STOPS



Super Stops look to improve the waiting area at the busiest stops in a transit system by introducing additional amenities and more space for passengers. A Super Stop in The Rapid system would likely look similar to the existing BRT stops on the Silver Line and new Laker Line. Super Stops should be architecturally significant and increase the visibility of transit in the community and should be served by multiple routes.

DESIGN FEATURES

- Space for Multiple Buses
- Real Time Arrival Signs
- System and Route Maps
- Large, Architecturally Significant Shelter
- Bicycle Parking
- Wayfinding

NEEDS ADDRESSED



RECOMMENDED LOCATIONS

- Fountain Street at Library Place
- Fulton Street at Gay Avenue SE



PEDESTRIAN INTERSECTION IMPROVEMENTS



NACTO

Recently, cities in The Rapid service area have been upgrading intersections with the introduction of curb bump outs and high visibility crosswalks. Intersections lacking crossing amenities are recommended to reduce crossing distances, make pedestrians more visible, and provide wayfinding to bus transfer opportunities and nearby destinations. Pedestrian leading intervals should be introduced on all intersections to allow pedestrians to get a head start crossing before the traffic signals change.

DESIGN FEATURES

- Sidewalk Bump Outs
- Pedestrian Count-Down Signals
- Pedestrian Leading Interval
- Wayfinding

NEEDS ADDRESSED



RECOMMENDED LOCATIONS

- Division Ave at Franklin St
- Division Ave at Burton St
- Division Ave at 28th St
- Division Ave at 44th St
- Fulton St at Lake Dr
- Alpine Ave at Myrtle St
- Leonard St at Plainfield Ave



DEDICATED TRANSIT LANE



SFMTA

Dedicated Lanes are employed to free up space for transit vehicles on highly congested streets. These lanes can take many forms, ranging from simple paint and signage markings explaining to motorists not to use the lane, to fully separated lanes utilizing bollards or curbs to keep private vehicles out of the lane. The Rapid should look to use red pavement or thermoplastic paint in dedicated lanes to alert motorists of the lane's intentions. Additional delineation could be employed in certain areas.

DESIGN FEATURES

- Red thermoplastic paint to denote a shared bus and bicycle lane
- Concrete bus pads at stops
- Signage explaining lane rules

NEEDS ADDRESSED



RECOMMENDED LOCATIONS

- Fulton Street
- Eastern Avenue
- Ransom Avenue
- Monroe Avenue



TRANSIT SIGNAL PRIORITY



WinnipegTransit.com

Transit Signal Priority (TSP) helps reduce travel time and improve reliability for on-street transit vehicles by reducing the time buses spend stopped at red lights. Buses are equipped with a transmitter that will hold a traffic light green for an approaching bus or reduce the red signal time for stopped buses. The Rapid currently uses this technology on the Silver Line BRT, which helps reduce overall travel time by several minutes. TSP will have the greatest effect on the most congested streets in the region.

DESIGN FEATURES

- Implemented along an entire corridor
- All buses using the street should be equipped with a transmitter
- Traffic signals at busiest intersections should be prioritized

NEEDS ADDRESSED



RECOMMENDED LOCATIONS

- Eastern Avenue
- Fulton Street
- Grandville Avenue/
Clyde Park Avenue
- 28th Street
- Alpine Avenue



QUEUE JUMPS



Queue jumps are a feature used by buses to bypass congestion at busy intersections. A queue jump is a short section of dedicated transit lane, paired with a transit leading signal, that allows buses to travel around the vehicles stopped at an intersection. The leading signal allows the bus to go first, which lets it get in front of the vehicles it was behind. Queue jumps can help reduce overall travel time and improve reliability, while giving the impression to non-riders that the bus is a faster travel option.

DESIGN FEATURES

- Short section of dedicated transit lane, on right side of roadway
- Red paint and/or lane markings denoting Transit Only
- Transit Leading Signal and/or Transit Signal Priority

NEEDS ADDRESSED



RECOMMENDED LOCATIONS

- 28th Street



BUS BULBS



NACTO

Bus bulbs are typically used on busier streets where buses can get stuck pulling in and out of vehicle traffic to pick up and drop off passengers. Reducing the dwell time at stops on busy streets will help buses become more efficient, reduce overall travel times, and improve reliability. Bus bulbs can be installed easily on streets with on-street parking and could include a shelter and landscaping, if demand warrants it.

DESIGN FEATURES

- Concrete extension of sidewalk into the street
- Shelter, if warranted

NEEDS ADDRESSED



RECOMMENDED LOCATIONS

- Fulton Street
- Eastern Avenue
- Monroe Avenue
- Alpine Avenue
- Walker Avenue



EXPRESS BUS



Metro Transit

The Express Services are designed to be used primarily as a commuter service, carrying passengers from outlying areas of the region into Downtown Grand Rapids. Express bus services would feature very limited stops (three to four stops total), travel along the major roads and freeways, park and ride ability at the outlying stops, and significantly shorter travel times compared to the existing local routes. The Express Services would run during the AM and PM peak hours only.

DESIGN FEATURES

- Limited Stop Commuter Service
- Park and Ride Capability
- Reduced Travel Time
- Six Round Trips per Day

NEEDS ADDRESSED

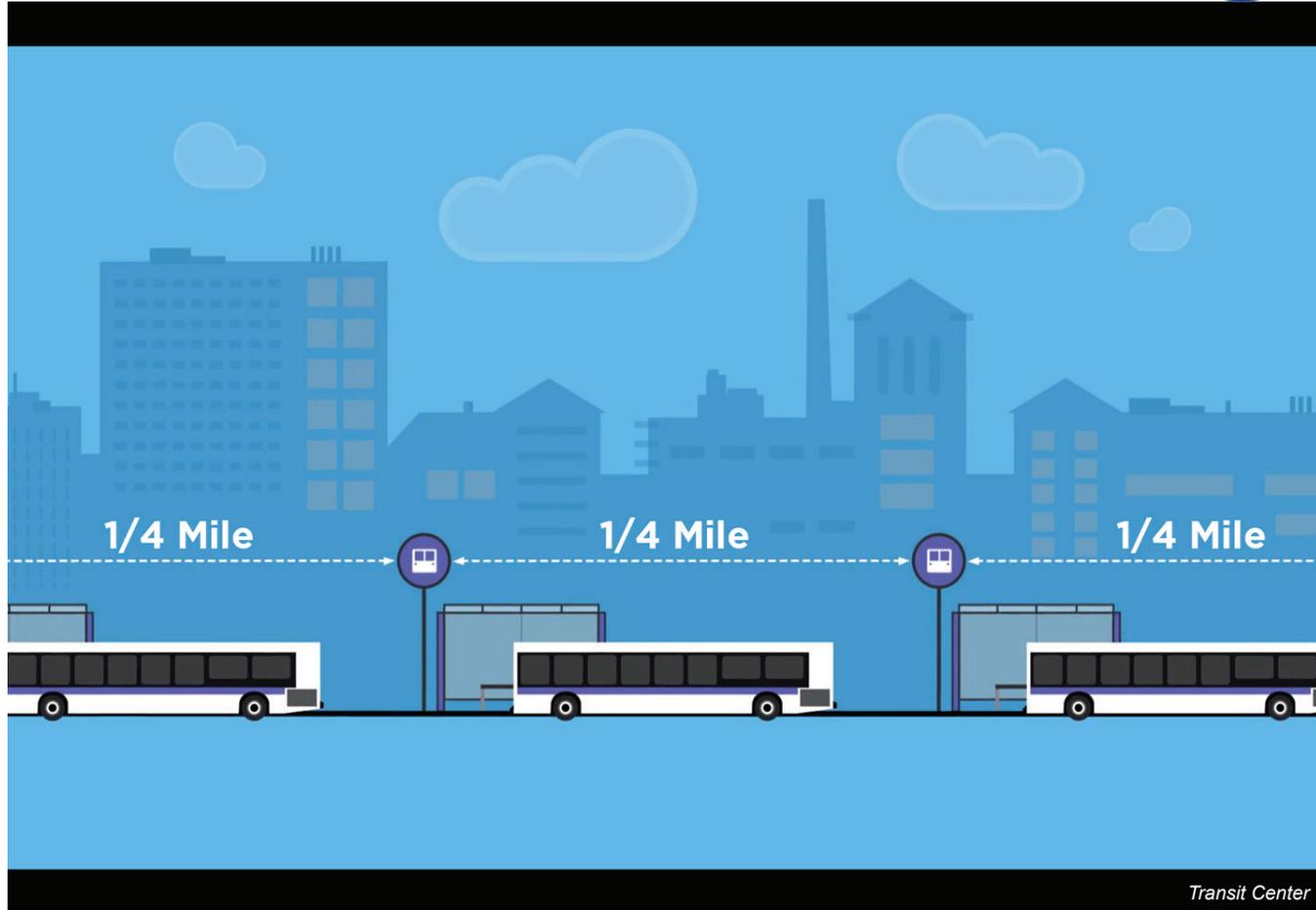


RECOMMENDED ROUTES

- Grandville Express
- Cascade/Gerald Ford Airport Express
- Knapp's Corner Express
- Cutlerville Express
- Rockford/Cedar Springs Express



STOP CONSOLIDATION



Consolidating closely spaced transit stops is a technique used to help improve travel time and reliability on bus routes. Low activity stops near to higher activity stops should be combined into a single stop. Riders would be then directed to the remaining stop, which may feature additional amenities like shelters and wayfinding.

DESIGN FEATURES

- Stops spaced roughly every 1/4 mile

NEEDS ADDRESSED



RECOMMENDED LOCATIONS

- Franklin Street
- Route 5, North of Burton Street
- Fuller Avenue
- Michigan Street
- Alpine Avenue



CROSTOWN ROUTES



NYC Department of Transportation

Crosstown routes are helpful for riders that need to travel across the Service Area and do not need to go to Rapid Central Station. Many of the existing Rapid routes travel to Central Station and passengers are required to transfer to continue past. Adding more crosstown routes to the system would allow riders to travel to certain areas in the service area without having to transfer and without having to travel into Downtown Grand Rapids, allowing for an overall faster and easier trip.

DESIGN FEATURES

- New Service
- Avoids Central Station if possible
- Reduced travel time across the region

NEEDS ADDRESSED

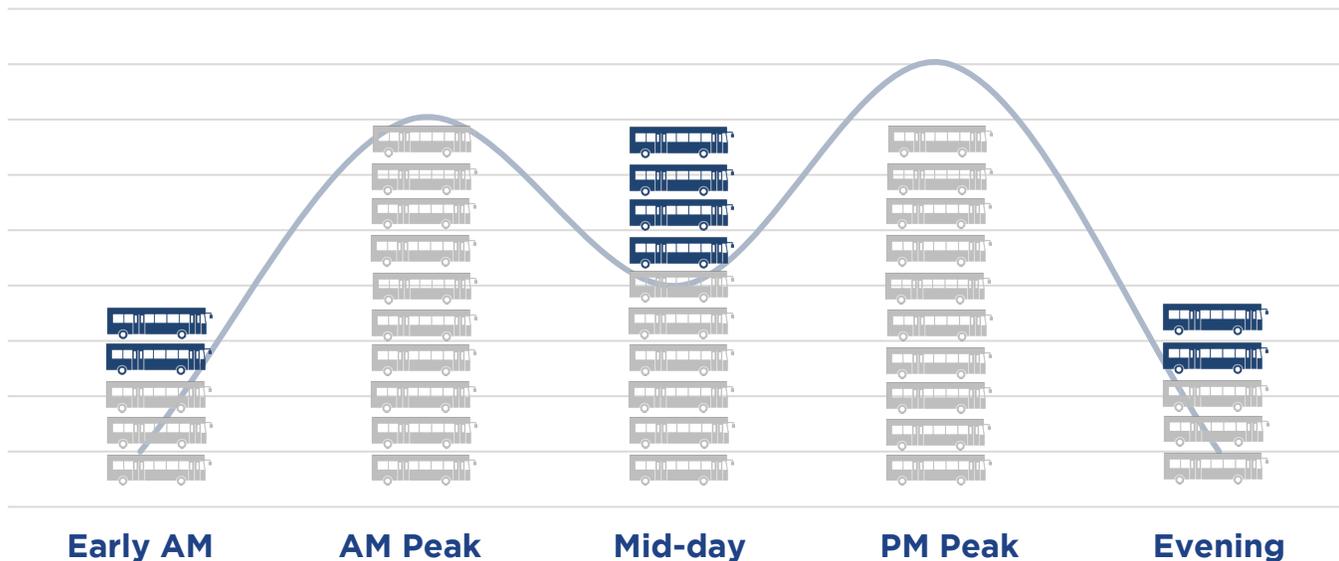


RECOMMENDED ROUTES

- Fuller Avenue/
Kalamazoo Avenue
- Wealthy Street
- Michigan Street
- Leonard Street
Crosstown



SYSTEMWIDE SERVICE ENHANCEMENTS



The Systemwide Service Enhancements include both increased frequency and increased service span for all routes in The Rapid system. Increasing the frequency of a service involves adding more buses per hour to a given route, while a longer service span allows buses to run later into the night or earlier in the morning. Both enhancements will improve the usability of the system and increase the number of options riders have.

DESIGN FEATURES

- More buses per hour, shorter wait times
- Longer span of service
- Increased rider options

NEEDS ADDRESSED

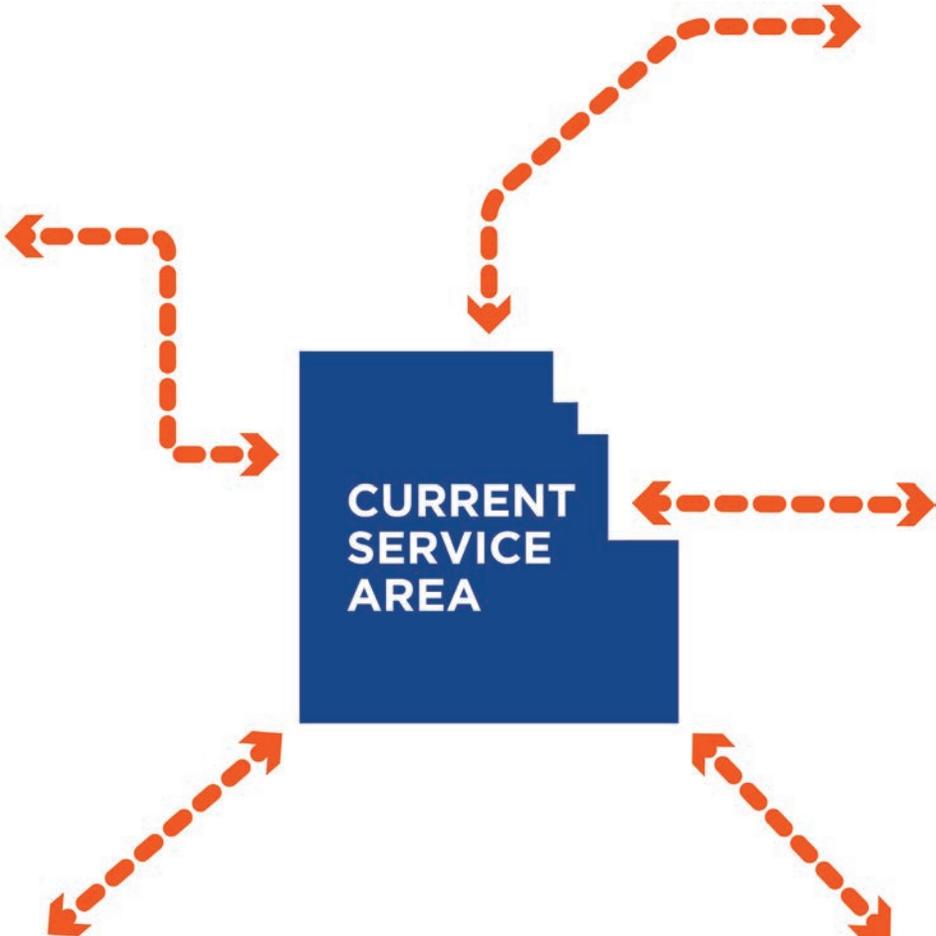


RECOMMENDED PROJECTS

- Weekday - Midday Frequency Increase
- Weekday - Night Span Increase
- Saturday - Match Weekday Frequency
- Saturday - Match Weekday Span
- Sunday - Match Saturday Frequency
- Sunday - Match Saturday Span



EXPANSION OPPORTUNITIES



Expansion Opportunities are the areas with the transit service area boundary, or just outside of it, that are lacking transit availability, but have current demand or an indication of need for greater transit service. These areas are typically in areas with high residential or employment growth and tend to be near the edges of the region. Expanded transit service to these areas could take the form of fixed-route service or more flexible, on-demand service that links to the most frequent routes in the system.

DESIGN FEATURES

- Service outside of current partner cities, or areas lacking existing service
- Fixed route or other connection to existing route

NEEDS ADDRESSED



RECOMMENDED LOCATIONS

- Plainfield Township
- 3 Mile Road
- Broadmoor Avenue



THE RAPIDS #1
Outstanding Transit System

Please have your fare ready before boarding.



KNEELING

RAMP



4

IMPLEMENTATION STRATEGY

Identifying projects that will address the needs of The Rapid and its riders is only the first half of the Align Study. To ensure that the recommended projects will benefit the region, they need to be implemented in a timely fashion, but without breaking the agency's capital budget. It is for this reason that an implementation plan was developed to guide The Rapid through the long term process of bringing the recommended project to fruition.

The Rapid will need to follow some guiding principles, develop a phasing plan, and introduce the region to some new ways of thinking in order to make sure that the project identified in this study are realized at their full potential. By following the process laid out on the following pages, The Rapid and the region will be poised for success.

Based upon The Rapid’s current opportunities and challenges, as well as input on the most needed enhancements from the public and regional leadership, the following strategy has emerged:

Leverage investment in the existing BRT corridors

The successful implementation of the Silver Line and upcoming Laker Line investment provide The Rapid’s system with key corridors to build around. On the other hand, more could be done to leverage these investments and extend their impact. The Rapid should work to make these corridors the most convenient in the system through a continued focus on transit-priority infrastructure (particularly in the downtown), better accessibility for pedestrians along the corridors, and improved transit connectivity to these lines. The Rapid should also look for opportunities to “finish” the Laker Line corridor by continuing it east along Michigan Street. Finally, The Rapid should coordinate with municipal partners to unlock the development potential along these corridors through targeted transit-oriented development planning (see “Making Regional Land Use More Transit Friendly”, page 44).



Source: Downtown Grand Rapids, Inc.

Invest in amenities and service upgrades in the high-ridership, high-frequency network.

Additional service and amenity enhancements should be focused around The Rapid’s most productive routes, making transit the most convenient option for these corridors, including Eastern, Kalamazoo, Plainfield, Alpine, and 28th. This begins with extending the peak-period “15 minutes or better” service levels to more of the week, but also includes transit-priority infrastructure and improved access and amenities. Increasing usage of the new Wave Fare Card in both on and off-board fare payment situations will help speed up service. In the long term, as ridership growth occurs, these corridors may provide opportunities for BRT-scale investments.



RapidRide bus shelters in Seattle provide improved amenities on the region’s busiest bus routes. Source: King County Metro Transit

Move toward and strengthen core system based around more of an all-day / all-week service model.

Low service levels during the midday and on weekends make the system difficult to rely on for current riders, and potentially unattractive to non-riders. The Rapid should focus its service planning to provide more consistent service through the 6 am to 6 pm time period, where most usage currently exists, and offer a more consistent schedule on Saturdays and Sundays, which are key for service-sector employment. An upcoming Comprehensive Operations Analysis study will help The Rapid determine how to structure its key routes around this model.

Provide new connections and service types to key growing travel markets, including expansion areas.

In addition to leveraging and expanding on its current system of routes, The Rapid also needs to continue to innovate and expand its service offerings to growing portions of the region. Key initiatives should include piloting of new services to high-employment, low-population zones at the edges of the current service area in Walker and Kentwood. One potential tool would be expanded use of new flexible-transit service models that better utilize technology or transportation network companies to supplement The Rapid's fixed routes (see "Explore Mobility on Demand", page 43).



Coordinating mobility solutions for all users using emerging technology can help extend The Rapid's reach into areas lacking fixed route service. Source: Transit Center

Implementation Phasing

The Align Plan includes elements that should be immediate priorities, as well as others that may take years of planning or identification of new funding resources.

Now (2018-2020): Make the best use of the current system

- Conduct a Comprehensive Operations Analysis to explore service enhancements within current system budget: extended peak period service levels, expanded weekend service and more cross-town routes
- Continue to encourage use of new Wave Fare Card to speed up passenger boarding
- Leverage recent / upcoming investments in BRT through corridor land-use planning
- Implement Transit Signal Prioritization in key corridors including Eastern Avenue, Alpine Avenue, 28th Street, Fulton Street, and Grandville/Clyde Park Avenue
- Enhance dedicated-lane markings and visibility in downtown corridors (Monroe, Ransom, Fulton)
- Prioritize amenity enhancements in high-need equity neighborhoods with transit supportive land use / accessibility
- Partner with municipalities and road agencies on priority pedestrian accessibility improvements along high-ridership service corridors
- Pilot mobility on demand service for employment growth zones within Walker and Kentwood

Next (2021-2023): Carefully consider service expansion priorities

- Extend Laker Line BRT service east to Plymouth to serve growing Michigan Street corridor and commuter trips to hospitals
- Implement service changes / restructuring based on results of Comprehensive Operations Analysis
- Strengthen amenities, operations and ridership in high-frequency, high-ridership corridors
- Create mobility hubs and super stop amenities to boost profile and connectivity of transit at key regional destinations
- Establish commuter / park-and-ride bus services

Future (2024+): Continue expanding BRT network

Based on evolution of service and ridership, identify next opportunities for BRT network expansion, commuter lines, or mobility on demand services

Explore Mobility On Demand

Mobility on Demand, also referred to as shared mobility or microtransit, refers to a broad set of transit service concepts that utilize advancements in technology to provide flexible, point-to-point transit connections for customers. One definition, from the Federal Transit Administration indicates:

'Mobility on Demand (MOD) is an innovative, user-focused approach which leverages emerging mobility services, integrated transit networks and operations, real-time data, connected travelers, and cooperative Intelligent Transportation Systems (ITS) to allow for a more traveler-centric, transportation system-of-systems approach, providing improved mobility options to travelers and users of the system in an efficient and safe manner.'

In many ways, MOD is similar to the demand-response or dial-a-ride paratransit service operated by The Rapid and other transit agencies. But the advent of new technologies for scheduling and hailing services, as well as the potential to partner with new mobility options (e.g., Uber, Lyft, bikeshare) provide new possibilities that many agencies are currently exploring. There have also been grant opportunities from the Federal Transit Administration and State of Michigan to pilot and test new services.

In many cases, such as for DART in Dallas, Mobility on Demand services and partnerships can be used to help supplement their fixed-route system services in areas and during timeframes when demand is lower. DART has established a GoLink pilot program that allows customers to use an app or call to receive a ride from a DART-branded vehicle within a defined zone (a suburban office park area), and is also exploring the possibility of incorporating Uber and Lyft rides as part of the program. The goal is to provide additional services without the cost of providing fixed-route service.

For The Rapid, there are two “expansion areas” in Walker and Kentwood that have been defined during the Align study could be perfect opportunities to test Mobility on Demand concepts in an area that is likely to be difficult to serve using fixed route transit.



DART's GoLink service provides Mobility on Demand services to areas in the region without the demand for a fixed route bus. Source: DART

Making Regional Land Use More Transit Friendly

Growth in The Rapid's service area increasingly occurs at the edges, in less dense and less pedestrian friendly areas of the region that are also more difficult to effectively serve with fixed-route transit. In addition, development patterns along key existing corridors often prioritize auto access and parking over pedestrians and transit. In each of these cases, and especially for developments that contain large numbers of jobs, better coordination between municipal planners and The Rapid could help ensure that as the region grows, it does so in a more transit-accessible way. Building off of the partnership discussions during the Align process, The Rapid should work with its municipal partners to determine:

- How The Rapid can support or attend municipal design or planning meetings to provide guidance on best practices for transit-supportive planning
- Whether The Rapid can become involved in site plan review/comment for projects along major transit corridors
- Where member jurisdictions will be conducting future land use or master planning that can support and prioritize transit access as a key element of community growth
- How sites can be acquired by The Rapid and developed with TOD principles in mind as a key development goal



Partnership Based Implementation

A major theme of the Align planning process and input received was the need to coordinate infrastructure and land use planning with the needs of transit service. As discussed on the previous page, this involves the siting and design of development to facilitate transit and pedestrian access. But it also involves the design and construction of transit supportive street corridors, something that is under the control of local, county and state agencies. Guidance from the National Association of City Transportation Officials, such as their Transit Street Design Guide, has provided a standard set of recommendations for how these agencies can create streets that function better as transit corridors.

The Align plan contains a series of transit-priority infrastructure investments, including signalization, queue jumps, pedestrian enhancement, station amenities, bus bulbs and dedicated lanes. To partner with local municipalities who will need to help approve and potentially fund these enhancements, The Rapid could consider developing new capital funding programs that help encourage local governments to cooperatively design and implement these interventions (many of which, like bus bulbs or improved pedestrian crossings, could be piloted at a low cost prior to major investment occurs).

A recent innovative example of this type of program is the “Local Pilots” program from the MBTA in Boston. MBTA utilized foundation grant funding to solicit bus-priority demonstration projects from local communities. After an open request-for-proposals (RFP) process, there are three projects being tested in 2018, including transit-signal prioritization, dedicated lanes, and queue jumps, and level boarding platforms. The program will also offer the agency an opportunity to test the impacts of these projects in key corridors.

Municipalities can play a major role in planning and implementing corridors that function better for transit. The City of Grand Rapids’ Vital Streets Plan offers an initial indication of this type of planning. This plan designates particular streets as transit-emphasis corridors, and many of the infrastructure features of the Align plan have been developed to coincide with these designated corridors. The specific areas and design of these infrastructure treatments would need to involve the City and be consistent with their standards. Other communities within The Rapid service area should also be encouraged to initiate their own processes of designating the streets in their boundaries that facilitate transit access and consider whether they could be better designed for that purpose.

Measuring Success

In the coming years, the success of the Align planning process will be dependent on how well the agency met the core goals established during the process. The following list below indicates potential metrics that the agency could track and measure on a recurring basis to measure the impacts of the enhancement strategy.

Goal		Performance Metrics	Current Benchmark
Provide Enhanced Transit Service Options		<ul style="list-style-type: none"> Total Ridership Ridership per Service Hour and Mile Ridership on High-Frequency Corridors Average Transit Travel Speeds On Time Performance 	
Improve Equitable Access to Transit		<ul style="list-style-type: none"> System Accessibility to High-Need Populations High-frequency service accessibility to high-need populations Amenities and investment in high-need areas 	
Maximize positive regional impact		<ul style="list-style-type: none"> Regional and community mode shift Employment accessibility by transit system Employment accessible by high-frequency transit 	
Encourage Economic Development Through Transit		<ul style="list-style-type: none"> Amount of new development within station areas Percent of regional development near station areas 	
Implement Projects with Community Support		<ul style="list-style-type: none"> Customer satisfaction surveys Community and stakeholder satisfaction surveys 	





STOP

5

6

17/44

24

5

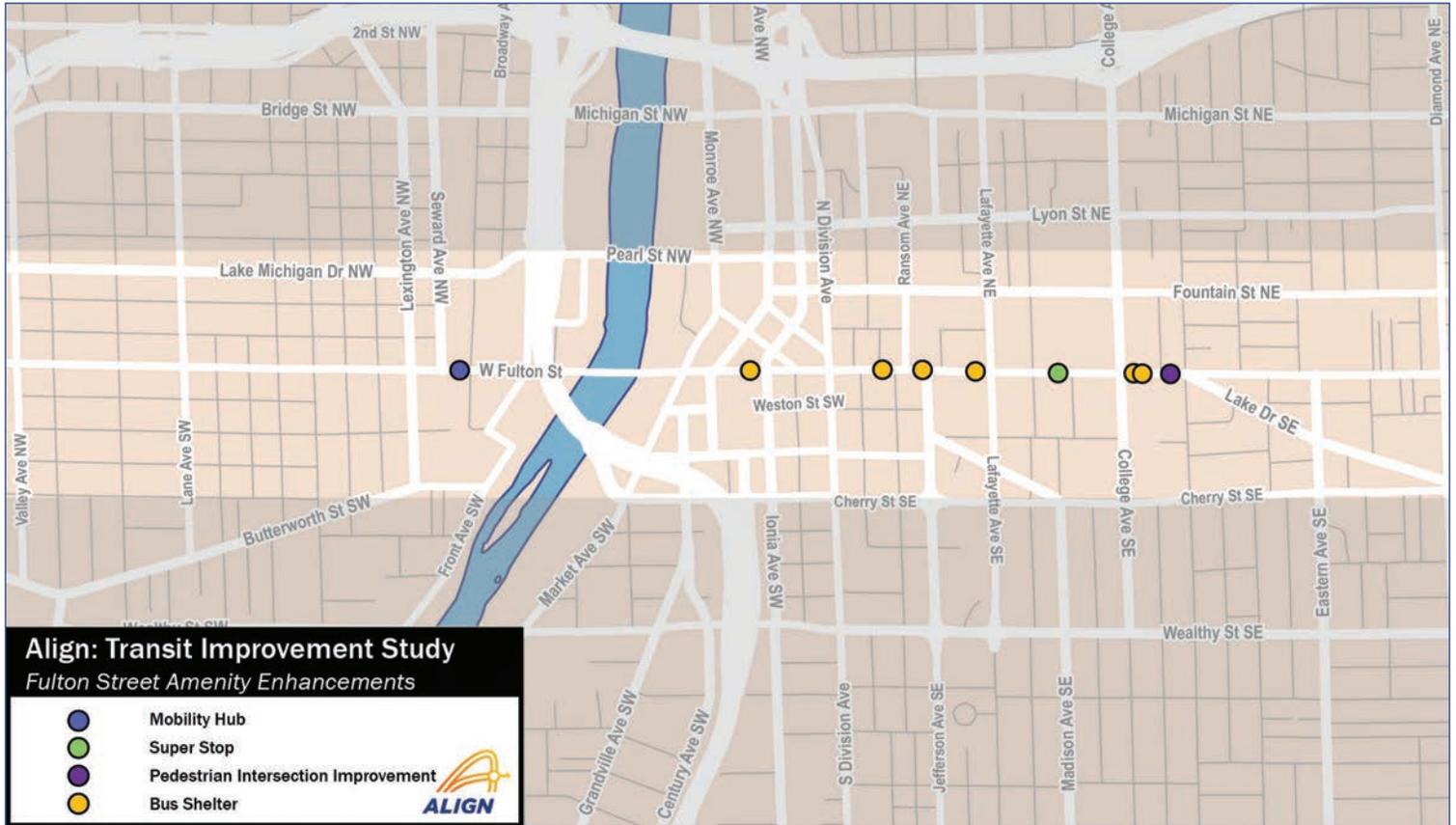
APPENDIX
A

ALIGN PROJECT LOCATIONS





FULTON STREET AMENITIES



The Amenity Enhancement projects recommended for Fulton Street are located between Seward Avenue and Lake Drive. This section of Fulton Street is one of the busiest transit corridors in The Rapid's service area. Improvements along this corridor will benefit a greater number of riders due to the confluence of several routes converging on Fulton Street.

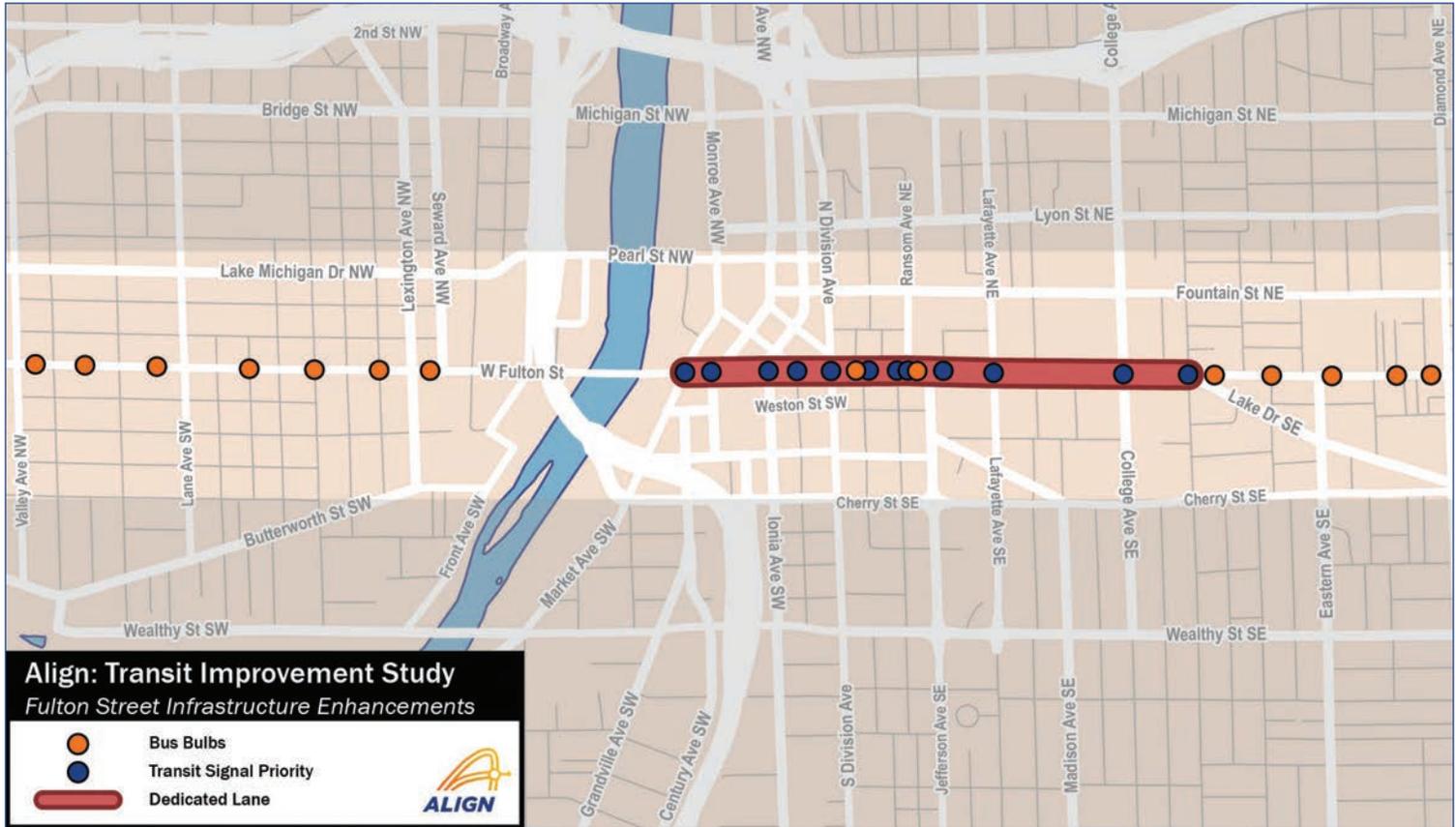
RECOMMENDED PROJECTS PRIORITY RATING	PROJECT CAPITAL COSTS
Super Stop: Fulton St at Gay Ave ●●●●○	\$300,000
Bus Shelters: Ottawa Ave to Lake Dr ●●●●○	\$115,500
Mobility Hub: GVSU Pew Campus ●●●●○	\$1,200,000
Pedestrian Improvement: Fulton St at Lake Dr ●●●●○	\$75,000

PROJECT GOALS ACHIEVED

- Mobility hubs improve efficiency by increasing options for travel
- Shelters provide a tangible investment in areas lacking amenities
- Land values are higher in areas with highly visible transit and amenities
- The public expressed interest in additional stop amenities



FULTON STREET INFRASTRUCTURE



Align: Transit Improvement Study
 Fulton Street Infrastructure Enhancements

- Bus Bulbs
- Transit Signal Priority
- Dedicated Lane

The Infrastructure Enhancement projects recommended for Fulton Street are located between Valley Avenue and Diamond Avenue. Buses consistently experience slowdowns in this corridor due to the high amount of vehicle, pedestrian, and transit traffic in the area. Introducing the recommended infrastructure projects will help keep transit operating smoothly and ensure better on-time performance.

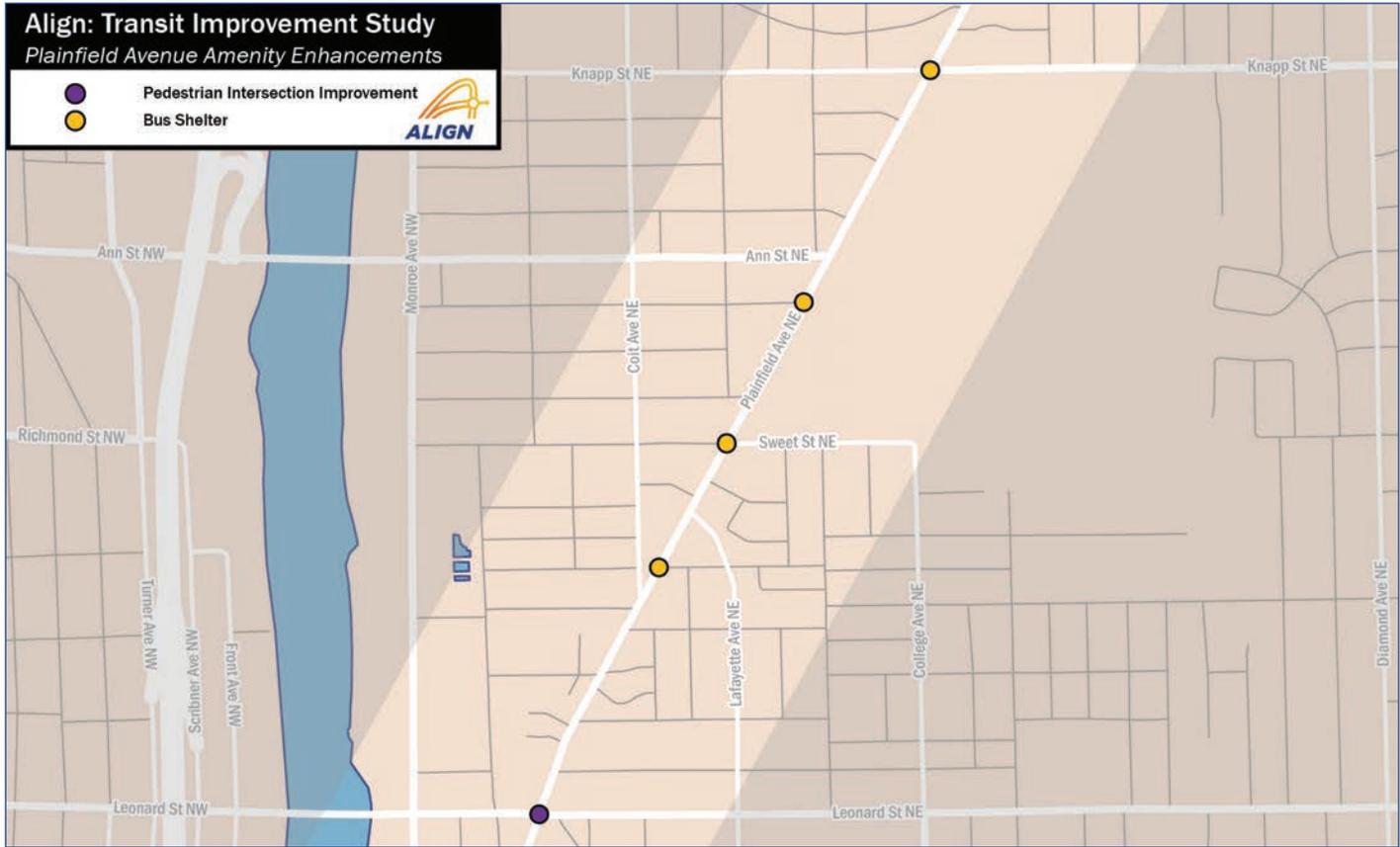
RECOMMENDED PROJECTS PRIORITY RATING	PROJECT CAPITAL COSTS
Bus Bulbs: Valley Ave to Diamond Ave 	\$140,000
Dedicated Lanes: Market Ave to Lake Dr 	\$440,000
Transit Signal Priority: Market Ave to Lake Dr 	\$1,200,000

PROJECT GOALS ACHIEVED

- All infrastructure projects help improve operations in the corridor
- Infrastructure increases the visibility of transit and can boost land value
- The public expressed a desire for better on-time performance for buses



PLAINFIELD AVENUE AMENITIES



The Amenity Enhancement projects recommended for Plainfield Avenue are located between Leonard Street and Knapp Street. Plainfield Avenue is a major north-south transit corridor in The Rapid system. Although this corridor is served by only one bus route, it carries some of the most riders per day. Improved amenities along Plainfield Avenue may help boost ridership in this corridor.

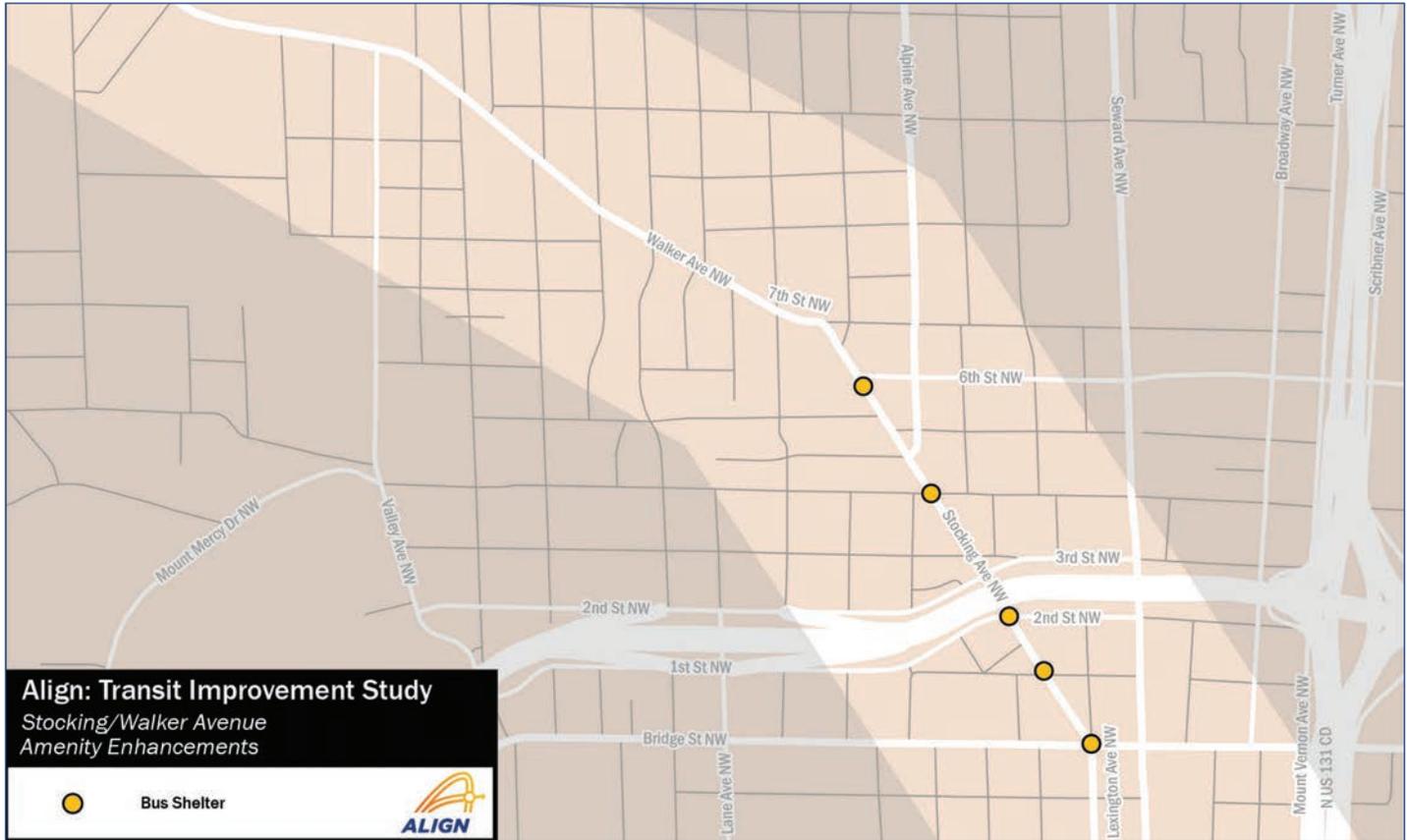
RECOMMENDED PROJECTS PRIORITY RATING	PROJECT CAPITAL COSTS
Bus Shelters: Leonard St to Knapp St 	\$132,000
Ped Improvement: At Leonard St 	\$65,000

PROJECT GOALS ACHIEVED

- Shelters provide a tangible investment in areas lacking amenities
- Walkability and transit amenities can add value to adjacent land
- The public expressed interest in additional stop amenities



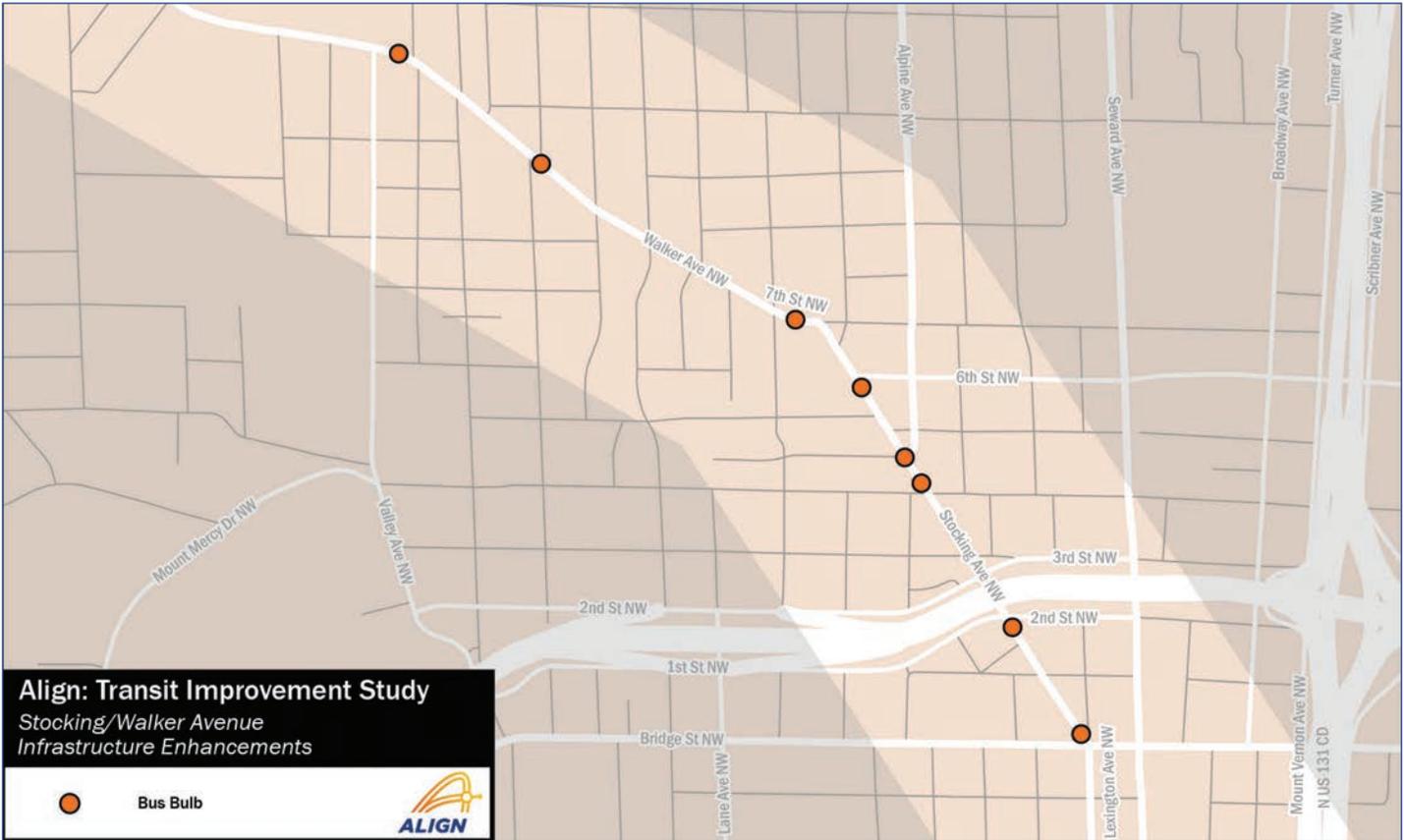
STOCKING/WALKER AVENUE AMENITIES



The recommended Amenity Enhancements for Walker Avenue and Stocking Avenue are located between Valley Avenue and Bridge Street. Stocking Avenue, which becomes Walker Avenue at 7th Street, is home to a small neighborhood business district that could benefit from the increased presence of transit. The dense neighborhood surrounding this corridor has potential for new transit riders with the addition of amenities.

RECOMMENDED PROJECTS PRIORITY RATING	PROJECT CAPITAL COSTS	PROJECT GOALS ACHIEVED
Bus Shelters: Bridge St to 8th St 	\$115,500	Shelters provide a tangible investment in areas lacking amenities Land values are higher in areas with higher visible transit and amenities

STOCKING/WALKER AVENUE AMENITIES



The recommended Amenity Enhancements for Walker Avenue and Stocking Avenue are located between 2nd Street and Valley Avenue. Stocking Avenue, which becomes Walker Avenue at 7th Street, is a two lane street through a neighborhood business district that will benefit from improved operations. The dense neighborhood surrounding this corridor is has potential for new transit riders with the addition of more convenient service.

RECOMMENDED PROJECTS PRIORITY RATING	PROJECT CAPITAL COSTS
Bus Bulbs: Bridge St to Valley Ave 	\$97,000

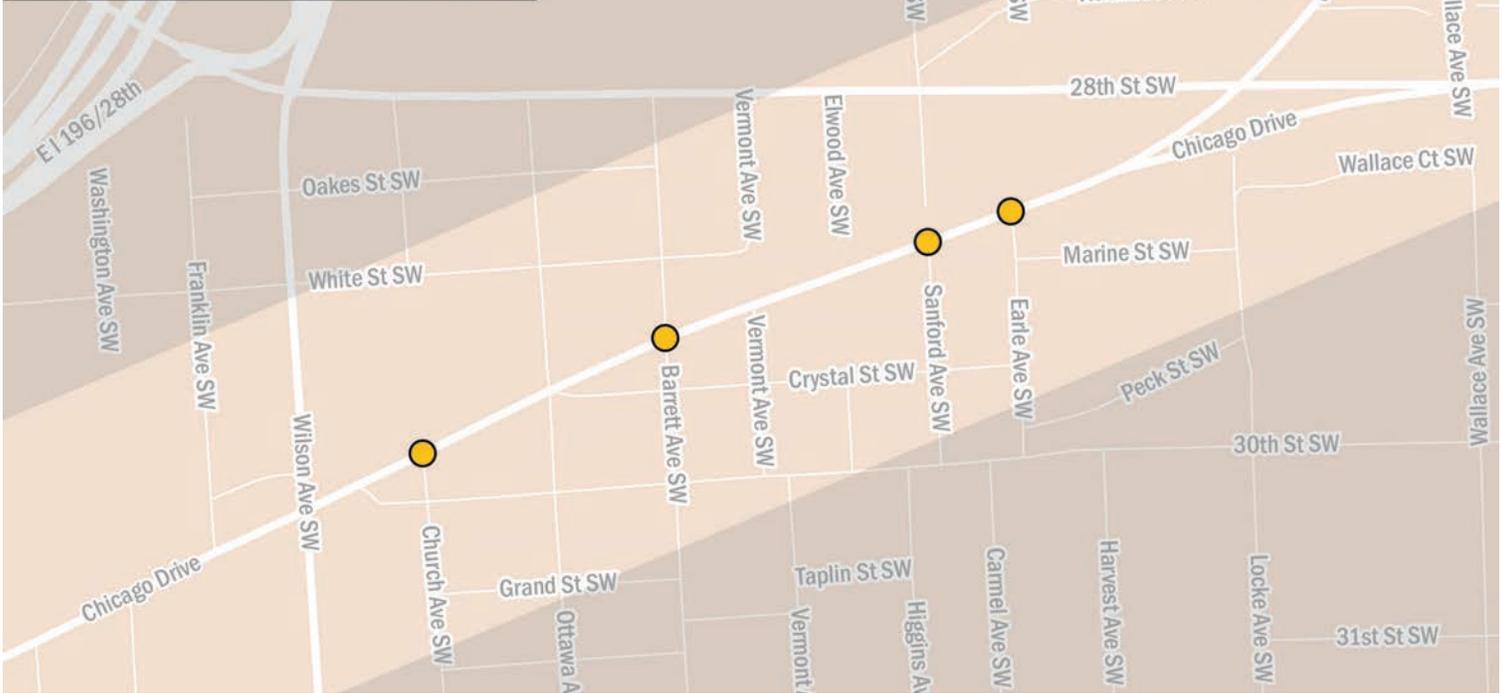
PROJECT GOALS ACHIEVED
Bus bulbs can help improve travel time and operations in the corridor
Land values are higher in areas with highly visible transit and amenities
The public expressed a desire for better on-time performance for buses

CHICAGO DRIVE AMENITIES



Align: Transit Improvement Study
Chicago Drive Amenity Enhancements

● Bus Shelter



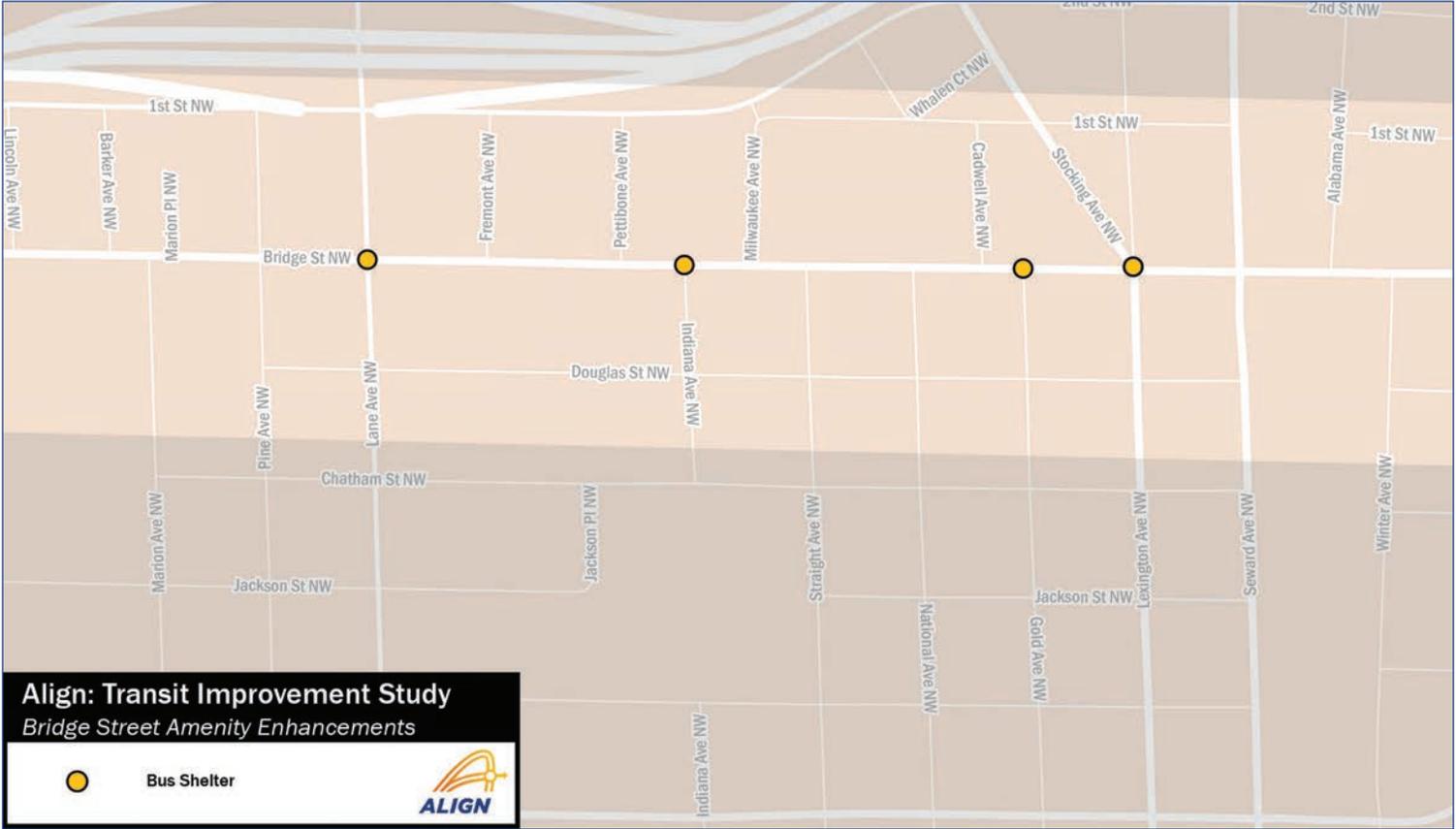
The recommended Amenity Enhancements for Chicago Drive are located between 28th Street SW and 30th Street SW. Chicago Drive functions as a major connector street from Grandville to Grand Rapids and includes Downtown Grandville at 30th Street. Riders using the businesses in Downtown Grandville and nearby will benefit from the improved waiting areas and new shelters may increase ridership in this corridor.

RECOMMENDED PROJECTS PRIORITY RATING	PROJECT CAPITAL COSTS
Bus Shelters: 28th Street to 30th Street ● ● ● ○ ○	\$99,000

PROJECT GOALS ACHIEVED

- Shelters provide a tangible investment in areas lacking amenities
- Land values are higher in areas with highly visible transit and amenities

BRIDGE STREET AMENITIES



Align: Transit Improvement Study
Bridge Street Amenity Enhancements

Bus Shelter



The recommended Amenity Enhancement projects on Bridge Street are located between Marion Avenue and Seward Avenue. This corridor is home to a neighborhood business district and is surrounded by dense, walkable single family housing. Increasing the visibility of transit in this corridor by adding amenities may help increase ridership in this corridor.

RECOMMENDED PROJECTS PRIORITY RATING

Bus Shelters: Stocking Ave to Lane Dr



PROJECT CAPITAL COSTS

\$82,500

PROJECT GOALS ACHIEVED

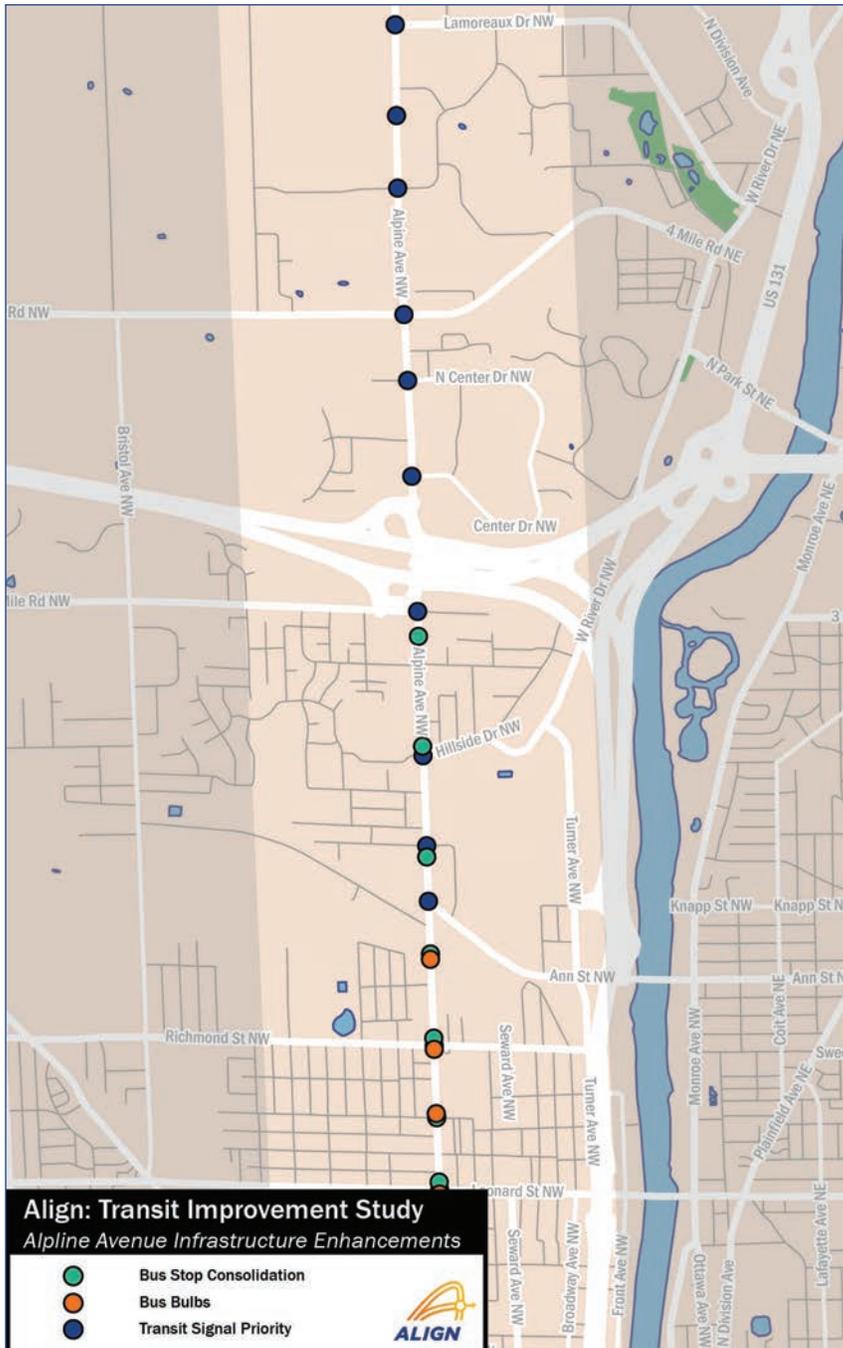
Shelters provide a tangible investment in areas lacking amenities



Land values are higher in areas with highly visible transit and amenities



ALPINE AVENUE AMENITIES



RECOMMENDED PROJECTS PRIORITY RATING

Bus Bulbs: Walker Ave to Richmond St



Stop Consolidation: Walker Ave to 3 Mile Rd



Transit Signal Priority: Walker Ave to 3 Mile Rd



PROJECT CAPITAL COSTS

Bus Bulbs: Walker Ave to Richmond St
\$110,000

Stop Consolidation: Walker Ave to 3 Mile Rd
\$1,300,000

Transit Signal Priority: Walker Ave to 3 Mile Rd
\$15,000

PROJECT GOALS ACHIEVED



The infrastructure enhancements can improve operations in the corridor



Land values are higher in areas with transit infrastructure like bus bulbs



The public expressed a desire for better on-time performance for buses

The recommended Infrastructure improvement projects for Alpine Avenue are located between Walker Avenue and Lamoreaux Drive. Alpine Avenue transitions from a denser neighborhood to a more auto-oriented development pattern with big box retail stores. The northern section of this corridor is home to a large number of retail jobs and is one of the higher ridership corridors in the system. Alpine Avenue consistently has traffic congestion issues that slow buses down and reduce on-time performance.

MICHIGAN STREET AMENITIES

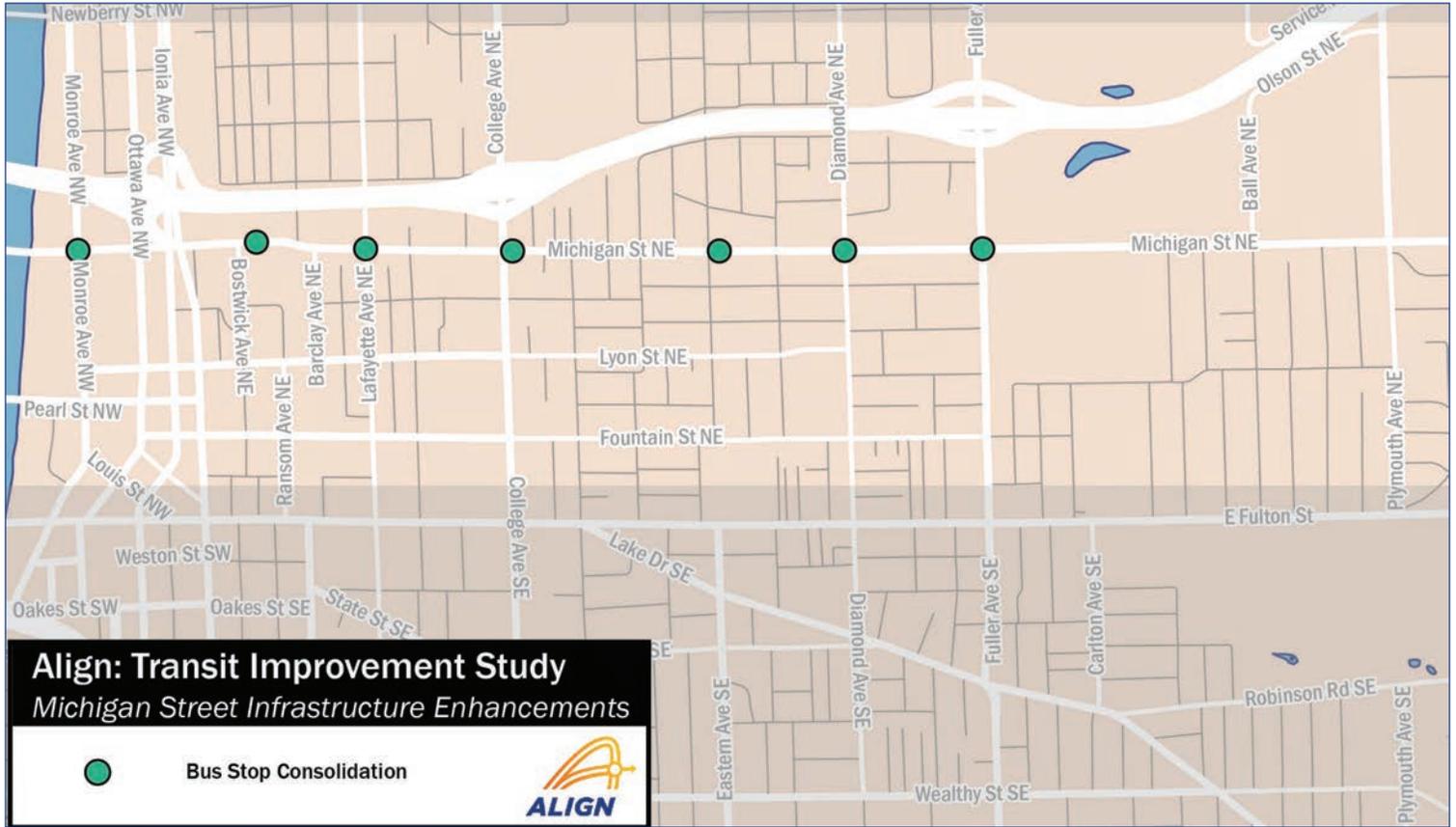


The recommended Amenity Enhancements on Michigan Street in Downtown Grand Rapids are located between Monroe Avenue and Plymouth Avenue. Michigan Street is one of the densest employment centers in the region due to the high concentration of medical facilities in the corridor. Improving transit facilities along Michigan Street is consistent with the Grand Rapids Vital Streets Plan and may encourage more commuting by transit.

RECOMMENDED PROJECTS PRIORITY RATING	PROJECT CAPITAL COSTS
Bus Shelters: Monroe Ave to Plymouth Ave 	\$247,500

PROJECT GOALS ACHIEVED
Shelters provide a tangible investment in areas lacking amenities
Land values are higher in areas with highly visible transit and amenities

MICHIGAN STREET AMENITIES



The recommended Infrastructure Enhancements on Michigan Street are located between Monroe Avenue and Fuller Avenue. This is one of the densest job centers in the region, most of which are healthcare related. Due to the high concentration of jobs and congestion in this corridor, transit vehicles tend to have trouble with on-time performance. Improving transit operations along Michigan Street may help convert more drivers to transit riders.

RECOMMENDED PROJECTS
PRIORITY RATING

PROJECT
CAPITAL COSTS

PROJECT GOALS ACHIEVED

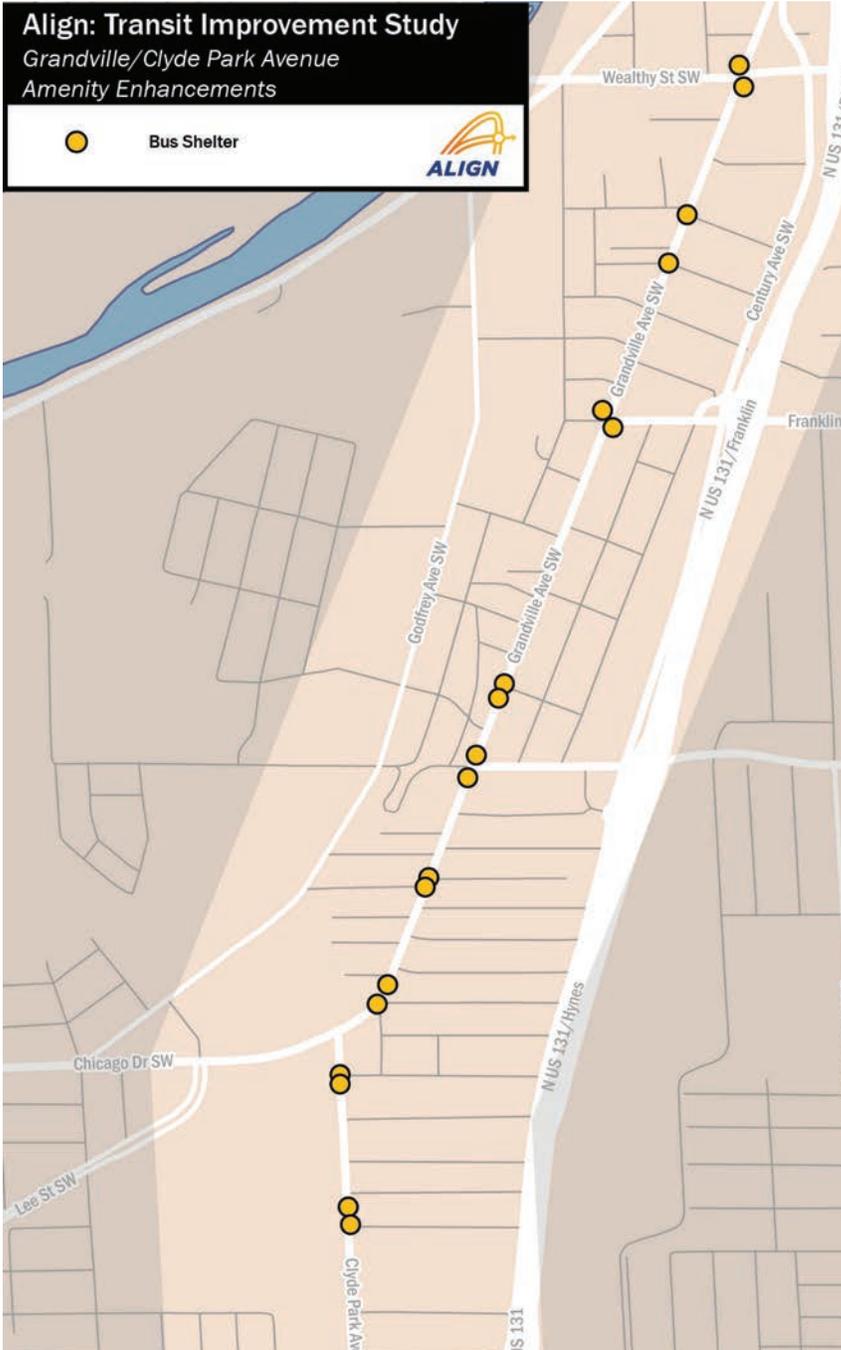
Stop Consolidation: Monroe Ave to Fuller Ave

\$8,000

Stop consolidation can help improve operations in this congested corridor



GRANDVILLE/CLYDE PARK AVENUE AMENITIES



Align: Transit Improvement Study
 Grandville/Clyde Park Avenue
 Amenity Enhancements

● Bus Shelter

RECOMMENDED PROJECTS
PRIORITY RATING

Bus Shelters: Wealthy St to Burton St

● ● ● ● ○

PROJECT CAPITAL COSTS

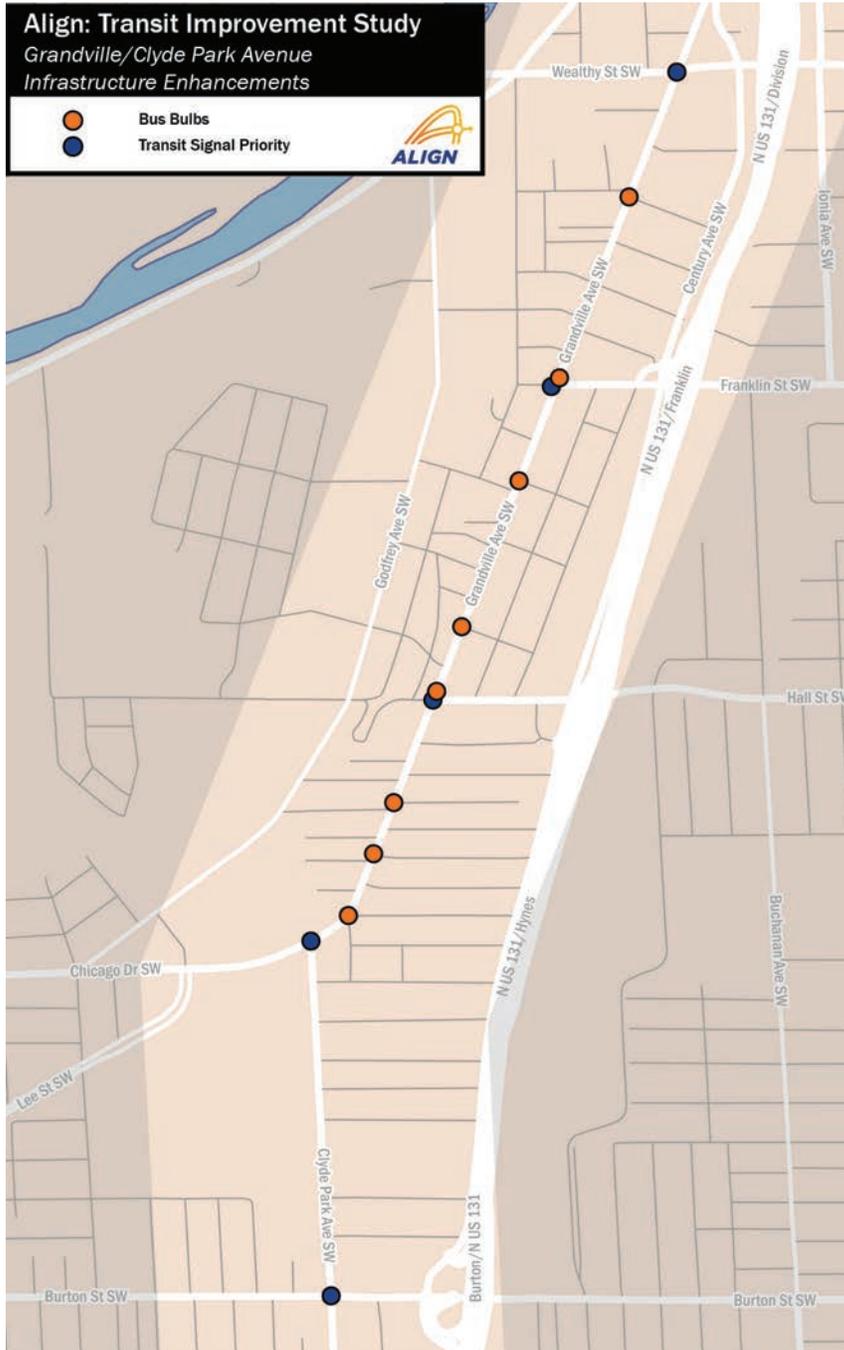
Bus Shelters: Wealthy St to Burton St
\$297,000

PROJECT GOALS ACHIEVED

- Shelters provide a tangible investment in areas lacking amenities
- Land values may be higher in areas with transit infrastructure like bus bulbs

The Grandville Avenue/Clyde Park Avenue corridor is one of the longest improvement corridors identified as part of Align. The recommended Amenity Enhancements are located between Wealthy Street to Burton Street. Two bus lines, Route 10 and Route 16, travel along Grandville and Clyde Park Avenues, which increases the amount of riders that would benefit from the recommended improvements. The neighborhood surrounding the corridor is home to a high minority population and has not seen as many transit investments as other areas in the system.

GRANDVILLE/CLYDE PARK AVENUE INFRASTRUCTURE



RECOMMENDED PROJECTS PRIORITY RATING

Bus Bulbs: Wealthy St to Burton St



Transit Signal Priority: Wealthy St to Burton St



PROJECT CAPITAL COSTS

Bus Bulbs: Wealthy St to Burton St
\$170,000

Transit Signal Priority: Wealthy St to Burton St
\$500,000

PROJECT GOALS ACHIEVED



TSP will help improve travel time and operations in this corridor



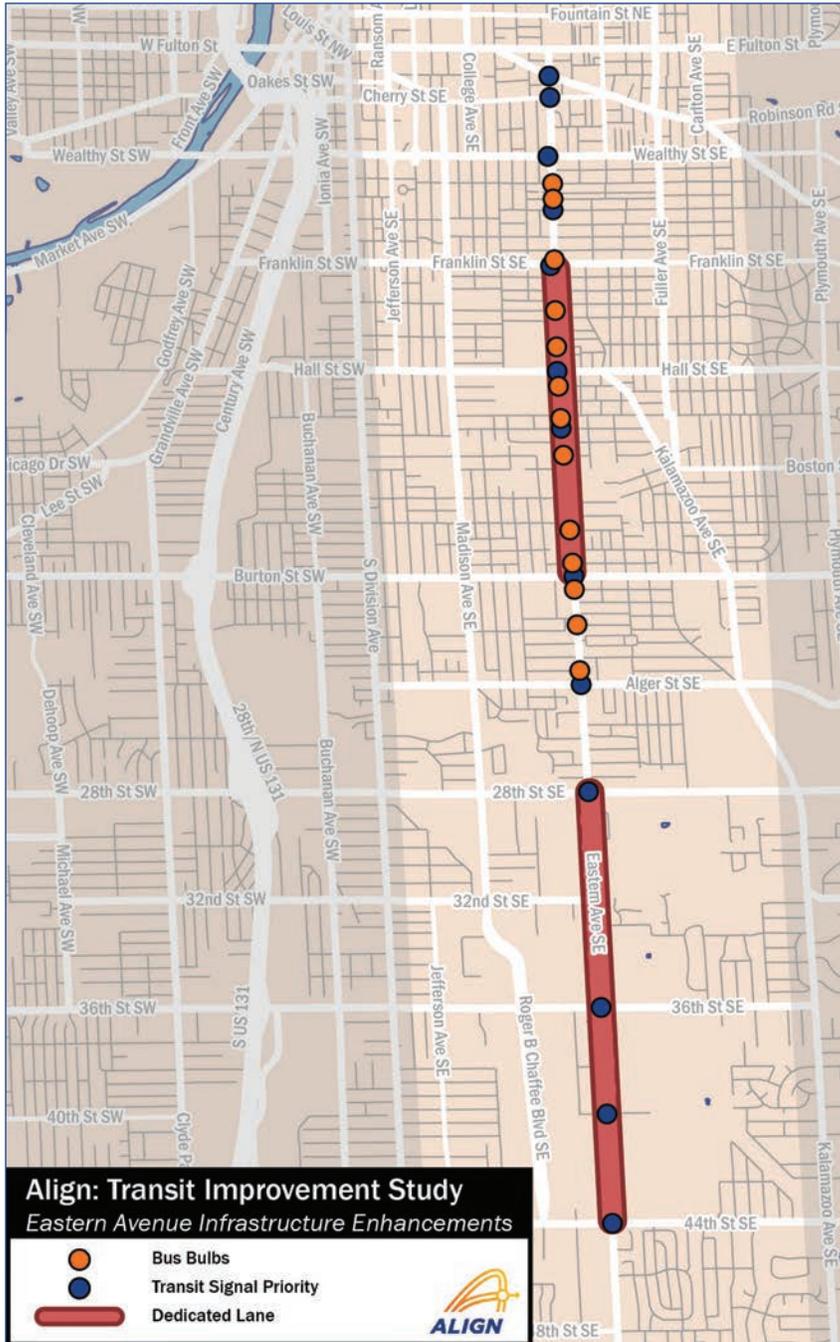
Land values may be higher in areas with transit infrastructure like bus bulbs



The public interest is high for improving the system's transit operations

The recommended Infrastructure Enhancements for the Grandville Avenue/Clyde Park Avenue corridor are located between Wealthy Street to Burton Street. Route 10 and Route 16 both travel along Grandville and Clyde Park Avenues, increasing the number of riders that would benefit from the recommended improvements. Implementing infrastructure improvements that improve transit operations may encourage residents of the surrounding neighborhoods to use transit in higher numbers.

EASTERN AVENUE INFRASTRUCTURE



RECOMMENDED PROJECTS PRIORITY RATING

Transit Signal Priority: Cherry St to 44th St



Bus Bulbs: Cherry St to Alger St



Dedicated Lanes: Franklin St to 44th St



PROJECT CAPITAL COSTS

Transit Signal Priority: Cherry St to 44th St
\$1,210,000

Bus Bulbs: Cherry St to Alger St
\$110,000

Dedicated Lanes: Franklin St to 44th St
\$3,000,000

PROJECT GOALS ACHIEVED



Infrastructure enhancements will help improve operations in this corridor



Land values may be higher in areas with transit infrastructure like bus bulbs



The public interest is high for improving the system's transit operations

Eastern Avenue is a major north-south transit corridor in The Rapid service area and has one of the highest ridership bus routes in the system. The recommended Infrastructure Enhancement projects are located between Cherry Street and 44th Street and are intended to improve transit operations in the most congested part of the corridor. This section of Eastern Avenue transitions from high density neighborhoods with neighborhood business districts to more auto-oriented development.

BURTON STREET AMENITIES

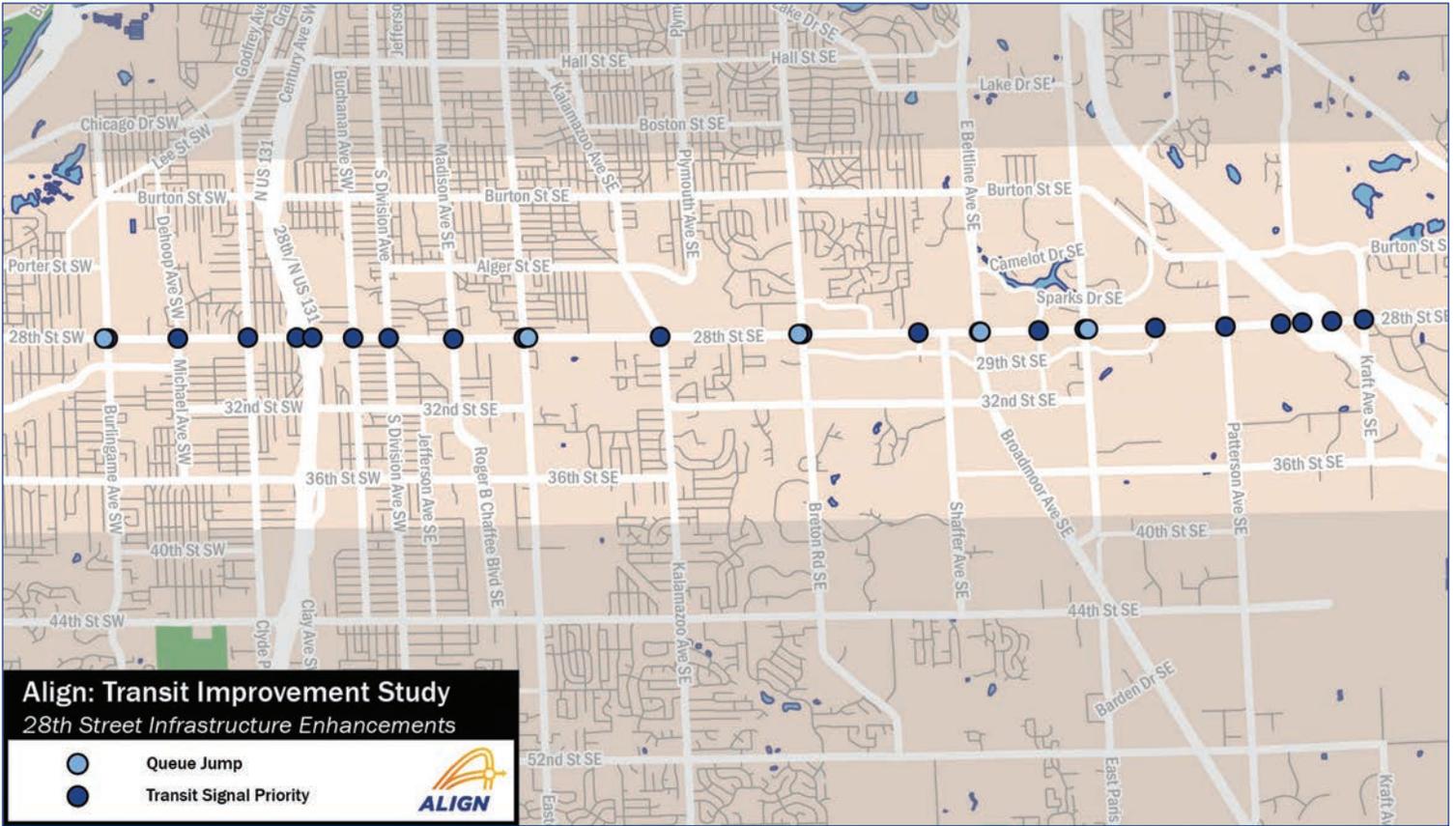


The recommended Amenity Enhancement projects for Burton Street are located between Division Avenue and Observatory Avenue. The Burton Street corridor is a higher traffic road, lacking amenities that may cause many pedestrians to feel uncomfortable while walking along the street and waiting for the bus. Improving rider amenities and transit visibility may help encourage residents and employees in the area to use transit more often.

RECOMMENDED PROJECTS PRIORITY RATING	PROJECT CAPITAL COSTS
Bus Shelters: Division Ave to Observatory Ave 	\$313,500

PROJECT GOALS ACHIEVED
Shelters provide a tangible investment in areas lacking amenities
Land values are higher in areas with highly visible transit and amenities

28TH STREET AMENITIES



28th Street is one of the region’s most congested streets due to the large number of jobs, retail stores, and residents in the corridor. It is also the busiest crosstown route in The Rapid system. The Infrastructure Enhancements recommended for the 28th Street corridor would be located between Burlingame Avenue and Kraft Avenue, and attempt to help transit vehicles operate more efficiently in this corridor with high vehicular congestion.

RECOMMENDED PROJECTS PRIORITY RATING

Transit Signal Priority: Burlingame Ave to Kraft Ave



Queue Jumps: Burlingame Ave to Kraft Ave



PROJECT CAPITAL COSTS

\$2,030,000

\$140,000

PROJECT GOALS ACHIEVED

TSP will help improve travel time and operations in this corridor

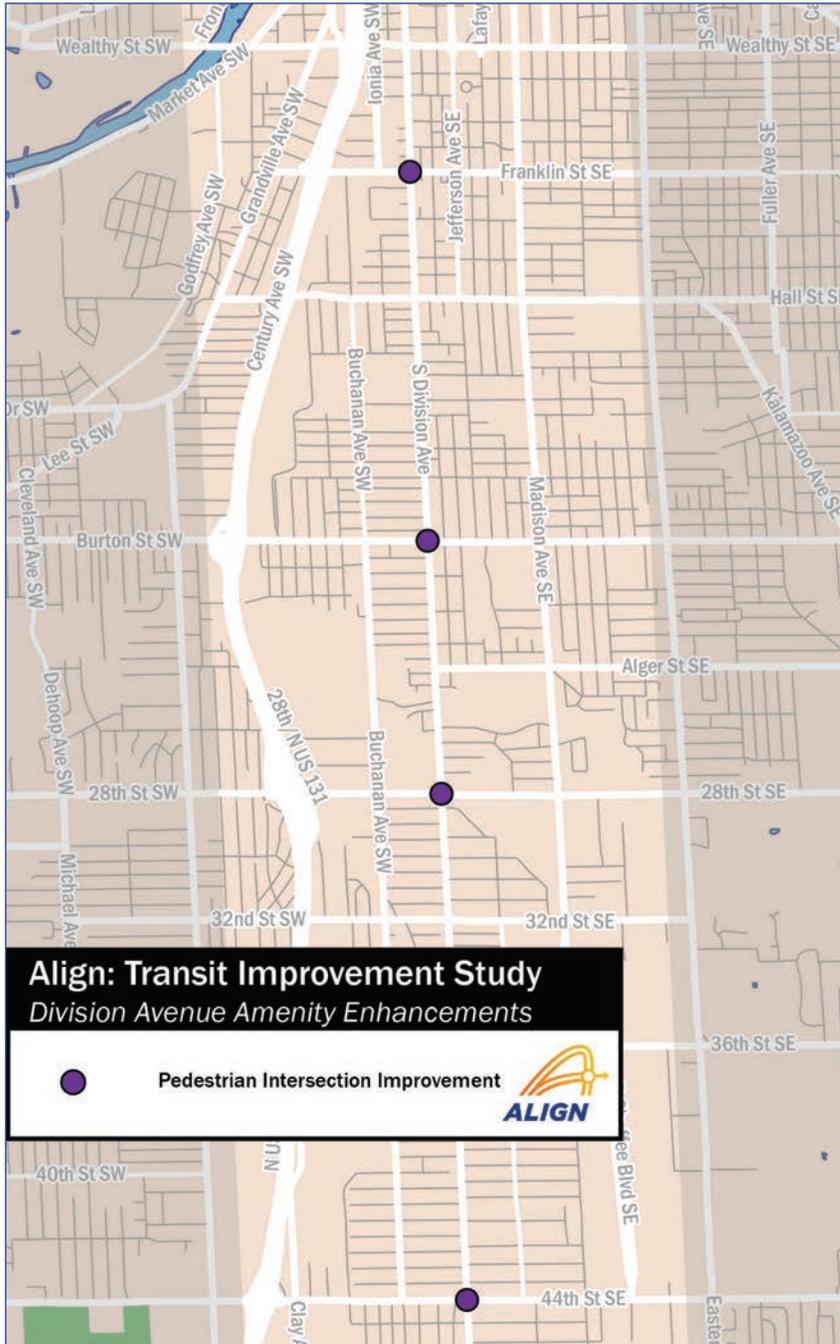


Land values are higher in areas with highly visible transit and amenities





DIVISION AVENUE AMENITIES



RECOMMENDED PROJECTS PRIORITY RATING

Pedestrian Improvements: Burton St



Pedestrian Improvements: Franklin St



Pedestrian Improvements: 28th St



Pedestrian Improvements: 44th St



PROJECT CAPITAL COSTS

Pedestrian Improvements: Burton St
\$27,000

Pedestrian Improvements: Franklin St
\$27,000

Pedestrian Improvements: 28th St
\$80,000

Pedestrian Improvements: 44th St
\$83,000

PROJECT GOALS ACHIEVED



Intersection improvements increases safe access to and from transit stops



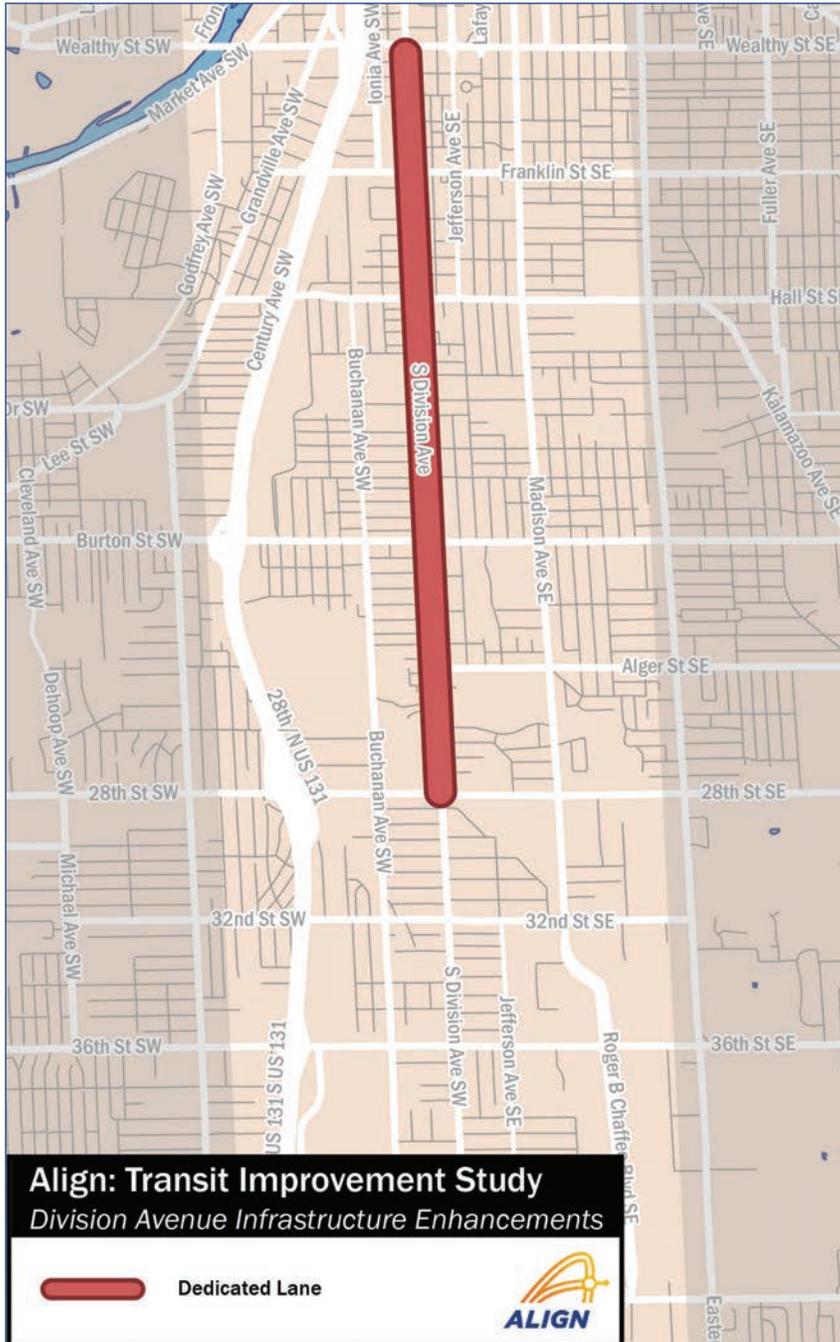
Walkability can improve an area's livability and boost property values



The public interest is high for improving safety in the Region

The Amenity Enhancements recommended for the Division Avenue corridor are located between Franklin Street and 44th Street. The Amenity Enhancements recommended for Division Avenue are all pedestrian intersection improvement projects that would make crossing the street safer, easier, and more comfortable for transit users (and other pedestrians). Division Avenue is the busiest transit street in The Rapid service area and improving the pedestrian environment along this corridor will benefit a large number of people.

DIVISION AVENUE INFRASTRUCTURE



RECOMMENDED PROJECTS PRIORITY RATING

Dedicated Lane: Wealthy St to 28th St



PROJECT CAPITAL COSTS

Dedicated Lane
\$1,580,000

PROJECT GOALS ACHIEVED



Dedicated lanes will help improve travel time and operations in the corridor



Land values may be increased in areas with visible transit infrastructure



The public interest is high for improving the system's transit operations

The Infrastructure Enhancement recommended for the Division Avenue corridor is proposed from Wealthy Street and 28th Street. Division Avenue already has a number of infrastructure enhancements, including dedicated lanes, which were installed as part of the Silver Line BRT project. However, the existing dedicated lanes consist of some pavement markings and signage which does little to prevent vehicles from using the lane. The high visibility lane markings should help inform motorists of the lane's transit priority.



RANSOM AVENUE AMENITIES



RECOMMENDED PROJECTS PRIORITY RATING

Dedicated Lane



PROJECT CAPITAL COSTS

Dedicated Lane

\$320,000

PROJECT GOALS ACHIEVED



Dedicated lanes will help improve operations in this corridor



Land values may be increased in areas with visible transit infrastructure

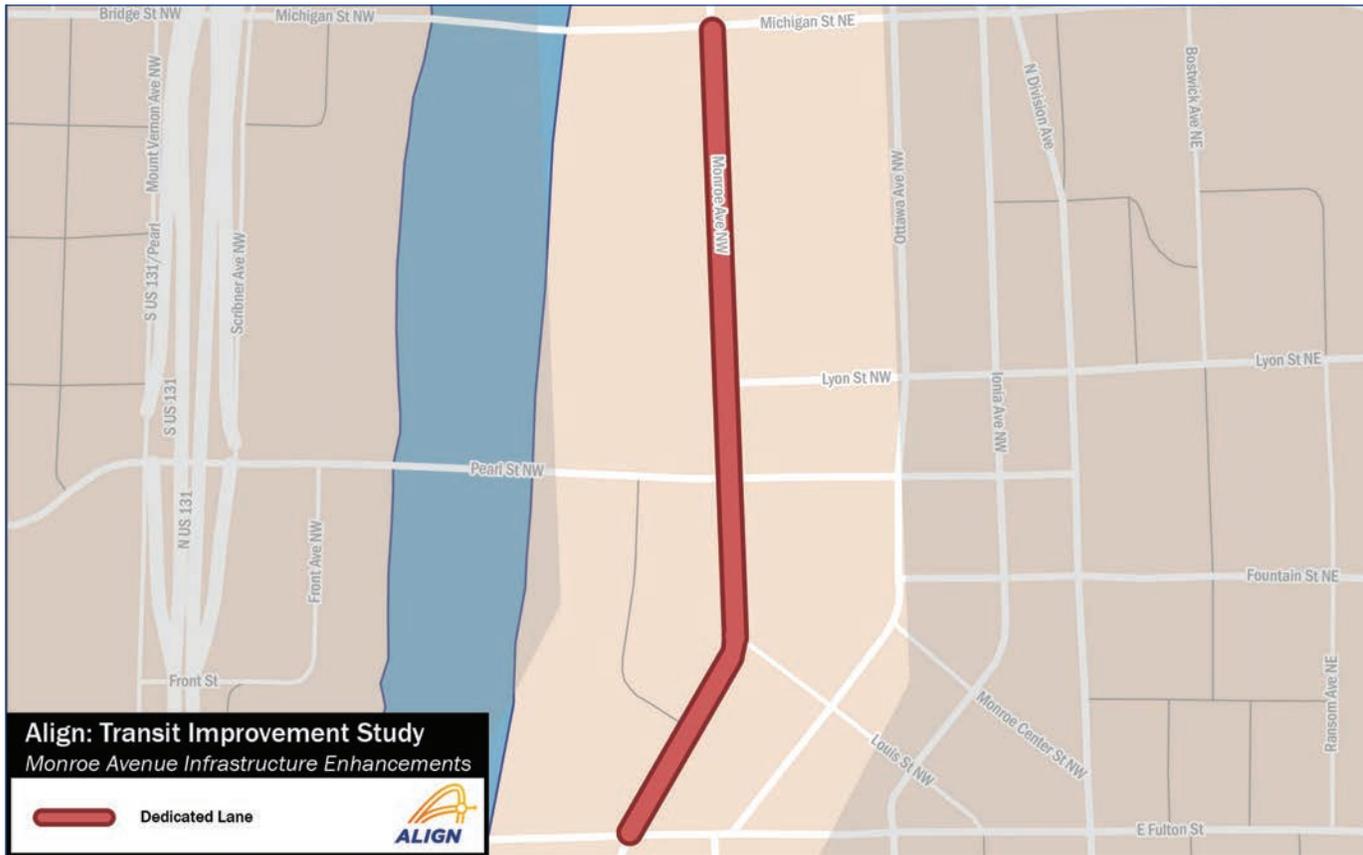


The public interest is high in improving systemwide transit operations

Ransom Avenue's recommended Infrastructure Enhancement projects would be located between Fulton Street and Michigan Street. Ransom Avenue already has a number of infrastructure enhancements, including dedicated lanes, that are part of the Silver Line BRT project. However, the design of the existing dedicated lanes does little to prevent vehicles from using the lane. The high visibility lane markings will help inform motorists of the lane's transit priority.



MONROE AVENUE AMENITIES



The recommended Infrastructure Enhancement projects for Monroe Avenue are proposed between Michigan Street and Fulton Street. Monroe Avenue has some infrastructure enhancements, including dedicated lanes during peak hours, that are part of the Silver Line BRT project. However, the design of the existing dedicated lanes does little to prevent vehicles from using the lane. The high visibility lane markings will help inform motorists of the lane’s transit priority.

RECOMMENDED PROJECTS PRIORITY RATING	PROJECT CAPITAL COSTS
Dedicated Lane 	\$580,000

PROJECT GOALS ACHIEVED
Dedicated lanes will help improve operations in the corridor
Land values may be increased in areas with visible transit infrastructure
The public interest is high in improving systemwide transit operations

FRANKLIN STREET AMENITIES



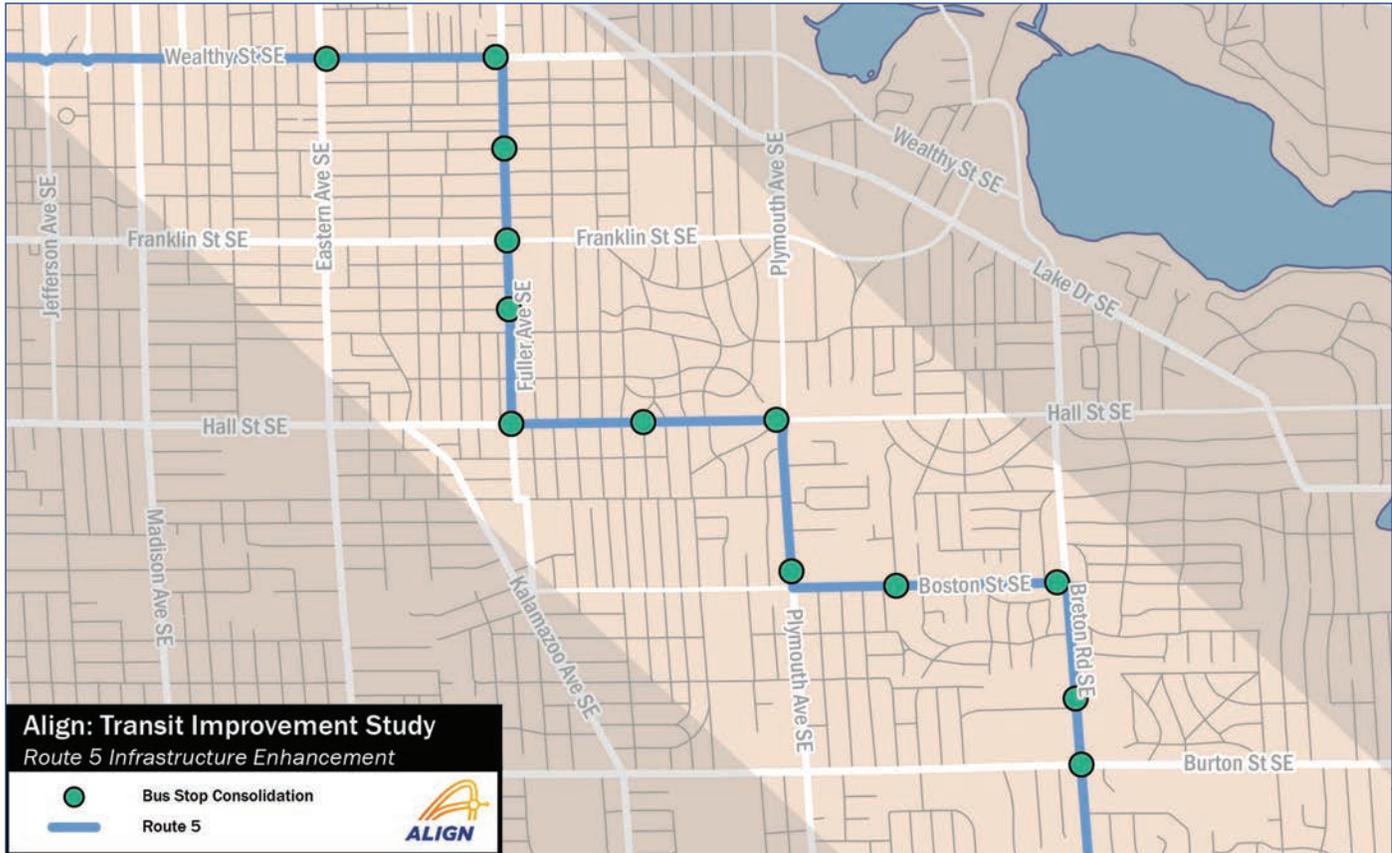
The recommended Infrastructure Enhancement projects on Franklin Street are located between Division Avenue and Kalamazoo Avenue. The Franklin Street corridor is a two lane street surrounded by a dense, walkable neighborhood and can sometimes become congested from other vehicles. Consolidating the stops on Franklin Street can reduce travel time and may help increase ridership on the routes that travel here.

RECOMMENDED PROJECTS PRIORITY RATING	PROJECT CAPITAL COSTS
Stop Consolidation 	\$8,500

PROJECT GOALS ACHIEVED

Consolidating stops will help improve operations in the corridor

ROUTE 5 AMENITIES



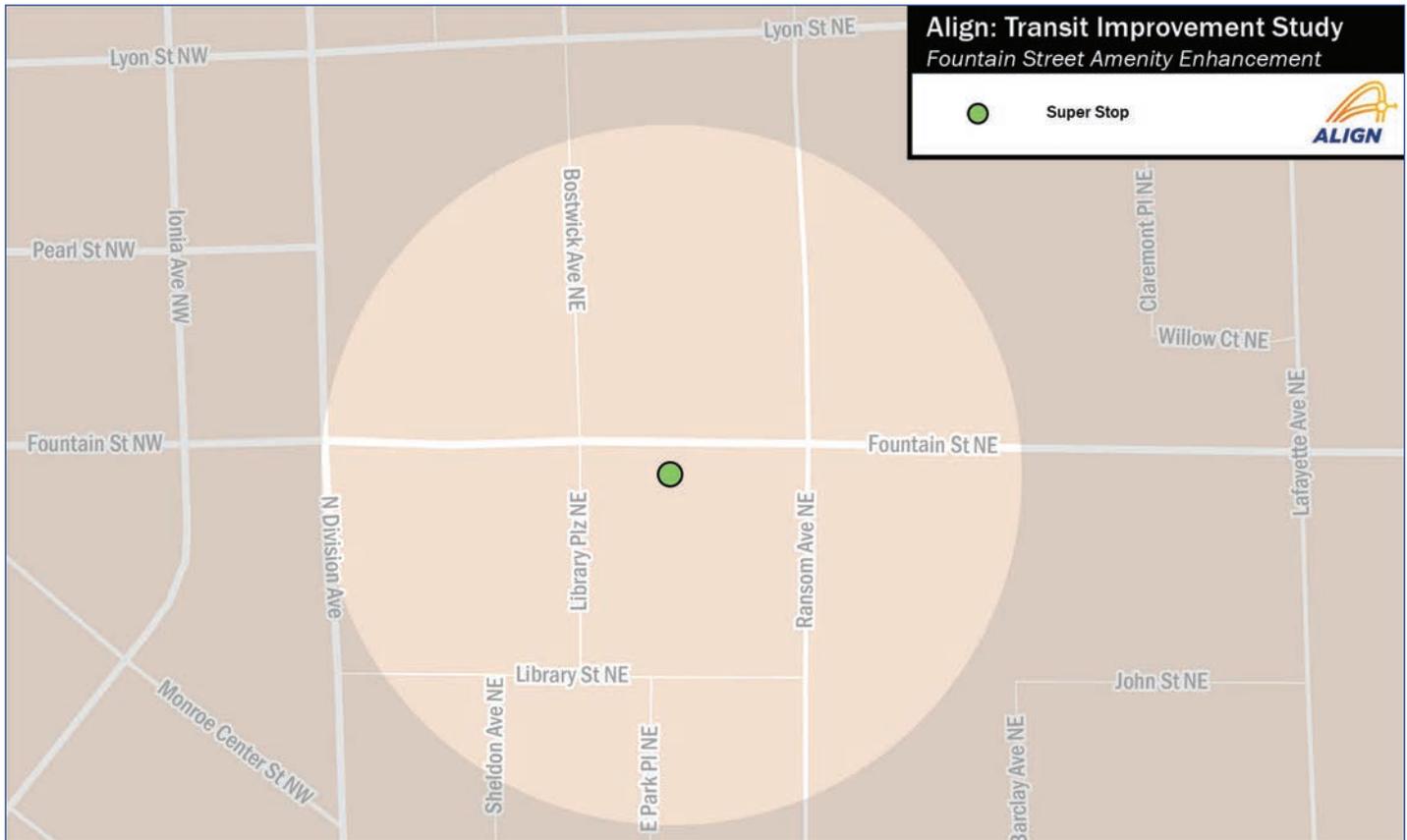
Route 5 - Wealthy/Woodland travels through the southeast neighborhoods of Grand Rapids on its way to Woodland Mall. The Infrastructure Enhancements, however, are located between Eastern Avenue and Burton Avenue in the densest part of the route. The recommended stop consolidation locations will help reduce traffic congestion and speed up transit service in this part of the corridor.

RECOMMENDED PROJECTS PRIORITY RATING	PROJECT CAPITAL COSTS
Stop Consolidation 	\$8,500

PROJECT GOALS ACHIEVED
Consolidating stops will help improve operations in the corridor



FOUNTAIN STREET AMENITIES

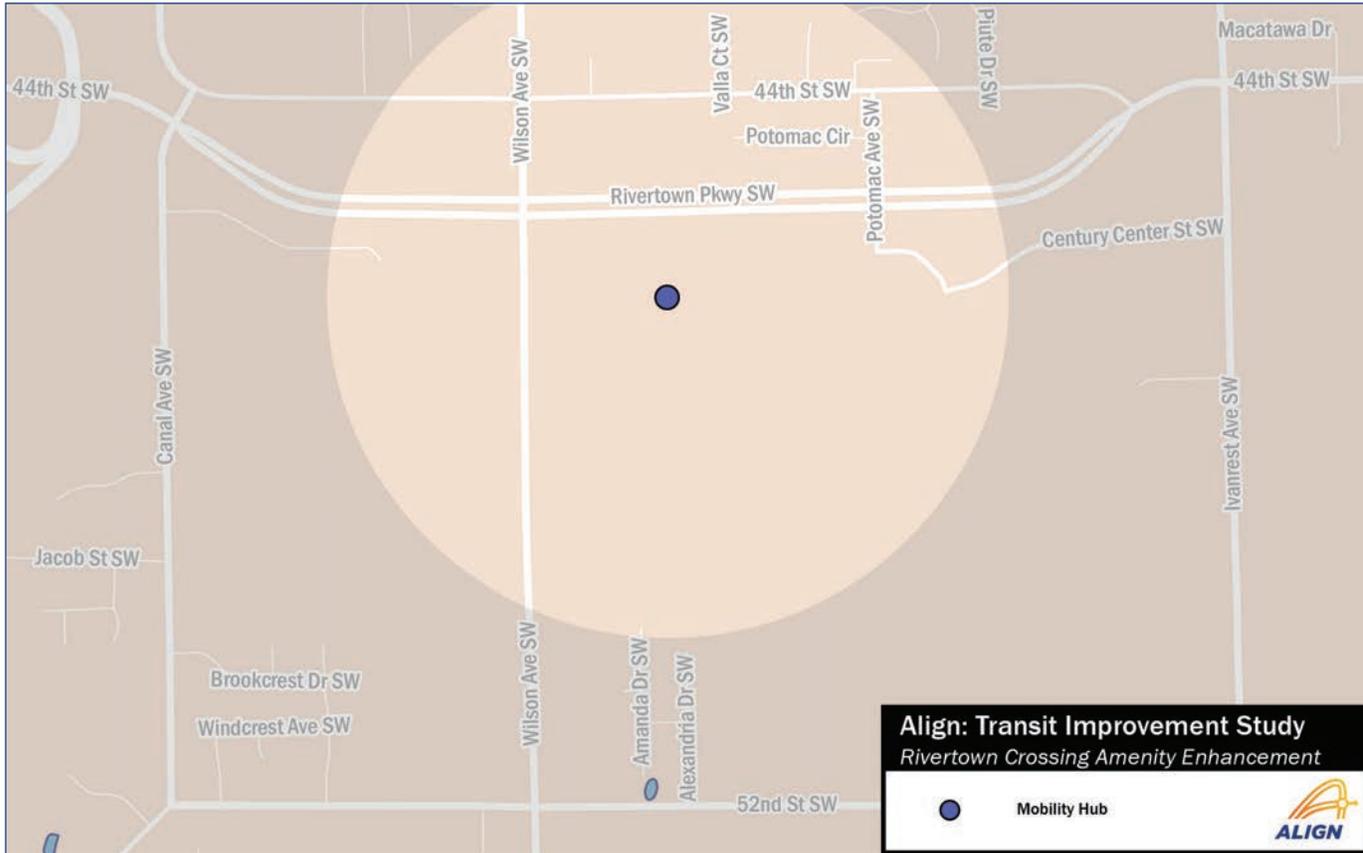


A Super Stop is recommended for the area near the intersection of Fountain Street and Library Place to help improve the waiting area for one of the busier stops in The Rapid’s service area. This Super Stop location would serve riders accessing the Grand Rapids Public Library, Grand Rapids Community College, the Grand Rapids Children’s Museum, and other downtown amenities.

RECOMMENDED PROJECTS PRIORITY RATING	PROJECT CAPITAL COSTS
Super Stop 	\$450,000

PROJECT GOALS ACHIEVED
Land values are higher in areas with highly visible transit and amenities 

RIVERTOWN CROSSINGS AMENITIES



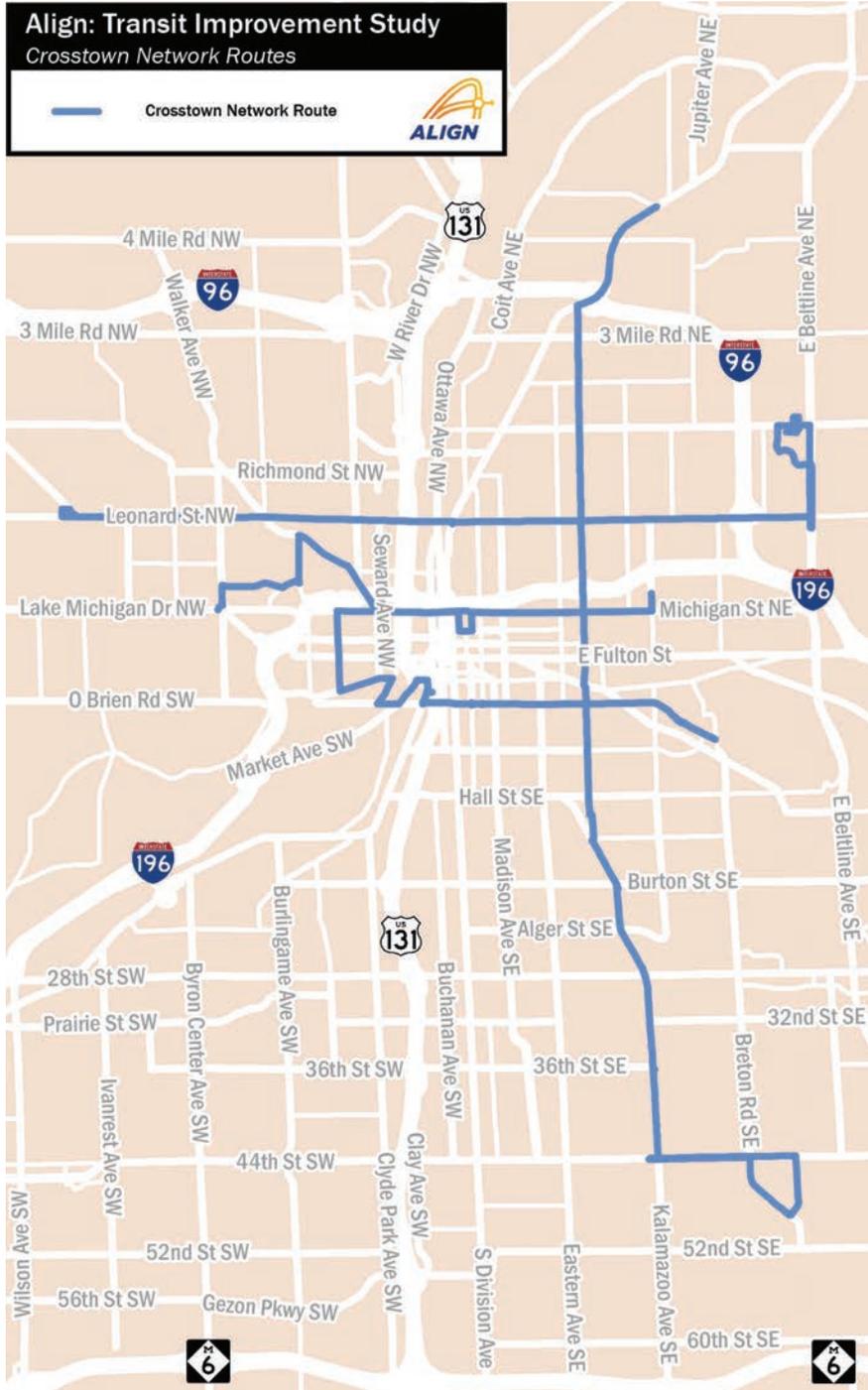
The Rivertown Crossings Mall Mobility Hub is recommended to be located in the mall’s parking lot. A mobility hub in this location will provide a visible and convenient place for riders to transfer to other routes and addition mobility options. This Amenity Enhancement is recommended to mirror the transfer area at Woodland Mall and feature additional features like bike racks, taxi stations, and car share.

RECOMMENDED PROJECTS PRIORITY RATING	PROJECT CAPITAL COSTS
Mobility Hub 	\$620,000

PROJECT GOALS ACHIEVED
Mobility hubs improve efficiency by increasing options for travel 
Land values are higher in areas with highly visible transit and amenities 



CROSTOWN NETWORK ROUTES



RECOMMENDED PROJECTS PRIORITY RATING

Michigan Street



Wealthy Street



Fuller Avenue/Kalamazoo Avenue



Leonard Street



PROJECT COSTS

Michigan Street

CAPITAL: \$3.8 M
O&M: \$1,640,000

Wealthy Street

CAPITAL: \$1.9 M
O&M: \$660,000

Fuller Avenue/Kalamazoo Avenue

CAPITAL: \$3.2 M
O&M: \$1,545,000

Leonard Street

CAPITAL: \$1.3 M
O&M: \$715,000

PROJECT GOALS ACHIEVED



Riders will have faster crosstown trips without having to transfer downtown



New crosstown routes will better connect to more jobs in the region

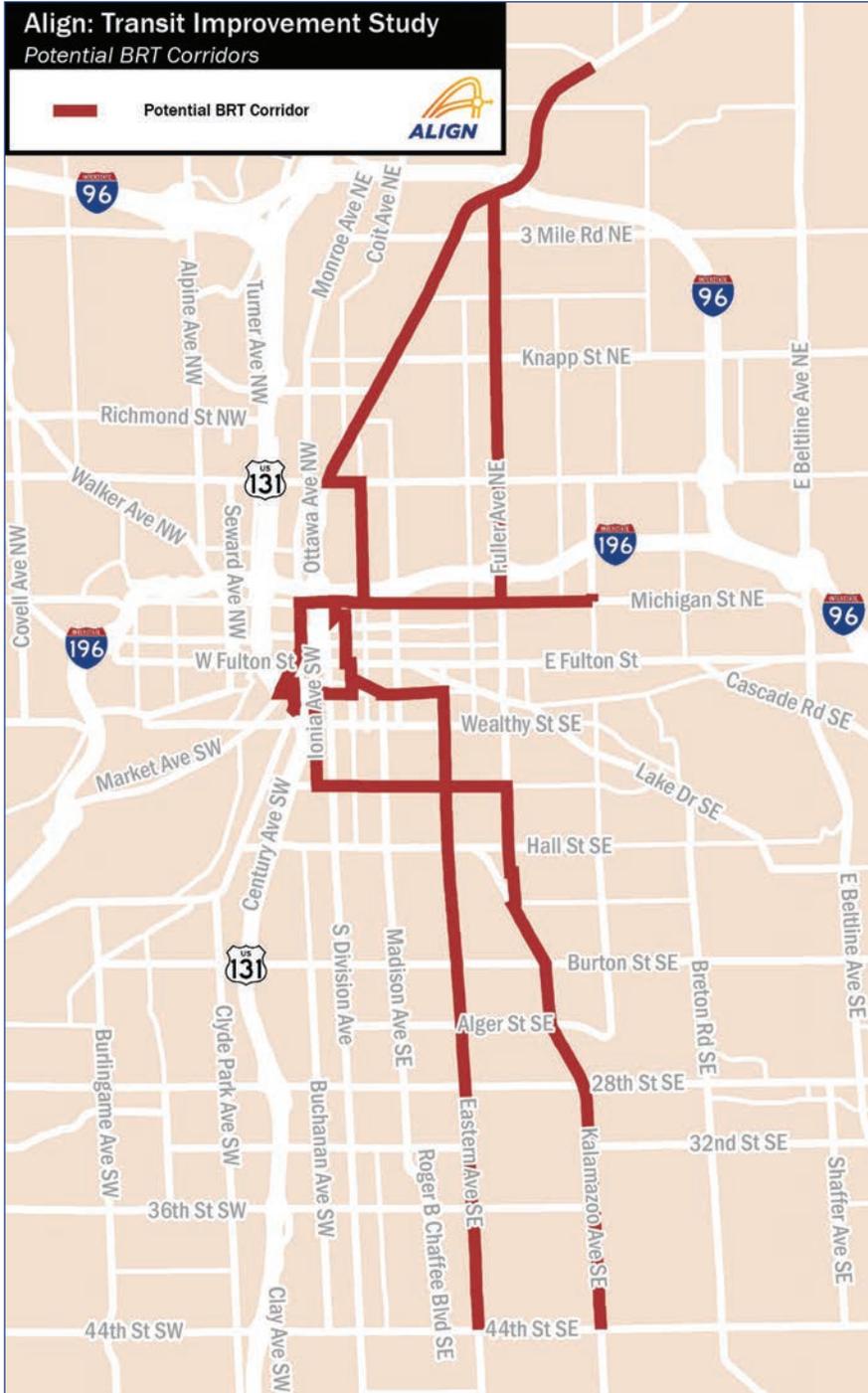


The public expressed interest in implementing more crosstown routes

Four potential Crosstown Routes are recommended as part of Align. Michigan, Wealthy, and Leonard Streets travel east/west across the region while Fuller Avenue/Kalamazoo Avenue travels north/south and avoids the congestion in Downtown Grand Rapids. These Crosstown Network Routes would be implemented to help riders travel across the service area without requiring a transfer at Rapid Central Station.



POTENTIAL BRT CORRIDORS



RECOMMENDED PROJECTS PRIORITY RATING

- Eastern Avenue BRT
● ● ● ● ● ○
- Laker Line BRT Extension
● ● ● ● ● ○
- Kalamazoo Avenue BRT
● ● ● ● ● ○
- Plainfield Avenue BRT
● ● ● ● ● ○

PROJECT COSTS

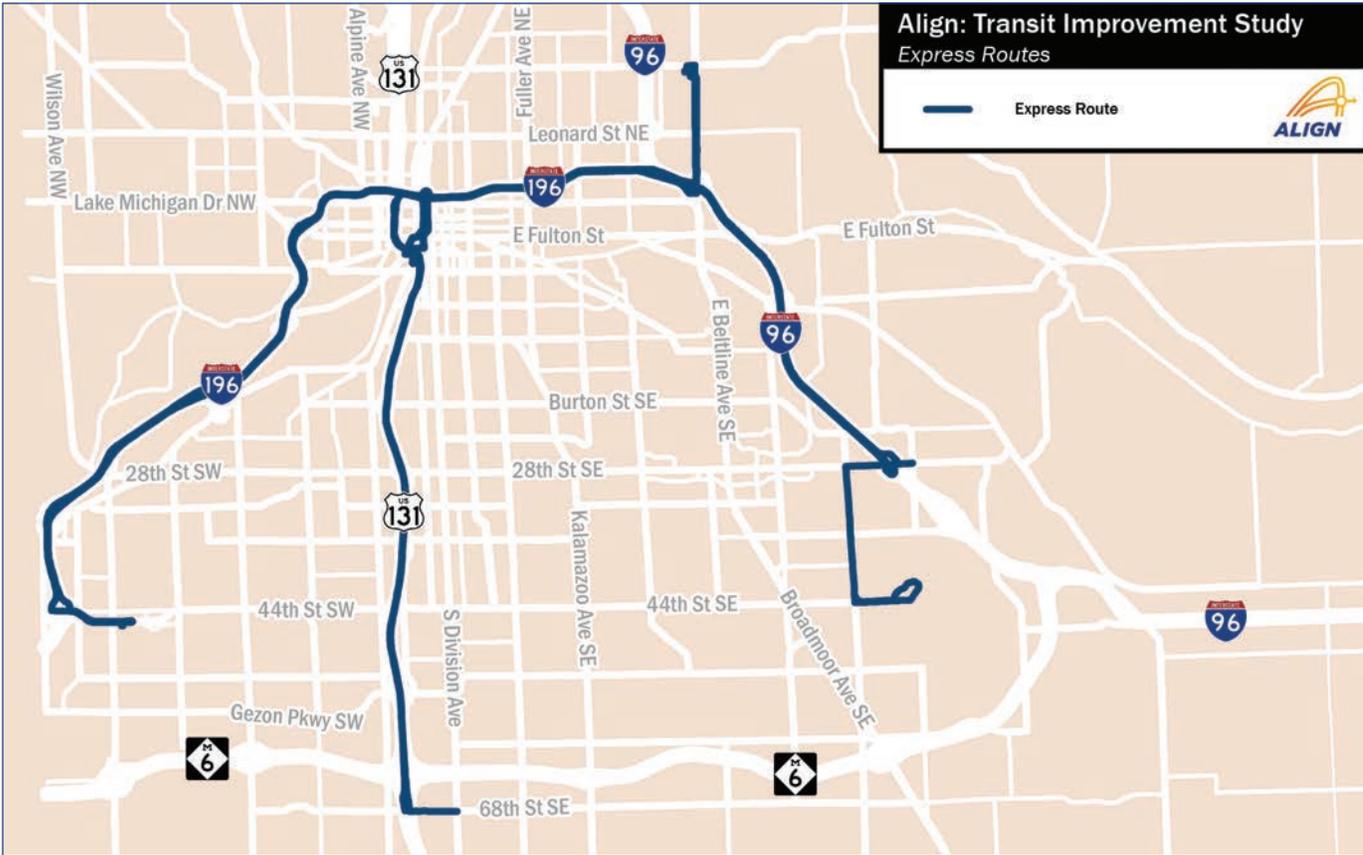
- Eastern Avenue BRT
CAPITAL: \$86.1 M
O&M: \$1,800,000
- Laker Line BRT Extension
CAPITAL: \$18.2 M
O&M: \$590,000
- Kalamazoo Avenue BRT
CAPITAL: \$99.2 M
O&M: \$2,200,000
- Plainfield Avenue BRT
CAPITAL: \$86.1 M
O&M: \$1,800,000

PROJECT GOALS ACHIEVED

- New BRT routes will provide additional service and efficiency to the system
- Expanding the BRT network will reach additional members of the community
- New BRT routes will better and more efficiently connect residents to jobs
- BRT lines are shown to increase economic development alongside
- The public indicated their support for more BRT type service in the region

The recommended Potential Bus Rapid Transit Corridors extend to the north, east, and south of The Rapid service area into parts of the region that do not have an existing BRT route. The routes could share routing and stations with the Silver Line as the infrastructure is already in place and the route is familiar to many riders. The Potential BRT corridors would also have the same service characteristics as the existing Silver Line BRT.

EXPRESS ROUTES



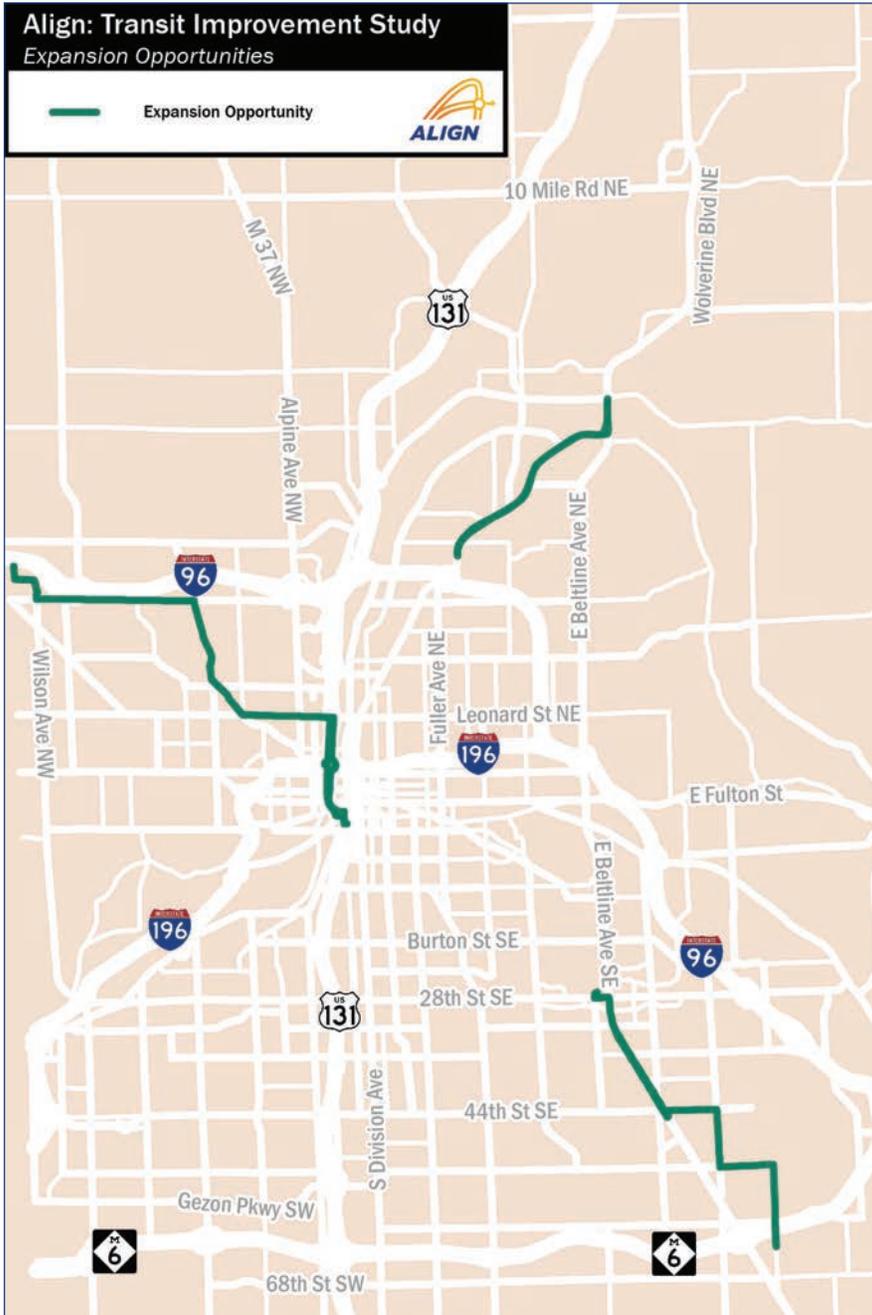
Five Express Routes are recommended and aim to provide more efficient travel for suburban commuters coming into Downtown Grand Rapids. Each Express Route would travel the same routing through the central business district featuring additional stops to drop riders off near their final downtown destination. The routes end at destinations where passengers could park and ride into the Central Business District to reduce commuting and parking costs.

RECOMMENDED PROJECTS PRIORITY RATING	PROJECT COSTS
Knapp's Corner Express ●●●○	CAPITAL: \$2.5 M O&M: \$165,000
Cutlerville Express ●●●○	CAPITAL: \$2.5 M O&M: \$180,000
Cascade/Airport Express ●●●○	CAPITAL: \$2.5 M O&M: \$400,000
Cedar Springs/Rockford Express ●●●○	CAPITAL: \$2.5 M O&M: \$220,000
Grandville Express ●●●○	CAPITAL: \$2.5 M O&M: \$180,000

PROJECT GOALS ACHIEVED

- Express routes provide fast service in and out of Downtown for commuters
- Commuter options to Downtown will better connect residents and jobs

EXPANSION OPPORTUNITIES



RECOMMENDED PROJECTS PRIORITY RATING

3 Mile Road Expansion



Broadmoor Avenue Expansion



Plainfield Avenue Expansion



PROJECT COSTS

3 Mile Road Expansion

CAPITAL: \$3.2 M
O&M: \$1,100,000

Broadmoor Avenue Expansion

CAPITAL: \$2.5 M
O&M: \$715,000

Plainfield Avenue Expansion

CAPITAL: \$2.5 M
O&M: \$490,000

PROJECT GOALS ACHIEVED

- New routes will provide additional service and efficiency to the Region
- Expanding the Service Area will reach additional members of the community
- The Expansion Opportunities will better connect residents to jobs with transit
- Land values can be higher in areas with reliable transit service
- The public indicated their support for expanded services to unserved areas

The recommended Expansion Opportunity areas are home to some of the region’s most significant employment concentrations and destinations that would benefit from additional transit service. The operations characteristics have not been defined but will likely be a lower level of service based on the overall demand in these areas. The Expansion Areas could also be served by on-demand transit vehicles that operate similar to the PASS system or traditional demand response service.



ALIGN



For More Information, Please Visit www.AlignTransit.org

www.RideTheRapid.org

