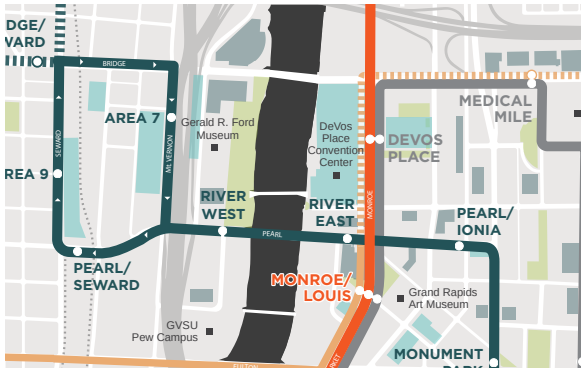
GOAL 3

IMPLEMENT A 21ST CENTURY MOBILITY STRATEGY

3>>

IMPLEMENT A 21ST CENTURY MOBILITY STRATEGY

Owing both to change in travel behavior among the millennial generation and the limited ability to dedicate more land and right-of-way to personal vehicles, the future growth of Downtown will increasingly depend on a multi-modal transportation system that is safe, convenient and affordable. This will be achieved by leveraging Downtown's existing transportation assets and providing additional options for the area's employees, residents, and visitors to get around. The end result will be a Downtown where people can choose to drive, but aren't required to.



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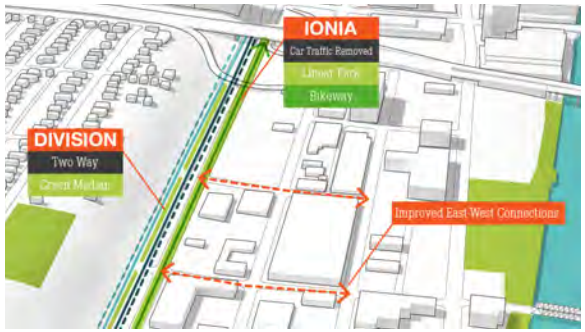
3.3 COMPLETE THE NETWORKS IN AND OUT OF DOWNTOWN



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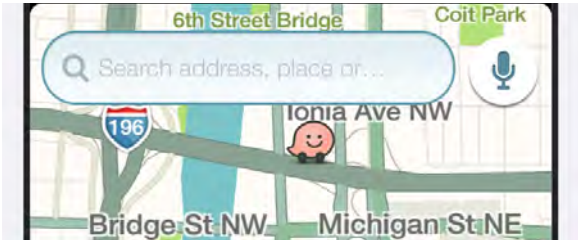
3.4 GET CONNECTED: UTILIZE TECHNOLOGY TO MAKE GETTING AROUND EASIER



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3.5 PUT GRAND RAPIDS ‘ON THE MAP’

WHY THIS MATTERS

For over five decades, transportation and land use planning in most American cities focused almost exclusively on private vehicles: moving them in the most expeditious manner and providing them the most convenient parking spaces. While these aims made driving as convenient as possible, particularly for employees that lived outside the city, infrastructure supporting this ideology created barriers and challenges to building a residential population in downtown and creating a sense of place. A network of highways disconnected neighborhoods and separated cities from their waterfronts, and buildings that were once filled with people were removed to make room for parking lots. Grand Rapids is no exception to this story of auto-centric growth. The streets in Grand Rapids have fewer travelers per lane mile, and higher lane-miles by population than Detroit, Chicago, Washington DC, and Portland. Today, Grand Rapids must establish a forward thinking philosophy towards transportation to recover from past actions, and position itself for a future of healthy, sustainable growth in Downtown.

Transportation costs are significant for the average family or business in Downtown Grand Rapids and it affects the affordability of Downtown. Future decisions on transportation must be made with cost in mind–both the cost of investment, operations and maintenance to the City and the project's impact on the cost of transportation for a resident or an employee. Utilizing existing assets and providing more choices is critical to keeping costs among all City stakeholders down and maximizing the benefits of the network as a whole.

Mobility needs vary widely for residents in Grand Rapids - from the population attending local colleges, young entrepreneurs, or growing families, to the population aging in place in Downtown. Infrastructure and transportation services must meet the needs of all users. Grand Rapids is well positioned to adapt existing infrastructure and land use to future population trends.

The typical solutions of the past [widening roads and highways, building more surface parking] are no longer practical, nor feasible and cannot be relied upon to support future growth. Transportation must evolve to meet more than the peak hour needs of commuters in cars. Downtown must be part of a transportation network that provides a variety of choices that are safe, convenient and affordable and appeal to a wider population. This can be accomplished by leveraging Downtown's existing transportation assets and investing in additional options for employees, residents, and visitors to get around. With limited room for new development, Grand Rapids must rethink the existing infrastructure so it can do more for all modes. By focusing on all modes, rather than letting vehicles drive decision-making, Grand Rapids can build capacity within the constrained urban areas while serving more users, and keep up with the varied needs and changing behaviors of the residential and employee population in Downtown. These changing trends and attitudes towards transportation also necessitate changes to policies and how future transportation decisions are made.

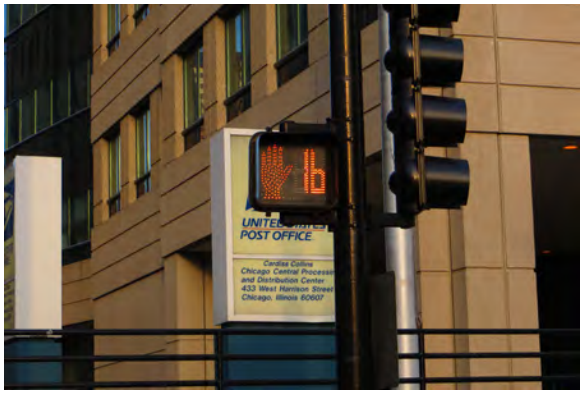
Most importantly the future of Downtown must focus on its one transportation asset that is unique to all of Western Michigan: its walkability. Nowhere else in the region can you find the amount of pedestrian activity throughout the day like in Downtown Grand Rapids. Building a 21st Century Mobility Strategy must start with prioritizing pedestrian safety, connectivity, and overall experience and then building to the next trip, whether it's by car, bus, bike, train, or plane. From there, the opportunity exists to provide a diverse set of multi-modal options in Downtown that allow people to choose their mode based on affordability, convenience, and the quality of the experience. This will necessitate a stronger collaboration between all parties in Downtown, from the City to DGRI to private businesses and institutions, to meet the changing transportation demands of Downtown's existing and future population.

STUDY AREA COMPOSITION

3.1 PROVIDE A STRESS-FREE PEDESTRIAN EXPERIENCE FOR ALL AGES AND ABILITIES

Whether one arrives Downtown via car, train, bus, or bike, eventually everyone becomes a pedestrian. In an urban place, business, entertainment, and recreation occur at the human scale. To that end, Downtown Grand Rapids is unique because of its overall walkability. The number of destinations that a pedestrian can access continues to grow every year. In areas with a dense street network, a person can access more places because they have the opportunity to travel along more streets that are fronted by more places. Comparisons of walksheds of other cities show that the development and density potential of the Grand Rapids street network is similar to that in Chicago, IL or Portland, OR is just as high[1].

While density and land use have helped create this asset, there are still many forces in Downtown working against it, from the design of streets, to driver behavior, to gaps and barriers in the pedestrian network. Downtown should fully embrace this unique quality and put pedestrians first in all decision making, from how intersections operate to the design of buildings. The future growth and success of Downtown Grand Rapids directly correlates to the amount of pedestrian activity on its streets.



Pedestrian countdown timer

Continental crosswalk

1 [Walkshed Data Source] Walkscore comparisons at the same scale for: GR [downtown and 28th St Mall], Chicago, Brooklyn and Portland

PRIORITIZE PEDESTRIAN SAFETY AND CONNECTIVITY AT INTERSECTIONS

Pedestrians are the most vulnerable users of the transportation system, particularly at intersections. If an intersection is safe for pedestrians of all ages and abilities, it will likely be safe for all modes of transportation. Redesigning intersections in Downtown to prioritize the safety and connectivity for pedestrians will not only enhance the pedestrian experience, it will also be a considerable step in creating a culture of respect on City streets. "Pedestrians" include those with mobility challenges, individuals with strollers, walking aids, or walking their bikes. People of all ages and abilities benefit from physical improvements that provide smoother or more direct paths, higher visibility, and adequate time to cross an intersection. These improvements should include:

- Pedestrian Countdown Timers are signal infrastructure, which provides information to pedestrians on how much time is remaining to cross the street, as opposed to the types of signals that just state 'Don't Walk'. The Manual on Uniform Traffic Control Devices [MUTCD] requires that all new traffic signals be installed with pedestrian countdown timers. It is recommended that Grand Rapids install pedestrian countdown timers with all new traffic signals. In addition, the City should commit to install at least three traffic signals in Downtown, annually, beginning in 2016. All signalized intersections should be improved with countdown timers by 2022. Audible signals should be considered on a case by case basis from requests by the public.
- Continental crosswalks, also known zebra or ladder crosswalks, are proven to provide much higher awareness of pedestrians than the standard two line crosswalks. Continental crosswalks should be installed as part of all resurfacing and reconstruction projects at signalized intersections and crossing locations at unsignalized intersections where the pedestrian must cross more than two travel lanes.
- Leading pedestrians intervals are a type of signal timing that turns the walk signal on before traffic can enter the intersection. This head start provides much greater awareness of pedestrians in the intersection to vehicles who might not have seen them waiting to cross. Pilot trials of leading pedestrian intervals should be programmed at Monroe/Pearl, Monroe/Ottawa, and Fulton/Ionia to evaluate their impact. Eventually all intersections in Downtown should be timed with a leading pedestrian interval.
- Pedestrian refuge islands, or raised medians, are used to allow pedestrians to cross a street in two separate phases and provide protection while they wait in the middle of the street. Refuge islands can be as narrow as 4', however wider facilities provide for more pedestrian comfort. Pedestrian refuge islands should be installed at uncontrolled locations on Michigan Street, Fulton Street, Campau Ave, Monroe Avenue, and Division Avenue.

Pedestrian refuge island

Planted curb bump-out with integrated storm water management

Pedestrian Scramble [Barnes]

"More green space, more pedestrian only space. Work to lessen car dominated areas. Create green alleyways to give pedestrians a safer place to walk."
- Online collaborative map comment

- Right-turns-on-red is a practice that was encouraged to reduce intersection delay and queues for vehicles. However, this has a minimal impact on traffic operations in Downtown and is a safety issue, particularly when vehicles do not come to a complete stop at the traffic signal. A one year pilot program prohibiting right-turns on red should be implemented in the area bounded by Michigan Street, Wealthy Street, the Grand River, and Division Avenue and the impacts on pedestrian safety, both actual and perceived, traffic delay, and compliance should be evaluated before and during the pilot period.
- A Barnes Dance/Pedestrian Scramble is a traffic signal operation that allows pedestrians to cross in any direction while vehicles have an all red phase. A Barnes Dance should be piloted at the intersection of Fulton and Ottawa and evaluated.
- A prioritization system should be developed for pedestrian safety improvements that emphasizes connection to major transit nodes, pedestrian activity generators, and river access points. The prioritization system should focus on areas with current need as well as future potential and inputs to the system should include residential and employment density, crash data, vehicular speeds, transit ridership, and pedestrian volumes.

DEVELOP, ENHANCE AND IMPLEMENT A 'BIG IDEA' POLICY FOR STREET DESIGN

The City currently has a Complete Streets policy, but it does not dive into the deep details of how streets are designed. A much more proactive stance must be developed to ensure all projects are being designed to protect pedestrians and prioritize their connectivity.

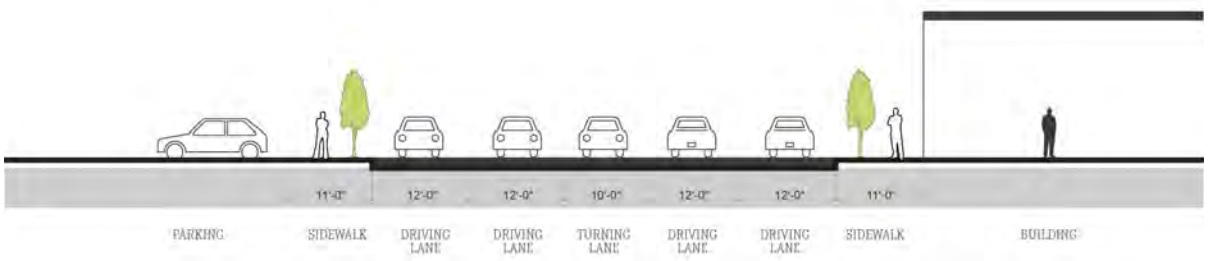
As part of the Vital Streets Plan, a Complete Street design policy/program should be implemented that provides the necessary guidance to ensure that the pedestrian is considered the "design vehicle" for all projects. The plan should also establish a Vision Zero policy to achieve zero deaths on all modes on Grand Rapids transportation network.

RE-DESIGN FULTON STREET TO BUILD A SEAMLESS PEDESTRIAN CONNECTION

Fulton Street is currently 58' in width and provides two travel lanes in each direction as well as a center left-turn lane. This design has made it very easy to drive quickly east-west through Downtown. It has also created a physical and psychological barrier between the portion of Downtown north of Fulton and the rapidly developing Arena South district. As Fulton is essentially a local street with no access to US 131 and narrows to one lane in each direction east and west of Downtown, the additional capacity that the street provides is not necessary. Reducing the number of lanes on Fulton within Downtown will improve safety for pedestrians. On street parking can be created in the space currently dedicated to the outer travel lane in each direction, increasing convenient parking options.

"Fulton is a dangerous road to travel by bike. I commute by bike, so bike friendly roads are essential."
- Online collaborative map comment

FIG 3.1: *Existing Fulton Street section - looking east*



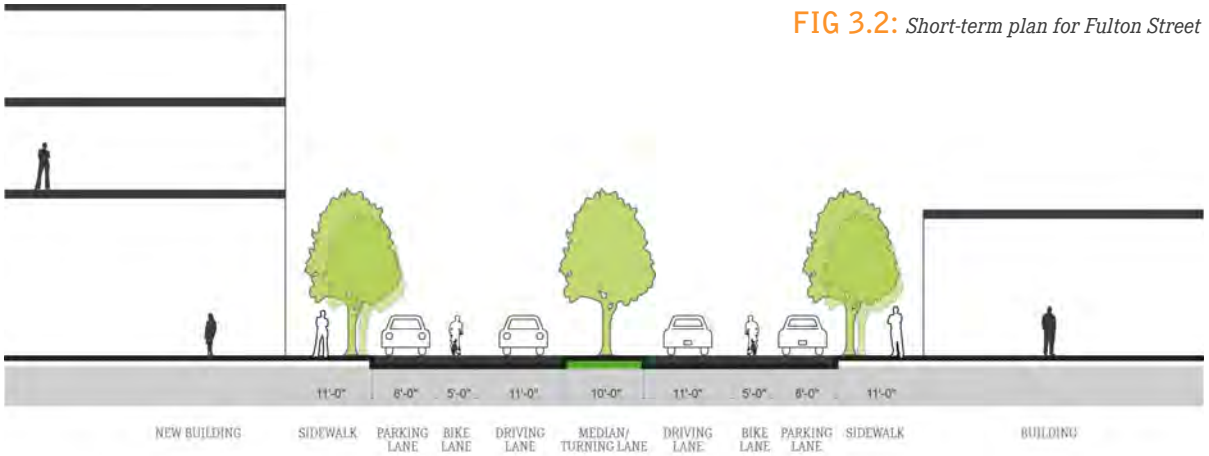
FULTON: EXISTING

The first step in a more pedestrian friendly Fulton Street will be to reduce the number of lanes and provide shorter pedestrian crossings. This can be accomplished by re-striping the street and adding some additional low-cost intersection treatments. All north-south crossings should be redesigned to prioritize pedestrian safety and connectivity, including installing leading pedestrian intervals, providing crosswalks that are wider and more visible to drivers, and advance stop bars.

The short term plan for Fulton Street should be to implement a road diet that provides one 10.5' travel lane, one 5' striped bike lane, and a 7' parking lane in each direction with a 10' center left-turn lane. For large events, the parking / bike lane could be used as an additional travel lane. The existing channelized eastbound right-turn lane at Market Avenue should be removed and pedestrian refuge islands should be provided on the east and west sides of the bridge, and mid-block between Ottawa/Ionia, at Sheldon, and between Jefferson/Lafayette. An eastbound left-turn lane should be provided at Ottawa Street.

Fulton: existing

FIG 3.2: *Short-term plan for Fulton Street*



FULTON: PROPOSED

There are a number of different options for how to best use the curb to curb space on Fulton Street in the long term. It is recommended that DGRI and the City work with local businesses and other stakeholders to prioritize how the street is used. Below are some potential options for the street and additional ideas for consideration.

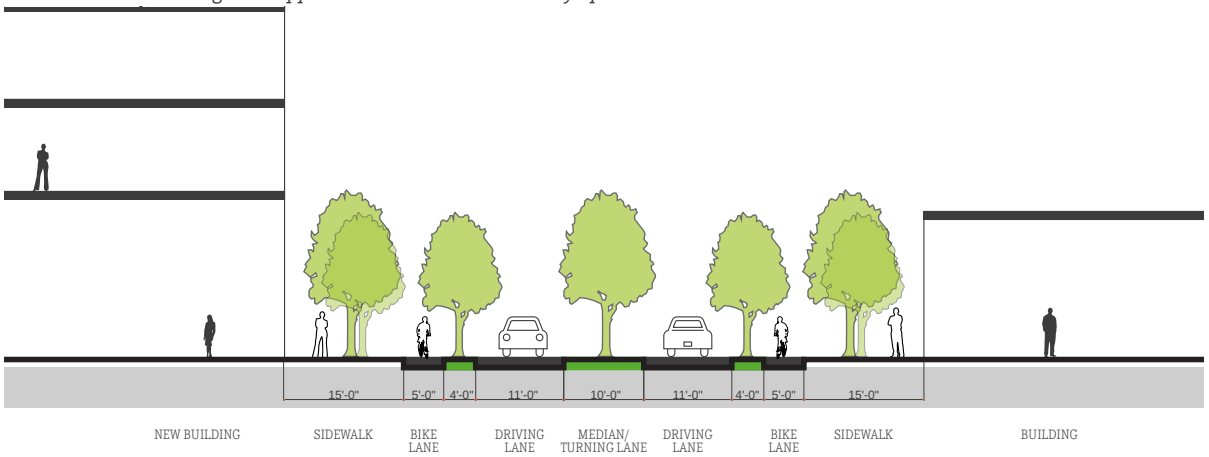
>> Enhanced Bike Facility Option: Remove parking from the short-term option, provide a 4' curbed/landscaped buffer between the travel lane and bike lane, add 4' to sidewalks

>> Shared Lane Option: Remove parking and bike lane from the short-term option and provide a 12' bus only lane with sharrows for bicycle traffic.

In addition, the north leg of Ottawa should be realigned, similar to Ionia, to provide as close to a 90 degree angle as possible with Fulton Street.

Fulton is a central gateway street through Downtown which should host bold design elements that demonstrate the City's attitudes toward transportation and the public realm in Downtown. Each stage of the process to implement big ideas on Fulton can further this goal. Typical roadway paint - rather than more permanent thermoplastic - should be used for the initial road diet restriping on Fulton. The typical lifespan of roadway paint is about 2 years. This two-year period can be used as a pilot-period to evaluate the lane configuration and other experimental elements of the streetscape. During this period, the City will be able to measure the success or failure of

FIG 3.3: *Fulton: long-term approach - enhanced bike facility option*



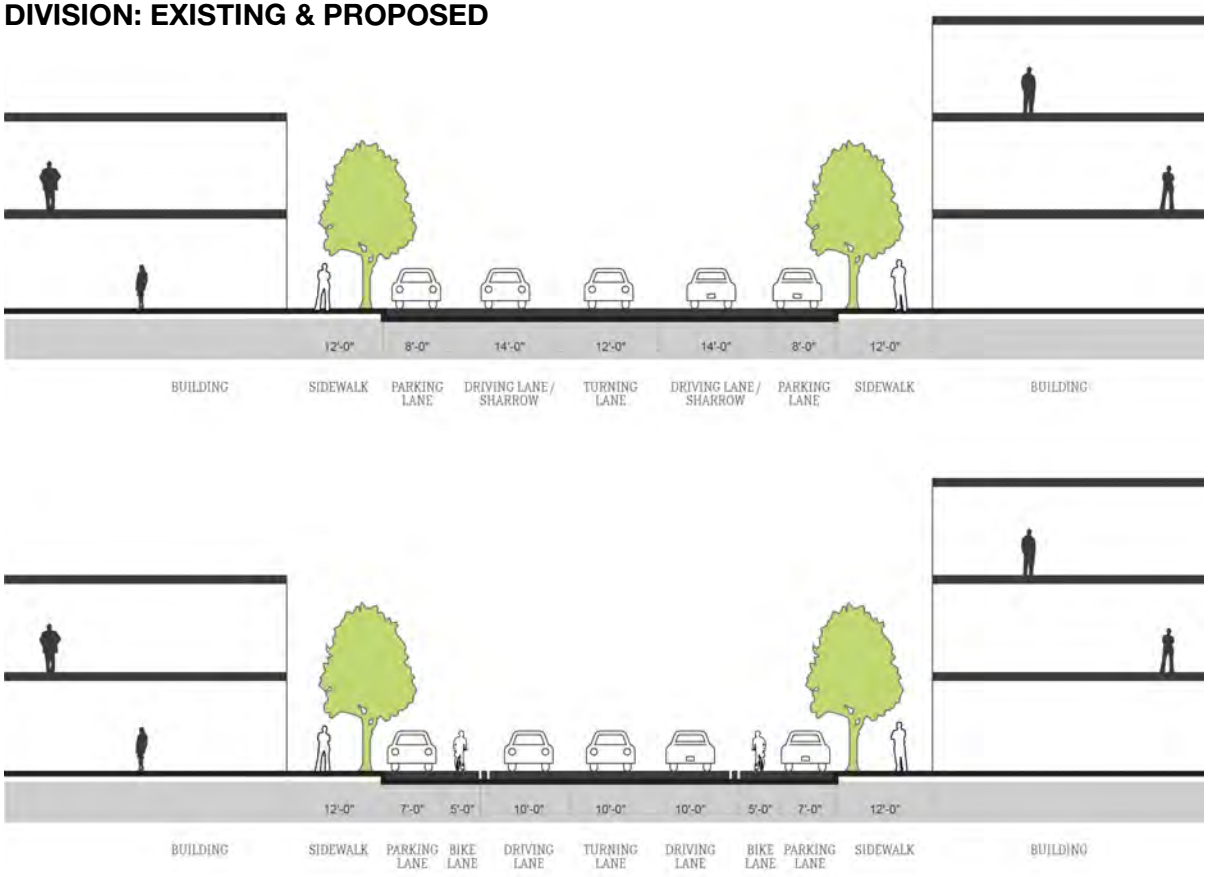
FULTON: PROPOSED

the lane widths and roadway design to serve the all users, and experiment with techniques to maintain clear bike and parking lanes throughout the winter months. In the spirit of this extended pilot period, the City should also use this time to experiment with a variety of pedestrian improvements such as curb bump-outs and pedestrian refuge islands, explore how to integrate artistic elements and test designs before final landscaping and new curbs are poured in concrete.

CREATE A MORE WALKABLE DIVISION AVENUE

The current width and function of Division Avenue varies from block to block. In many areas south of Fulton Street, Division feels unnecessarily wide with limited landscaping. An upgrade in streetscape design is warranted including new tree plantings, bus shelters, signage and furniture but broader moves should also be considered. North of Fulton, the current bike lanes could be removed if the proposed bike lanes on Ionia are installed [see Goal 3.3]. This space could be used for expanded sidewalks and plantings. South of Fulton there is an opportunity to create a north-south bicycle connection to Fulton Street [proposed for new bike lanes as described above] and Downtown. Reconfiguring the lane widths or, at times, removing the center turning lane, would create space for a dedicated bike lane buffered from traffic. Division south of Fulton has the advantage of width that enables the integration of new bike lanes without negatively impacting traffic or on-street parking. Recognizing that Division is a State-controlled street, discussions are needed to determine the feasibility of different design solutions and the timing of potential improvements as well as establishing an ongoing maintenance schedule. Consideration should be given to removing the US Business 131 designation and having the City take back jurisdiction of the street. This would increase maintenance costs, but allow the City to have much more control over how the City street network is designed and operated.

DIVISION: EXISTING & PROPOSED



> *"I'm sure the City is working with the state to generate a plan for Division Ave, so my comment might be irrelevant, but reducing traffic, creating wider sidewalks and more trees/green on Division would help pull people into the businesses, current and future, that are on that street."*
>
> *- Online collaborative map comment*

MARKET: EXISTING & PROPOSED

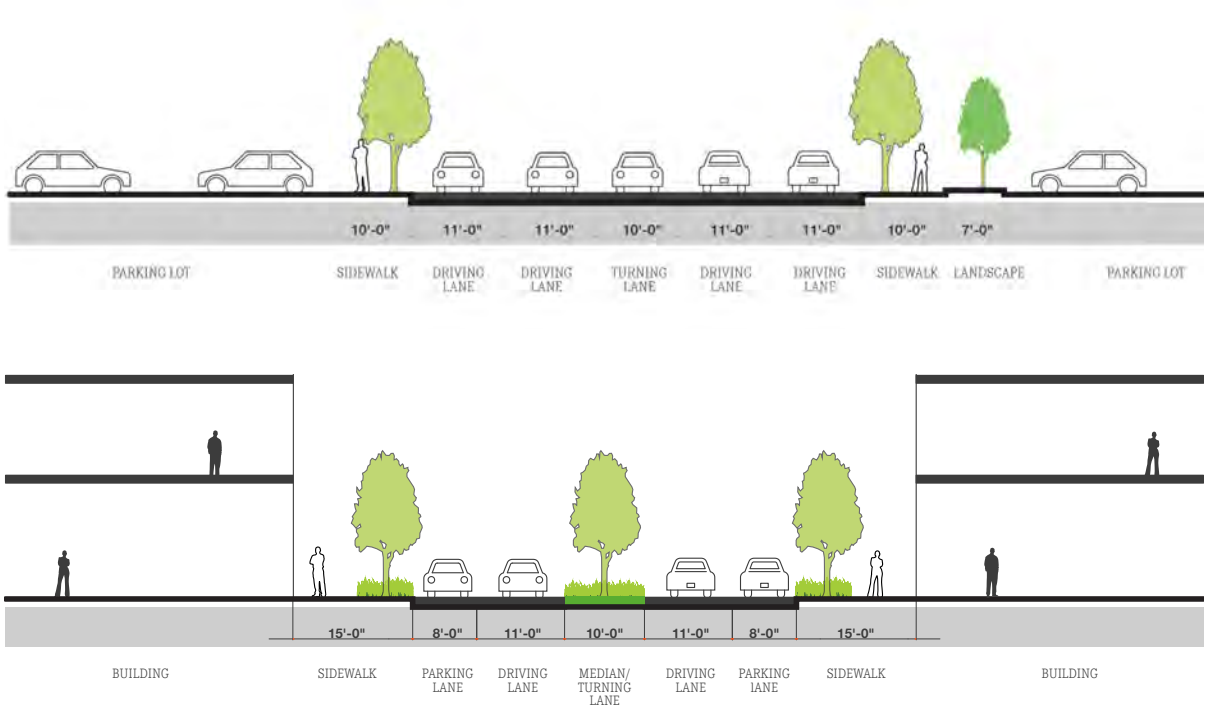
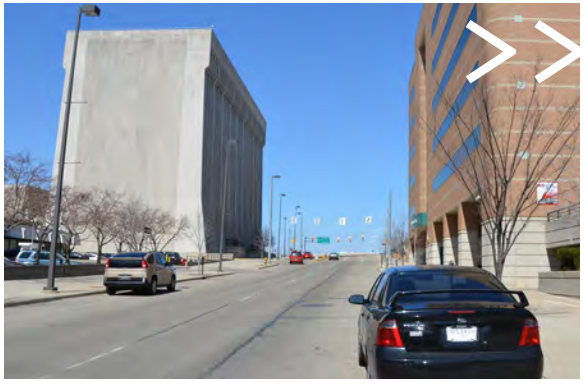


FIG 3.4: *Market@Weston, existing and proposed street sections*

Market Avenue heading toward Downtown



REDESIGN MARKET AVENUE AS THE INTERFACE BETWEEN DOWNTOWN AND THE RIVER

Market Avenue south of Fulton is an extremely wide corridor but adjacent to one of the largest development opportunities along the Grand River – 201 Market. The proposed redevelopment of 201 Market as described in Goal 2 includes new housing and commercial uses surrounding a large "green living room." To encourage use of this new open space and maximize the value of the River, Market should be redesigned for pedestrian safety. The current roadway should be redesigned with one travel lane in each direction, a turning lane and parking lanes. Closer to Wealthy Street where there is more truck traffic, the design may need to be adjusted depending on the current volume of truck traffic.

IMPROVE SAFETY OF THE MICHIGAN / BRIDGE CORRIDOR FOR ALL USERS

The current design of Michigan Street is challenging for all users: vehicles must make jogs across intersections to stay in a travel lane, pedestrians have to cross very long distances to get from one side of the street to the other, and vehicles turn at high speeds on and off Michigan. As discussed in the Michigan Street Corridor Plan, a redesign of the street would benefit all users. This should include removing the offset through-movements on Michigan Street to keep travel lanes as straight as possible, reducing the corner radii at intersections to reduce turning speeds for vehicles and crossing distances for pedestrians, removing the westbound right-turn lane at southbound Monroe Avenue, and installing international crosswalks at all intersections.

Bridge Street on the Westside acts as a critical commercial street that is currently seeing more investment. The improvements proposed for Michigan should be continued and tailored for the challenges of Bridge Street. This should include installing international crosswalks at all intersections, narrowing travel lanes where possible and installing curb bumpouts to improve pedestrian safety when crossing the street.

Colorful Crosswalk Example Image

Art/Programming Example Image

INVEST IN CHERRY STREET

Cherry Street is the one east-west street that connects the neighborhoods together and extends directly to the River where redevelopment is proposed at 201 Market Avenue. As times, the pedestrian experience leaves much to be desired, with narrow sidewalks in places, inconvenient placement of crosswalks, and minimal protection or separation from traffic. Pedestrian-oriented improvements should be considered a priority along Cherry to better connect Downtown south of Fulton to the Grand River. This is particularly important in the segment between Grandville and Ionia under US 131. Improvements should include tree plantings, lighting, and signage as well as active frontages for all new development. A full redesign of the intersection of Cherry and Ionia is necessary to reduce pedestrian crossing distances and vehicular turning speeds.

Blank walls make dull walks

ENSURE SAFE PASSAGE FOR BIKES AND PEDESTRIANS TO AND FROM VERN EHLERS STATION AND RAPID CENTRAL STATION

Rapid Central Station and Vern Ehlers Station serve as the hub of Grand Rapids local and regional transit network. Twenty [20] of the Rapid's bus routes, DASH South, Amtrak's Pere Marquette line [with an approximate annual demand of 50,000 passengers], and regional bus carriers all converge at this one area.

Improving the pedestrian connections to this multi-modal hub will not only improve pedestrian safety, but create a gateway for the thousands of visitors that experience this area first on their trip to Grand Rapids. Key access points should be prioritized to include pedestrian safety tools, including a redesign of Ellsworth Avenue and Bartlett Street. Consideration should be given to providing wider sidewalks on Ellsworth Avenue. Additional signage should be provided to guide pedestrians to Downtown. Future development in the area should include sidewalk lighting, pedestrian amenity upgrades and widening where possible.

Central Station

DEVELOP PEDESTRIAN-FOCUSED INCENTIVE PROGRAMS

While many people take advantage of Downtown's walkability, there will always be a segment that needs an additional push to take a walk to lunch or for fun. DGRI should partner with local employers to do an annual pedestrian challenge to measure the distance and/or number of steps participants walk. This could include a giveaway of pedometers or step counting devices.

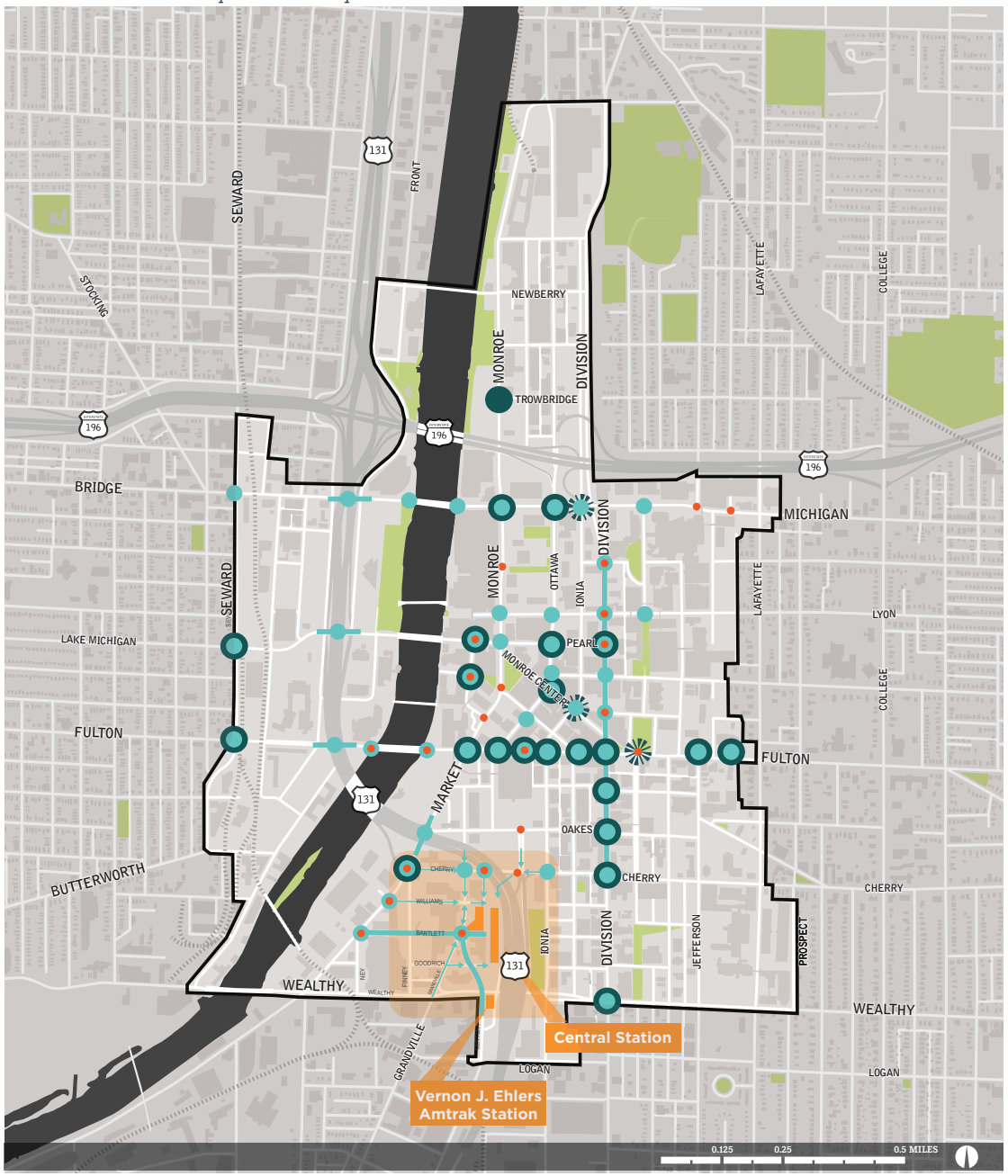
DGRI and the City should also collaborate on organizing an Open Streets event. Open Streets is a successful global program where streets are shut down to vehicles and programmed with pedestrian- and family friendly activities. It is recommended that a street not typically viewed as a pedestrian street, like Monroe Avenue, Grandville Avenue, or Fulton Street, be used for this event, as opposed to Monroe Center or Pearl Street.

RETROFIT PARKING STRUCTURES FOR UPGRADES

Parking facilities, whether they are surface parking lots or parking ramps, are necessary to provide vehicle storage for employees, residents and visitors of Downtown. However, these facilities do not contribute to the experience of Downtown. Aesthetic requirements should be established for parking lots and ramp facades, which currently include minimum landscaping percentages, screening types and maximum unarticulated fencing or barrier lengths, and be extended to include sidewalk extensions with amenities like bike parking, space for event programming, or transit improvements. In order to make integrating these transit facilities or programmed spaces easier– even retroactivity - DGRI should act as an information exchange, connecting developers looking to build parking facilities with others that deal with the right of way.

Grand Rapids's zoning code has many existing regulations for parking facilities that achieve the goals of improving the Downtown environment for all residents and workers. However, most of these policies focus on new construction. In a dense area with limited opportunities for new construction, these policies need to be expanded to include a vehicle and timeline for bringing existing ramps and surface lots into compliance to make a bigger impact in the near term. An ordinance should be developed proposing ambitious compliance targets for existing City-owned lots and ramps. This will require the City to lead by example by undertaking exterior

FIG 3.5: *Pedestrian Improvements Map*



INTERSECTIONS

PEDESTRIAN IMPROVEMENTS

- PEDESTRIAN REFUGE ISLAND IN CROSSING
- SIGNAL UPGRADES AND TIMING
- INTERSECTION GEOMETRY CHANGES
- BIKE FACILITY THROUGH INTERSECTION
- SIDEWALK IMPROVEMENT AND WIDENING

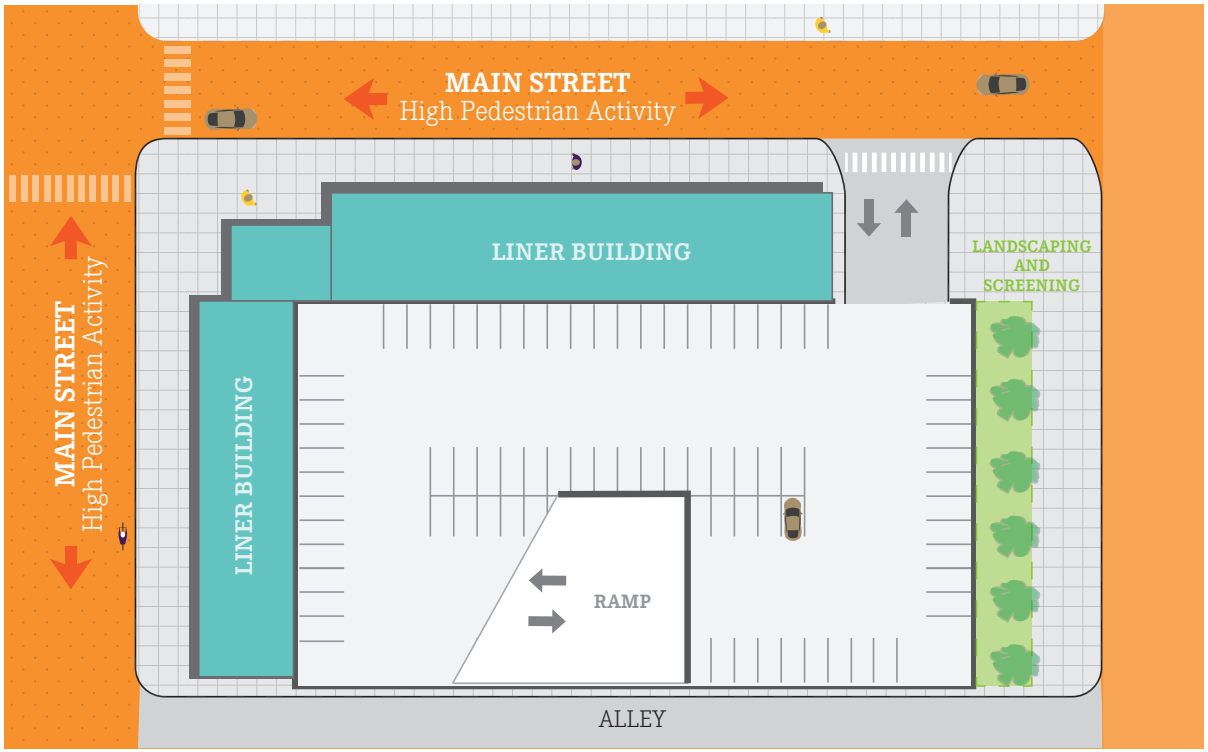
renovations of City-owned structures, and landscaping and fencing existing parking lots, which do not currently meet City standards. Compliance requirements should vary for lots and ramps, as construction costs, lot constraints or structural concerns for ramps may make significant exterior renovations or the construction of liner buildings along existing structures [described below] more challenging, or impossible.

The City should consider banning the construction of new surface parking lots within the area bounded by Michigan/Wealthy/Seward/Division. If banning the construction of new parking structures is impossible the City should continue their efforts to ensure high-quality design if new parking structures are to be constructed in Downtown through the use of pro-active requirements for new parking ramp construction, such as requiring 'Ground Floor Active Use'. These regulations encourage or require the development of 'Liner Buildings', or small buildings lining parking garages specifically designed to front a public space and activate the façade of the hidden parking structure. The burden of building and operating commercial spaces in addition to the parking facility may serve as a disincentive to some developers looking to build lots in Downtown, achieving both the goal of limiting new construction and ensuring that new construction serves more users. The City should explore ways permit and incentivize the construction of liner buildings along public frontage of larger, existing surface parking lots.

Existing parking facility facade

In addition to the existing policies governing design for new construction of parking garages, the City should explore the possibility of amending City and State zoning policy so that parking garages are no longer given an exception from current zoning ordinances as non-conforming uses. Under the current policy, most existing parking structures are exempt from increased screening or landscaping requirements established after their initial construction unless they undergo major renovations, updates, or expansion. Change to the City and State zoning code to exempt parking structures from approval as a non-conforming could provide the City with a vehicle to require aesthetic improvements be made to existing structures over a set period of time.

If a change in zoning policy is possible, the City could explore establishing parking compliance goals based on the number of spaces in a facility to make the transition more financially feasible for private owners. One option applied to parking lots might be to establish a target compliance date to meet minimum landscape standards based upon the overall size of the lot. For example, lots with 100 spaces or fewer would be required to meet landscaping compliance within 2 years whereas lots with 100-300 spaces would be required to comply with all landscaping requirements within 5 years. Understanding that the cost of compliance would be significant for many lot owners, a secondary set of landscaping requirements could be developed to reduce this cost by reducing landscaping requiring significant excavation, or cost-sharing additional lighting or public utilities.



Liner Building Diagram

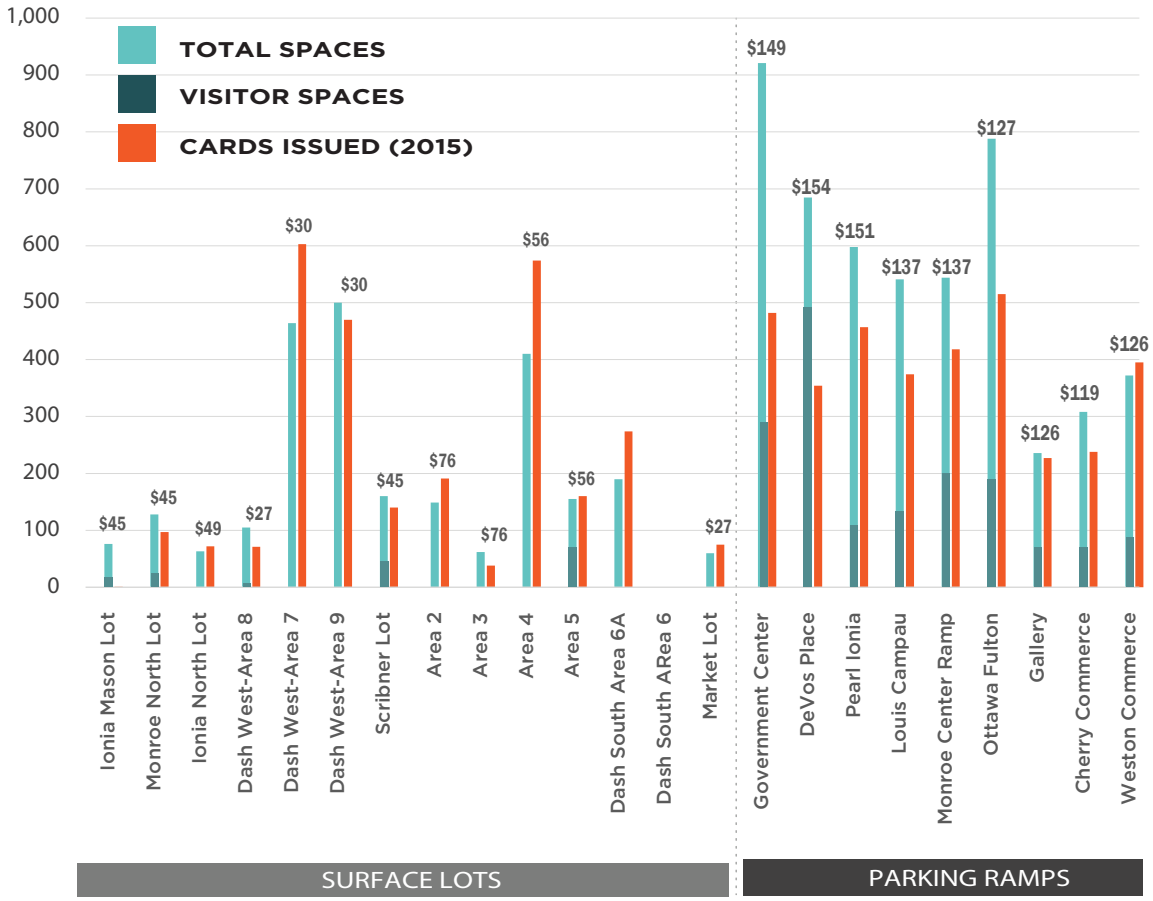
3.2 ESTABLISH MOBILE GR

The Parking Services department within the City's Enterprise Services has done a remarkable job operating a sophisticated parking system. It has managed to stay ahead of changes that have occurred with growth in demand, technology and other behavioral aspects. In order to best serve the future of Grand Rapids residents, businesses, and visitors, Parking Services must continue to evolve to meet the City's future transportation demands.

Parking is only a part of the overall mobility solution that will be necessary to serve the future of Downtown and Grand Rapids as a whole. Recognizing this, Parking Services must broaden its scope to cover all transportation choices, not solely driving and parking. This expanded department, Mobile GR, will encompass multiple modes of transportation to help achieve the City's economic development and quality of life goals by increasing the number of people who take transit, walk, bike, or commute/travel in a way other than driving alone, in addition to continuing to manage the City's parking assets.

Mobile GR will require changes to the organization of Parking Services, including additional staff, additional responsibilities, and a change in culture. The potential opportunity of this new organization exists to not only provide parking solutions for those that choose to drive, but also help people identify and embrace additional transportation choices that are easy, affordable, and attractive if they do not want to drive and park.

FIG 3.6: *Chart of parking utilization*

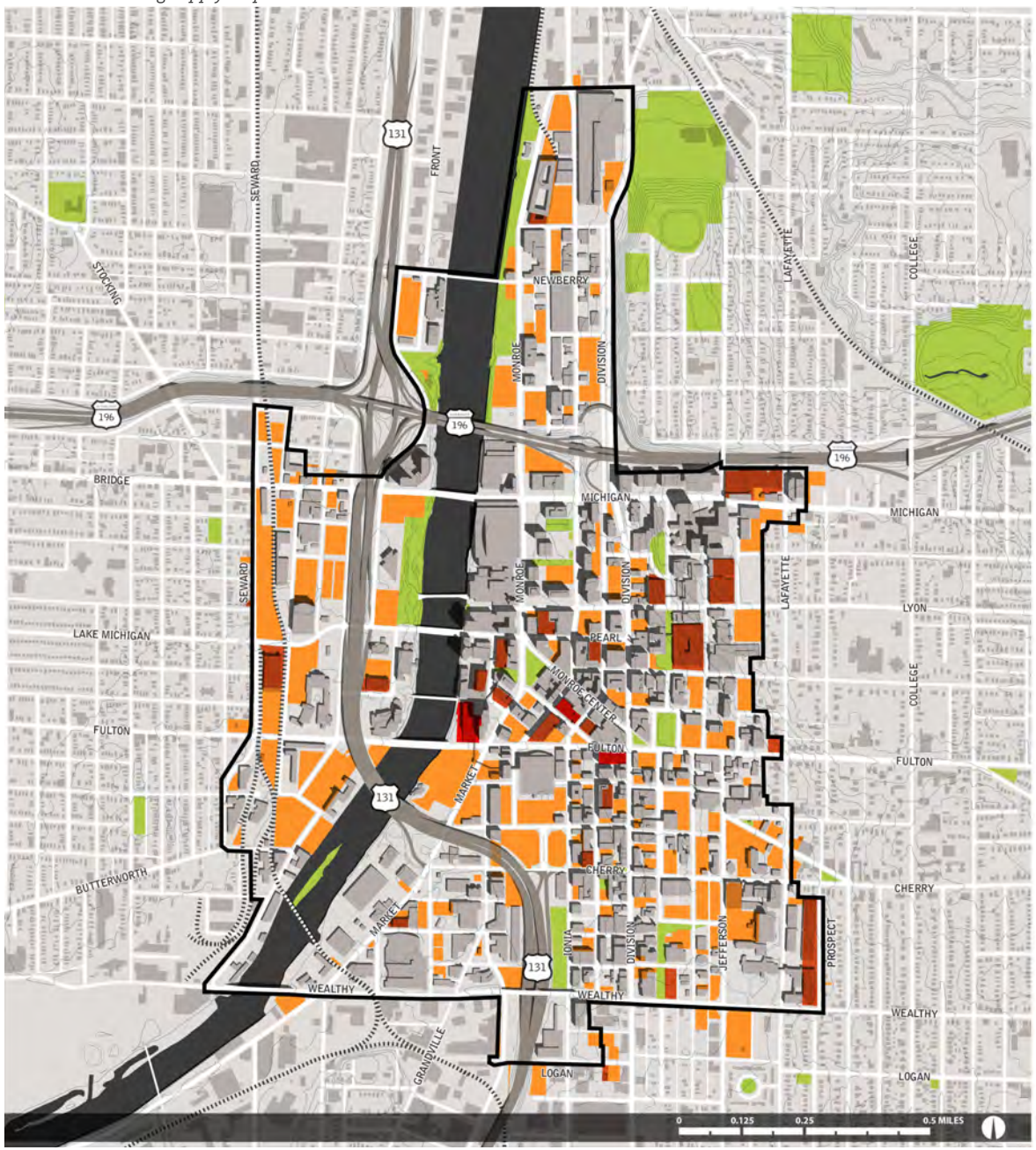


ESTABLISH MOBILE GR ORGANIZATION

Mobile GR will be a new organization that evolves Parking Services to include all mobility options for the residents, employees, and visitors of Downtown. The organization should serve as the hub for mobility information, collaboration and transportation solutions for all users of the City's transportation system. Mobile GR will set the course for multi-modal transportation in Grand Rapids and also be the face of this aspect of growth.

Mobile GR should continue to manage existing parking assets and DASH service as well as take an even bigger role in building collaborations across the public and private sectors. Mobile GR should manage and coordinate new mobility services, review parking and transportation demand management plans for

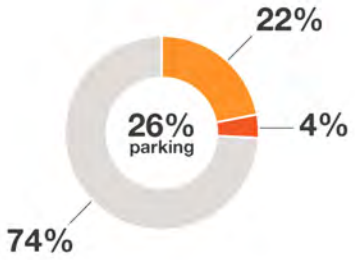
FIG 3.7: *Parking supply map*



PARKING

INTERFACE - STUDIO FIELD SURVEY

PARCELS / DEVELOPABLE LAND:	649 ACRES
PARKING LOTS:	141 ACRES
PARKING RAMPS:	26 ACRES
MIXED-USE PARKING RAMPS:	4 ACRES



- PARKING LOT
- PARKING RAMP
- MIXED-USE PARKING RAMP

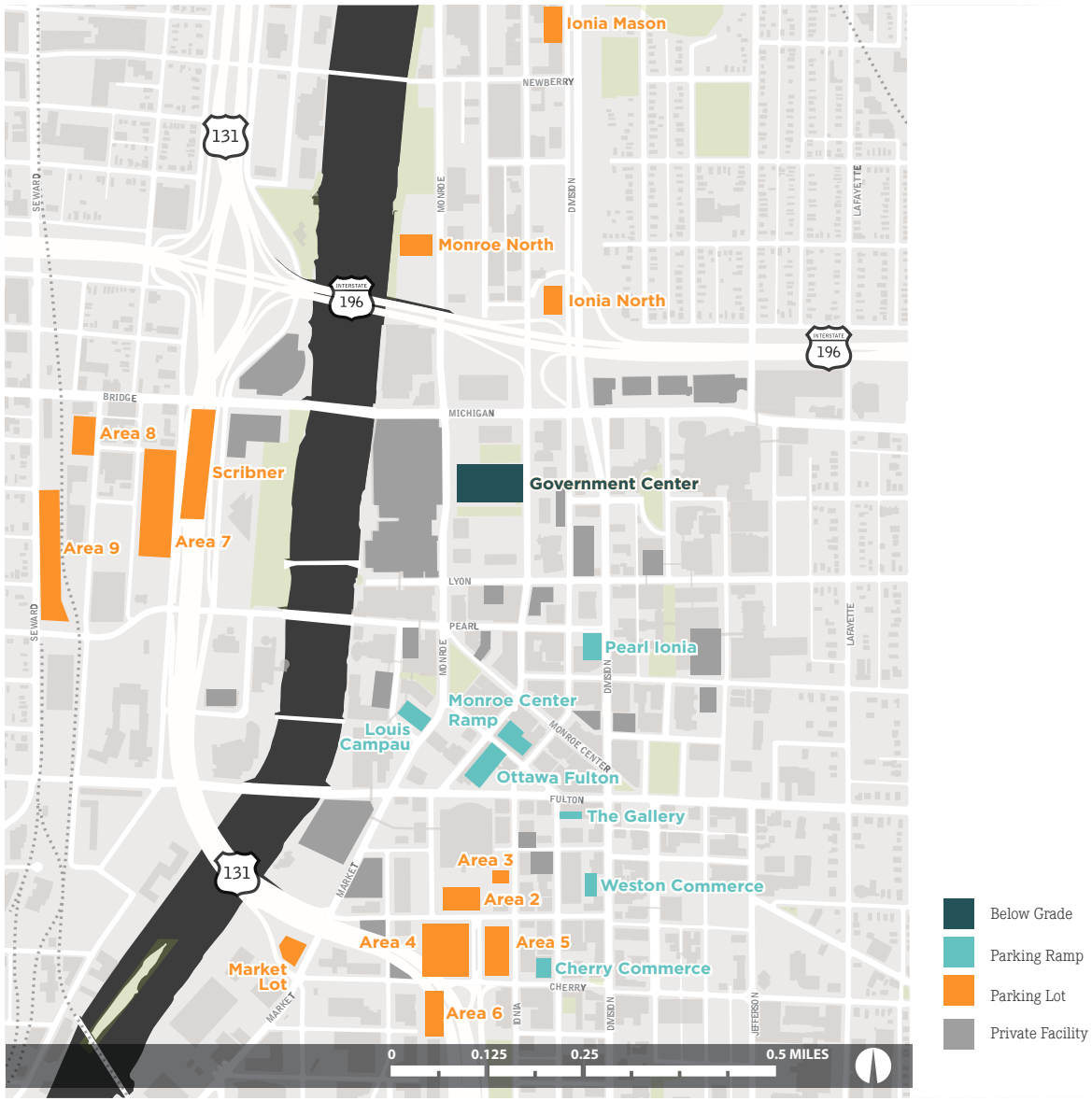


FIG 3.8: *City-owned/operated parking*

new developments, and develop an employer outreach/solutions program. Three new staff positions should be part of this organization: Mobile GR Manager, Mobile GR Supervisor, and Mobile GR Outreach. Additional overhead costs will be necessary for this organization, including developing a new website and other administrative tools.

MANAGE PARKING ASSETS TO SUPPORT THE SUCCESS OF DOWNTOWN

Mobile GR must continue to deliver the excellent service and operations that have been the hallmark of Parking Services. The focus of these recommendations is on the Downtown area, but Mobile GR will be responsible for the entirety of Grand Rapids's on-street parking, curbside management and City owned/operated facilities. Additional work will be necessary to outline recommendations for all parking owned/operated by the City.

The data collected on monthly cards and utilization of the existing parking facilities demonstrated a need to make adjustments to the price of off-street facilities to better match supply and demand. This includes both increases and decreases to the monthly price of parking. These changes should be phased in over time.

There are currently a number of different parking programs for different types of users. It is recommended that the parking programs be consolidated to three: Daytime, Nights and Weekends, and 24/7. Mobile GR should partner

with a technology firm to develop an algorithm to help predict customer patterns in each facility.

The price of on-street parking, bounded by Michigan Street, Wealthy Street, Division Avenue, and the Grand River, should be adjusted to $2.00 per hour and the price of on-street parking should be increased by a minimum of $0.25 on an annual basis. The price of off-street hourly parking should be reduced to $1.00 for the first hour and rates should be frozen and only raised when on-street parking occupancy is 50% higher than off-street parking. The hours of enforcement of on-street parking should be extended to 8 PM on weekdays and all meters should be enforced Saturdays. The price of off-street event parking should be increased to $10.00.

It is recommended that an extended pilot of accepting credit card payments be conducted at all parking meters to determine the potential return on any future investments.

PROVIDE ADDITIONAL PARKING SUPPLY

There will be a need for future parking in Downtown, both to replace existing surface lots that will be redeveloped as well as to meet the expected demand of parking for new developments. It is anticipated that new parking in Downtown will be constructed in ramps at a cost of $25,000 to $35,000 per space [2015 estimates]. Mobile GR should partner with private developers to build future parking ramps with the goal of both owning and operating the

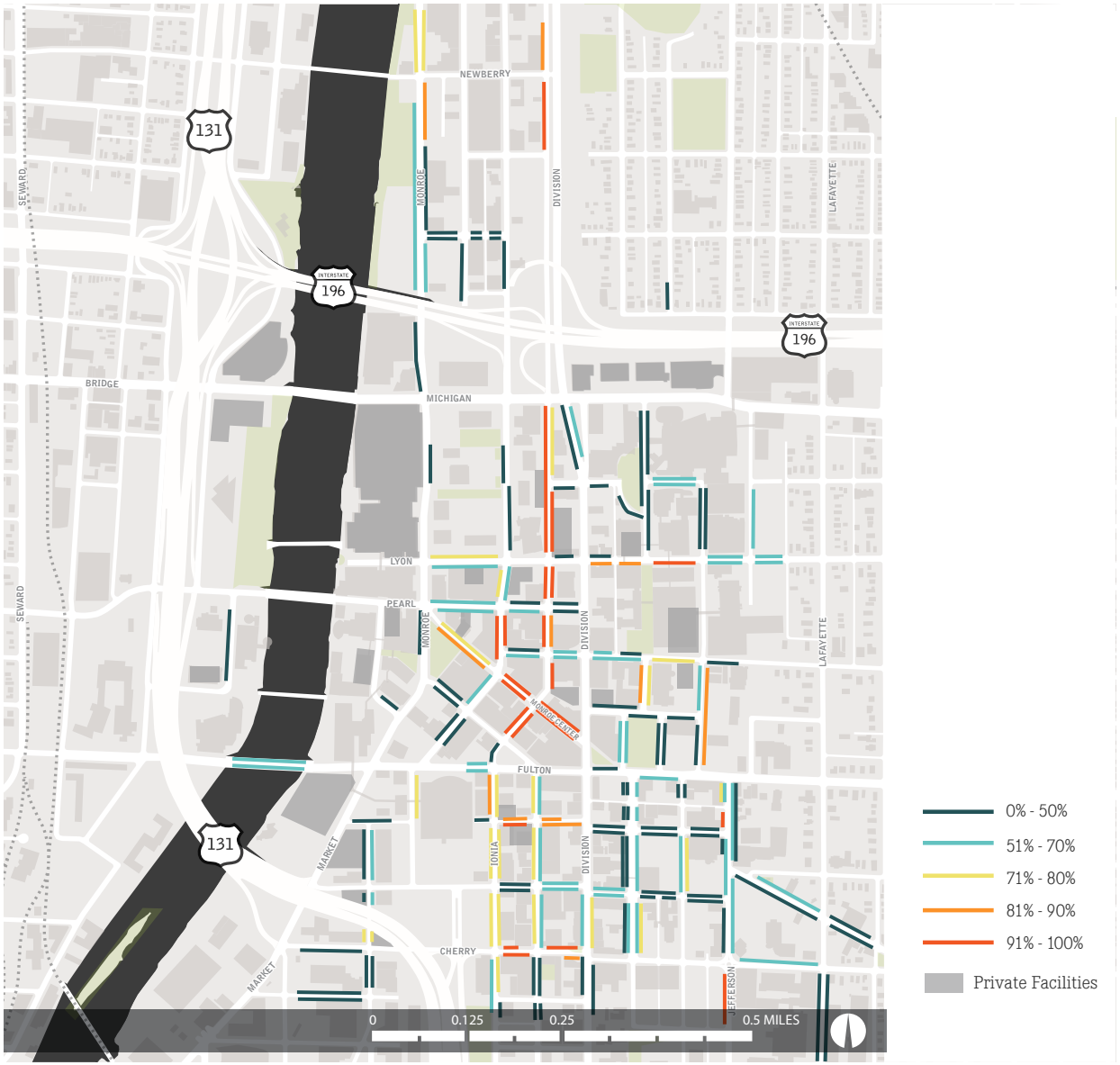


FIG 3.9: *On-street parking utilization*

> *“It’s so easy to drive in Grand Rapids. Parking is everywhere and it doesn’t cost anything to park.”*
>
> *- GR Forward interviewee*

facility. For parcels that are currently owned by the City, having Mobile GR own/operate parking should be part of the negotiation strategy.

Providing remote parking facilities that are located next to the Rapid’s existing and future Bus Rapid Transit facilities will be necessary to accommodate bargain parkers as well as reduce traffic congestion in Downtown. The existing Silver Line, running primarily on Division Avenue, and the proposed Laker Line, running along Lake Michigan Avenue, will be a reliable and quick transit service in and out of Downtown, mimicking many of the features of typical rail commuter service. Providing a remote parking option for people to park at a very low rate and ride the bus should be an attractive option in the future. The initial remote parking facilities should be considered pilots to determine what is necessary to make them a success. This will include making it free to park at the facility, providing free transit and evaluating opportunities for mobility hubs and retail amenities as appropriate. Future locations for remote parking should be identified.

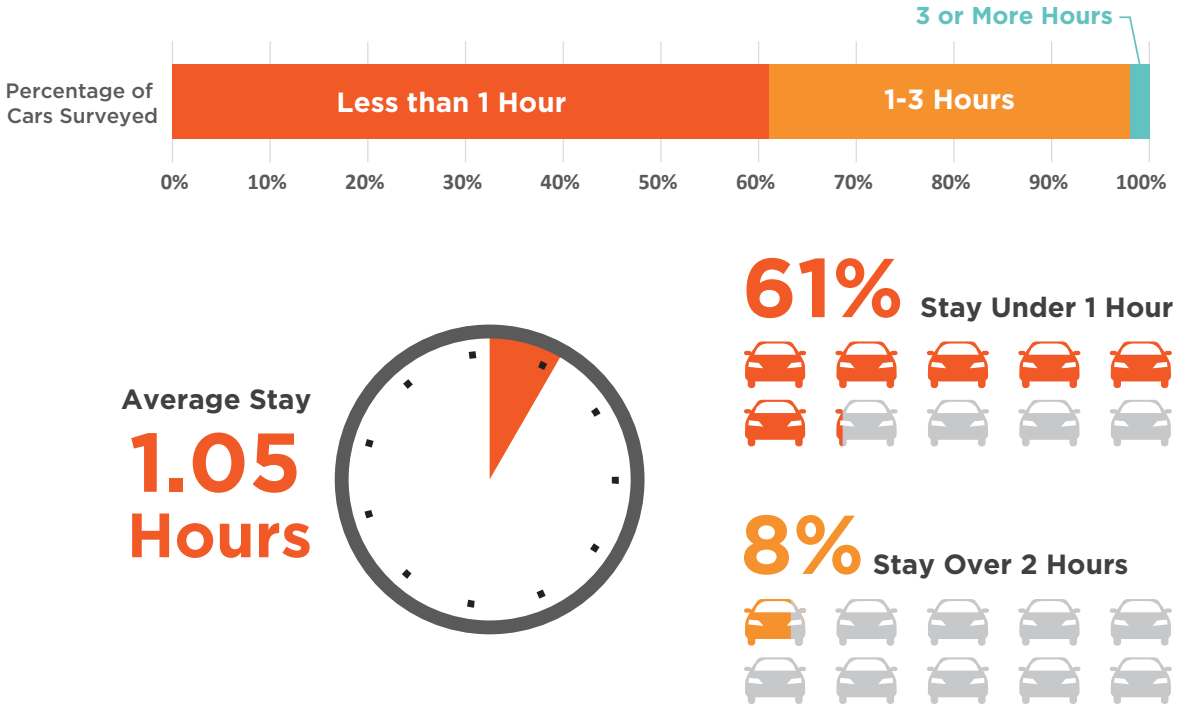


FIG 3.10: *Characteristics of on-street parking use*

RECONFIGURE EXISTING DASH SERVICE

One of the primary connectivity issues in Downtown Grand Rapids is the lack of transit service linking all of the different areas within Downtown. Due to its geography and size, Downtown is often experienced in sections [e.g. DeVos Place, Downtown Market]. This current state of restrictive mobility is primarily dictated by the lack of simple, reliable, comprehensive transit service to connect all Downtown destinations.

To best compliment the Rapid’s BRT investments and improve mobility in Downtown, in addition to serving existing patrons of City-owned parking lots, a revised DASH service should be implemented. This service should function as a circulator to ensure that resources are used in a pragmatic fashion to complete a high-frequency transit network in Downtown Grand Rapids.

This will be accomplished through replacing the current DASH service with two new simple bus lines – comprising the DASH Circulator – that connect current parking facilities to destinations and create a true high-frequency Downtown circulator that compliments the current Rapid public transit network. The service would run on weekdays, except holidays.

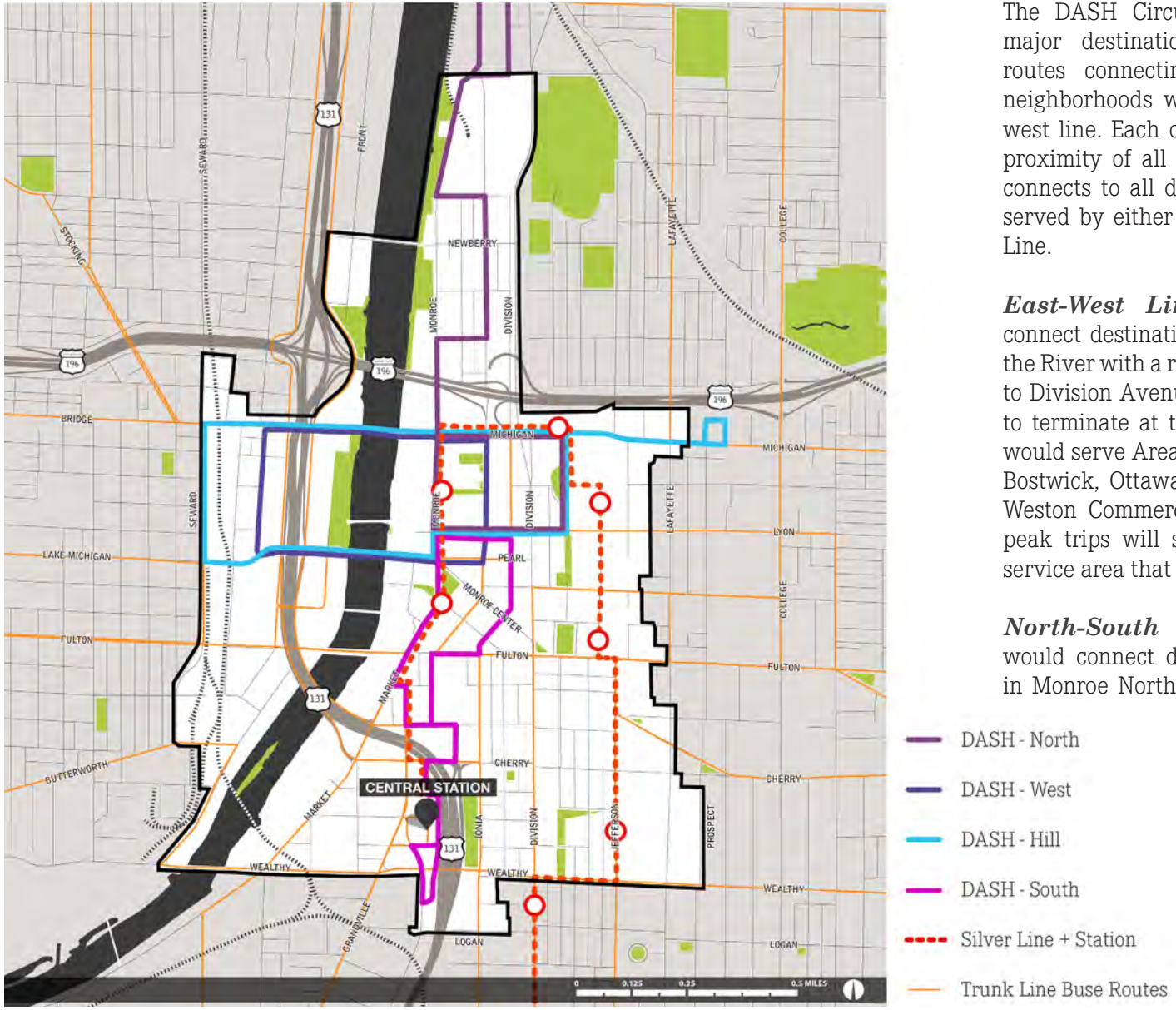


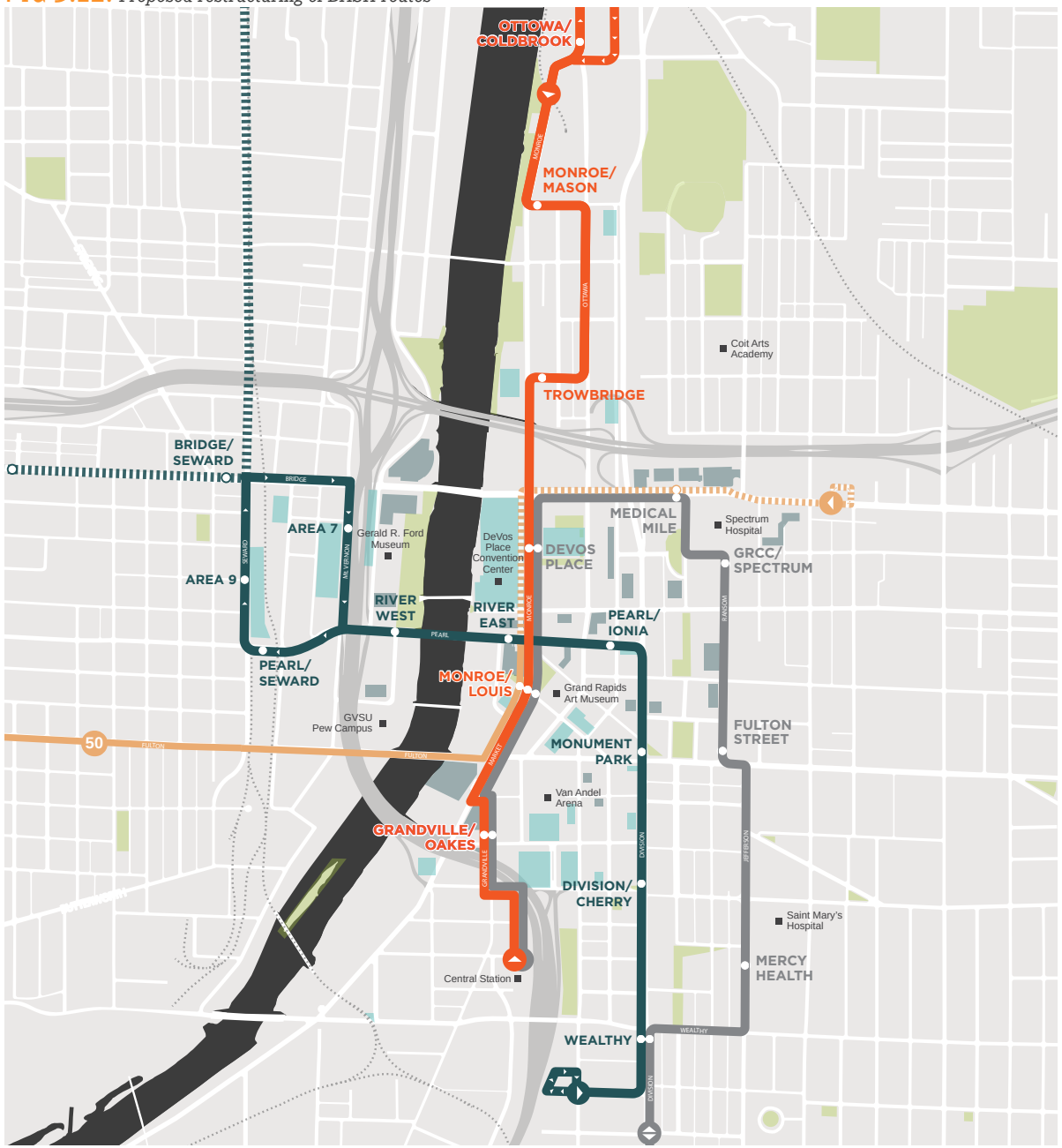
FIG 3.11: *Existing public transit assets [Dash + Silver Line]*

The DASH Circulator [figure 3.12] will link all major destinations through a simple pair of routes connecting Downtown and surrounding neighborhoods with both a north-south and east-west line. Each of these lines is within very close proximity of all City-owned parking facilities and connects to all destinations within Downtown not served by either the Silver Line or planned Laker Line.

East-West Line: The East-West Line would connect destinations and parking facilities west of the River with a routing that runs east/west on Pearl to Division Avenue then south on Division Avenue to terminate at the Downtown Market. This route would serve Area 8, Area 9, Area 7, Scribner, GRCC Bostwick, Ottawa Fulton, Pearl/Ionia, The Gallery, Weston Commerce, and Cherry Commerce. Some peak trips will serve a shortened portion of the service area that will end by the Van Andel Arena.

North-South Line: The North-South Line would connect destinations and parking facilities in Monroe North, Devos Place with a routing that runs north/south on Ottawa/Monroe/Market/Grandville to Cherry Street then south on to terminate at Central Station. This route would serve Ionia Mason, Monroe North, Ionia North, Government Center, GRCC Bostwick, Ottawa Fulton, Louis Campau, Market Lot, Area 2, Area 3, Area 4, Area 5, and Area 6 City-owned parking facilities.

FIG 3.12: *Proposed restructuring of DASH routes*



DASH ROUTES

PROPOSED

- DASH E-W
- DASH N-S
- SILVER LINE
- LAKER LINE
- STATION
- City Operated Parking Facilities
- Non-City Operated Parking Facilities

PROVIDE NEW AND ENHANCED MOBILITY OPTIONS

In addition to managing parking, Mobile GR will play a key role in supporting the transition of Grand Rapids from a City where people have to drive to one that provides an array of choices of how to get around. Mobile GR will play many different roles with these mobility options: some will be funded and operated by Mobile GR, others will require marketing, and some may just need assistance with building partnerships. Mobile GR's mission will be to provide as many choices as possible to the people of Grand Rapids and do it as efficiently and successfully as possible.

Many of these new options will require time to build awareness, usage and success as Mobile GR is part of a long term vision of how the City will grow. The recommendations for each mobility option should serve as an initial framework to understand opportunities and challenges and establish benchmarks. Each option should be evaluated on an ongoing basis

to determine how to increase utilization in the most efficient manner. Due to the constant changes in technology and demographic demands, there will need to be flexibility with these options to scale and change to meet the growing needs of Grand Rapids.

>>Bring bike share to Grand Rapids

Bike share is a point to point transit system that provides a mobility option that is flexible, fun, healthy, and affordable. In larger cities, such as New York and Chicago, bike share has changed how people get around the city and expanded the amount of destinations they can get to in a short amount of time. For instance, the walk from DeVos Place to Founders Brewing is about 16 minutes for the average person; using bike share that trip would be reduced to 6 minutes. Bike share is essentially a pedestrian accelerator that allows people to cover a larger area in a shorter amount of time. A successful bike share system requires building a membership that encompasses all demographics who are willing to use it to make short point-to-point trips. Achieving this goal requires a dense system of bike share stations as well as a membership and cost structure that does not create significant barriers to entry.

Based on the existing density of employees and expected future residential population, Downtown Grand Rapids can support a bike share system. An initial system of 20-35 bike share stations should be pursued that covers the Downtown area and near neighborhoods. The initial steps of this will be to complete a quick planning study on where to install the bike share stations and identify the best structure of the system and begin to reach out to vendors to obtain more information on pricing.

It is strongly recommended that the bike share stations be concentrated within Downtown and nearby areas in the first stage of implementation. Strong consideration should be given to including as many electric assist bikes as possible for the initial system. Electric assist bikes are standard bikes that provide riders with the option of an added electric propulsion. This is particularly effective for challenges with bicycling up steep hills and for people that haven't ridden a bike in a while. Birmingham, AL recently launched a 400 bike system, with 100 of those bikes being electric assist, and other cities are poised to pilot this technology.

The startup cost of bike share can be covered either through a public/private collaboration or grants. The system and operating structure should be designed to cover annual operating costs after year two. Sponsorship should also be considered for a revenue stream, but it is unlikely that it will cover the initial capital expenses.

>>Bring car share to Grand Rapids

To understand potential positive impact of providing more affordable transportation options, it is necessary to understand how residents of Grand Rapids are spending their money today. Traditionally, the cost of housing as a percentage of income was used to measure the 'affordability' of a place. In recent years the idea of 'affordability' has been expanded to include transportation costs to more accurately reflect the day-to-day cost of living to residents. The combined housing and transportation cost by representative income brackets illustrates the cost burden placed on a typical household. Household transportation costs for Grand Rapids were calculated as the sum of auto ownership costs, auto use costs, and public transit costs. Within the census tracts making up most of the Downtown area of Grand Rapids, combined housing and transportation costs make up 37%-42% of a typical household income.[2]

Car share has proven to be a revolutionary transportation service, particularly in urban areas with growing residential population, which reduces both parking demand and individuals' cost of living. The service allows

2 Center for Neighborhood Technology Tool : The statistics for the Municipality of Grand Rapids MI, and census tracts within Downtown [Tract: 26081002000 and 26081001900 were modeled for the Regional Typical Household. Income: $52,108 Commuters: 1.16 Household Size: 2.64 [Grand Rapids-Wyoming, MI]

> *"I work in the ER, and many of our patients use public transportation to and from the hospital, but after midnight it is almost impossible to catch a bus, we need 24/7 public transportation."*
>
> *- Open house participant*

people to pay an hourly fee to use a vehicle and the fee is typically inclusive of all costs, including insurance, gas and maintenance. For someone who lives and works Downtown, but has an occasional need for a car, car share is the perfect solution. Car share has shown to significantly reduce car ownership in dense areas.

There are currently a number of different models of car share. The best model for Downtown Grand Rapids is where a vendor rents a parking space for each vehicle and members must pick-up and return the vehicle to that same spot. To startup a new geographic location, the vendor will likely need to feel confident that they can achieve a monthly revenue target to cover costs and make a profit. Vendors are typically averse to risk of starting up in a new location until there is a proof of concept that car share will succeed. Often a private or public partner, including a developer, institution, or municipality will help to guarantee some amount of monthly revenue.

The City should build a collaboration among public [City, Rapid, Grand Valley Metropolitan Council] and private [DGRI, foundations, employers, higher education intuitions] partners to work with a vendor on an initial ten [10] vehicle pilot car share program. This would be similar in size to the existing car share program in Ann Arbor, MI. The public/private partnership should work with the vendor to guarantee a monthly revenue goal per vehicle for the pilot and share in potential profits for future expansions. The public/private partnership should offer services/infrastructure, such as parking spaces, vehicle maintenance and office space that would reduce the amount of the monthly guarantee. The partnership should also work to reduce their own fleets and replacing them with car share vehicles.

Mobile GR should assist with an aggressive marketing campaign to build awareness of the program as well as membership. The potential user groups include students, residents that live/work Downtown, municipal employees [in lieu of using a City/County vehicle], and out of town visitors that arrive in Grand Rapids via the airport or Amtrak and only need a car for a meeting. The marketing campaign should focus on these groups for the first year.

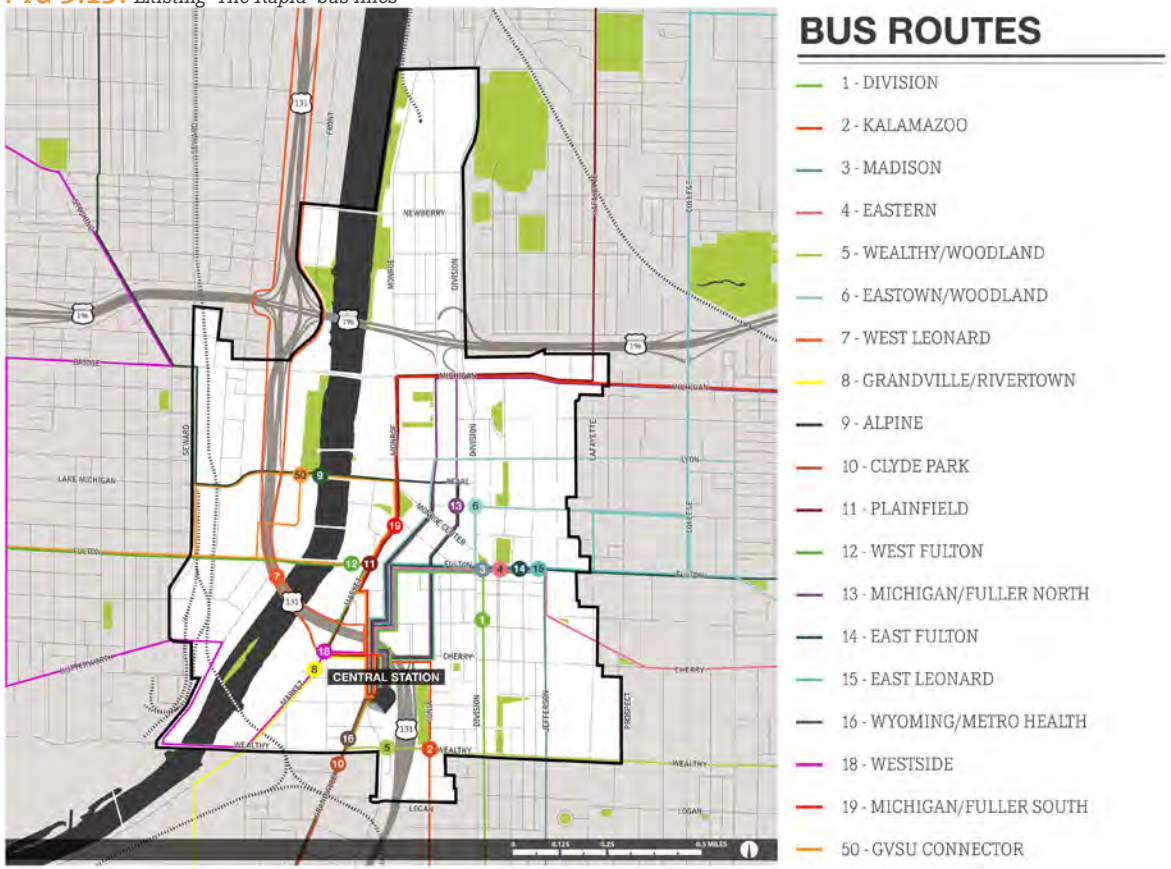
>> Incentivize transit use

The Rapid provides a robust transit service to Downtown and the Grand Rapids region as a whole. Making better use of this system will be critical to achieving the overall goals of GR Forward and reducing the overall rate of parking demand in Downtown. One of the ways to encourage more transit ridership among Downtown employees is to provide free or reduced fare transit service. A number of cities, including Boulder [CO], Columbus [OH], and

FIG 3.13: *Mode splits in Downtown Grand Rapids vs. peer cities*

FIG 3.14: *Drive alone trips in Grand Rapids*

FIG 3.15: *Existing 'The Rapid' bus lines*



Ann Arbor, MI offer a program that provides a transit pass to Downtown employees that allows them to ride transit for free or for a nominal annual fee.

Mobile GR, in collaboration with the Rapid and DGRI, should conduct a one year pilot program of offering free transit to up to five businesses of different sizes and one higher education institution. After the one year program is over, an evaluation should be completed that identifies the costs to maintain and expand the program as well as the benefits, including reduction in parking demand. Partnerships should also be explored to provide residents who cannot afford transit with special fares.

"In my generation and for myself this is huge. No one I know wants to own a car. They do it out of necessity. Having Downtown more accessible will help people to see they can live car-less Downtown."
- Public forum comment

>> Improve paratransit options

Paratransit options should be considered as part of a suite of mobility improvements Downtown. The Rapid currently operates the Go!Bus paratransit call-a-ride service for individuals with mobility challenges. A review of the existing operations should be conducted to identify opportunities to improve service for users.

PROGRAMS AND POLICIES

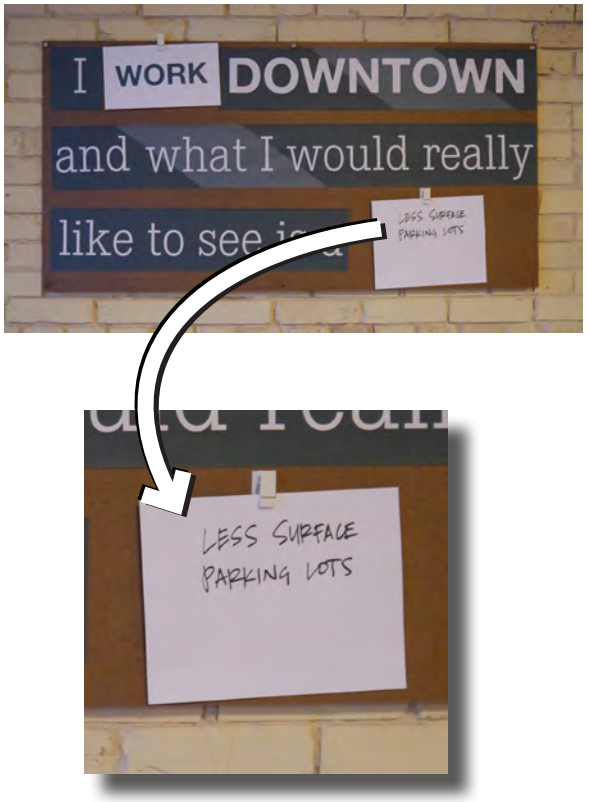
Providing additional mobility options is a piece of the puzzle, but Mobile GR will also need to do a lot of hard work to market, educate, and communicate these options on a macro- and micro-scale. Policy will also be needed to ensure that future projects are in line with all the investment that is being done.

One of the most important roles for Mobile GR is to work with employers on their transportation needs and help them come up with multi-modal solutions. Employers in Grand Rapids have voiced a demand for additional options other than parking, but many do not have the capacity or expertise to develop new solutions. The biggest impact that organizations similar to Mobile GR can have on reducing the rate of parking demand is working with businesses on commuter solutions.

Mobile GR must develop programs that address existing businesses as well as new businesses that are looking to relocate to Downtown. One key strategy that should be encouraged is parking cash out, where instead of paying for a parking space, the employer gives that money to the employee and allows them to make the decision of how to use it. They can choose to use all of it for parking, or keep the money and take transit, arrange carpools, bike, walk, etc. As a major employer in Downtown, the City should consider leading by example. By providing City employees with a parking cash-out option, the City can demonstrate the success of the program on a relatively large scale and gain credibility to encourage a change in the culture of private industry.

Mobile GR and DGRI should conduct an annual transportation survey of employees and residents to better understand the transportation needs of Downtown and the effectiveness of the expanded mobility options. The results of the survey should be used to plan for the following year's budget and be included in Mobile GR's end of year report.

Providing incentives has been shown to impact people's choices with respect to transportation. In addition to the transit pass pilot program, Mobile GR should develop incentive programs to encourage people to take transit, bike, and walk. Targeting the incentives towards new users of mobility options should be the focus of this program. Mobile GR should also work with individual employers to develop incentive programs for their employees, particularly large employers that are looking to save money on transportation costs, such as building additional parking.



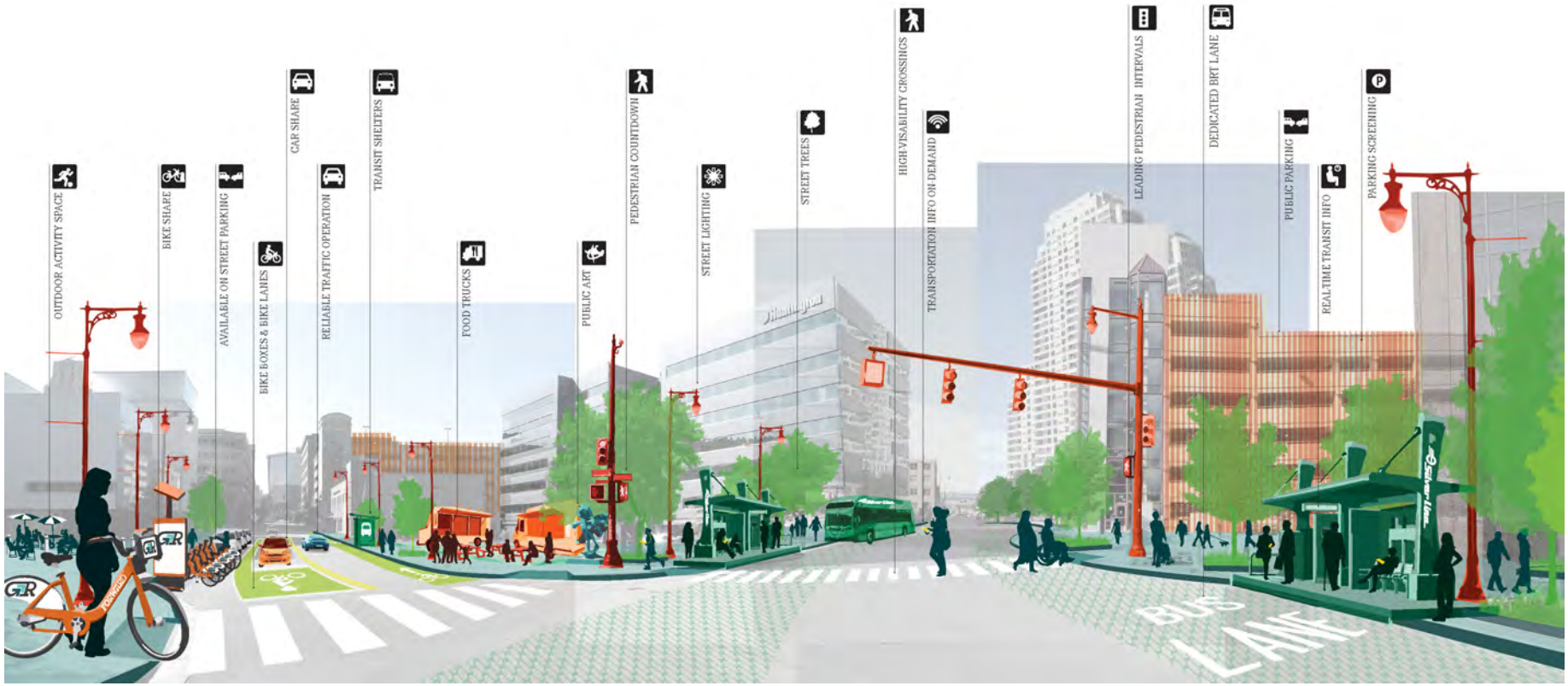


FIG 3.16: *Graphic summary of GR Forward mobility improvements*

3.3 COMPLETE THE NETWORKS IN AND OUT OF DOWNTOWN

Complete Streets and multi-modal planning usually focuses on specific street design and how to prioritize the use of space. Each of those pieces must be part of an entire network that connects Downtown to surrounding neighborhoods and provides people with choices on how to reach their destination. Just like every street cannot be a car street, every street cannot be a bike street or a transit street. Grand Rapids has already taken the idea of Complete Streets a step further by establishing a "Vital Streets" vision, which combines prioritization of street infrastructure improvements, goals to increase accessibility for all modes, and includes targets for sustainable development and sustained investments. The City is currently in process of developing a Vital Streets Plan + Design Manual which will tie together the existing plans and guidelines to provide guidance for consistent design of Vital Streets. Once completed, the document will provide consistent street and sidewalk design principles for all projects in the City of Grand Rapids. Building a multi-modal and Vital Street network means building an effective network of functions. This requires prioritizing different streets for different things. While it need not be mode-specific; networks can include streets for different land uses and destinations, such as the River.

> *"Fix the roads leading to Downtown. They leave a bad first impression."*
> *- Open house participant*

DESIGNATE STREET "TYPOLOGIES" PAIRED WITH VITAL STREETS DESIGN APPROACH TO GUIDE INVESTMENT DECISIONS AND POLICY

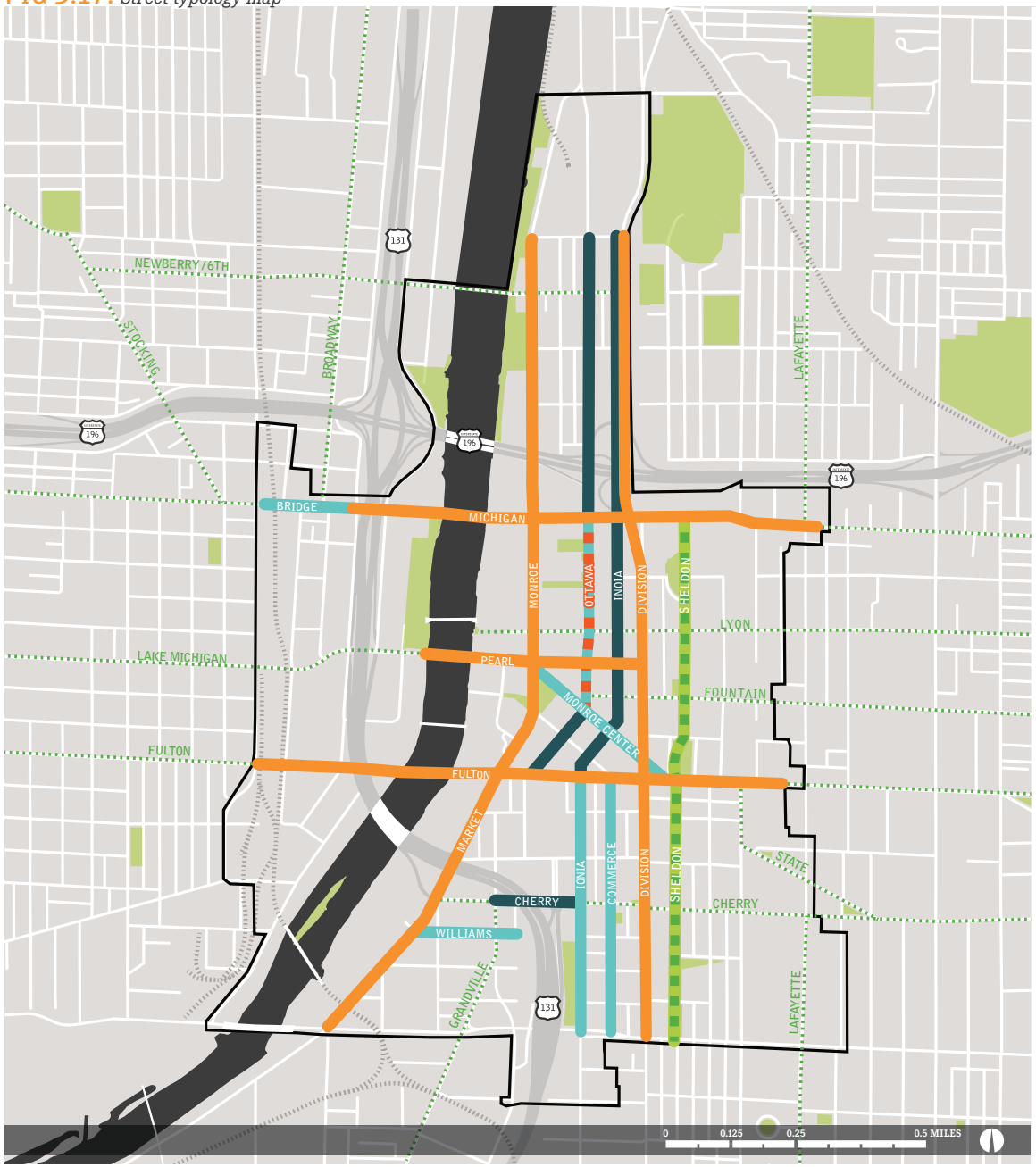
Downtown streets cannot be all things to all people. Streets must be prioritized to achieve the desired atmosphere and development in each area. By establishing typologies within the street network, we can use the highest and best function of each roadway, to influence the atmosphere and function of the sidewalk, open space, and general atmosphere of each place, and vice versa. These typologies can be paired with appropriate elements from the Vital Streets Plan + Design Guide, as they relate to the aesthetic and functional goals of each street. For Downtown, GR Forward has identified the following types of streets:

- Gateway Streets: Streets that serve as major gateways to Downtown and act as major thoroughfares. These streets are opportunities to make a statement about Downtown and the direction it is heading. Gateway streets Downtown include: Bridge / Michigan, Fulton, Division, and Market/ Monroe.
- Neighborhood Connectors: Streets that serve as primary connections to nearby neighborhoods. These streets are opportunities to promote pedestrian and bicycle activity to Downtown. Neighborhood connector streets include: Newberry/6th, Lyon, Fountain, State, Cherry, Pearl / Lake Michigan, and Grandville.

> *"The one way streets encourage speeding and increase car/pedestrian accidents throughout Downtown!"*
> *- Open house participant*

- Downtown Transition Streets: Ottawa and Ionia function as highway on and off-ramps in Downtown. There are opportunities to humanize these streets by slowing traffic and prioritizing pedestrian safety. Ottawa is proposed for two-way traffic and Ionia should be redesigned to include a two-way bicycle facility described below in section C. Cherry Street, between Grandville and Ionia functions similarly, yet is an important pedestrian connection across US 131.
- Events Corridor: Ottawa is also a primary corridor for major events. During these events, the street is closed to traffic. The design of Ottawa should seek to not only create a walkable street everyday but also offer some unique design features that support its role as home to these events.
- Outdoor Entertainment: Corridors with the concentration of active restaurants and street activity should be promoted as outdoor entertainment streets. These streets – Monroe Center, Ionia, Commerce, Williams and Bridge – are ideal locations for temporary events, parklets and outdoor activities including dining.

FIG 3.17: *Street typology map*



STREET TYPOLOGY

> Linear Park – Sheldon Street connects multiple small parks and important institutions. Its redesign should seek to become a linear park, using its excessive right-of-way to create new open space that provides integrated stormwater management.

These typologies are intended to guide streetscape design but also the provision of specific programming and marketing across Downtown. As a part of the Vital Streets plan, consideration should be given to the future design of one-way streets including Ottowa (illustrated as a potential two-way street in figure 3.19) and Lyon and Fountain Streets (proposed for conversion to two-way streets in Goal 6).

- GATEWAY STREET
- EVENTS CORRIDOR
- OUTDOOR ENTERTAINMENT
- HUMANIZE / DOWNTOWN TRANSITION
- LINEAR PARK
- NEIGHBORHOOD CONNECTOR

ENHANCE PHYSICAL AND PERCEIVED CONNECTIONS TO NEIGHBORHOODS SURROUNDING DOWNTOWN FOR ALL MODES

Most people that work or play Downtown live elsewhere, which will continue to be the case until the residential population grows significantly. Improving connections, particularly those for the neighborhoods in close proximity, will help maintain the economic health of Downtown. This will require an investment in these connections and planning new development areas smartly around transit.

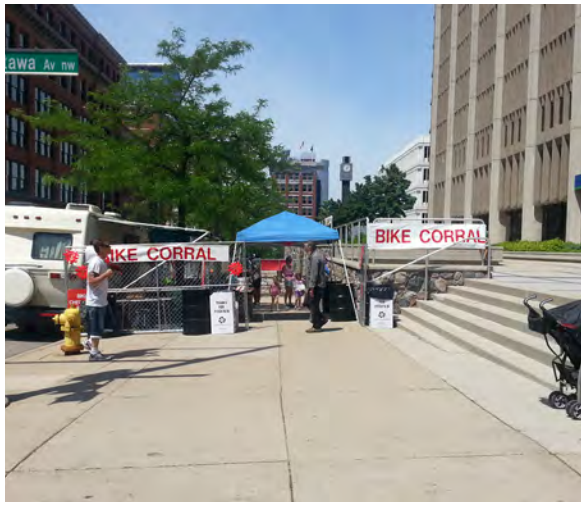
The City, the Rapid, and DGRI should make a commitment to investing in all infrastructure that will encourage additional transit use. This may include installing more 'gold standard' transit stops in the neighborhoods to provide protection from the road and weather, providing better information on transit routes and arrivals of the bus, and providing direct outreach to businesses.

Development outside of Downtown should be focused around Bus Rapid Transit nodes and integrate remote parking facilities as part of them.

CREATE THE MOST BICYCLE FRIENDLY DOWNTOWN IN THE MIDWEST

Cities and downtowns across America have seen tremendous increases in the amount of people bicycling since 2000, including 498% in Washington DC, 389% in Chicago, 169% in St. Louis and 130% in Minneapolis. This is due to a number of reasons, including the relatively low [compared to road projects] investments made in better infrastructure, rising interest in riding bikes as a commuting option, and programmatic investments that encourage people to ride. And it is not only in warm climate cities; those with challenging winters, such as Boston and Chicago, have seen considerable increases in ridership. Minneapolis, which averages approximately 36 inches of snow per year and has an average January temperature of 15.6 degrees, was recently named the most bicycle friendly city in the US. An estimated 4.1% of workers in Minneapolis commute by bike[3], compared to .9% in the City of Grand Rapids[4].

Bicycling has also been on the rise in Downtown Grand Rapids, a trend will likely continue with additional residential development. For a Downtown the size of Grand Rapids, riding a bike can be a quick, convenient and free way to get from one destination to the other. However, to help more people in Downtown feel safe riding a bike on its streets, additional infrastructure will be necessary to provide greater protection from vehicle travel and parking lanes. The infrastructure can be supported with increased

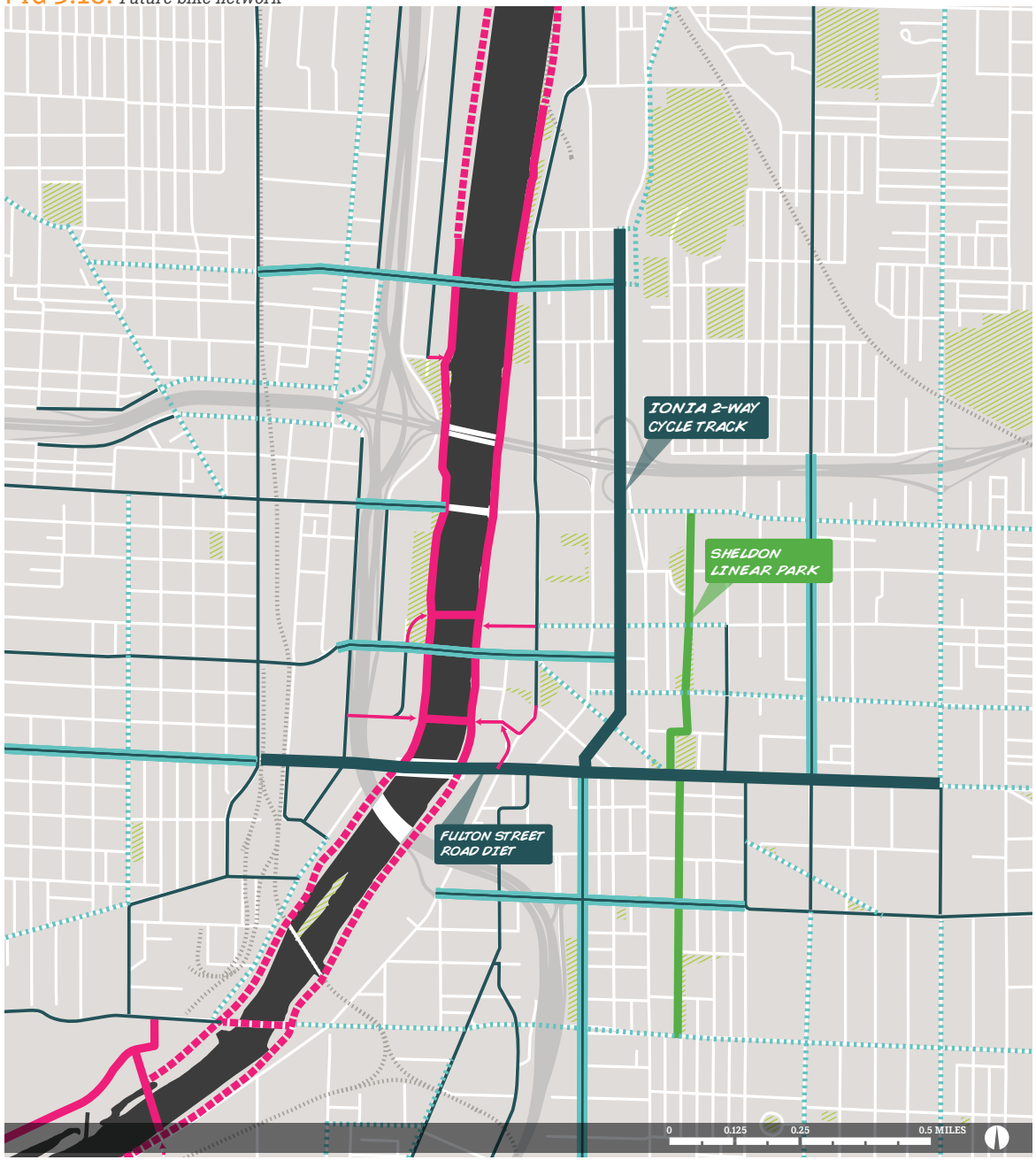


More and more people are using bicycles to get around. Well-used bike parking at events demonstrates the local potential.

3 2009-2012 American Community Survey.

4 2008-2012 American Community Survey.

FIG 3.18: *Future bike network*



FUTURE BIKEWAYS

FUTURE VISION OF THE BIKE NETWORK IN GRAND RAPIDS

- HIGH PROFILE ON STREET BIKE FACILITY
- KEY ON-STREET CONNECTION
- OFF-STREET MULTI-USE PATHS / TRAIL EXTENSI
  TRAIL CONNECTION
- EXISTING FACILITY TO IMPROVE
- (POTENTIAL) NEIGHBORHOOD CONNECTIONS CREATING A LOW STRESS NETWORK

and secure bike parking, better information, and more encouragement and safety programs. This will all create a unique culture in Downtown and help the City attract new businesses, residents, and visitors.

The focus of this plan is on Downtown and there are a number of improvements that can be made as part of it. However, without a plan to develop connections to all of the City, the investment in biking Downtown will not have the overall impact it should. A bike plan will be incorporated as part of the Vital Streets Plan and develop the overall road map for making Grand Rapids the most bike friendly city in the Midwest. It should include a decision tree for bike facilities as part of street design projects [sidepath/trail >> cycle track >> buffered bike lane >> bike lane >> marked shared lane] and include a city-wide network of facilities with an emphasis on developing infrastructure that separates people riding their bikes from other modes of transportation and low stress routes using neighborhood streets. Implementation should prioritize installing infrastructure where demand is currently high as well as building in neighborhoods where riding a bike could have a significant impact on household transportation cost.

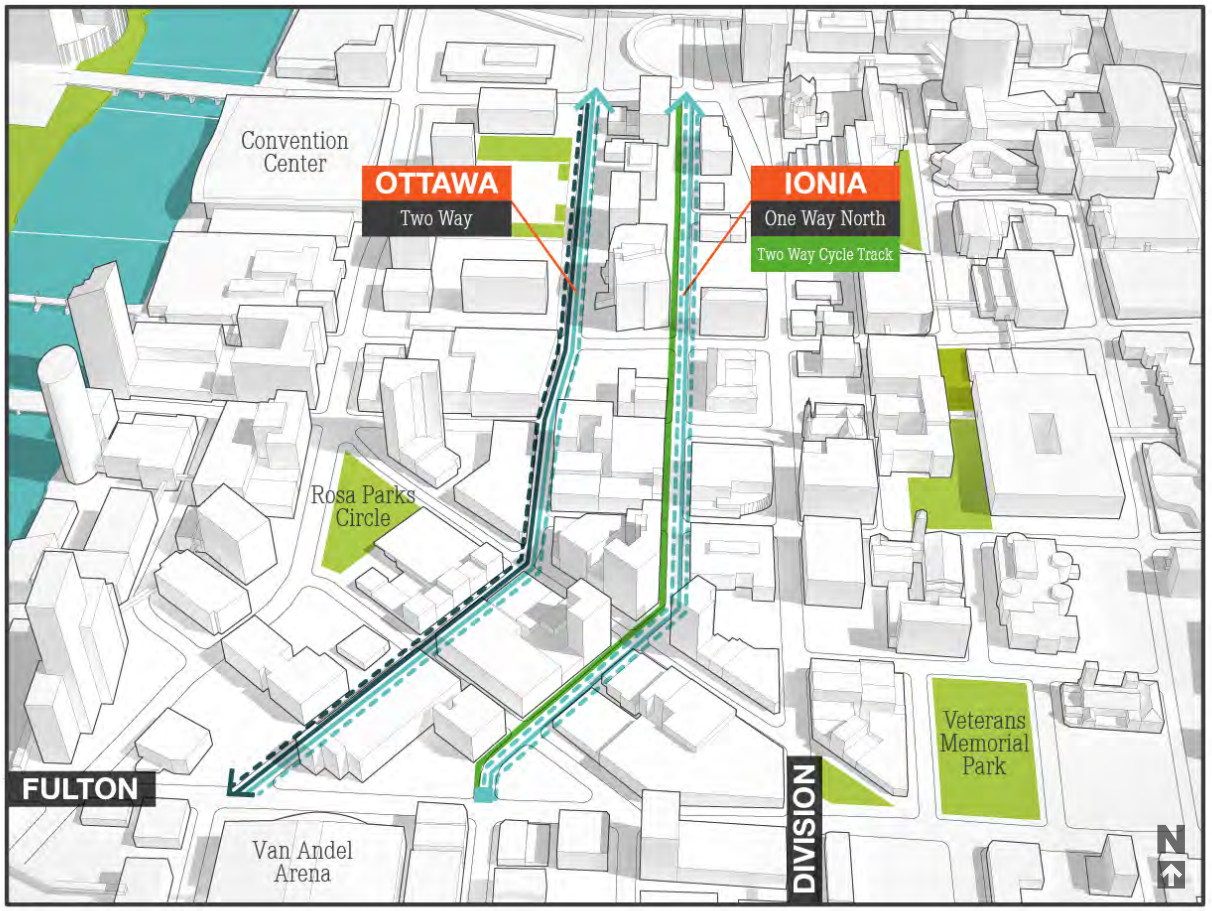


FIG 3.19: *Re-envisioning Ionia and Ottawa*

Providing a dedicated and separated north-south bicycle facility to connect to Downtown should be the immediate bicycle infrastructure priority. A two-way cycle track on Ionia Street would accomplish this. This would require removing one lane of traffic, providing a two-way cycle track on the east side of the street, and installing bike signals at each signalized intersection. Converting Ottawa Street to two-way and the redesign of the interchanges will provide the additional capacity and accessibility to balance removing a lane on Ionia. Additional improvements should be made to Ionia, south of Fulton, to make it a low-stress bike route.

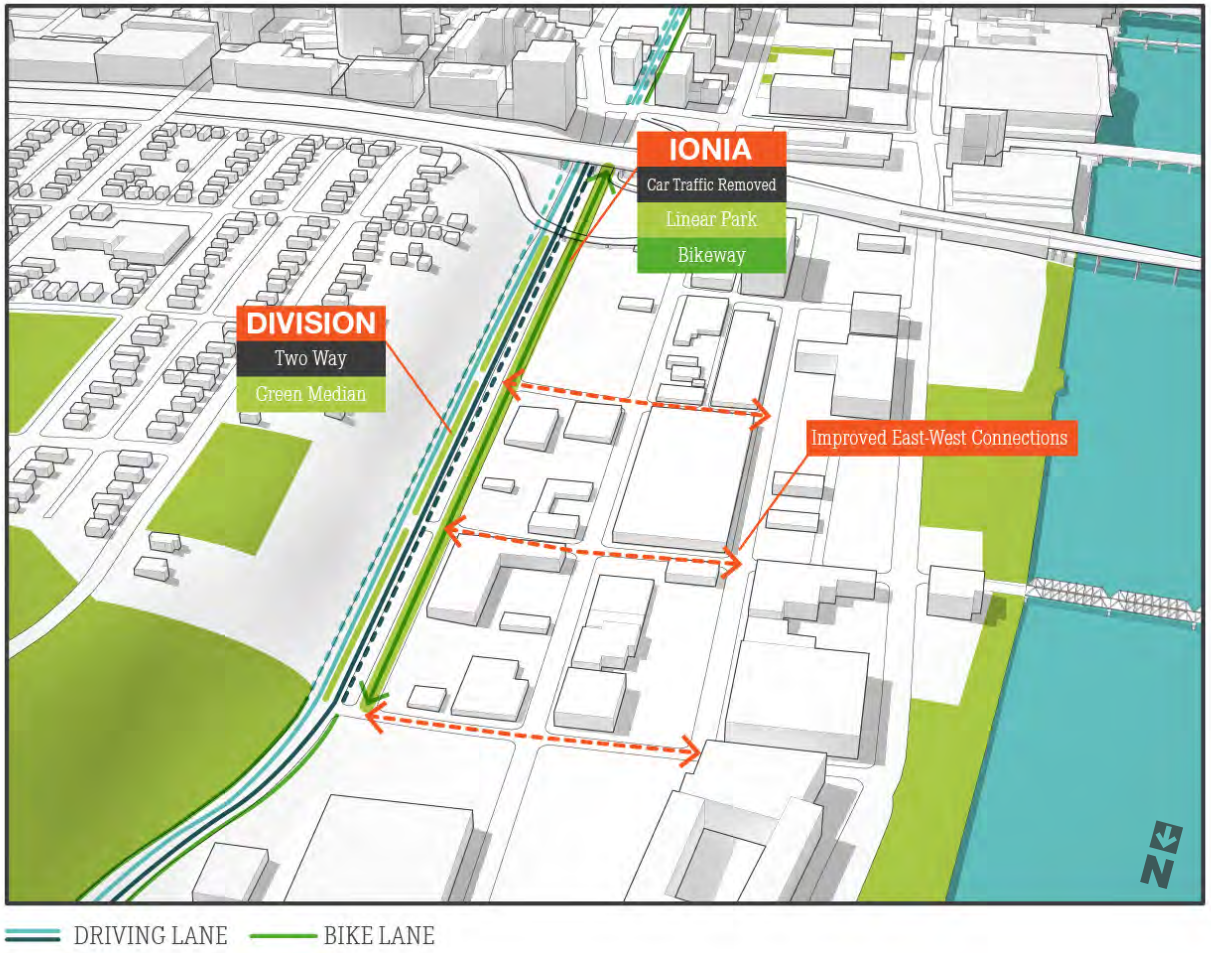


FIG 3.20: *Re-envisioning Division and Ionia, north of I-196*

North of I-196 where Ionia is not a through-street, the opportunity is to redesign it to accommodate this cycle track coupled with a linear park. This improvement will help to connect Belknap, Creston and Monroe North to Downtown.

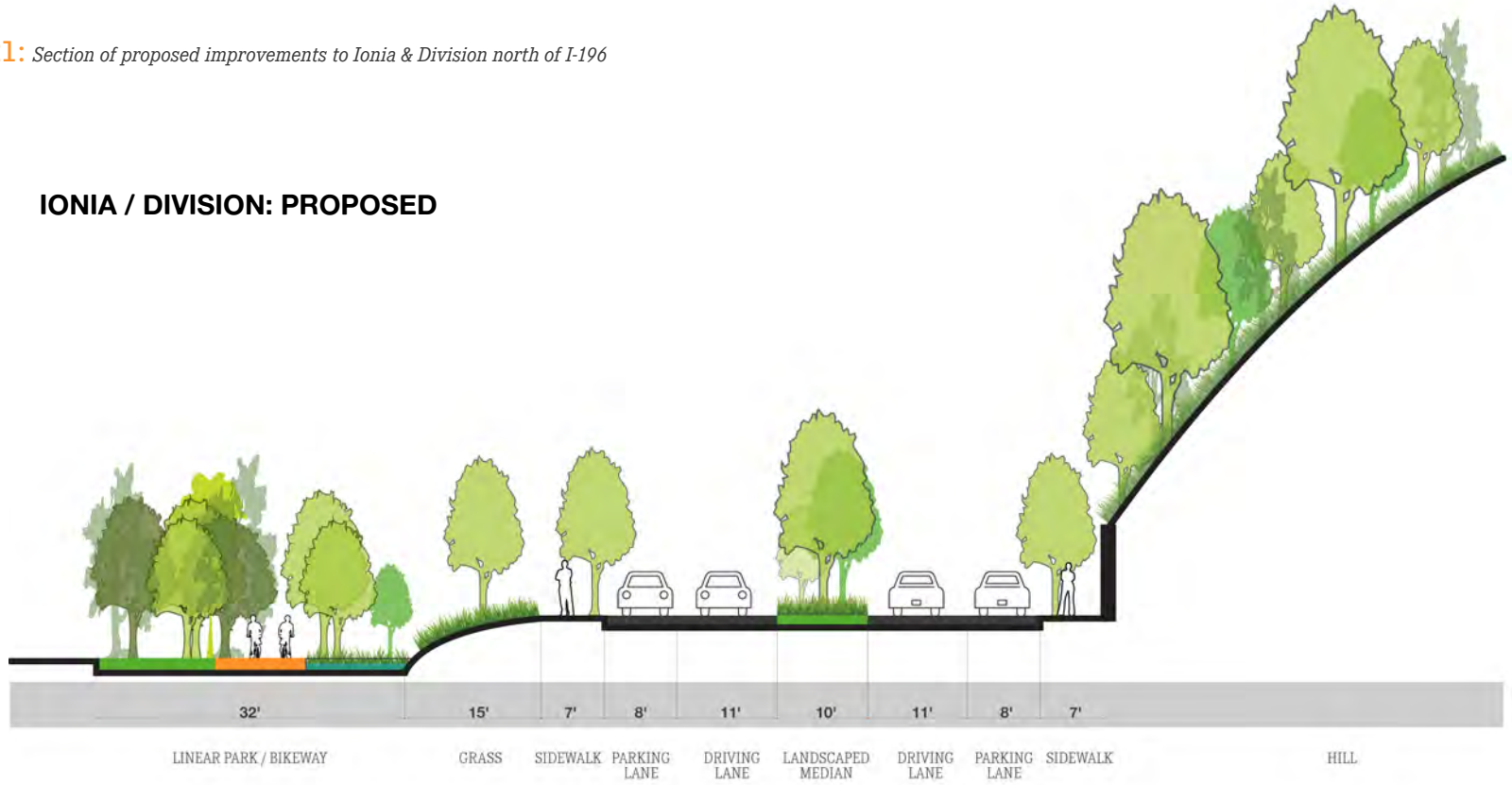
Division could serve as a north-south bicycle street south of Fulton. Unlike other streets that have limited width, Division allows the integration of bike lanes without removing parking or travel lanes. Coordination with MDOT is needed to determine the feasibility and timing of these improvements.

Selecting an east-west connection to provide a similar facility needs to be part of the larger bike plan to identify the best connection. The steep grades on Lyon, Fountain, and Fulton present challenges for users riding eastbound [uphill] and hazardous speeds for riders westbound [downhill]. A larger planning effort, such as the city-wide Vital Street plan, can identify the best connection to the east side of the City. In the short term, improvements should be made to develop a low stress route from Cherry Street to State Street to Weston Street. Bike lanes should also be tested on Fulton Street as discussed previously. Both of these routs should link up with the Ionia cycle track.

The Blue Bridge should be considered the destination to connect bicyclists across east and west of sides the River. To improve connections to the west, a new bicycle connection should be provided on Lake Michigan Drive under US 131 that ties in with a low stress route on Front Avenue to the bridge. To the east, bicyclists will be connected to the bridge via the trail on the river connecting to the future bike facility on Fulton and utilizing a low stress route on Lyon, west of Ionia.

The majority of crashes between bicycles and vehicles occur at intersections. People on bikes will always be vulnerable at intersections due to the potential conflict points with vehicles and issues with speed and visibility. Providing greater priority to bikes in intersection design will have a tremendous impact on improving safety. Bike signals should be installed with the cycle track on Ionia Avenue as well as

FIG 3.21: *Section of proposed improvements to Ionia & Division north of I-196*



with any future two-way bicycle facility. A protected intersection design for bikes should be developed as part of the Ionia Avenue design at Monroe Center. All bike facilities should be striped through the intersection and bike boxes should be included at the intersections.

One of the challenges with new bicycle facilities, such as a cycle track, is maintaining them. Because they are between the parking lane and the curb, they accumulate snow during winter months and debris during the rest of the year. New maintenance procedures and equipment will be necessary to maintain this infrastructure. This will include a policy on maintenance and training City workers how to plow new bike facilities, procuring additional equipment to maintain cycle tracks, and including bike facilities in the prioritization system of what streets get plowed first.

In addition to infrastructure and policy, Downtown should take a number of steps to become a Bicycle Friendly Business District. These actions are necessary to making biking part of the culture of Downtown and encourage people to ride, particularly those that live within two miles of Downtown. This may include developing an incentive program for people that ride their bike to receive discounts at local stores and restaurants, installing public fix-it stands and air pumps, purchasing a cargo bike and allow it to be shared by businesses in Downtown, increasing the amount of promotional materials on biking, and ramping up participation with Bike to Work Week.

INTEGRATE FREIGHT AND HIGHWAY INFRASTRUCTURE INTO THE EXISTING GRID AND NETWORKS IN DOWNTOWN

Barriers exist in almost any urban transportation network, both natural and man-made. While there is nothing that can be done to overcome most natural barriers, steps can be taken to minimize the barriers that rail, bridges, and highways create to a city's transportation network. Downtown has two major highways going through it and industrial land uses that generate high volumes of trucks.

>> Interstate 196

Interstate 196 provides regional access between Grand Rapids and the rest of Michigan and the Midwest. It is not only important for employee commutes, it also provides a connection for freight traffic. Its location, however, disconnects the north side of Downtown with the rest of the study area, making it difficult for pedestrians to cross. The interchanges at Ottawa and Ionia are constrained by grade and land, which make them confusing to drivers, particularly those using them for the first time. The City Grand Valley Metro Council, Grand Valley State University and the Michigan Department of Transportation are currently conducting a study to redesign these interchanges and the following recommendations should be incorporated into the design:

- The design of the interchanges should prioritize pedestrian safety and connectivity to ensure that no additional barriers are created between the areas north and south of the highway. It should also ensure that the Ionia cycle track continues north and the design is as low-stress as possible so all ages and abilities of people feel comfortable riding their bike.
- Minimizing vehicular delay at these locations should come after pedestrians and bikes have been accommodated as the design priority.
- All intersections in the area should be designed to avoid free-flow right-turn lanes, channelized right-turn lanes, dual turn lanes, and pedestrian push buttons.
- Underpasses with lighting, artwork, more friendly pedestrian spaces, and programming to reduce the barrier effect of these spaces.

I-196/US-131 interchange

- If possible, both Trowbridge and Fairbanks should be extended to connect Monroe with Division and create a full grid network. The Michigan Street Plan included a number of ways to better connect the Belknap Area to North Monroe, including a trail parallel to I-96 that would connect to the southern set of existing stairs. The proposed Switchback Park will enhance these previous ideas to improve this connection.

>> US 131

US 131 separates Grand Valley State University and the Westside from the River, Downtown, and Arena South. Improving the safety and aesthetics of this connection through a combination of lighting, artwork, more friendly pedestrian spaces, and programming, will help reduce one of the largest barriers in the area.

Many cities have, or are considering taking, similar highways that disconnect their waterfront and converting them to high capacity at-grade boulevards. The studies for these projects have revealed a number of benefits of these conversions, from opening up land for development, to increasing existing property values, to saving taxpayer dollars on both construction and maintenance. The 2002 Master Plan for Grand Rapids included the idea of studying the feasibility of converting a portion of US 131 to a boulevard. It is estimated that up to 2 million square feet of land could be made available for development with a different alternative of US 131. The City and DGRI should undertake a feasibility study and cost benefit analysis of the long term future of the highway, between Interstate I-196 and Burton. The potential options for this segment include keeping it as it is, converting the highway to a boulevard, burying the highway, or complete removal. This study should include the potential design of the alternatives and impact to traffic as well as a value capture strategy for redevelopment to help pay for the project.

A potentially shorter term project for improving the connections across US 131 would be to convert Wealthy Street from its current condition as an overpass to an at- or just below-grade crossing with US 131 enabling the ramps go over the street. This is an expensive proposition but could significantly improve this portion of Downtown and access to the Public Market and the Amtrak Station.

Art and lighting examples for underpasses

>> Truck traffic

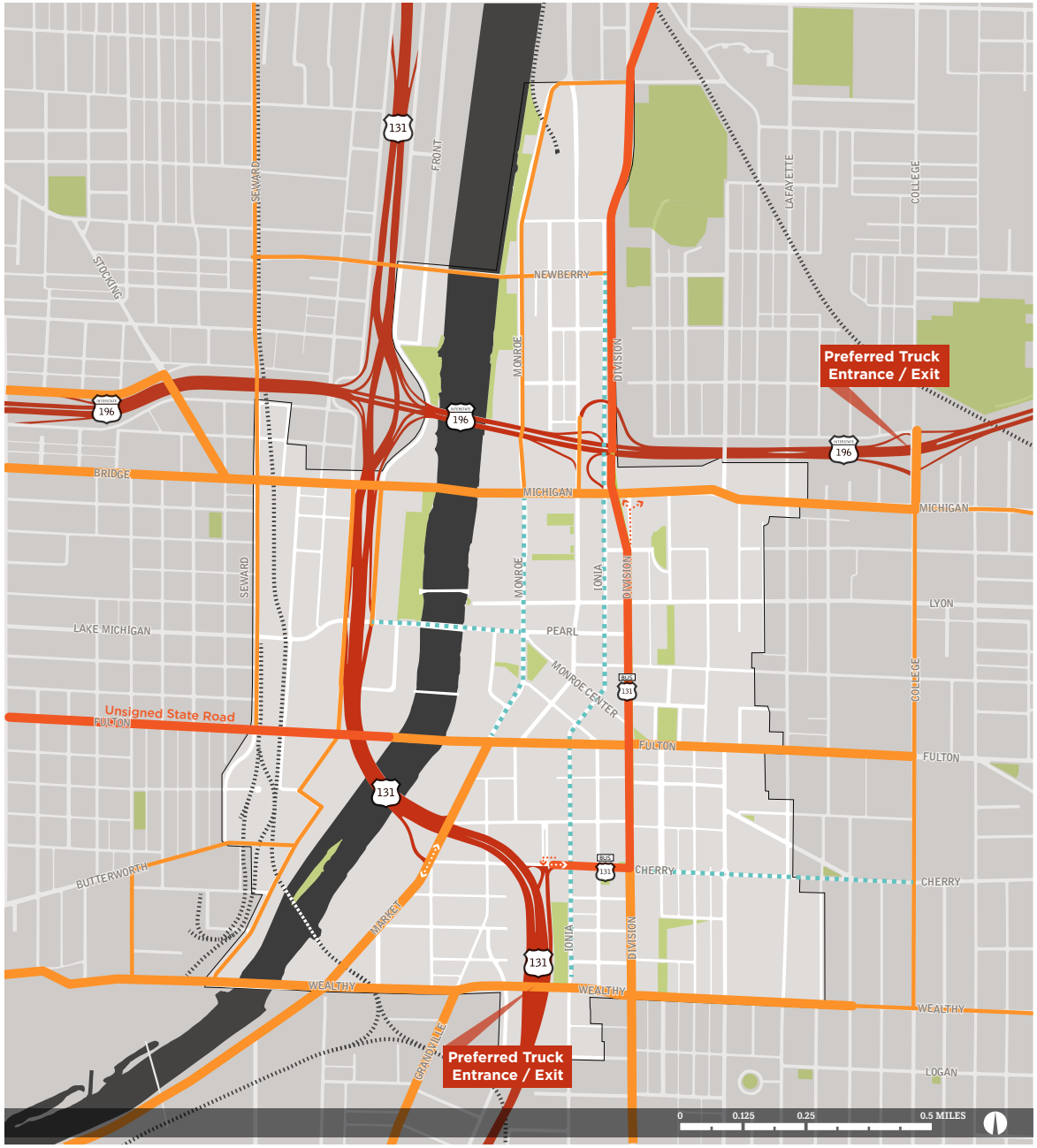
Trucks and freight traffic are never shown as part of the marketing materials for any downtown, but they are critical to the day-to-day operations of retail and restaurant uses, as well as industry and other commercial businesses. Balancing the need to provide direct and reliable access to freight vehicles while creating streets that are people friendly is a challenge for any downtown, but must be accomplished to ensure the success of the area.

The first step of this process is to identify streets which trucks should and should not use. The existing Trucks, Prohibited Streets [Trucks, Prohibited Streets] Ordinance be expanded to include the following streets.

- Ionia, from Wealthy to Newberry
- Monroe Ave, from Fulton to Michigan
- Pearl, from US 131 to Monroe
- Cherry, east of Division

Streets that are designated for truck use should be upgraded to ensure smooth and efficient delivery of goods. A simplified truck map for Downtown should be developed and distributed to local companies. It should limit and direct trucks to collect along the State and County designated routes, deviating only once they are within 1/4 mile from their delivery destination address. The City should work with the Michigan Department of Transportation to restrict Trucks from exiting onto Market Avenue and Cherry Street in the center of Downtown, favoring instead the Wealthy Street ramps.

FIG 3.22: *Preferred truck route map*



TRUCK ROUTES

PREFERRED ROUTE NETWORK

- INTERSTATE, STATE, AND U.S. ROADS
- STATE DESIGNATED TRUNK LINES
  BUSINESS ROUTES; UNSIGNED STATE ROADS
- PREFERRED LOCAL TRUCK ROUTE
- SECONDARY LOCAL TRUCK ROUTE
- COMMERCIAL VEHICLE LIMITED OR TRUCK PROHIBITED DESIGNATION
  (Any such vehicle may be driven not more than 1/4 mile along herein identified road segments when necessary for the purpose of loading or unloading)

There will always be tension between providing access and circulation for freight with changes to improve the connectivity and circulation of transit and non-motorized modes. Solutions will need to be developed on a block by block level to provide loading zones and mitigate impacts for trucks when new street designs are implemented.

3.4 GET CONNECTED: UTILIZE TECHNOLOGY TO MAKE GETTING AROUND EASIER

As Downtown modernizes its transportation system with more options, it must also begin to integrate technology with those options to provide users with more information and ability to pay for these options with their mobile device. Wherever possible, these solutions should be designed by local entrepreneurs and students to address specific issues in Downtown.

UTILIZE APPS AND WEB TOOLS TO IMPROVE CITY SERVICES

Mobile apps and web tools have made it much easier for people to communicate, including with respect to city services. The existing App, grcity 311, allows residents to report potholes, streetlights, and graffiti. But, the world is changing. Technology is now integrated into more and more facets of everyday life. Becoming accustomed to the instant gratification and real-time responses provided by mobile apps – people now look for immediate, and consolidated information and response. An app like grcity 311 could serve as a resource to tracking and responding to far more City service needs, and could provide functionality to show where others have made requests [similar to the WAZE App, or other apps driven by crowd-sourced user information]. In a city like Grand Rapids, with significant snowfall affecting the daily commutes of everyone in Downtown, information could be posted tracking snow-plowing progress in real time, for instance.

Across the nation software developers, companies, and cities have recognized this shift as a source of 'Big Data'. Individuals in cities are accustomed to reacting and responding to day-to-day life by reporting on social media. The City should work to position itself to take advantage of the growing resident ties to technology and social media, building more outlets to collect information and respond to the needs of residents Downtown.

INTEGRATE DIGITAL SIGNAGE/ CHANGEABLE SIGNAGE

Providing real-time information to drivers on parking and special events can help manage congestion and improve the overall experience of visitors. In addition to variable message boards that can be placed on streets, real-time digital signage should be provided at City-owned off-street parking facilities to let customers know the price of parking and how many spaces are available.

USE NEW TECHNOLOGY TO IMPROVE CONDITIONS FOR TRANSIT RIDERS

Not knowing when the next bus is coming makes it difficult to project how long it is going to take to reach a destination. This uncertainty is one of the reasons people choose not to take transit. Many transit agencies have had great success by simply making this information available to the public in as many ways as possible. The Silver Line bus stops currently provide information on the next bus arrival, but those are the only locations where this information is available. The information is available on the Rapid's website.

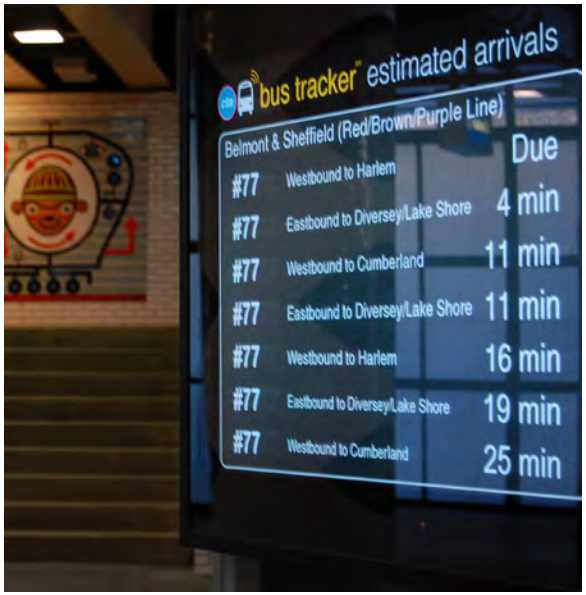
It is recommended that the Rapid work with DGRI and businesses to install monitors/screens in the public right-of-way and in businesses to inform the public of when the next Rapid or DASH bus will arrive. This information should also be provided to web developers to create a mobile application.

DGRI and the Rapid should also partner to pilot different technologies within bus stops, including self-actuated heating, additional lighting, digital maps, and information boards, and determine which improvements bring the most benefit for the cost.

ENCOURAGE OPEN DATA FOR PRIVATE TRANSPORTATION PROVIDERS AND COMPANIES

Similar to the Rapid, private transportation providers, such as Greyhound, Megabus, car share vendors, and bike share vendors, should provide open data on travel times, origin/destination pairs, and trip lengths to encourage the development of mobile applications. DGRI should work with local developers or an existing company to develop a real time transportation app that provides all the options to reach a certain destination.

Screen shot of GR City service app



Real time information displays

Screenshot of Waze app

IMPROVE RELIABILITY AND INFORMATION OF TAXI SERVICE AND TRANSPORTATION NETWORK COMPANIES

Reliable, on-demand 'for-hire' transportation is necessary for connecting regional transportation hubs to Downtown. For visitors and travelers doing business in Grand Rapids, these services are the first and last impression they have of the City. Making taxis and transportation networking companies, such as Uber and Lyft, as easy and pleasant of an experience as possible will make a difference for all.

Although private companies, such as Uber and Lyft, establish internal regulation processes for drivers – including background checks, proof of insurance, etc – these regulations are not standard across all companies. These regulations also often differ from licensing of city cab drivers. For the safety of Grand Rapids residents, and to ensure the City's best interest in the growth and expansion of these companies within Downtown, it is recommended that the City engage these private transportation providers to develop regulations that standardize licensing of drivers, while accommodating the private company interests.

DGRI and the City should work together with the taxi companies and transportation network companies to develop solutions that work for everyone. Aside from operations, this includes seeking ways to minimize the amount of apps that are out there as well as providing information to the customer on the types of service and their costs.

3.5 PUT GRAND RAPIDS 'ON THE MAP'

With the expected growth of Grand Rapids and all of its unique assets, it is anticipated that the number of visitors to Grand Rapids, from the Midwest, nationally, and globally will continue to grow. Transportation is the first and last experience for most visitors and should help support the overall unique experience of Downtown. The different regional connections to Grand Rapids should also be marketed, particularly within the Midwest.

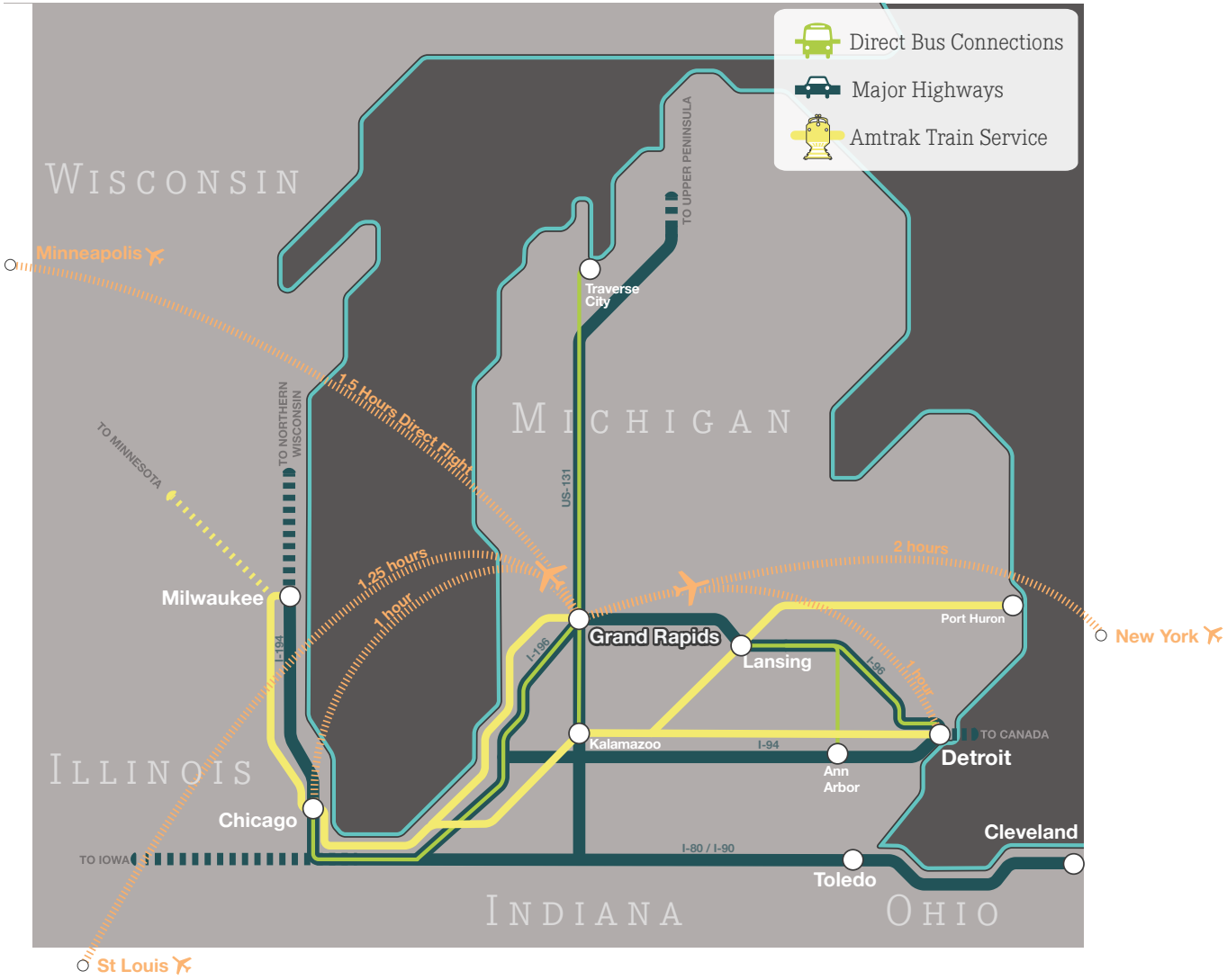
MARKET GRAND RAPIDS'S REGIONAL CONNECTIONS

Grand Rapids has a number of regional transportation connections, including Amtrak [Pere Marquette service, one train in/one train out daily, and two buses in/three buses out to Kalamazoo to connect to the Wolverine Service], air [six airlines and direct flights to 22 cities] and numerous bus companies. DGRI and others should market the ease of these direct connections as well as all the other unique assets the City has to offer.

IMPROVE THE 'ARRIVAL EXPERIENCE' TO GRAND RAPIDS

When people get off the plane or their train, they typically want to get to their destination as quickly and easily as possible. DGRI and others should work to improve information at both the airport and the Amtrak station and ensure that the next connection, typically taxi or Uber, is easy to find and use.

FIG 3.23: *Map of regional connections and opportunities*



IMPROVE NAVIGATION AND WAYFINDING

The increase in mobile device use and GPS applications have made it much easier for first-time visitors to find their destination without major signs. However, there will always be a need for some type of wayfinding, particularly denoting major destinations like the River, transit stations, or the Ionia cycle track. It is recommended that the City begin this effort by taking stock of the existing wayfinding and signage in Downtown. In addition to street signage, there are several wayfinding systems, such pedestrian directional signs posted along Michigan, signage directing patrons to and around major attractions Downtown, and signs directing drivers to parking facilities, as well as wayfinding posted by private companies and businesses. Opportunities exist to standardize some of these systems city-wide to simplify navigation for new visitors, and reinforce the Grand Rapids "brand". By finding opportunities to integrate wayfinding, resources can be more easily overlaid in a digital format. This has the potential to benefit all modes by providing a one-stop-shop for information useful to residents and visitors. Digital maps can also be updated to include information about events such as ArtPrize. Maps posted in transit shelters could share iconography for major destinations and parking facilities, to reinforce these messages for those new to Downtown.

Image of digital sign

Image of wayfinding

Image of wayfinding


OPEN
JUDE'S BARBERSHOP
OPEN
FOOD BOOTH
4
EXIT
PITCH'N IN

IMPLEMENTATION APPROACH

Implementing the recommended mobility strategies will begin the transformation of Downtown Grand Rapids to a place that provides a more balanced set of choices for how to get around. This type of multi-modal transportation system has proven to support growth in dense, urban locations. The future vision of Downtown and the River will transform Grand Rapids into a different place than it is today, and for the better. However, this transformation will encounter growing pains with transportation at the forefront. To ensure success, projects must be implemented at an excellent level and continually monitored to make improvements, the impacts of the projects should be continually evaluated, and communication, both internally and externally, will need to be clear and concise.

The following details the priority projects of the Mobility Strategy:

- Establish Mobile GR
- Design and construct the Ionia Cycle Track
- Design and construct the Fulton Street pedestrian safety project
- Develop prioritization system for pedestrian infrastructure projects and begin upgrades
- Complete Vital Streets Plan + Design Manual
- Implement car share pilot

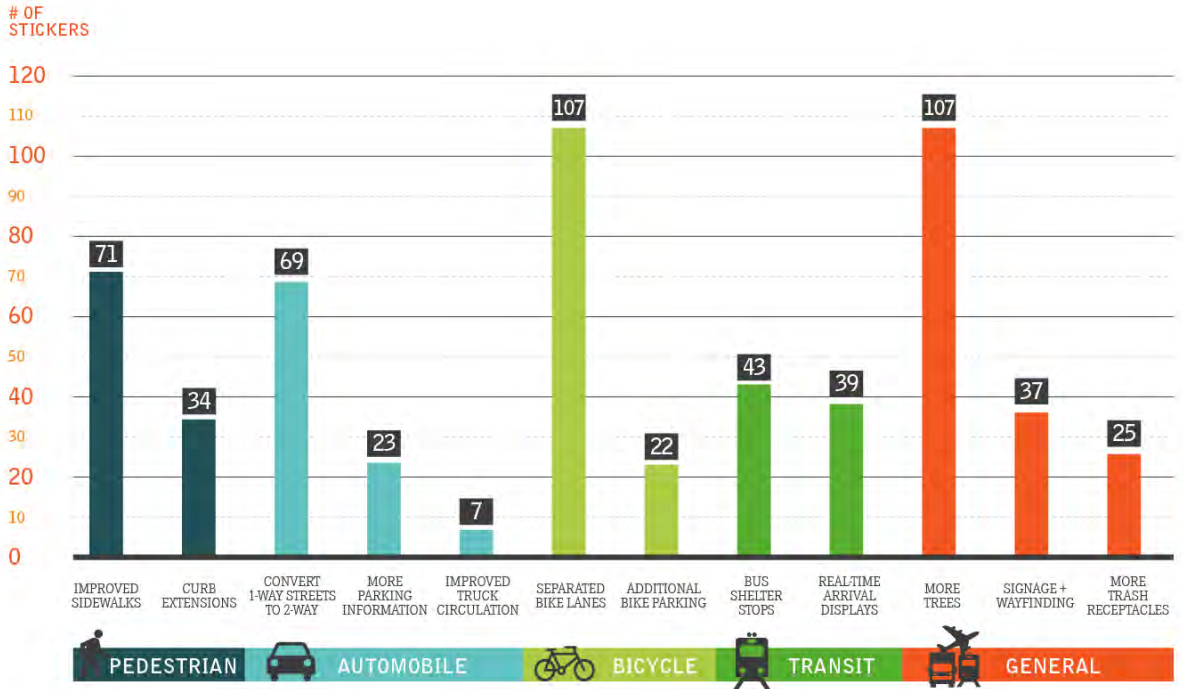


FIG 3.24: *Transit priorities as identified in the GR Forward Open House*

3 IMPLEMENT A 21ST CENTURY MOBILITY STRATEGY

3.1 Provide a Stress-Free Pedestrian Experience for All Ages and Abilities

Recommendation	Timeframe	Responsibility / Partners	Source of Funds
Prioritize pedestrian safety and connectivity at intersections	within 5 years	City of Grand Rapids / DGRI / private developers	City/MDOT/DGRI
Initial Action Steps -			
Establish a Department standard to upgrade crosswalks to international style crosswalks as a part of any street resurfacing or improvement project in Downtown.			
Pilot Leading Pedestrian intervals at intersections of Monroe/Pearl, Monroe/Ottawa, and Fulton/Ionia			
Establish prioritizations system for intersection improvements including pedestrian volume, crossing distance, proximity to transit, proximity to destinations.			
Develop, enhance and implement of 'Big Idea' policies for street design	1st year	City of Grand Rapids	City/MDOT
Initial Action Steps -			
Revise existing Complete Streets Policy to take a more proactive attitude towards projects as part of Vital Streets Plan			
Establish Vision Zero policy			
Re-design Fulton Street to build a seamless pedestrian connection	within 10 years [3 years for initial design]	City/DGRI	City of Grand Rapids / DGRI / MDOT
Initial Action Steps -			
Complete design for road diet on Fulton Street with three-lane cross section and bike lanes			
Begin planning study to develop ultimate vision for Fulton			
Create a more walkable Division Avenue	within 5 years	City of Grand Rapids /DGRI/ MDOT/Rapid	City of Grand Rapids / DGRI / MDOT / Rapid
Initial Action Steps -			
Evaluate costs/benefits of transferring jurisdiction of US Business 131 to City			
Monitor impact on bicycle activity on Division Avenue after Ionia Street cycle track is installed			
Design road diet on Division Avenue south of Oakes Street			
Redesign Market Avenue as the interface between Downtown and the River	within 5 years	City of Grand Rapids /DGRI/ MDOT	City of Grand Rapids / DGRI / MDOT
Initial Action Steps -			
Redesign Market Avenue to create a better connection with the green living room			

Recommendation	Timeframe	Responsibility / Partners	Source of Funds
Improve safety of the Michigan / Bridge corridor for all users	within 5 years	City of Grand Rapids /DGRI/ MDOT	City of Grand Rapids / DGRI / MDOT
Initial Action Steps -			
Redesign Michigan Street to improve clarity and safety for all users			
Invest in Cherry Street	within 5 years	City of Grand Rapids /DGRI/ MDOT	City of Grand Rapids / DGRI / MDOT
Initial Action Steps -			
Design and implement targeted improvements along Cherry to enhance safety - focus around US 131			
Ensure safe passage for bikes and pedestrians to and from Ehlers Station and Central Station	within 10 years	City of Grand Rapids /DGRI/ MDOT	City of Grand Rapids / DGRI / MDOT /Amtrak / Rapid / private developers
Initial Action Steps -			
Install pedestrian improvements at priority intersections connecting to Elhers and Central Stations			
Ensure developments in the area provide improvements for pedestrian safety and connectivity			
Develop pedestrian-focused encouragement programs	1st year	City of Grand Rapids/DGRI/ local non-profits/health service providers	City/DGRI/Foundations/ Businesses
Initial Action Steps -			
Establish a Pedestrian Challenge; Partner with local employers to participate.			
Organize at least one Open Streets event annually, in a high profile location Downtown, preferably Monroe or Fulton			
Retrofit parking structures for upgrades	within 10 years	City of Grand Rapids/DGRI	Private Developers [+City if cost-sharing method is established for retrofit]
Initial Action Steps -			
Note: SSE to review landscaping policy for specific changes			

3.2 Establish Mobile GR

Recommendation	Timeframe	Responsibility / Partners	Source of Funds
Establish Mobile GR Organization	1st year- 18 months	City of Grand Rapids	City of Grand Rapids
Initial Action Steps -			
Hire new staff, update website, developing marketing materials			
Manage parking assets to support the success of Downtown	1st year- 18 months	City of Grand Rapids	City of Grand Rapids
Initial Action Steps -			
Adjust parking pricing			
Consolidate parking programs			
Provide additional parking supply	ongoing	City of Grand Rapids / private developers	City of Grand Rapids / private developers
Initial Action Steps -			
Identify potential future parking ramp locations			
Pilot remote parking on the Silver Line			
Reconfigure existing DASH service	1st year	City of Grand Rapids / Rapid	City/Rapid
Initial Action Steps -			
Pilot changes to one line			
Provide New and Enhanced Mobility Options	1-2 years	City of Grand Rapids / DGRI / Rapid / Foundations / private businesses	City of Grand Rapids / DGRI / Rapid / Foundations / private businesses
Initial Action Steps -			
Launch car share pilot			
Complete bike share planning study			
Pilot transit pass program			
Programs and Policies	1st year	City of Grand Rapids / DGRI	City of Grand Rapids / DGRI
Initial Action Steps -			
Conduct outreach to employers			

3.3 Complete the Networks in/to Downtown			
Recommendation	Timeframe	Responsibility / Partners	Source of Funds
Designate Street "typologies" to guide investment decisions and policy	1-2 years	DGRI / City of Grand Rapids	DGRI / City of Grand Rapids / private businesses
Initial Action Steps -			
Develop a Street Typology Map for all key streets within Downtown			
Establish desired atmosphere and development types for each street typology as part of the Vital Streets Plan			
Engage local businesses in establishing marketing and branding in line with the desired street typology			
Enhance physical and perceived connections to neighborhoods surrounding Downtown for all modes	within 5 years	Rapid / City of Grand Rapids / DGRI	Rapid / City of Grand Rapids / DGRI
Initial Action Steps -			
Install 2 high-profile, weather protective transit stations per year along streets within neighborhoods surrounding Downtown which provide a direct transit link, or transfer into Downtown.			
Survey the condition of all transit stops along routes connecting to Central Station within 1 mile of Downtown; add seating, weather protection, and lighting where possible.			
Identify potential advertising partner for cost share of improved map panels			
Integrate remote parking facilities with BRT nodes through physical [sidewalks, lighting, landscaping] and visual [wayfinding, signage] improvements			

Recommendation	Timeframe	Responsibility / Partners	Source of Funds
Create the most Bicycle Friendly Downtown in the Midwest	varies	City of Grand Rapids / DGRI / MDOT / local non-profits	City of Grand Rapids / DGRI / MDOT
Initial Action Steps -			
Include city-wide bike network as part of Vital Streets Plan and identify long-term east-west connection			
Install two-way cycle track on Ionia between Fulton and Lyon; improve bike facilities south of Fulton to create a low-stress network			
Develop low-stress routes from Cherry Street to State Street, to Weston Street and link to Ionia Cycle Track			
Install bicycle connection on Lake Michigan Drive under US 131 connection to the Blue Bridge			
Develop protected intersection design at Ionia/Monroe Center			
Establish a Bicycle Friendly Business District; create incentive programs for patrons who bike to local businesses.			
Increase promotional materials and participation with Bike to Work Week			
Integrate freight and highway infrastructure into the existing grid and networks in Downtown.	varies	City of Grand Rapids / MDOT / Grand Valley Metro Council	City of Grand Rapids / MDOT / Rapid / Institutions / Foundations
Initial Action Steps -			
Re-design Interstate 196 interchange ramps			
Develop a simplified preferred truck route map highlighting State/County designated truck routes.			
Circulate truck route map to local industry and commercial businesses; Make all truck route information easily available on the City's website with other business resources			

3.4 Get Connected: Use technology to make getting around easier			
Recommendation	Timeframe	Responsibility / Partners	Source of Funds
Utilize apps and web tools to improve City services	1st year	City of Grand Rapids / DGRI	City of Grand Rapids / DGRI
Initial Action Steps -			
Develop a new website for Mobile GR which makes it easy to find all transportation related information			
Integrate Digital Signage/Changeable Signage	1-2 years	City of Grand Rapids / DGRI / Rapid / private partners	Rapid / City of Grand Rapids / DGRI / private partners
Initial Action Steps -			
Install real-time digital signage for City-Owned parking facilities			
Develop an App linked to parking map with real-time parking availability.			
Encourage advanced sale of parking spaces for large events with ticket purchase to manage demand			
Use new technology to improve conditions for transit riders	Within 5 Years	City of Grand Rapids / DGRI / Rapid / private partners	Rapid / City of Grand Rapids / DGRI / private partners
Initial Action Steps -			
Work with DGRI and businesses to install monitors/screens in the public ROW and in businesses showing real-time Rapid/DASH schedule information			
Encourage open data for private transportation providers and companies	within 5 years	City of Grand Rapids / DGRI / private partners	City of Grand Rapids / DGRI
Initial Action Steps -			
Increase regular communication with private transportation companies operating in Grand Rapids			
Initiate a regular [Annual/Monthly] method of data sharing with willing companies			
Consider passing open-data ordinance for private transportation companies operating within Downtown			
Improve reliability and information of taxi service and transportation network companies	within 5 years	City of Grand Rapids / DGRI / private partners	City of Grand Rapids / DGRI
Initial Action Steps -			
Work with private transportation companies to develop safety and operational standards that benefit the City, businesses, and protect residents			
Work with private transportation companies to understand their individual operation and growth targets			

3.5 Put Grand Rapids 'On The Map'			
Recommendation	Timeframe	Responsibility / Partners	Source of Funds
Market Grand Rapids's Regional Connections	within 2 years	DGRI / City of Grand Rapids / Amtrak / Rapid / Airport	DGRI / City of Grand Rapids / Amtrak / Rapid / Airport
Initial Action Steps -			
Provide web links to all regional transportation connections in one place on the City's website			
Meet with representatives from all regional transportation connections to explore cross-promotional opportunities			
Highlight connections to regional transportation connections on all transportation map produced/released by the City			
Improve the Arrival Experience to Grand Rapids	within 2 years	DGRI / City of Grand Rapids / Amtrak / Rapid / Airport	DGRI / City of Grand Rapids / Amtrak / Rapid / Airport
Initial Action Steps -			
Meet with Airport representative to explore opportunities to increase signage and wayfinding to Downtown at the Gerald R Ford Int'l Airport			
Improve Navigation and Wayfinding	within 5 years	DGRI / City of Grand Rapids / Rapid	DGRI / City of Grand Rapids
Initial Action Steps -			
Conduct a survey of all of the existing formal and informal wayfinding systems in the Downtown area. [Walk Your City, Michigan Street Wayfinding, Arena directional signage, GRTagTour]			
Evaluate the success of existing wayfinding programs in Downtown			
Choose the most successful system and explore expansion of this wayfinding typology throughout Downtown			
Procure an App to assist with wayfinding in Downtown - or integrate pedestrian wayfinding into parking/transit app			