December, 2016

Dear Mayor and City Commissioners,

On behalf of the Vital Streets Oversight Commission I am pleased to submit to you the proposed Vital Streets Plan.

The Vital Streets Oversight Commission is charged with advising and assisting city staff to wisely invest our Vital Streets resources to achieve the envisioned complete streets outcome of safe, accessible, attractive and multimodal streets that serve all people and improve the livability and economic prosperity of our great city.

We take this charge seriously and we have worked hard over the past year to develop this Plan and accompanying design guidance through broad input and collaboration with many stakeholders. We believe it will be a valuable tool in helping our city make informed, asset management-based decisions about our streets and sidewalks. It provides a cohesive network approach with clear objectives and measurable outcomes.

In addition to our 25-member Commission, scores of individuals participated in working groups and other meetings contributing their time, expertise, and insights. These partners contributed the diversity of perspectives that are the strength of our city: neighborhood residents, local businesses, freight haulers, education and health care institutions, stormwater and green infrastructure specialists, state and regional partners, advocates for safety and mobility, and many more. They represented the needs of people of all ages, abilities, and economic status to ensure this plan and its resulting outcome is prudent, holistic, and inclusive.

Grand Rapids is setting the bar high. This plan is ambitious, but achievable and necessary. It will improve the safety of our streets, the connectivity of our networks, and the predictability of street design. It is an important cornerstone in achieving and maintaining the vision of a great Grand Rapids we all hold.

On behalf of my fellow Vital Streets Oversight Commissioners, I thank you for the opportunity to serve our city and advance this important work.

Sincerely,

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Quality streets and effective transportation networks are critical to the health, safety, enjoyment, and economic strength of the Grand Rapids community and the preservation of the Grand River watershed.

Grand Rapids has defined Vital Streets as “complete streets with green infrastructure.” In 2014, city voters approved Vital Streets funding and made a bold commitment to improving the quality of city streets and providing equitable access and mobility for all people.

The Vital Streets Oversight Commission (VSOC) was established to oversee the investment of these resources and implement the Vital Streets vision. In addition to approving the Capital Improvement Plan, the VSOC is charged with monitoring progress, reporting on achievements and outcomes, and recommending necessary course corrections.

Street design is complex, involving and affecting many stakeholders and disciplines. While the VSOC provides strategic vision and direction, and evaluates outcomes, the City’s “Design Team” oversees project design and decision making. The interdisciplinary Design Team provides holistic project review and is comprised of representatives from multiple City departments including: water, public services, mobility and parking, economic development, environmental services, fire, and other departments and/or agencies as project demands require.

Urban street space in Grand Rapids is limited and the needs of pedestrians, bicycles, transit, personal vehicles, and commercial vehicles often compete with one another. The intention of the Vital Streets Plan is to promote consistency and provide a framework, much like a soundboard, to use best practices in project-based decision-making. By establishing this Plan, the City aspires to ensure that Vital Streets projects serve the City’s overall vision and deliver a complete and viable network that sustains Grand Rapids over time.

OBJECTIVES

» Provide a reasonable and predictable set of processes and outcomes while minimizing conflict
» Increase coordination and advance planning with stakeholders to reduce “re-work” (measure twice, cut once)
» Provide consistent guidelines for facility and element design and operational strategies
» Incorporate life-cycle thinking into the design and development process (considering street design choices and maintenance implications)
» Provide sound and defensible methods for project definition and prioritization
» Define measures for evaluation that are simple, consistent and meaningful
» Improve the understanding and knowledge of the street design process among the public, community leaders, transportation agencies and other organizations.
Components

This framework:

1. Establishes a street typology that unites street design with local land use context and community objectives;
2. Defines an integrated, multimodal network that provides quality mobility choices for pedestrians, bicyclists, transit services, motorists, and the movement of freight;
3. Provides current and state-of-the-practice guidance and considerations in the use and design of numerous potential street elements and components;
4. Presents a clear methodological approach to facility selection and the balancing of competing demands to improve the consistency and transparency of street design; and
5. Provides a structure for performance measurement and evaluation of outcomes so that the city may continually learn, adapt, and improve.

Intended Users

This guide is intended for a number of different audiences who have a stake in the critical decisions made in the street design process.

The Vital Streets Plan, including street types and mode emphasis overlays, and the design objectives and performance outcomes associated with each, is expected to be of interest to all street stakeholders including community members, business interests, general travelers, elected leadership, funders, and city staff.

The Vital Streets Design Controls and Design Guidelines may be of general interest to many and thus are accessible to all, the guidelines are specifically produced for street design professionals to use in their technical project design and development.

Performance evaluation and measures of success are similarly a topic of broad interest, but the Vital Streets Implementation and Oversight is specifically intended to aid City staff in assembling the information necessary for review by the Vital Streets Oversight Commission, so that it may effectively assess progress toward desired outcomes.

The Vital Streets Plan is intended as a companion to the Master Plan of the city. A thorough review and update of the plan should be done in concert with major updates to the Master Plan.
CONSISTENCY WITH ADOPTED STANDARDS AND POLICIES

The Vital Streets Plan is consistent with and compliments adopted national guidance represented in both the National Association of City Transportation Officials (NACTO) Urban Street Design Guidelines and the American Association of State Transportation Officials (AASHTO) Policy on Street Design. Additionally, guidance is in conformity with the standards of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD).

The Vital Streets Plan is an update to the City’s 1996 Street Classification Policy. Design objectives and guidelines of the Vital Streets Plan, however, shall supersede conflicting guidance in the former Street Classification Policy. Conventional street types of the Street Classification Policy will continue to be used to provide the consistency necessary in interactions with the State (Michigan Department of Transportation).

The Vital Streets Plan is a complement to the Grand Rapids Standard Construction Specifications (also known as the “Red Book”). In any cases of conflict in guidance, the Vital Streets Street Design Guidelines augment and supersede the guidance and standards provided in the Red Book.

UPDATES, AMENDMENTS AND MODIFICATIONS

The Vital Streets Plan works in concert with other key adopted city policies and plans including the City of Grand Rapids Master Plan, Grand Rapids, Green Infrastructure Standards, and GR Forward. The Vital Streets Plan incorporates established or planned bicycle, transit and truck route networks of the City and region.

However, the Plan is intended to serve as a living framework. Street designations and modal networks will be revised over time as the City and technology continues to evolve. The street design controls and guidelines will be modified as street design advances and innovates. Performance measures will be revised and amended to best capture and evaluate the outcome of Vital Streets investments.

The VSOC will review any changes to street type or modal emphasis overlays, after consultation with City agencies and stakeholders. Such changes will be transmitted to the City Commission for formal modification of the Vital Streets Plan. Additions, deletions, or other changes to the design guidelines will be done administratively through the Design Team.

The Vital Streets Plan is intended as a companion to the Master Plan of the City. A thorough review and update of this Plan should be done in concert with major updates to the Master Plan.
BACKGROUND

The economic downturn of the mid 2000s severely reduced public resources, including the ability to invest adequately in the maintenance and repair of city streets. Simultaneously, the City of Grand Rapids and the whole of the Grand Valley metropolitan region continued to grow, increasing demands for travel on the relatively narrow rights of way of city streets and increasing tension between the buses, bicyclists, private and commercial vehicles, and pedestrians forced to compete for safe accommodation in this limited space.

In 2012, the City Commission established the Sustainable Streets Task Force to assess the level of need and identify resources to restore the city’s road infrastructure. Although 60% of city streets were in good-to-fair condition in 2002, fewer than 40% were in fair condition in 2012 and 87% were predicted to be in poor condition by 2019 without critical new investment.

In May 2014, Grand Rapids voters approved a Vital Streets dedicated funding measure, providing essential resources needed to repair, rehabilitate, and reconstruct city streets. It was promised that streets would be sustainably maintained over the long term, provide safe accessibility for all people, and incorporate green infrastructure to protect water quality.

In 2015, the Vital Streets Oversight Commission (VSOC) was convened with the responsibility to oversee the deployment new tax revenue, monitor results, and ensure funds serve the original purpose and intent. The VSOC commissioned expert assistance to develop the strategy and provide the tools needed for efficient, consistent, and transparent implementation. The Commission formed five working groups, each focused on a different aspect of Vital Streets—pedestrians, bicycles, transit and freight, parking and transportation demand management, and green infrastructure in coordination with the Stormwater Oversight Commission. This Vital Streets Plan is the product of over a year of discussions by the Commission and working group members who represented a diverse group of citizens, businesses, civic organizations, and advocates who contributed their unique perspectives to ensure a viable strategy.

A NEW APPROACH

Under the guidance of the Vital Streets Oversight Commission, Grand Rapids is revolutionizing its approach to street design. The city recognizes that roads aren’t just for moving vehicular traffic. Rather, streets are complex environments that must serve varied modes and users that intermingle.

In 1996, the City adopted its Street Classification Policy. This policy established the hierarchy of streets and approach to street design in general practice today. The City, with the help of her residents, has recognized the limitations of this current policy and the need to introduce more sensitivity to street context and greater accommodation of non-auto users. This Plan updates the Street Classification Policy to incorporate street design focusing on multi-modal transportation that recognizes that the city will continue to evolve.
THE VISION FOR VITAL STREETS

The network of city streets and rights-of-way will be accessible, attractive, multimodal and safe; serving all people of our community, contributing to the livability of our neighborhoods and business districts, protecting the quality of our river, and increasing economic opportunity to individuals, businesses, and new development.

Infrastructure assets will be maintained and well-managed, using a multi-faceted funding and educational strategy and innovative approaches to preserve our investment.

PRINCIPLES

Streets reflect the fundamental values of a community. In Grand Rapids, Vital Streets shall:

» Be safe and accessible for all members of the community.
» Be soundly designed and well maintained for lasting investment.
» Be developed in partnership among city agencies, communities, and other stakeholders.
» Promote equitable access to the amenities of the city
» Expand travel options to increase mobility and improve public health.
» Strengthen community by promoting human interaction and reflecting local character.
» Protect and enhance the environment.
» Embrace innovation and support continuous learning through measurement and evaluation.
VALUES

The Vital Streets investments should advance the ambitious goals and targets established by the City of Grand Rapids. Specifically:

» **Mode Share.** Reduce single-occupant vehicle travel from a 95% drive-alone commute rate to 45% by 2035 by providing efficient transit corridors, safe walking and bicycle facilities and smart solutions for ride-sharing to achieve mode split of 20% transit, 12% walking, 5% biking, and 20% ridesharing.

» **Equity.** Ensure transportation options are available, affordable, and reliable for all people to meet their travel needs regardless of age, ability, race, ethnicity, or economic status.

» **Vision Zero.** Eliminate all traffic related serious injuries and fatalities on Grand Rapids city streets.

» **Health:** Vital Streets promote and enable walking, bicycling and other forms of active transportation. Vital Streets should, over time, contribute to reductions in childhood and adult obesity and improve public health outcomes.

» **Age-Friendly Community:** Vital Streets will serve and accommodate people through their many phases of life from an infant in a stroller to student walking to school to active adult commute to access for aging seniors.

» **Climate Change:** Vital Streets will reduce transportation related emissions by reducing Vehicle Miles Travelled (VMT) through the increased use of transit, shared vehicles, and non-motorized travel.
MEASURES OF SUCCESS

The Vital Streets Oversight Commission is charged with monitoring the outcomes and results of Vital Streets investments. The following outcomes and associated performance measures shall be used to monitor the overall health and performance of the system and ensure Vital Streets investments are making progress toward the City’s goals. In addition, the street types established in this framework lay out the objectives and desired outcomes for each street type. Vital streets projects will be evaluated on project-based measures to ensure the goals are being met and if not, what might need to be addressed.

» TRAFFIC-RELATED SERIOUS INJURIES + FATALITIES It is the intent and desire of the Vital Streets Oversight Commission and the City of Grand Rapids to provide safe street design and maintain the quality of our infrastructure such that we can eliminate serious injuries and fatalities on our city streets (Vision Zero).
- 3-year running average crashes involving pedestrians
- 3-year running average crashes involving bicyclists
- 3-year running average traffic-related serious injuries and fatalities

» OPERATIONS AND MAINTENANCE Streets reconstructed with Vital Streets resources will remain in a state of good repair with only standard preventive maintenance. Asset conditions are measured by street conditions and pavement quality.
- Condition rating for Vital Street sidewalk projects
- PASER rating for Vital Street projects (heavy rehabilitation or reconstruction)
- PASER rating for all streets (percent good and poor streets)

» NETWORK CONNECTIVITY Vital Streets will improve the functionality of the larger city and regional network for all modes of travel to provide increased access for all persons.
- Percent of gaps in connectivity filled for pedestrians
- Percent of dwelling units within 1/2 mile of a dedicated bicycle facility
VITAL STREETS PLAN

- Centerline miles of connected and accessible designated routes or facilities for pedestrians

» **MODE SHARE**  The intent of Vital Streets is to fix Grand Rapids streets, move people efficiently and safely, and improve green infrastructure. Increasing the use of non-drive alone auto travel will improve public health by providing people of all ages and abilities with opportunities for active living:
- Grand Rapids city mode distribution from American Community Survey (compared year on year).

» **PERSON THROUGHPUT**  Vital Streets will accommodate more person-trips, through the incorporation of pedestrian, bicycle and transit accommodations (as appropriate). Pedestrian, bicycle, and transit facilities will be designed to invite and attract additional non-auto users:
- Total daily trips made within the City of Grand Rapids (derivation of National Household Travel Survey)
- Select corridors/cordons peak hour counts (vehicles + 1.1 occupants + transit riders + observed pedestrians + observed bicyclists)

» **PERSON DELAY**  Vital Streets value all travelers and shall be designed to minimize the overall delay experienced by all persons traveling through a corridor or critical intersection(s).
- Percent reduction in person delay at improved intersections—Former to Improved (Highway Capacity Manual methodology for calculating vehicle, pedestrian and bicycle delay and adapted to apply transit passenger volumes)

» **REDUCTION IN STORMWATER RUNOFF**  Vital Streets are green streets and a measure of their ability is the reduction of stormwater immediately flowing to the City’s stormwater system and waterways:
- Volume infiltrated per year (gallons)
- Acreage from which the first inch of rain is treated for water quality

» **PUBLIC SATISFACTION**  Many aspects of street design success cannot be quantitatively measured. However the qualitative assessment of residents, businesses, workers and other stakeholders regarding the street’s aesthetic is a critical measure of Vital Street success:
- Annual Vital Streets web-based voluntary survey
The Vital Streets Plan identifies the objectives and priorities used in street design by combining street form and function. Street types are used to inform street design decisions and are sensitive to land use, community and environmental context and transportation function.

**STREET TYPOLOGY**

Street types are outcome-oriented, driven by an overall vision for the intended future state—both localized and network wide.

Street types are the general foundation that reflects the hierarchy of multimodal transportation. The hierarchy is determined by street classifications: (a) transportation link function, (b) characteristics of land use and place, and (c) determination of mode emphasis where uses or demands compete for space.

Certain streets within these basic classifications may be designated to emphasize one or more modes. All classes, or types, of street must support a high quality residential environment and provide network connectivity for all modes, yet the unique design of each street may provide some advantages that enhance its emphasized mode.

**MODE EMPHASIS**

Modal emphasis is captured in “overlays.” Modal emphasis refers to the user: pedestrian, bicyclist, auto driver, truck driver, or transit operator. In addition to the basic objectives of street types, special consideration for particular users is identified through the modal overlays. Overlays generally continue for the whole street corridor, however how that mode is emphasized in a particular segment—how the street is designed and the facilities for accommodation provided—may deviate along the length of the corridor in response to changes in land uses and character defined by the underlying street type. For example, a corridor may be designated for transit emphasis. In some portions, that may require that a travel lane be designated exclusively for transit use while in other segments transit emphasis can be achieved through modest changes to signal operations or intersection design.

**TRANSITIONS**

Street types may not be consistent for the whole of a corridor. Just as land use context changes—from low density residential neighborhoods, to neighborhood business districts, to areas of industry and production to the core downtown—so too the street types change. However, overlays generally remain consistent along the whole of a corridor to provide a continuous modal network.
STREET TYPES
Neighborhood Residential streets invite residents to use the streets as common gathering places and linear green space. Much of Grand Rapids consists of quiet residential communities characterized as “Modern,” “Mid-Century” or “Traditional” in the City’s Neighborhood Pattern Book.

Land use along these streets is primarily low-to-moderate density in nature, generally with a preponderance of single-family detached or duplex style homes.

Neighborhood Residential streets are not principal streets in the regional vehicular transportation network, although they may serve as an important link for pedestrians and community bicyclists who generally travel at lower speeds. Neighborhood Residential streets generally do not feature transit service. Additionally, truck traffic may be restricted on these streets.

These streets typically have limited connectivity to the larger network.

**Example Streets:**
- Oakleigh Avenue, Westend Avenue, or Jackson Street NW
- Lamberton, Graceland, or Mason Streets NE

**Anticipated and Desired Uses:**
- Community interactions in the public rights-of-way such as visiting neighbors.
- Recreational use of the street, such as walking or running, learning to ride a bicycle, or shared use of the street as an extension of recreational space.
- Community low-stress non-motorized travel by foot or bicycle.
- Property access through driveways and on-street parking.
- Short distance (last block) vehicle travel.
- Grey and green infrastructure (utility corridors).
PRIORITY USERS:
» **Pedestrians** of all type and abilities but with particular attention to **vulnerable users** including young children, seniors, and persons with disabilities.

DESIGN OBJECTIVES:
» Maintain low vehicle volumes and low travel speeds.
» Design streets as linear greenways and open spaces.
» Provide access to homes and residences.

TYPICAL DESIGN FEATURES AND TREATMENTS:
» Narrow street travel ways that are most commonly bi-directional “yield” streets without a marked center line. Vehicles must pull to the side and slow or stop to enable an approaching vehicle to pass.
» The limited connectivity and narrow travel lanes generally manage speeds and deter non-local traffic, however in some cases active speed control or traffic deterrents may be needed.
» Intersections may be stop-controlled, yield-controlled or uncontrolled. Intersections may have diverters, neck downs, or other traffic calming treatments.
» Crosswalks generally are not marked. Pedestrians may comfortably cross the street at any point along its length.
» Properties may be accessed from the street or by way of alleys. Multiple access points and driveways are common.

» Adequate growing space to support large street trees and dense canopies. Substantial front yards and parkways.
» Sidewalks on both sides of the street are preferred unless the street is a shared street. A shared street is a street where pedestrians and other users share and mix together using the entire streetscape. Shared streets are typically single block streets with limited connectivity and very few vehicles.
» Impervious surfaces are minimized.
» On-street parking is generally provided on one or both sides of the street.
» Separate bicycle facilities are generally not provided. Vehicle speeds and volumes are low enough to provide safe and low-stress bicycle accommodation within the street.
» For streets included in the low stress bicycle network, traffic calming, diverters, wayfinding, and other treatments should be provided.

TYPICAL/TARGET METRICS:
» Vehicle volumes below 2,000 vehicles per day
» Vehicle speeds <25 MPH
» Face-to-face of curb 26’ to 30’
**FORM AND FUNCTION**

**LINK RESIDENTIAL**

Link Residential streets serve a larger network function, providing connectivity between nearby neighborhoods or local destinations. They are most typical in areas with traditional neighborhood character and a connected grid of streets, but may be in any neighborhood type.

Link Residential streets are predominantly low to moderate density residential in character and must be designed to support a high quality of residential life. Link Residential streets are commonly the location of local community facilities such as parks or recreational facilities, schools, or houses of worship.

Although Link Residential streets may have a slightly higher volume of vehicle traffic than the Neighborhood Residential street, vehicle travel must be maintained at a low speeds to respect and enable the local community uses common on these streets.

Link Residential streets are not principal streets in the regional vehicular transportation network. They play an important role in the local transportation network for all modes of travel, with an emphasis on pedestrians, bicyclists, and local area vehicle travel. Link Residential streets may be ideal as designated bicycle corridors and may, or may not, provide designated and marked bicycle facilities. Fixed route bus transit may be provided on some Link Residential streets. Link Residential streets may accommodate a modest amount of local delivery truck traffic but are not designated truck routes.

**EXAMPLE STREETS:**

- Marion Avenue from Bridge Street to Butterworth
- Crescent Street NW from Lafayette to Fuller
- Logan Street SE from Lafayette to Glenwood
- Griggs Street SE from Buchanan to Newton

**PREVALENCE OF NEIGHBORHOOD LINK RESIDENTIAL STREET TYPE:**

<table>
<thead>
<tr>
<th>Centerline Miles of Street</th>
<th>125</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of All City Streets</td>
<td>21%</td>
</tr>
</tbody>
</table>

**ANTICIPATED AND DESIRED USES:**

- Community interactions in the public rights-of-way that characterize and

1. Active speed control and traffic calming
2. Narrow, two-way street
3. Substantial yards & parkways
4. Comfortable design for persons on bicycles
reflect a quality residential neighborhood environment.

- Modest pedestrian volumes.
- City or regional low-stress bicycle travel.
- Lower frequency bus transit.
- Modest distance (last mile) vehicle travel.

**PRIORITY USERS:**

- Link Residential streets prioritize pedestrian movement and bicycle travel in addition to accommodating local vehicle access and circulation.
- Link Residential streets are true complete streets that provide safe accommodation for all users.
- Link Residential streets explicitly designated as key components of the bicycle network emphasize bicycle accommodation for both experienced and less experienced bicyclists.

**DESIGN OBJECTIVES:**

- Maintain modest vehicle volumes and low travel speeds.
- Design streets as linear greenways and open space.
- Provide access to residences and community facilities.
- Connect to local destinations.

**TYPICAL DESIGN FEATURES AND TREATMENTS:**

- Narrow travel lanes. Larger vehicle types such as transit vehicles or trucks, although permitted, are fairly infrequent on Link Residential streets. Narrow lane widths provide adequate accommodation for movement of these vehicles.
- Narrow travel lanes generally manage speeds; in some cases active speed control and traffic calming may be needed.
- Bi-directional streets are preferred. The center line may or may not be marked. Streets may be “yield” streets requiring vehicles to move to the side to permit oncoming traffic to pass.
- Intersections are frequent. Stop controls and/or neighborhood traffic circles at many intersections are acceptable to deter high volumes of longer distance vehicle travel.
- Crosswalks may or may not be marked. Pedestrians may typically comfortably cross the street at any point along its length.
- Consolidated curb cuts or shared alleys are encouraged and preferred, but multiple access points and driveways may be common.
- Adequate growing space should be provided to support large street trees and dense canopies. Provide substantial yards and grass or landscaped parkways.
- Streets should provide sidewalks on both sides. Sidewalk dimensions should be scaled to accommodate the modest pedestrian volumes using these link streets.
- On-street parking is generally provided on at least one side of the street.
- Link streets are key for bicycle and pedestrian networks. Designated bicycle facilities may or may not be provided, but for streets specifically designated as components of the low stress bicycle network, traffic calming, diverters, wayfinding and other treatments should be provided.

**TYPICAL/TARGET METRICS:**

- Vehicle volumes between 2,000 and 5,000 vehicles per day
- Vehicle speeds approaching 25 MPH
- Face-to-face of curb 28’ to 36’
Network Residential streets are quality residential corridors that also serve critical roles in the larger transportation network by efficiently and safely moving regional vehicle and non-motorized users.

Network Residential streets are similar to arterial roadways in the standard street classification system used by State and Federal agencies. However, the design of Network Residential streets is more sensitive and attentive to non-auto users than is typical in traditional arterial roadway design.

While family homes are the predominant land use, residential density may be higher along these corridors than is typically found in the Neighborhood or Link Residential and Crosstown Connector street types. Local community facilities such as parks or recreational facilities, schools or houses of worship are common on these streets and may be interspersed with some industrial or production space, or very small commercial uses.

Despite their regional network role, Network Residential Streets should still be designed to contribute to and enhance the residential character and support typical neighborhood activities including active use of front yards for play or leisure, active use of sidewalks, and safe accommodation of community bicyclists—including very young, less experienced, or less confident riders. These uses and interactions are typically contained behind the curb and separated from vehicle traffic.

These streets may have moderate to higher volumes of traffic—particularly during peak travel hours. As with other residential streets, however, vehicle travel must be maintained at modest speeds in respect to the residential community, their quality of life, and resident’s safety.

Network Residential streets are primary streets in the regional transportation network for all modes of travel including pedestrians, bicyclists, private vehicles, transit, and trucks. Network Residential streets often have some level of transit service and some may feature frequent transit service. Network Residential streets are generally included in the city’s truck route network. They may also, however, serve as critical backbones to the regional bicycle network. Given the higher vehicle volumes, streets designated as critical to the bicycle network generally require at least designated bicycle facilities (such as bike lanes) and may require separated or protected bicycle facilities.
EXAMPLE STREETS:
» Covell Avenue SW/NW
» Fulton Street from Arthur to East Beltline
» Leonard Street NW from Benning to Frederick and Leonard Street NE from Coit to Herrick, excepting areas of local business concentration
» Buchanan Avenue from Cottage Grove to the city boundary

ANTICIPATED AND DESIRED USES:
» Community travel, uses and interactions in the public rights-of-way typical of a strong and healthy residential community.
» Moderate to higher pedestrian volumes.
» City or regional commuter bicycle travel; community bicyclists.
» Moderate to higher frequency bus transit.
» Modest truck volumes.
» Moderate to significant local and longer distance (cross-town) vehicle travel.

PRIORITY USERS:
» Network Residential streets are complete streets and must provide safe accommodation for all users.
» Some streets may be designated as key links in a modal network (bicycle, transit, or cross-town vehicle) and thus be designed with a slight prioritization for accommodation and efficient travel of that mode.

DESIGN OBJECTIVES:
» Protect residential quality of life.
» Accommodate safe and efficient cross-town connectivity via a diversity of modes.

TYPICAL DESIGN FEATURES AND TREATMENTS:
» Narrow travel lanes with marked center line. Streets are commonly bi-directional.
» Curb or center lanes may be slightly wider on streets that have demonstrated higher volumes of larger vehicle types, such as transit vehicles or trucks. Narrow lanes should be used to effectively manage traffic speeds while maintaining safety.
» Certain traffic calming design interventions may be used to further manage vehicle speeds to maintain speeds that are consistent with a safe and quality residential environment. Speed humps are generally not used on Network Residential streets.
» Intersections are commonly signal controlled or uncontrolled along the Network Residential street (side streets are stop controlled).
» High visibility crosswalks should be provided at signalized intersections. Typical (continental) crosswalks may be provided at higher volume or otherwise significant unsignalized locations. Crossings may be unmarked at intersections. Regardless of the presence or absence of markings, these remain legal pedestrian crossing locations.
» Shared driveways or alleys are preferred. Curb cuts and other access points should be limited, where possible.
» While large canopy trees are desired, creative solutions are encouraged where the demands of the street compromise the amount of space that can be provided for tree growth in the parkway of the street.
» Highly visible gateway or identity elements that mark the transition into or out of distinct neighborhoods and to celebrate and highlight unique character or identity should be considered.

» Streets must provide sidewalks on both sides. Sidewalk width is generally wider. Pedestrians should be buffered from the curb of the street by a generous parkway or amenity zone.

» On-street parking on one or both sides of the street is generally desired.

» Network Residential streets are key links for bicycles and pedestrians, as well as for vehicles (transit, trucks, and private vehicles). Given the higher volumes and speeds, key bicycle corridors must have designated marked and/or protected bicycle facilities.

**TYPICAL/TARGET METRICS:**

» Vehicle volumes greater than 5,000 vehicles per day
» Vehicle speeds 25 MPH
» Face-to-face of curb 36’ to 58’
The Neighborhood Business streets are typically compact areas that occupy only a segment along a longer street corridor. Neighborhood business districts are unique areas within Grand Rapids neighborhoods. They provide dining, shopping and employment opportunities while adding character and commerce to the Grand Rapids economy. Neighborhood Business districts are not just destinations for local residents, they are visited by patrons from across the region.

Neighborhood Business Streets are generally moderate to higher volume multimodal streets.

The quality of the pedestrian environment is of paramount importance. Inviting sidewalk zones correspond positively with higher retail sales and greater commercial value of properties along Neighborhood Business Streets. Pedestrians must be able to cross the street safely at multiple points to access the many offerings of the district. The pedestrian zone is buffered from roadway traffic by curbside parking or a generous amenity zone to increase pedestrian comfort. Formal or informal seating is common to invite pedestrians to gather, visit and linger along the street. Pedestrian scaled street lighting increases the attractiveness of the street during evening hours.

Access for delivery vehicles, patrons and workers is equally critical to the success of Neighborhood Business streets. These users may arrive by foot, bicycle, transit, or personal vehicle, and all modes should be comfortably accommodated.

Street vehicle speeds should be slow and well managed.

Robust tree canopies contribute positively to economic productivity of these street and districts. Studies have shown that patrons will stay longer and spend more on tree-lined streets compared to those bereft of tree coverage.

Neighborhood Business streets are critical segments in the larger city or regional street network. They accommodate travel demands both to and through the business district and must provide safe access and mobility for all modes of travel, although they may be prioritized for one or more modal emphasis. It is often difficult to provide separated or protected bicycle facilities on these streets given the variety and volume of mobility demands. However, when the segment is a component of the bicycle priority network, designated and marked facilities must be accommodated.
FORM AND FUNCTION

EXAMPLE STREETS:
» Wealthy Street SE from Union to Auburn
» Michigan Street NE from Prospect to Fuller
» Grandville Ave SW from Hall to Grant

ANTICIPATED AND DESIRED USES:
» Commercial activities such as café dining or outdoor retail.
» Residential uses both at the ground and upper levels.
» Patron, client, and employee access by way of vehicle and bicycle parking, quality transit stops, and inviting pedestrian zones.
» Moderate to higher pedestrian volumes.
» Moderate to higher frequency bus transit service and access.
» Delivery truck access.

PRIORITY USERS:
» Commercial patrons and visitors
» Delivery vehicles
» Workers and proprietors

DESIGN OBJECTIVES:
▪ Support and strengthen economic productivity and value.
▪ Enable efficient and unobtrusive delivery of goods and/or high frequency and brief commercial transactions (e.g. short duration stops).
▪ Enhance street quality and image.
▪ Enhance access via all modes (pedestrian, bicycle, transit, personal vehicle).
▪ Accommodate multimodal through travel.

TYPICAL DESIGN FEATURES AND TREATMENTS
» Narrow travel lanes to slow traffic speeds and minimize pedestrian crossing distance.
» Bi-directional street operations are preferred. Center line may or may not be marked.
» Short block lengths and frequent intersections are preferred. Intersections may be stop or signal controlled, or uncontrolled.
» Pedestrian crossings along the length of the segment should be anticipated.

Crosswalks may or may not be marked at uncontrolled locations. Midblock crossings connect trip generators on opposing sides of the street and minimize out of direction travel for pedestrians. Crosswalks should be marked at controlled intersections.
» Streets must provide generous sidewalks on both sides, adequately buffered from vehicle traffic. Pedestrian seating is recommended.
» On-street parking on one or both sides of the street is preferred. Sufficient and convenient bicycle parking is required.
» Parking should be well managed to optimize occupancy while concurrently providing a limited but continuous amount of available access. Parking may or may not be metered.
» Adequately scaled and spaced loading zones are required to support commercial needs. Loading periods may be managed and loading zone usage enforced.
» Transit service is common and encouraged on Neighborhood Business streets. Transit stops should provide adequate amenities for a quality rider experience. Transit amenities must not constrain the minimum required pedestrian clear zone.
» Curb cuts and driveways should be discouraged and minimized in favor of alleys and shared access points from minor and intersecting streets.
» Large canopy trees are desired. Creativity is encouraged to promote green infrastructure.
» Streetscape should provide a quality environment. Standard materials, installed with quality workmanship, are acceptable and in many cases encouraged. Special materials may be used if maintenance agreements are provided.
» Public art, wayfinding, and other unique features of place are appropriate and encouraged.
» Access to Neighborhood Business streets by foot, bicycle, transit, and personal vehicles are all vitally important.

TYPICAL/TARGET METRICS
» Vehicle volumes greater than 5,000 vehicles per day
» Vehicle speeds <25 MPH
» Face-to-face of curb 36’ to 58’
CROSSTOWN CONNECTORS

Grand Rapids has several larger, regionally significant streets that move a high volume of motor vehicle traffic, while accommodating transit stops, pedestrians and bicycle activity. Generally serving low density, commercial, parkland, institutional and residential land uses, street environments at present often lack a distinctive character. Given high traffic volumes traveling at somewhat higher speeds, these streets typically require that bicyclists and pedestrians be physically separated from traffic. Crossings must be safe and well-marked with adequate crossing time.

The current character of Crosstown Connectors varies substantially at present, from the sprawling strip retail character of 28th Street, to the traditional built form of Division Street, to the parklike boulevard of East Beltline.

Crosstown Connector streets are critically important in the regional travel network and are generally continuous from one end of the city to another. They may also connect from a point in the city to travel corridors that continue further into the region. Crosstown Connectors commonly have heavy vehicle volumes and may feature a significant number of commercial vehicles. In addition to automobiles, streets often have significant demands by transit users and bicyclists. While the pedestrian environment on Crosstown Connector streets is often challenging, pedestrian mobility is imperative. Given the high traffic volumes and relatively high speeds, non-motorized users should be well protected and buffered from moving traffic.

Tree canopies and landscaping may currently take a variety of forms from greener, more boulevard-like streets such as East Beltline to streets with less distinctive green edges such as 28th Street. Regardless of existing conditions, street trees along the curb line are important in establishing an attractive character on these streets and improving the overall environment.

**EXAMPLE STREETS:**
- Lake Michigan Drive NW from the city line to Covell Avenue
- Fuller Ave NE from the city limit to Michigan Street (excluding the small nodes of Neighborhood Business)
- Burton Street SE

**ANTICIPATED AND DESIRED USES:**
- Significant through vehicle travel.
Access to major employment and commercial destinations.

» Safe non-auto travel options both day and night through all seasons.

» Robust street trees to define the street edge.

**PRIORITY USERS:**

» Through vehicle travel.

» **Through person travel** via all modes.

» Worker and patron access.

**DESIGN OBJECTIVES:**

» Improve street character while maintaining critical connectivity for through travel.

» Support land uses or any planned transition of adjacent land uses.

» Improve safety and operation for all users.

**TYPICAL DESIGN FEATURES AND TREATMENTS:**

» Appropriately scaled travel lanes to support through travel as well as safe pedestrian crossings.

» Medians and pedestrian refuges for pedestrian safety and safe vehicular movement.

» High visibility lane markings.

» Frequent pedestrian crossings to minimize crossing at uncontrolled locations. Marked crosswalks must be provided at all transit stops.

» Continuous sidewalks on both sides of the street. Sidewalks may be widened to serve as shared use paths for pedestrians and community bicyclists.

» Streets generally do not have on-street parking, though temporal (rush hour prohibited) parking may be provided.

» Bicycle parking in the sidewalk zone of the street should be provided.

» If transit service is provided, transit stops should be well lit and contain appropriate amenities.

» Streets may either have abundant access points or strictly limited access controls.

» Intersections are signalized.

» Large canopy trees along the curb line help delineate the street edge and provide a sense of enclosure to the street.

» Street lighting is critical for the safety of all. The pedestrian zone should be well illuminated in addition to lighting for the travelway. Special attention is necessary at intersections and pedestrian crossings.

**TYPICAL/TARGET METRICS**

» Vehicle volumes greater than 15,000 vehicles per day

» Vehicle speeds ≥25 MPH

» Face-to-face of curb 36’ to 58’ or more
Grand Rapids’ downtown core is a vibrant, mixed-use area with a well-connected street network. Travel demands are intense in the downtown core, with travelers using a variety of different modes. Pedestrian volumes are high, as people both travel through downtown streets, window shop, and simply linger as they enjoy the wonderful spaces and offerings of downtown.

Urban Center streets represent a wide spectrum—from the highly pedestrianized Monroe Center, to transit-intensive Fulton, to high vehicular demands on Ottawa and Monroe. Downtown streets are Grand Rapids’ principal employment and entertainment streets. The streets also support a number of residents, institutional uses, students, and workers.

Urban Center streets often face the greatest challenges in balancing demands from both travelers and land uses. The streets are active places with outdoor retail, shopping, festivals, public art, and parks and plazas.

Urban Center streets have specific design requirements to provide a high quality public realm and to contribute to the city’s identity and sense of place. Street trees, elaborate landscaping, and hardscaping are all important components of street design. All must be well maintained with clear responsibilities for maintenance and programming.

Streets may be designated as Urban Center streets in areas that are not currently considered downtown. The street types are an aspirational designation and will encompass many transitioning areas adjacent to the traditional downtown core.
Urban Center streets are important links in the local and regional transportation network. Most have high travel demands by all modes. Even though private vehicle travel is significant, people traveling by transit, bicycle, and on foot well outnumber those traveling in personal vehicles. Parking is important, though is not always provided on street. The supply of off-street parking available to Urban Center streets generally dwarfs the on-street supply.

Traffic speeds should be kept generally slow. This not only makes a more comfortable, inviting street environment, but also commonly increases the vehicle throughput and allows for smooth and reliable flow of vehicle traffic.

**EXAMPLE STREETS:**

» Wealthy Street from Lafayette to Straight Avenue
» Seward Street from Leonard to Fulton
» Monroe Avenue from Knapp to Wealthy
» La Grave Avenue from Fulton to Logan

**ANTICIPATED AND DESIRED USES:**

» Pedestrian activity, both traveling along streets and lingering in the public space dining, window shopping, visiting or gathering
» Significant employment, commercial activity, entertainment, institutions, and residences
» Intensive multimodal travel – particularly during peak travel periods
» Major public events and festivals and signature public spaces

**PRIORITY USERS:**

» **Pedestrians.**
» Workers, patrons, students and visitors arriving on a variety of modes.
» Active uses of the public space such as outdoor dining, retailing, and community gatherings.

**DESIGN OBJECTIVES:**

» Create a distinctive and appealing sense of place and public impression of Grand Rapids.
» Promote access to destinations via a variety of modes.
» Provide smooth and efficient movement with a minimum of circling and unnecessary congestion.

**TYPICAL DESIGN FEATURES AND TREATMENTS**

» Travel lanes scaled appropriate to common users of the street.
» High visibility lane markings and major pedestrian crossings.
» Generously scaled sidewalks on both sides of the street. Sidewalks of adequate scale to support active uses as well as both stopped and through pedestrian movements.
» Abundant vehicle and bicycle parking both on and off street. Well managed loading zones.
» Frequent transit service should be anticipated. Transit stops suitable for higher rider volumes.
» Strictly limited curb cuts and access points. Shared alleys are to be encouraged and supported.
» Large canopy trees and robust landscaping add to streetscape quality. Enhanced streetscape materials and fixtures may be used, however maintenance responsibilities should be clear and enhancements well maintained.

**TYPICAL/TARGET METRICS**

Vehicle volumes greater than 5,000 vehicles per day

» Significant pedestrian volumes
» Vehicle speeds <25 MPH
» Face-to-face of curb 36’ to 58’
**Maker/Industrial Streets** are critical to the Grand Rapids economy. They are places of production and innovation. They may manufacture durable goods such as furniture or electronics, consumer goods such as the city’s many breweries, or intellectual goods such as media production. Uniquely, Maker/Industrial Streets in Grand Rapids are often located contiguous with residential areas or may have residential or retail uses interspersed with industrial, manufacturing, or warehouse uses.

Maker/Industrial Streets may be relatively isolated from other streets, may occur in small pockets among other street types, or may comprise an entire distinct district.

Maker/Industrial Streets are often places of transition, as they have been for more than a century. They may represent a diversity of different characters—from dynamic 24-hour districts, to more isolated warehousing or distribution activities.

These streets serve industrial corridors and are built to accommodate commercial trucks. While there may be fewer pedestrians and bicyclists here, these streets may also serve as through-routes to adjacent land uses or connections between destinations.

Tree canopies and landscaping are important to soften the streetscape, reduce noise, and help manage stormwater.

Maker/Industrial Streets often have relatively moderate traffic volumes. Because they are locations of significant employment, access via a variety of modes including transit, bicycle, and pedestrian access is critically important. Traffic speeds are generally slow. Streets may have a higher proportion of larger vehicle traffic—in excess of 10% of total vehicle volumes. Given these numbers and the blind spots often present in large vehicles, it is important to provide separated protection for more vulnerable travelers—specifically cyclists and pedestrians.

A subset of the Maker/Industrial Street type is the Service Street. Service streets typically are not the site of production activity. They may have a variety of different uses along them. Many of these uses do not address the street or are set far back from the street.
edge. Service streets are the access point for larger retail or commercial properties or may be smaller streets connecting to larger Maker/Industrial streets.

EXAMPLE STREETS:
» Wealthy Street SW from Garfield to Straight
» Oak Industrial Drive NE
» Cottage Grove SE
» Turner Street NW north of Richmond

ANTICIPATED AND DESIRED USES:
» Large and small scale manufacturing and processing, distribution, and warehousing.
» Other employment such as design, production, office, direct sales retail, and/or housing.
» Modest pedestrian volumes.
» Worker access via all potential modes.
» Truck access, parking, and operations.

PRIORITY USERS:
» Freight and service vehicles.
» Workers and proprietors.
» Customers and clients.

DESIGN OBJECTIVES:
» Support and strengthen economic productivity and value.
» Enable efficient industrial, commercial and production activities.
» Connect workers to jobs and customers or clients to goods and services.
» Increase safety and decrease opportunities for conflict.
» Mitigate and minimize environmental impacts such as water runoff, noise, and vibrations.

TYPICAL DESIGN FEATURES AND TREATMENTS:
» Lanes adequately wide to accommodate larger commercial vehicle travel and movement.
» Center line may or may not be marked.
» Larger block lengths are common.
» Pedestrian crossings should be clearly marked.
» Streets must provide sidewalks on at least one side. Sidewalks on both sides is preferred.
» Streets may or may not have on-street parking. Parking may or may not be metered. Parking should be designed to accommodate trucks in addition to typical automobiles. This accommodation may include loading/unloading zones, as well as restricted parking hours. Bicycle parking in the sidewalk zone of the street should be provided.
» Transit service may be provided. Transit stops should be well lit and visible from many points.
» Streets may have many wide curb cuts and driveways. Careful design is necessary to limit conflict between pedestrians and commercial vehicles, to the extent possible.
» Large canopy trees are desired to the extent possible and practical.
» Street and streetscape materials should be durable, given the presence of large and heavy vehicles.

TYPICAL/TARGET METRICS:
» Vehicle volumes less than 5,000 vehicles per day
» Vehicle speeds <25 MPH
» Face-to-face of curb 36’ to 58’
MODE EMPHASIS OVERLAY
All streets must be complete streets. All streets must be complete streets. All streets must consider how to accommodate all modes of transportation. However, since each street has a finite amount of space, some streets will emphasize and encourage—through design—one mode over another while still recognizing that all modes will have occasional use. All streets must consider how to incorporate green infrastructure and stormwater management best practices. Modal overlays map and describe how specific modes are emphasized.

Streets of all types must provide safe and accessible accommodation for pedestrians of all ages and abilities—both along the street and at street crossings. “Accommodation” requires adequate space to facilitate and enhance the range of pedestrian demands common for that street type. Because of their fundamental nature, some street types, such as Neighborhood Business and Urban Center streets, feature greater concentrations of pedestrians and thus provide a higher level of pedestrian accommodation. Accommodation generally is not met with a narrow strip of pavement scarcely wide enough for a single individual.

Neighborhood Business and Urban Center streets will generally have even wider sidewalks to accommodate groups of people walking abreast, space for cafes and window shopping, opportunities for public art, and places to sit and linger. These streets need to be treated more like economic engines and gathering places, not thoroughfares.

COMMUNITY BICYCLE EMPHASIS

Streets designated for Community Bicycle Emphasis are designed to accommodate casual bicyclists. Community bicyclists may be children, seniors, less experienced or less confident adults, or any person on a bicycle desiring a more social and less stressful accommodation.

Community Bicycle Emphasis streets should be contiguous with one another and connected to the wider Commuter Bicycle Emphasis network. The Community Bicycle routes may be marginally more circuitous because they weave through and connect the many neighborhoods of the city. Together with the Commuter Bicycle network, Community Bicycle Emphasis streets should connect to common community destinations such as neighborhood business districts, schools, libraries, parks, and recreation centers.

Community Bicycle Emphasis is generally applied to lower stress streets—streets with lower volumes of traffic and/or lower typical travel speeds. Thus, Community Bicycle Emphasis is most common on Residential Link streets, although it may be applied to any street type.

The type of bicycle facility should be scaled to ensure a comfortable experience for a casual bicyclist. That at might mean a relatively low-level facility, such as a sharrow, on a quiet neighborhood residential street and a higher level facility, such as a protected lane, on higher traffic volume streets. Typical design enhancements added to streets designated as Community Bicycle Emphasis include traffic calming and/or traffic diverting features, increased landscaping and stormwater management features, and special signage, in addition to other treatments.
**Commuter Bicycle Emphasis**

Commuter Bicycle emphasis is generally oriented to more experienced bicyclists, however novice cyclists should be anticipated and accommodated on these streets.

Certain streets may be designated as critical spines in the larger regional bicycle network. These streets are generally continuous corridors that form a longer distance network.

Commuter Bicycle emphasis most commonly occurs on a subset of Network Residential, Neighborhood Business, and Downtown and Crosstown Connector streets. However, it may also be applied on Residential Link and Industrial/Maker streets. They generally connect to the downtown and other major employment areas and destination districts.

Streets designated for Commuter Bicycle emphasis generally provide a dedicated bicycle facility such as an on-street bike lane or off-street trail or cycle track. Given the relatively narrow width of many street rights-of-way in Grand Rapids, providing this level of bicycle accommodation may require the removal of on-street parking, the narrowing or conversion of one or more travel lanes, or the narrowing of sidewalk zone features such as parkways. The clear pedestrian zone of the sidewalk must not be narrowed below minimum thresholds.

Selecting the design treatment and/or allocation of the street right of way to accommodate Commuter Bicycle facilities depends significantly on the underlying street type. For example, removal of on-street parking on an Industrial/Maker street is preferable to narrowing travel lanes; in Neighborhood Business streets, however, removal of parking may be unacceptable while the narrowing of travel lanes is more desirable given the ancillary benefits provided.

**Transit Emphasis**

Transit Emphasis is generally assigned to streets that carry premium transit services.

Examples include bus rapid transit or planned future streetcar service and/or streets that have or are planned to include high frequency transit service. High frequency transit is generally defined as transit service every 15 minutes or better. Transit emphasis most commonly occurs on streets classified as Urban Center, Network Residential, Neighborhood Business, or Crosstown Connectors.

A limited number of streets are designated for transit emphasis. These are streets with higher frequency and span of transit service and/or streets where transit vehicles encounter an unacceptable level of congestion or delay, such that transit service becomes highly unreliable.

Streets designated for transit emphasis may moderately impact the flow of other traffic. These streets may be less appealing to bicyclists as well; however, with careful design bicycles and transit vehicles can share a street with quality and comfortable facilities for each. Pedestrian accommodation should not be compromised on Transit Emphasis streets; stop improvements may be needed to enhance pedestrian access to and from transit stops.

Design treatments that emphasize transit include relocated transit stops, enhanced stop amenities, smart signal operations, bus bulbs, queue jump lanes at intersections, and/or dedicated transit lanes, among others.
Although all streets must be complete streets, the network must continue to provide for the efficient movement of vehicles and freight.

Some streets in the network are explicitly designated to emphasize freight and vehicle movement. These streets must still be designed to safely accommodate pedestrians, bicyclists, and all other travelers.

Grand Rapids has an adopted truck route plan. All streets designated as truck routes must be designed to accommodate at least the occasional use by larger vehicles. However, some streets may be specifically designated for a higher proportion of freight vehicles. Additionally, as the center of the regional economy, Grand Rapids must anticipate and accommodate the efficient movement of regional vehicle travel. Within the city are several MDOT streets designated for Freight and Trucking. To ensure the successful movement of freight and ensure the continued need for efficient vehicle movement, some streets are designated with a Freight and Vehicle Emphasis.

As with all other streets, designation as Vehicle Emphasis does not mean that other modes can be unacceptably compromised. Safety for all potential users remains paramount. Additionally, these streets, as with all streets, must continue to serve and support their abutting land uses. However, by their nature, Vehicle Emphasis streets may be less attractive to pedestrians and bicyclists who have other route alternatives.

Unless specifically designated with another of the above overlays, both Industrial/Maker streets and Crosstown Connector streets have an inherent emphasis to safely and efficiently move freight vehicles and automobiles. The Vehicle Emphasis overlay may also be applied to Network Residential, Neighborhood Business, and Downtown street types.

Among other design approaches, streets overlaid with a Freight and Vehicle Emphasis may have signal controlled intersections or free flowing roundabouts, wider curb radii, longer signal cycles, longer block lengths and more curbside restrictions. Depending on the underlying context of the street, Vehicle Emphasis streets may either have a high number of access points (e.g. 28th Street) or very limited access (as on Beltline).