

Corridor Context

REALIZE **CED\N**R URBAN DESIGN FRAMEWORK

1

Acknowledgments

Steering Committee

Tracy Miller — Delhi Township Community Development Director
Howard Haas — Delhi Township DDA Executive Director
Jon Harmon — Delhi Township Board Trustee
Evan Hope — Delhi Township Clerk
David Leighton — DDA, Leightronix
Steve Warfield — Cedar Street Resident
Jamie Burton, PE — Hubbell, Roth, & Clark

Board of Trustees

C.J. Davis — Supervisor
Evan Hope — Clerk
Roy Sweet — Treasurer
Jon Harmon — Trustee
John Hayhoe — Trustee
Megan Ketchum — Trustee
DiAnne Warfield — Trustee
John Elsinga — Township Manager

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*This Plan Approved by the Delhi Charter Township
Planning Commission on October 24, 2016.*



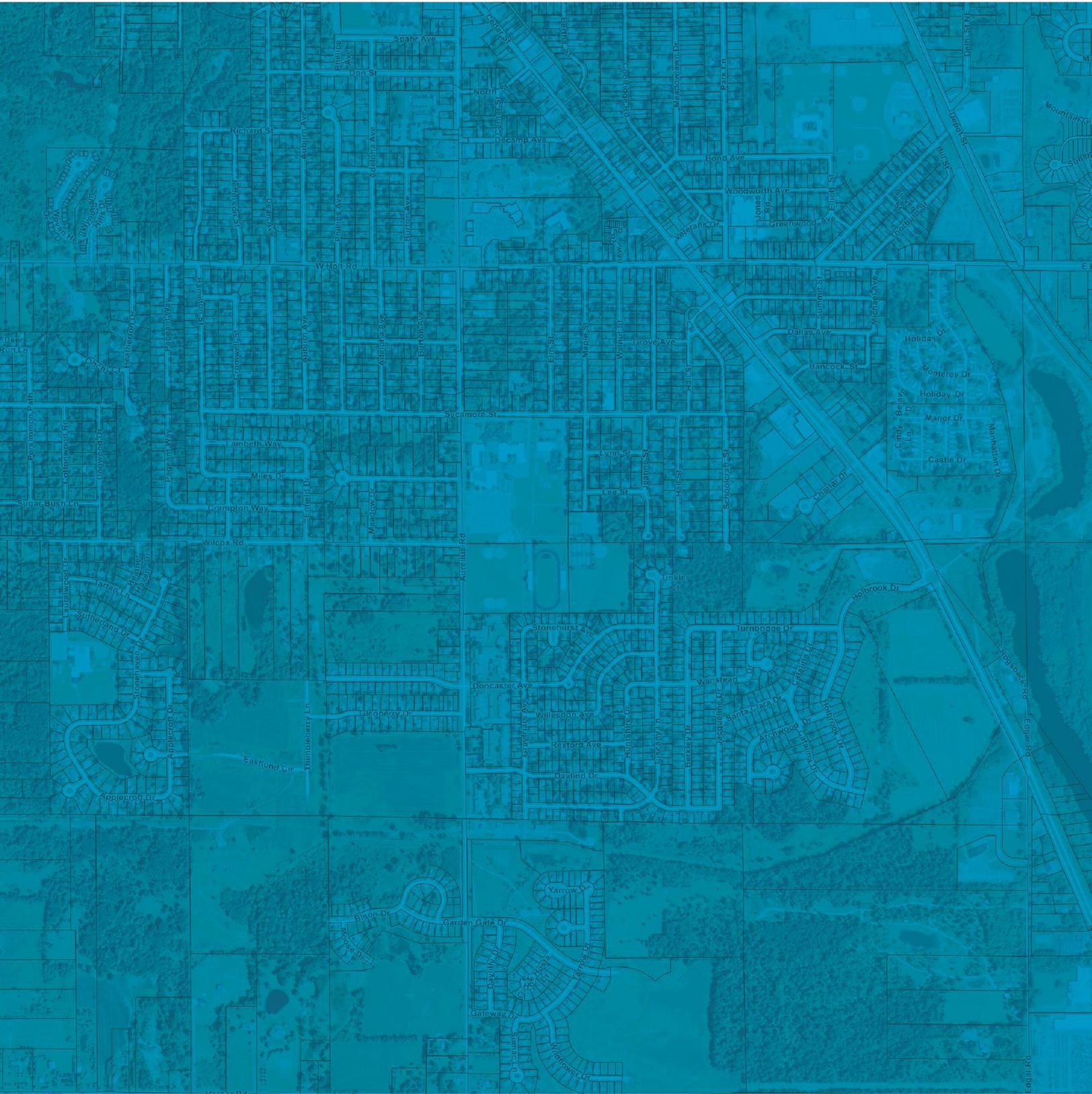
*Matt Lincoln, Chairperson
Delhi Charter Township Planning Commission*



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Delhi Charter Township Planning Commission*

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1.1 Purpose

The Cedar Street corridor, at just over four miles, traverses the Township from border-to-border. The corridor begins at the large-scale commercial retail aesthetic found on the northwest end of Willoughby Road. There is an increase to the ‘downtown’ feel southeast of Aurelius Road, before reaching the more rural land-use characteristics south of Holbrook to College Road. The corridor provides regional connections for civic institutions, employers, and retailers with some success, yet unified need and desire exists for a transformative change.

As Cedar Street traverses the Township’s many contexts and uses, the design of the street itself varies. The changing roadway design is indicative of different transportation and land use demands. The challenge of this Urban Design Framework is to chart a course towards a more unified, functional, and multimodal future for Cedar Street. The variation in the character of the street, from the Holt, Aurelius, Cedar triangle to suburban convenience retail to light industrial uses, presents an opportunity but also poses a question – how do these areas relate to each other? A well designed, zoned, and branded Cedar Street corridor is the best way to bring the community together, while also serving the needs of the regional population.



Veterans Memorial Garden
Entrance to Veterans Memorial
Garden along Cedar Street

In order to ensure that Cedar Street is well positioned for future success, the Realize Cedar Urban Design Framework takes several important leaps forward. The process engaged the public in a broad, yet unique way, to get over 'meeting fatigue' that has led to unproductive public meetings and low turnout. More importantly, the plan offers specific infrastructure and development concepts that range from building type and architectural guidelines to regional connections to monument design, materials and driveway consolidations.

Realize Cedar when implemented to reach its full potential, will address all of the essential functions of the public realm.

- Efficient traffic circulation
- Regional multi-modal connections & sustainability considerations
- Aesthetic beauty
- Land use and urban design context
- Promotion of business viability

Cedar Street is the embodiment of Delhi Township's unique and diverse community. Realize Cedar will lay the foundation for its evolution into a beautiful civic space that successfully and equitably meets the needs of vehicle traffic, bicyclists, and transit; that is a vibrant and walkable thoroughfare; and is the model for the Township's sustainable future over the next 5, 10, and 20 years.



1.2 Process

The Realize Cedar project spanned one year from October of 2015 to November of 2016. The planning process followed the State of Michigan requirements for Master Planning and the Realize Cedar Urban Design Framework is an adopted sub-area plan of the Delhi Township Master Plan.

In accordance with state law the following jurisdictions were coordinated with in the creation of the framework plan:

- Alaiedon Township
- Aurelius Township
- City of Lansing
- Windsor Township
- Ingham County Board of Commissioners
- Consumers Energy
- Lansing Board of Education
- Ameritech-Engineering
- Eaton Rapids Township
- Meridian Township
- Vevay Township
- Lansing Township
- City of East Lansing
- Tri-County Regional Planning Commission
- Comcast Cable
- Adrian & Blissfield Railroad Company
- Delta Charter Township

The Realize Cedar Urban Design Framework included a robust and diverse public engagement process that was designed to engage residents in places where it was convenient for them and to maximize civic participation. A steering committee led the process and outreach tactics included a walk audit, agency meetings, online outreach, focus groups, pop-up engagement, and a digital kiosk at Township Hall.



Walk Audit
Members of the steering committee participate in a walk audit of Cedar Street during their first meeting in November 2015

Steering Committee

McKenna worked with the Township to establish a steering committee responsible for overseeing and reviewing the project. The steering committee met monthly from November 2015 through July 2016, for a total of nine meetings. The steering committee consisted of the following participants:

- Tracy Miller: Delhi Township Community Development Director
- Howard Haas: Delhi Township DDA Executive Director
- Jon Harmon: Delhi Township Board Trustee
- Evan Hope: Delhi Township Clerk
- David Leighton: Owner of Leightronix (Cedar Street business)
- Steve Warfield; Cedar Street Resident
- Will Kangas; Delhi Township Communications (advisory, participated as needed)
- Jamie Burton, PE: Hubbell, Roth, & Clark (advisory, participated as needed)

At their first meeting, the steering committee participated in a walk audit of Cedar Street, walking as far north as just beyond Aurelius Road, and as far south as Hancock Road. Some of the key issues identified included narrow sidewalks and buffers, blight, noise, an uncomfortable environment in which to walk, and a lack of connectivity especially to neighborhoods on the east. The steering committee also noted several opportunities and ideas for improvement along the corridor. The property just south of AutoZone and the areas around the motels were cited for potential redevelopment. Other low-hanging fruit included benches along sidewalks, landscaping and potential DDA assistance to green up properties, and Farmers Market driveway access tightening.

Over the course of the project there were nine steering committee meetings. The committee members provided feedback on the draft goals and objectives, branding and logo, content for public engagement exercises, and conceptual designs of Cedar Street elements.

Agency Meetings

Our team met with staff at the Ingham County Road Department (ICRD) to discuss the possibilities and process for changing Cedar Street, which is a County-owned road within Delhi Township. At our first meeting, ICRD staff shared their approach to changing the design of a roadway. ICRD typically uses the standards and procedures from the MDOT Road Design Manual, and also uses American Association of State Highway and Transportation Officials (AASHTO) standards. We discussed converting part of Cedar Street from four lanes to three lanes using the best practices outlined by the Federal Highway Administration (FHWA). The FHWA road diet feasibility methodology was followed to create this document. At our second meeting we reviewed the design concept and project development schedule. It was acknowledged that the four to three lane conversion is an essential element to the overall corridor vision.

Online Outreach

McKenna established a project website which served as the clearinghouse for project information. The website used the Realize Cedar brand and provided a description of the project, along with links to our surveys on mySidewalk and Survey Monkey. McKenna created and printed business cards for the project with the website listed on the card, including a QR code to access the website by mobile phone. Business cards were primarily distributed at the Holt High School basketball games and at Valhalla Park to raise awareness of the project at pop-up workshops and to encourage participation in the surveys.

McKenna used Survey Monkey to gain feedback throughout the project from Delhi Township residents and any other users of Cedar Street. One of our first two surveys asked people to provide one big idea for improving Cedar Street, whether it was changes to the road, new land uses, or something else. The second survey asked people for their level of agreement with goal statements regarding both land use and transportation, mirroring the goal priority exercise done by the steering committee members. The feedback from these surveys guided the proposed architecture, streetscape design, and changes to the roadway. We developed drawings for key development nodes and the roadway, and asked people for their reactions in a third survey.

The McKenna team also developed polls via mySidewalk to gauge how important several street design concepts were to the users of Cedar Street. We asked people about the importance of having convenient places to eat and drink, shop, bike, walk, and drive, as well as the importance of having a well-maintained and well-designed streetscape along Cedar Street. These polls were created at the beginning of the project to provide a general indication of what people would want to see if Cedar Street were redesigned, and helped influence what concepts were emphasized in our recommendations.

A third online survey was conducted to preview the proposed design concepts included in this Urban Design Framework. Participants provided comments and indicated their support level as either "Yay, OK, Meh, or No Way." Of 90 responses, the Township received votes of 48% Yay, 6% OK, 12% Meh, and 34% No Way. The comments on the "Yay" votes were supportive of a walkable streetscape and a four to three lane conversion on Cedar Street. The "No Way" votes expressed concerns about tax increases and intersection wait times. Two factors address these concerns; 1) the Township intends to fund the project using DDA revenues and grants without tax increases, 2) traffic counts of 10,550 cars per day and intersection operational analysis indicate that the traffic is well within the accepted norms for three vehicle lanes. Further, a three lane profile will enable the consideration of signal timing adjustments at Holt and Aurelius that could improve the existing wait times.

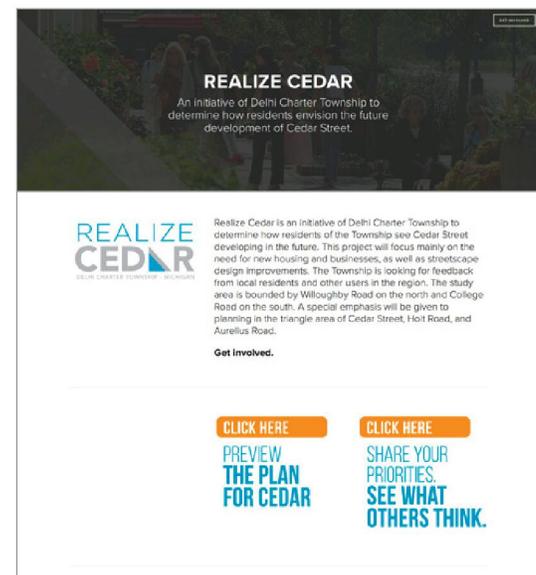
Project Website

Our team created a website to inform people about the project, provide links to surveys, and publicize draft plan materials



Partner Agencies

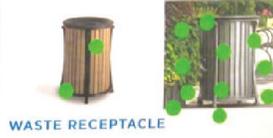
Partners in the Realize Cedar project included Delhi Charter Township and Ingham County



PREFERRED STREETScape ELEMENTS

CEDAR STREET CORRIDOR STUDY
DELHI TOWNSHIP · MI
January 14, 2016

Pedestrian Amenities



Softscape Elements



Hardscape Elements



Mckenna

Focus Groups

Focus groups were used to gain the perspectives of specific stakeholders

(Above) Participants gave feedback on streetscape elements in a visual preference survey

(Right) Our team used the flyer on the right to publicize the focus group for Cedar Street residents

Focus Groups

Our team held three focus groups to learn the perspectives of specific stakeholders along Cedar Street, specifically seniors, residents, and business owners. Each focus group consisted of four activities. We first led the focus group in a brainstorming activity similar to the big idea survey. We then had people take the goal priority survey. Next, we led a group discussion on specific questions regarding different aspects of Cedar Street. The final activity was the visual preference survey with dot voting exercise, in which, people placed dots next to their preferred landscape and streetscape elements.

The first focus group was held in January at the Sam Corey Senior Center and was targeted toward the senior Township residents. There were 17 total participants in the focus group. Some of the concerns raised during this focus group included lack of safety walking along or crossing Cedar Street, a need for higher quality restaurants and other destinations, and traffic issues including vehicles speed and difficulty turning.

The second focus group was held in February at the DDA Office and was targeted toward the residents of Cedar Street. There were five total participants in the focus group. Some of the ideas raised during this focus group included greater walkability and safety in the downtown area, enhancing the potential of new and existing businesses to thrive, and ensuring adequate parking for both residents and visitors.

The third focus group was held in April at the DDA Office and was targeted toward business owners on Cedar Street. There were three total participants in the focus group. Some ideas and issues that were raised during this focus group included improving the traffic flow during heavy congestion especially at the beginning and end of school, improving the walking and biking environments, and consistency with governmental expectations and guidelines for development along Cedar Street.

REALIZE CEDAR
DELHI CHARTER TOWNSHIP · MICHIGAN

Join us for a Cedar Street Resident Focus Group: Goals & Objectives Session

Delhi Township is working to develop a new vision for **Cedar Street** and we want to hear from you! The Township is seeking input from the Residents of Cedar Street at a focus group meeting on February 11th. Please come and share your thoughts about how to make Cedar Street a better place for you!

Thursday
February 11, 2016
5:30 - 6:30pm

DDA Office
2045 Cedar Street
Holt, MI 48842
(517) 699-3866

Mckenna

Pop-Up Engagement

McKenna staff hosted pop-up tabling sessions at four community events. The pop-up tabling allowed our team to raise awareness of the project to large groups of people and collect input without needing to conduct separate meetings. We conducted intercept surveys to gauge public reactions on different elements of the project and to encourage people to interact with the workshop display. The team also established a digital kiosk to display at Township Hall, which was used to receive feedback on the draft plan for the Downtown Node, Market Node, and roadway changes.

Our first pop-up tabling workshop was held in March of 2016 at the Holt High School junior varsity and varsity basketball games, which we estimate more than 500 people attended. For this workshop we focused on describing the project to attendees and asked for people to provide their big idea for Cedar Street. Many people were engaged in discussion about their big ideas for Cedar Street and the team handed out the project business cards to people and encouraged them to check out the project website to get involved. Overall, through talking to people at our display boards and handing out the business cards, we engaged with approximately 45-50 people. Residents expressed a desire for reinvestment in the service-oriented shopping destinations, including restaurants, grocers, and entertainment.

Our second pop-up tabling session was held in June at Holt Farmers Market and Valhalla Park. At these workshops, we asked for feedback on the draft plan for the Downtown Node, Market Node, and roadway changes. This display was set up like our second-round survey question, and we explained to attendees how the feedback and ideas from the first surveys were used to form the proposed street and site designs.

We received 10 completed comment cards on the draft plan, which was displayed at Holt Farmers Market. Nine respondents enthusiastically supported the plan concepts and one expressed concerns with the Aurelius intersection. We also handed out approximately 100 project business cards at Valhalla Park.

The third pop up meeting was held in July at the July 14 "Music in the Garden" with the Sea Cruisers singing popular hits from the 50's, 60's, and 70's. Many residents took time to discuss their thoughts and express support for Realize Cedar and additional business cards were distributed to people who preferred to participate online. The event was attended by more than 820 people and we received six comment cards offering support of the project.

The fourth pop up meeting was held at the July 21 breakfast meeting of the Holt Business Alliance. Township staff and the planning team presented the planning concepts to the Alliance and fielded questions. Alliance Members were provided with business cards to provide feedback through the online engagement platform.



Pop-Up Engagement
(Above) Realize Cedar display at the Farmer's Market on June 11 and Music in the Garden on July 14, where our team gave people the opportunity to provide feedback on the draft plan.

(Right) Display





ESTABLISHED 1842



Digital Kiosk
This digital kiosk was displayed in Township Hall beginning in June in order to capture new participants into the project

Digital Kiosk

A digital kiosk was displayed in Township Hall beginning in June to gather feedback on the draft plan for the Downtown Node, Market Node, and roadway changes. The kiosk display contained the images from the boards used at the Farmers Market and Summer Concert Series pop-up workshops. The display gave us the ability to extend our outreach by providing an opportunity for engagement during normal business hours and by capturing new participants in the project. The digital kiosk received 428 interactions.

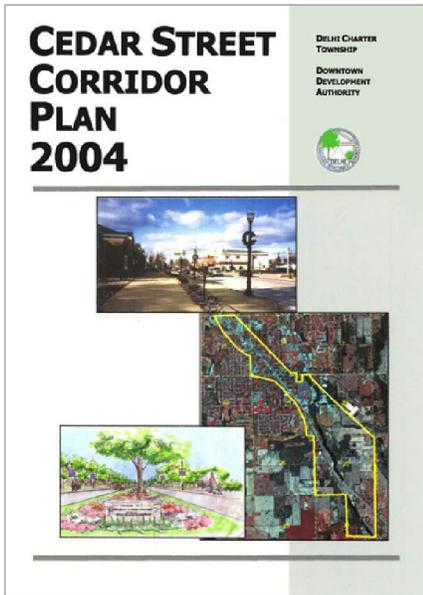


1.3 Plans

Market Study

In 2014, The Chesapeake Group conducted a Market Opportunities Assessment for Delhi Township. The study examined Ingham County and Delhi Township trends, the impact of the ‘Great Recession’, as well as the impact of ‘mega trends’ in local patterns.

Using an adopted trend forecast, the study found that Delhi Township is projected to gain just under 4,000 people between 2010 and 2045, for an expected percent change ranging between 1.1-2.4% every five years. The study also found that Delhi Township has the market to absorb between 500-650 and 1,100-1,200 housing units over the next five to ten years respectively. Between 50-65% of the new housing units are projected to be multiple unit developments.



Previous Plan
The Delhi Township DDA previously conducted a corridor plan for Cedar Street in 2004 to supplement the current Township Comprehensive Plan at the time

The study also found projected growth in the non-residential development market. Between 2014 and 2024, there is a projected commercial square footage growth of nearly 250,000. Much of this anticipated growth is in the transportation/vehicle service, hardware, and general merchandise sectors. This projected growth comprises just over half of all projected market space growth in Ingham County. Several non-residential development opportunity sites were identified along, or near, the Cedar Street corridor, including 1465 N Cedar Street, 1694 N Cedar Street, and the Cedar Point site at Cedar and Fernwood. The market study concludes by recommending development projects such as active adult housing, retail plus office, and/or rehabbing current multi-story structures.

Delhi Charter Township Master Plan – 2013

Originally adopted in 2002, Delhi’s Master Plan has been amended in 2007 and most recently in 2013. The 2013 Master Plan makes several references to Cedar Street and works to implement planning projects and goals from the past, including the South Cedar Street Corridor Plan (1995), Downtown Development Plan, Sidewalk Master Plan, Cedar Street Corridor Plan (2004), Non-Motorized Transportation Plan (2007), and the Complete Streets Ordinance (2012).

The Master Plan highlights the use of transitional zoning, or density standards from high density commercial to low density residential, for the Cedar Street corridor. The Master Plan recommends the use of overlay zones to indicate the areas of transition and ensure, on a case by case basis, that proper space is given for transition. The Future Land Use map identifies Cedar Street as predominately maintaining its commercial corridor character into the future. The map does identify a large portion of the east side of Cedar Street south of Holt Road and north of Harper as a large Planned Development site.

Cedar Street Corridor Plan – 2004

The DDA undertook a Cedar Street corridor study in 2004 as a more specific planning effort to complement the current Comprehensive Plan at the time. The plan set out to evaluate the market and physical conditions to determine future land use mixes, as well as provided concept designs. The 2004 plan informs for this study; however, the assumptions, the traffic data, market data, and land use trends are no longer current. Additionally, some of its recommendations, like a roundabout at Aurelius Road, were explored and deemed unfeasible.

The 2004 plan broke the Cedar Street corridor into four different districts. The North Cedar Business Area district called for infill development, improved landscaping and pedestrian connections, and driveway consolidation. The Holt Town Center district encouraged an appropriate blend of residential and non-residential uses, with an emphasis on filling vacant lots and excessive parking areas, while still being compatible for residential neighborhoods nearby. The Central Cedar Business Area district encouraged the expansion of residential development, complimented by institutional, office, and limited retail uses. Site design guidelines were also recommended in order to prevent the linear sprawl of retail development as residential uses increased. The South Cedar Business Area district recommended planned unit developments in order to ensure controlled and efficient development projects, with a focus on major retail complexes, research and development facilities, and/or planned residential communities.

1.4 Scale

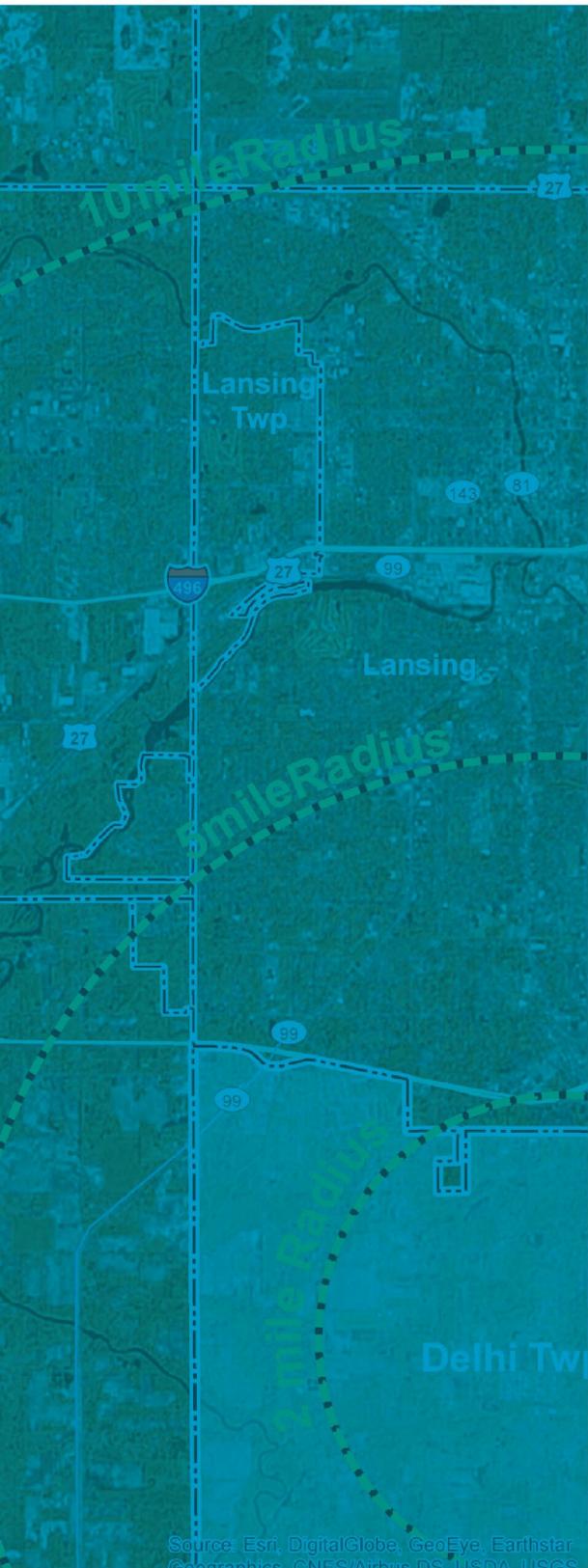
Regional Scale

Cedar Street is a major north-south corridor in the Lansing metropolitan area. Cedar Street runs for 14 miles from Grand River Avenue in Lansing to Kipp Road in Mason, connecting Downtown Lansing to the neighborhoods and communities to the south. From the beginning of the road in Lansing to Holt Road in Delhi Township, Cedar Street is classified as a principal arterial, meaning that it carries a large volume of commercial and inter-city traffic in an urban setting.

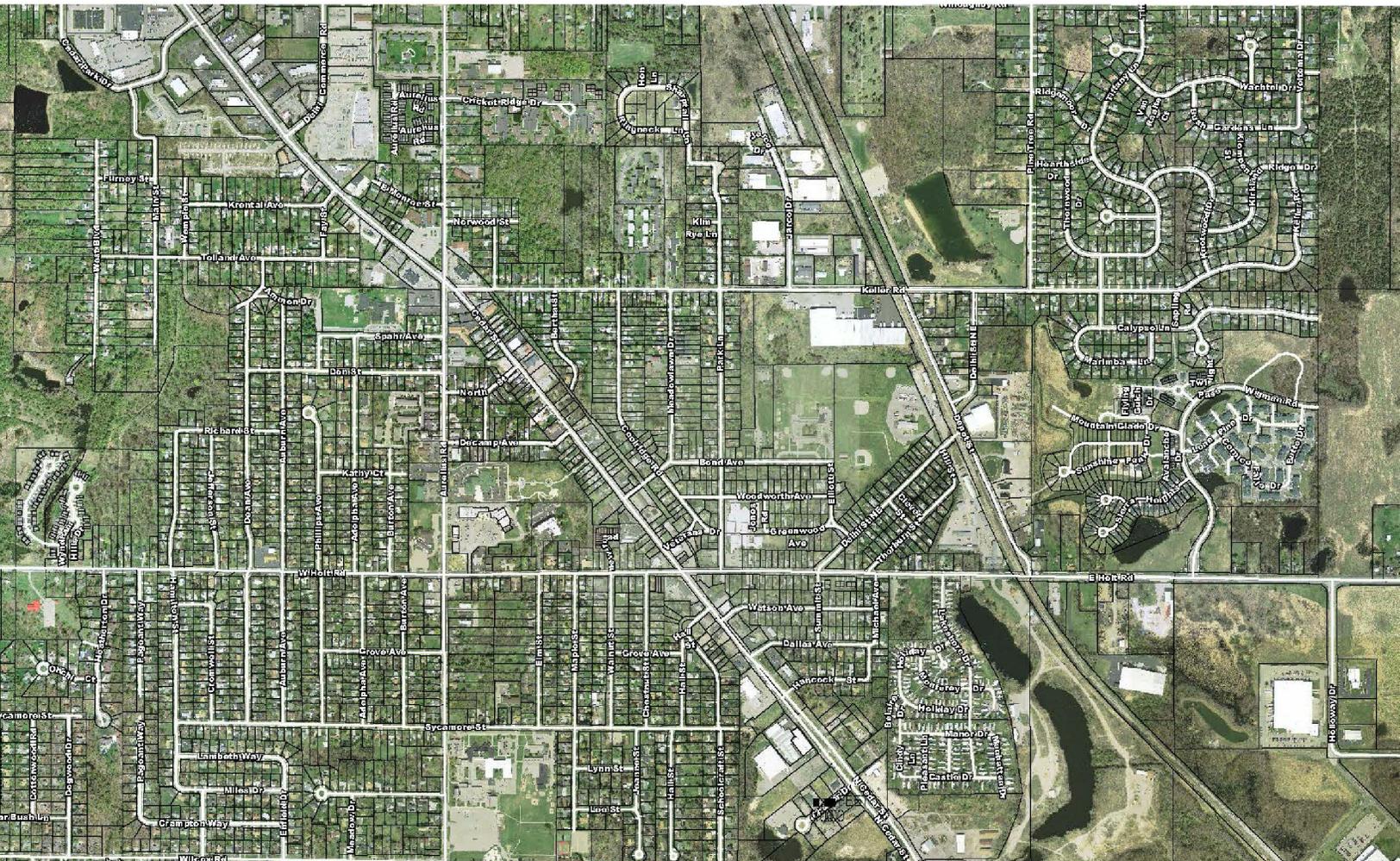
From Holt Road south to the end of the road in Mason, Cedar Street is classified as a minor arterial road, meaning that it carries mostly local traffic and facilitates shorter trips than principal arterials. The entire corridor acts as a local alternative route from US 127 and Interstate 96.

Regional Context

Cedar Street in context with the greater Lansing metropolitan region, with distances of 2, 6, and 10 miles from the Downtown Holt area shown



Source: Esri, DigitalGlobe, GeoEye, Earthstar
Geographics, CNES/Airbus DS, USDA, USGS



Downtown Holt Area

The Downtown Holt area with parcels shown in context with the surrounding neighborhoods of Delhi Township

Township Scale

Cedar Street enters Delhi Township at its northern border with the City of Lansing at Willoughby Road, and runs southeast for approximately 4 miles to the eastern border with Alaiedon Township at College Road. The northern part of Cedar Street from Willoughby to Holbrook has a variety of commercial uses along its entire length, with some residential pockets especially between Fay and Aurelius and between North and Bond. The southern part of Cedar Street from Holbrook to College is more rural in character and businesses tend to be larger and spaced apart from other businesses. Spartan Speedway is located at the intersection of Cedar and College, and is a regional attraction.



Block Scale

Cedar Street between Aurelius and Holt Roads is considered the downtown of Holt and the community hub of activity for Delhi Township. Several key community resources are located on this part of Cedar Street. The Holt Farmers Market is located across from the intersection with North Road, and with the corner lot forms the Market Node opportunity discussed in this study. The Sam Corey Senior Center is located roughly across from De Camp Street, and is a gathering place for senior activities and programs. Just to the south is the entrance to Veterans Park, which hosts the Summer Concert Series and attracts other visitors to the area. The area around the Holt Road intersection has several commercial buildings close to each other, creating a hub of activity. The area at this corner and extending to Bond forms the Downtown Node opportunity discussed in this study.

Downtown Node Block

Two blocks of Cedar Street from Holt Road to Bond Avenue forming the Downtown Node opportunity discussed in this study



Population and Housing
Delhi Township Population
and Housing Trends,
2000-2010

Population

Delhi Township's population has increased by just over 3,000 people, or 14.7% from 2000 to 2010. At the same time, the population of the Township has aged slightly, with an increase of almost 700 people aged 65 years or older. This accounts for a 1.3% increase in the proportion of older adults living in Delhi Township. This will be an important trend to keep in mind for Delhi Township as the baby boomer generation continues to enter into retirement age, particularly considering many in this demographic have a desire to 'age in place'.

Table 1A: Population Trends — Delhi Township, 2000-2010

	2000	2010
Population	22,569	25,877
0-17 Years Old	6,514 (28.9%)	6,586 (25.5%)
65+ Years Old	2,166 (9.6%)	2,808 (10.9%)
Median Age	35.9	37.7

Source: U.S. Census

Housing

The number of occupied housing units, or households, has increased with the increase in population. While both family and non-family households have seen significant growth since 2000, non-family household's share of occupied housing has increased by 3.9%. This trend is similarly reflected in the rise of renter-occupied units, a demographic which is typically associated with non-family households. Vacancy has also seen a slight up-tick since 2000, by just over 200 units, suggesting the Township may have experienced housing expansion faster than demand had warranted.

Table 1B: Housing Trends — Delhi Township, 2000-2010

	2000	2010
Households	8,563	10,191
Family Households	6,266 (73.2%)	7,066 (69.3%)
Non-Family Households	2,297 (26.8%)	3,125 (30.7%)
Owner Occupied	6,656 (77.7%)	7,539 (74.0%)
Renter Occupied	1,907 (22.3%)	2,652 (26.0%)
Vacant Units	425 (4.7%)	626 (5.8%)

Source: U.S. Census

Workforce

As of 2013, there were just over 12,000 employed residents in Delhi Township. Approximately 5,000 residents had at least a Bachelor's degree, or 34.7% of the population 25+ years old. Employment and educational attainment have led Delhi Township to being a relatively affluent community, with a median household income of over \$60,000. Just under 6% of Delhi residents live in poverty.

Only 5.5% of the community either walks or takes public transit to work. These statistics point to the potential need for a more comprehensive transportation planning approach that may be more conducive to alternative modes of transportation. This is particularly the case for those living in poverty or that are disabled (6.0%) as they may not have access to a car.

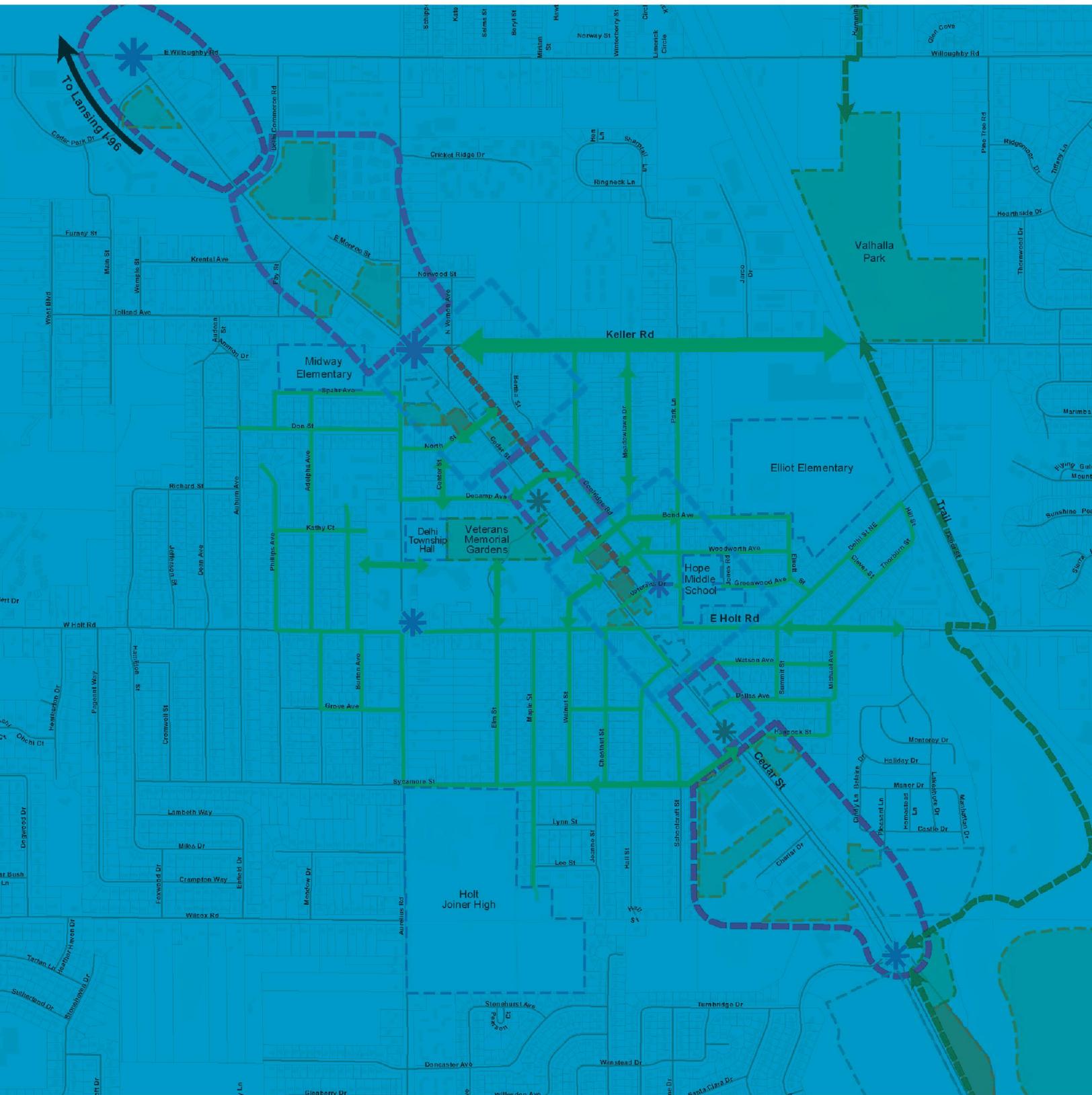
Table 1C: Economic, Educational, and Work Commute Trends
— Delhi Township 2009-2013

Economic Trends	
Workers 16+ Years Old	12,353
Median Household Income	\$61,273
Median Family Income	\$73,204
Poverty Status	1,528 (5.9%)
Disability Status	1,560 (6.0%)
Educational Attainment	
Less than High School Graduate	762 (5.3%)
Bachelor's Degree or Higher	4,999 (34.7%)
Work Commute Trends	
Drove Alone	10,668 (86.4%)
Public Transit	182 (1.5%)
Worked at Home	500 (4.0%)
Mean Travel Time	20.6 minutes

Source: American Community Survey 2009-2013



Workforce Trends
Delhi Township Economic,
Educational, and Work
Commute Trends, 2009-2013





1.5 Opportunities

Cedar Street is a vital connection in Delhi Township that links to US 127 and Mason on the south and to Interstate 96 and Lansing on the north. In the middle of Cedar Street is the historic hamlet of Holt, which serves the role of Delhi Township cultural center. Upon thorough analysis of the Cedar Street corridor within Delhi Township, many real and perceived opportunities and issues emerge. This analysis presents research, design assessment, and transportation system examination. It will provide a basis for corresponding recommendations in the Urban Design Framework. The following opportunities and issues are illustrated on the corresponding Opportunities and Issues Map.

Transitional Uses

Sites designated as Transitional Uses represent non-conforming uses, with respect to their current zoning classification or sites otherwise ripe for change based upon development potential. These include an old motel site, vacant lots, an automotive repair shop, and a large tract of agricultural land at the south end of the corridor which has been zoned General Business. The realization of untapped potential at any of these locations represent a significant opportunity for the corresponding property owners or developers.

Key Opportunity Sites

Sites designated as Key Opportunity sites are those that could have a major impact on the community as a whole as a result of the scale or nature of their potential development. Such sites include an underutilized shopping center, three development opportunity sites near the Farmer's Market, and three additional development sites closer to the Holt Road intersection.

Parks and Recreation

As the Cedar Street Corridor develops, current and future residents will desire reasonable proximity to recreational opportunities and green space. An understanding of park locations and access existing will be instrumental in addressing this issue. Veterans Memorial Garden offers a high quality central recreational opportunity. However, Valhalla, Kiwanis, and the new park being developed at Hogsback Road are well within a walkable and bikable distance to the downtown area.

Public Uses

Civic uses such as libraries and government centers can serve to anchor retail centers and restaurants in existing and new town centers. Additionally, elementary schools and their associated green spaces can serve as excellent neighborhood centers. The public uses within walking distance of the study area could be improved with connections to downtown. These uses in particular could shape a recommendation for new biking, walking, or even vehicle connections to retrofit the street grid.

Gateway Areas

Any entry points and pathways that have been designed with landmark emphasis have the potential of defining a community in the minds of residents and visitors alike by the impressions that they create. A welcome sign with a compelling message and design can achieve this kind of impact in the right context. Sometimes a landscaped promenade, archway, or public art installation can achieve the desired result. The Opportunities and Issues map identifies key entry points for thoughtful consideration and future recommendations.

Intersection Redesign

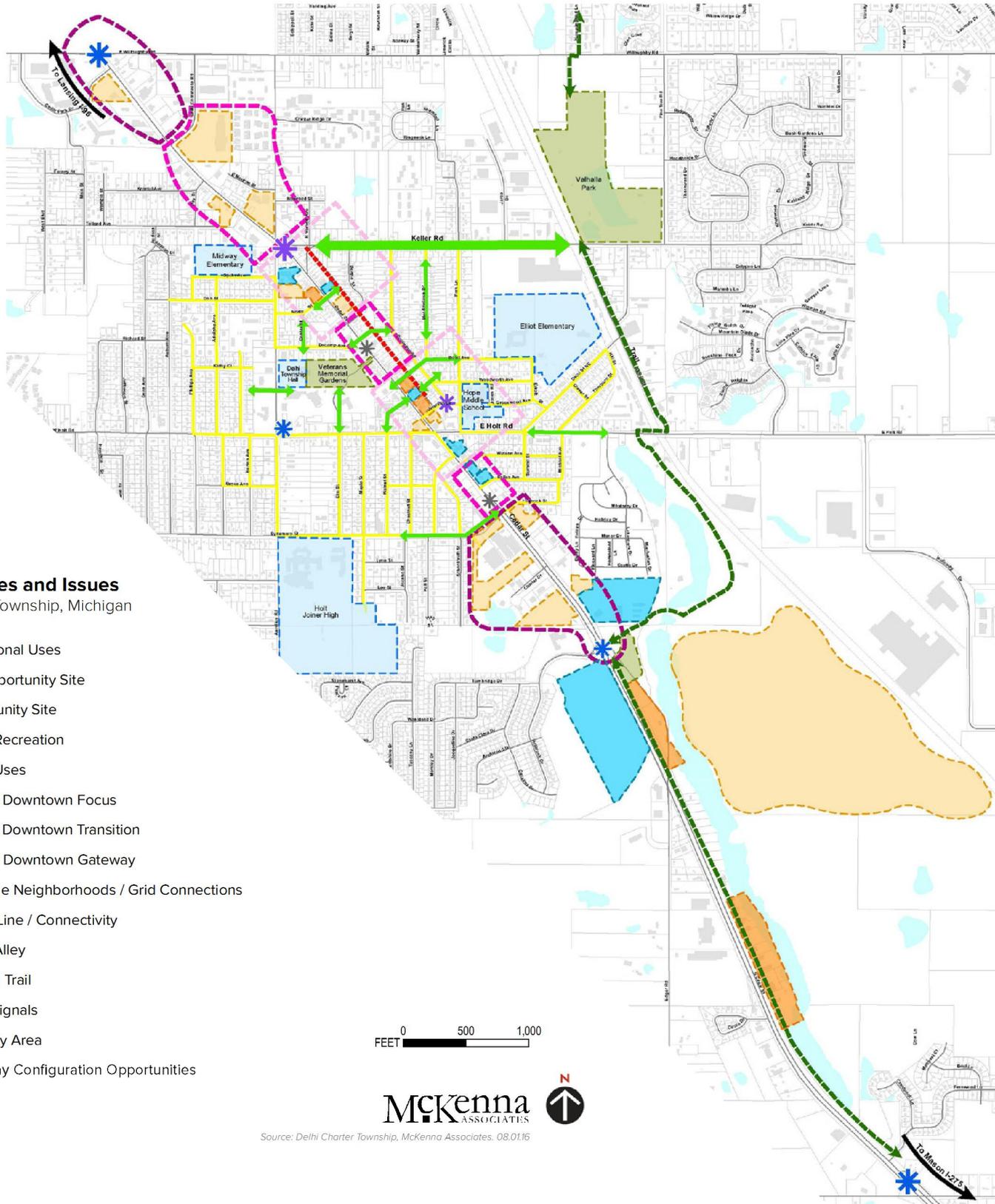
Occasionally, due to natural features, property ownership, travel trajectories, or competing functional objectives, difficult conditions arise regarding roadway intersections and other roadway configurations that cannot be resolved via signaling or marking. Additionally, with changing needs, opportunities may arise to simplify or enhance a roadway condition. A notable issue that must be addressed is the confluence of Keller, Aurelius and Cedar, which is confusing and only permits movement in one direction at a time. The Holt/Cedar and Coolridge/Veterans intersections could also be improved.

Type A: Downtown Focus

The general area of the existing Holt town center, as well as the area around the Farmer's Market, have each been delineated for intensifications. Within these districts, there is the general expectation that a destination for entertainment, shopping, working and living in a compact, walkable environment will be supported. It is further implied that new uses within each of these districts and their respective existing adjacent uses will be separated from one another by compatible uses or zones. Finally, new buildings along designated frontages could be constructed to a build-to-line (or Right-of-Way line) with a shopfront-style private frontage. The Township has the opportunity to partner to create this kind of development in designated areas.

Opportunities and Issues

An aerial overview map of Cedar Street showing the opportunities and issues in different segments of the corridor



Map 1A:
Opportunities and Issues
 Delhi Charter Township, Michigan

- Transitional Uses
- Key Opportunity Site
- Opportunity Site
- Parks/ Recreation
- Public Uses
- Type A: Downtown Focus
- Type B: Downtown Transition
- Type C: Downtown Gateway
- Walkable Neighborhoods / Grid Connections
- Desire Line / Connectivity
- Public Alley
- Valhalla Trail
- Hawk Signals
- Gateway Area
- Roadway Configuration Opportunities

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Source: Delhi Charter Township, McKenna Associates, 08.01.16

Type B: Downtown Bridge

Adjacent to the Downtown Focus areas there are transitional districts designated to be of similar character but lower intensity. These districts should contain a mix of building types, including those of both residential and commercial character, as well as a small range of building setbacks and private frontage types. The existing configurations of these districts are suited to this designation supporting the opportunity for positive transformation.

Type C: Downtown Gateway

Along the southern and northern reaches of the Cedar Street corridor opportunities exist to create downtown gateways and transition to an area where pedestrians are prioritized. On the south, this area is between the roundabout and Holt Road. On the north, this area is between Delhi Commerce Road and Aurelius Road. The further development of the vision for these areas and ensuring appropriate corresponding development present opportunities for the Township.

Walkable Neighborhood Grid Connections

Delhi has several proximate neighborhoods that area within a ½ mile of the Downtown area. While the inherent connectivity of a street grid generally enhances walkability, barriers to the grid can isolate blocks or neighborhoods from desirable destinations. Therefore, it is imperative that existing streets be retrofitted to restore connections to downtown. When vehicle connections are unfeasible or impractical, biking and walking connections can be pursued. Improving such connectivity presents both a challenge and an opportunity.

Desire Lines and Connectivity

There are naturally occurring places where increased connectivity is desirable, such as new street openings or the creation of new pedestrian connections. Desire lines link neighborhoods into Cedar Street at strategic locations. Such opportunities have been illustrated here using green arrows.

Public Alley

Walkable districts include buildings constructed to a build-to line or right-of-way line and facades that occupy all (or close to all) of lot frontages. As Cedar continues to develop in this manner an alley can be used to develop secure individual lot access from some location other than the front. Traditional Downtown-style development achieves this with alley easements along rear property lines. Consequently, a record of existing alley easements has tremendous inherent value in the planning of any corridor. Alley easements potentially accommodate new and existing utilities as well.

Valhalla Trail

The Valhalla Trail is one of Delhi Township's premier trails. According to the Delhi Trails website, "the long-term plan is to link the majority of Delhi Township with interconnected non-motorized pathways and to connect those pathways with the trails of surrounding communities." Thus, the creation of clear and convenient bicycle route or bicycle path connections from Cedar Street to the Valhalla Trail presents an enormous opportunity for the future.

Midblock Crossings

Midblock crossings allow pedestrians to cross safely at unsignalized locations. They often use beacons, flashing lights, or stop signs. Two such crossings exist currently along the Cedar Street corridor: one near Veterans Memorial Gardens and the other between Dallas Avenue and Hancock Street

Summary

The opportunities and issues outlined here are multi-faceted. Implementation of the vision for the Cedar Street should capitalize on the opportunities and issues to realize the corridor's potential.





1.6 Action Plan

The Strategic Action Plan for Cedar Street is organized around the following three goals:

Goal 1:
Promote Cedar Street as a desirable corridor for development, with various desired and needed uses available in the different sections of the corridor.

Goal 2:
Foster connectivity and access between the surrounding neighborhoods and destinations along Cedar Street.

Goal 3:
Create a cohesive, consistent design along Cedar Street to attract investment and activity, and to enhance the identity of the corridor.

Abbrev	Partners
TWP	Delhi Charter Township
DDA	Downtown Development Authority
BO	Business Owners
ICRD	Ingham County Road Department
CM	Community Members
PC	Planning Commission
PR	Parks and Recreation Department
FLRT	Friends of the Lansing River Trail
HFM	Holt Farmers Market
UC	Utility Companies
SFG	State and Federal Grants

Abbrev	Priority
A	Top Priority
B	Near-Term Priority
C	Long-Term Priority

Goal 1: Promote Cedar Street as a desirable corridor for development, with various desired and needed uses available in the different sections of the corridor.

Objective 1.1: Encourage the preferred level of density in each section of Cedar Street.				
Actions	Priority	Time Frame	Partnerships	Funding
Action 1.1.1: From Willoughby to Fay, allow for low-medium density that supports strip and auto-oriented commercial activity to continue	Ongoing	Ongoing	TWP	TWP
Action 1.1.2: In the Community Activity Center, encourage a transition from low-medium to high-medium density according to Section 2.1	A	1-2 years	TWP, DDA, PC, BO	TWP BO
Action 1.1.3: In the Community Core, require high density to create activity hubs at the Downtown Node and Farmers Market Node and seek out developers to invest in these sites	A	1-2 years	TWP, DDA, PC, HFM, BO	TWP DDA BO
Action 1.1.4: From Hancock to College, allow for low-density development to continue	Ongoing	Ongoing	TWP	TWP
Objective 1.2: Allow for the desired land uses in each section of Cedar Street.				
Actions	Priority	Time Frame	Partnerships	Funding
Action 1.2.1: From Willoughby to Fay, continue to encourage drive-thru and other commercial uses oriented toward automobiles and Interstate traffic	Ongoing	Ongoing	TWP	TWP
Action 1.2.2: In the Community Activity Center, encourage a transition from auto-oriented commercial uses toward smaller scale and pedestrian-oriented development	A	1-2 years	TWP, DDA, PC, BO	TWP BO
Action 1.2.3: From Hancock to College, continue to encourage larger sites as needed including those requiring outdoor storage	Ongoing	Ongoing	TWP	TWP
Objective 1.3: Enforce site design standards for new development.				
Actions	Priority	Time Frame	Partnerships	Funding
Action 1.3.1: Require new buildings to be of the types found within Section 2.3 by amending the Delhi Township Ordinance Section 5.13	A	1-2 years	TWP, DDA PC	TWP BO
Action 1.3.2: Require parking to be designed according to Section 2.4 including parking in the rear of the building within the Community Core areas according to Delhi Township Ordinance Section 5.13	A	1-2 years	TWP, DDA, PC, BO	TWP BO
Action 1.3.3: Enforce architecture guidelines according to Section 2.5 by amending the Delhi Township Ordinance Section 5.13	A	1-2 years	TWP, DDA, PC	TWP

Goal 2: Foster connectivity and access between the surrounding neighborhoods and destinations along Cedar Street.

Objective 2.1: Reconfigure the roadway on Cedar Street between Holt and Aurelius Roads.				
Actions	Priority	Time Frame	Partnerships	Funding
Action 2.1.1: Install 4-lane to 3-lane conversion on Cedar between Aurelius and Holt Roads	A	1-2 years	TWP, DDA, ICRD	TWP, DDA, ICRD, SFG
Action 2.1.2: Add on-street parking along Cedar Street in the reconfigured roadway, especially near activity nodes at the Downtown and Farmers Market	A	1-2 years	TWP, DDA, ICRD	TWP, DDA, ICRD, SFG
Objective 2.2: Create connections to neighborhoods through grid retrofits.				
Actions	Priority	Time Frame	Partnerships	Funding
Action 2.2.1: Encourage vehicular access to the surrounding neighborhood streets, especially to Bertha Street, Coolridge Road and Sycamore Street	C	5+ years	TWP, DDA	TWP, DDA
Action 2.2.2: Where vehicular access points are impractical, install sidewalk-only connections	C	5+ years	TWP, DDA	TWP, DDA
Objective 2.3: Require cross access management between sites.				
Actions	Priority	Time Frame	Partnerships	Funding
Action 2.3.1: Create an alley in the existing utility corridor on the east side of Cedar Street	B	3-5 years	TWP, DDA, UC	TWP, DDA, UC
Action 2.3.2: Reduce the number of driveways as sites are redeveloped	B	3-5 years	TWP, DDA, BO	TWP, DDA, BO
Objective 2.4: Consider all modes of transportation including bicycling and walking.				
Actions	Priority	Time Frame	Partnerships	Funding
Action 2.4.1: Between Willoughby and Aurelius, develop a multi-use side path on the north/east side of Cedar Street to provide non-motorized access	B	3-5 years	TWP, DDA, BO	TWP, DDA, BO
Action 2.4.2: Between Aurelius and Holt, install sharrows on Cedar Street and enhance existing sidewalks as sites are redeveloped	A	1-2 years	TWP, DDA, ICRD	TWP, DDA, ICRD, SFG
Action 2.4.3: Between Holt and College, develop trail to link Delhi Township to Mason and to other trails in the region	B	3-5 years	TWP, DDA, BO, FLRT, PR	TWP, DDA, SFG

Goal 3: Create a cohesive, consistent design along Cedar Street to attract investment and activity, and to enhance the identity of the corridor.

Objective 3.1: Develop activity nodes in the designated Community Core areas.				
Actions	Priority	Time Frame	Partnerships	Funding
Action 3.1.1: Develop Downtown Node near Cedar and Holt Road intersection according to framework in Section 4.1, and seek developers who will invest in the site	A	1-2 years	TWP, DDA, PC, BO	TWP, DDA, BO
Action 3.1.2: Develop Farmers Market Node near Farmers Market/Post Office according to framework in Section 4.2, and seek developers who will invest in the site	A	1-2 years	TWP, DDA, PC, HFM, BO	TWP, DDA, BO
Action 3.1.3: Amend Section 5.13 of the Delhi Township Ordinance to encompass the new boundaries of Community Activity Center and Community Core areas according to the map in this document	A	1-2 years	TWP, DDA, PC	N/A
Objective 3.2: Enhance the streetscape along the entire corridor.				
Actions	Priority	Time Frame	Partnerships	Funding
Action 3.2.1: Install landscaping according to palette in Section 4.4	B	3-5 years	TWP, DDA, BO	TWP, DDA, BO
Action 3.2.2: Amend Delhi Township Ordinance Section 6.10 to regulate landscaping for parcels with frontage on Cedar Street	A	1-2 years	TWP, DDA, PC	N/A
Action 3.2.3: Install hardscape elements according to palette in Section 4.5	B	3-5 years	TWP, DDA, BO	TWP, DDA, BO
Action 3.2.4: Create opportunities for public art to enhance other streetscape elements	C	5+ years	TWP, DDA, BO, CM	TWP, DDA, BO, SFG
Objective 3.3: Install signage and other elements to enhance the corridor identity.				
Actions	Priority	Time Frame	Partnerships	Funding
Action 3.3.1: Install gateway entrance signs to the corridor at Fay Avenue and Hancock Drive	B	3-5 years	TWP, DDA, BO	TWP, DDA, BO
Action 3.3.2: Install business oriented identity and wayfinding ground signs at major activity nodes and near key intersections	B	3-5 years	TWP, DDA, BO	TWP, DDA, BO
Action 3.3.3: Use other identity elements including banners according to Section 4.6	C	5+ years	TWP, DDA, BO	TWP, DDA, BO

Development Framework

REALIZE **CEDAR** URBAN DESIGN FRAMEWORK

2

Acknowledgments

Steering Committee

Tracy Miller — Delhi Township Community Development Director
Howard Haas — Delhi Township DDA Executive Director
Jon Harmon — Delhi Township Board Trustee
Evan Hope — Delhi Township Clerk
David Leighton — DDA, Leightronix
Steve Warfield — Cedar Street Resident
Jamie Burton, PE — Hubbell, Roth, & Clark

Board of Trustees

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Evan Hope — Clerk
Roy Sweet — Treasurer
Jon Harmon — Trustee
John Hayhoe — Trustee
Megan Ketchum — Trustee
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John Elsinga — Township Manager

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Ken O'Hara — Chairperson
Matthew Lincoln — Vice Chairperson
Tonia Olson — Secretary
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2.1

Development Scenarios

The Realize Cedar Development Framework utilized scenario planning to evaluate potential development around two key project sites that the Township controls: *A Downtown Node*, that will expand on the traditional urban scale of the Cedar and Holt intersection and a *Farmer's Market Node*, that will expand on the successful market located at Cedar and North.





The foundation of this approach and the focus on these specific places was established during previous plans, as well as verified during public outreach activities and steering committee input. The scenarios tested recommendations for development intensity using plan schematics, perspective views and preference surveys. The feedback was synthesized into three alternatives and one preferred intensity level was selected for each area.

The preferred development scenario indicates the desired physical and economic patterns; including the desired form of land, buildings, lots, blocks, and use mix. The preferred development scenario also provides the context for evaluating roadway function explored in the *Connectivity Framework*. The existing roadway conditions like utilities, traffic speed, traffic volumes, and right-of-way constraints, and the strategies used to improve the roadway function for all user conditions is dependent on the preferred development intensity and character.

Redevelopment Nodes

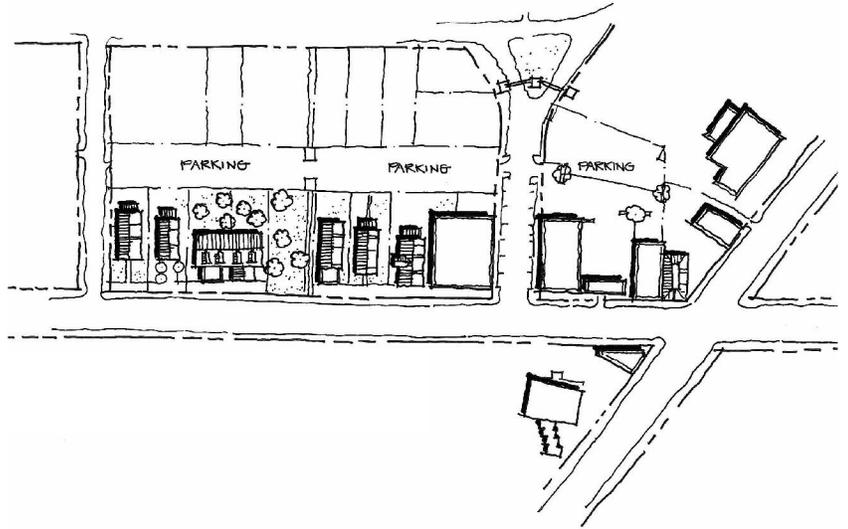
The two redevelopment sites in the Community Core area of Cedar Street, the Downtown Node and the Farmer's Market Node

-  Cedar Street
-  Redevelopment Nodes

**Downtown Node:
Low-Intensity – Cottage Retail**

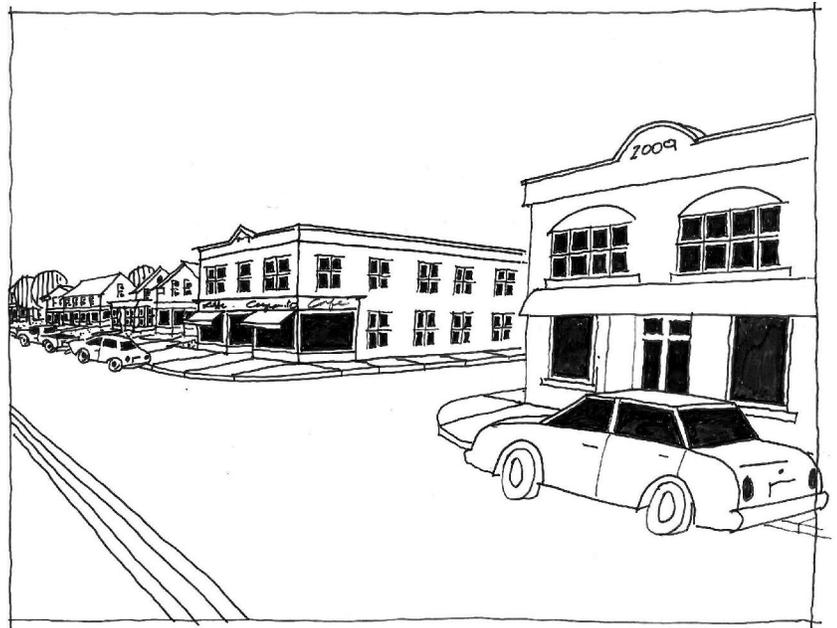
This scenario preserves downtown Holt’s current village character by allowing for the further expansion of retail into only new residential building types, or cottage retail, excepting one new two-story building to match the existing retail building opposite Veterans Drive. Their new retail would emulate existing houses elsewhere along Cedar Street that have been converted from residential to retail in the past, but permit open layouts and mixed uses more conducive to a modern downtown. These Cottage Retail buildings are also positioned to reflect existing residential buildings opposite Cedar Street

In this scenario, parking behind new development is visible between new buildings and accessed by the dedication of one existing parcel for a green path, connecting the sidewalk along Cedar Street to that parking lot.



Low-Intensity Plan View
(Above) The low-intensity scenario extends the garden retail pattern of the housing along Cedar into the development sites in the Downtown Node

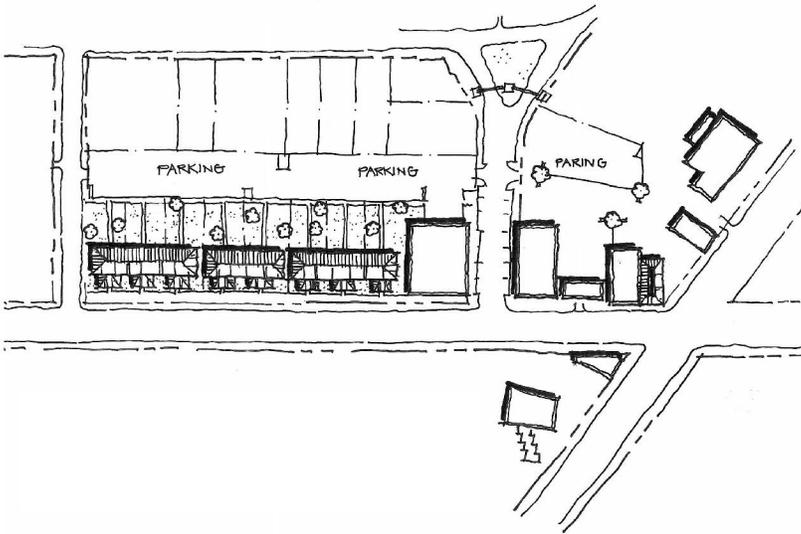
Low-Intensity Perspective View
(Right)



Downtown Node: Medium-Intensity — Townhome / Mixed-Use

As in Scenario 1, this plan matches the existing retail building opposite Veterans Drive. However, the residential density of downtown is modestly intensified with the addition of rowhouses mid-block to the north and west of that new commercial building. Furthermore, it is intended that these rowhouses reflect the single-family residential character of Holt / Delhi through the use of a compatible architectural style and generous front setbacks, as well as the inclusion of front porches.

Given the relatively low parking demand generated by the proposed quantity of residential units, the space behind these rowhouses may become dedicated to a common yard and public parking.



Medium-Intensity Plan View

(Above) The medium-intensity scenario envisions townhome style housing along Cedar with some mixed-use structures on the development sites in the Downtown Node

Medium-Intensity Perspective View

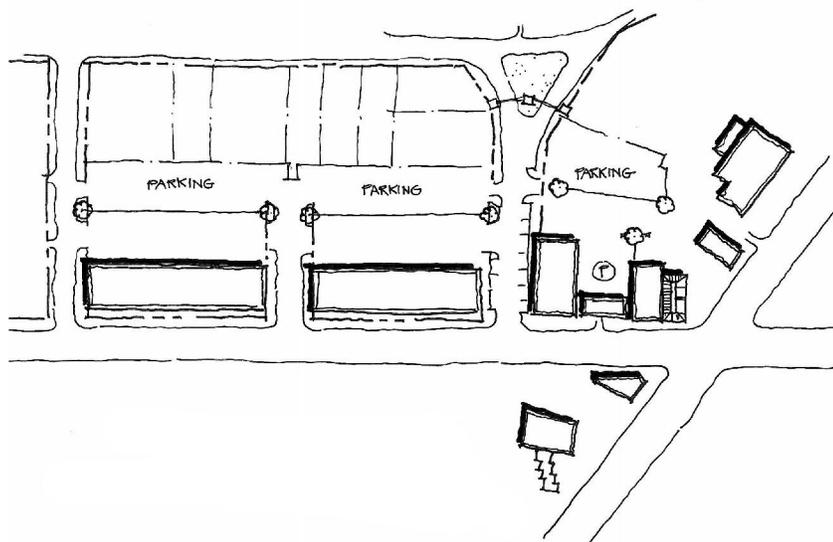
(Left)



Preferred Downtown Node: High-Intensity — Mid-Rise Apartments / Mixed-Use

This development scenario continues the ground floor shopfront pattern of the existing downtown buildings, but with a shallower building footprint and increased building heights from low to mid-rise. On the upper floors, residential apartments are envisioned, dramatically increasing residential density in the downtown area.

The expected high parking demand, associated with taller mixed-use buildings of this nature, can be accommodated behind these new buildings on the ground plane due to shallower than normal building footprints.



Preferred - High-Intensity Plan View
(Top) The preferred higher-intensity scenario envisions 3 to 4 story mixed use buildings in the Downtown Node along Cedar with housing, retail, and office uses

Preferred - High-Intensity Perspective View
(Bottom)



Downtown Node Preferred Development Concept

Preferred Development Concept Rendering



Preferred Development Concept Perspective



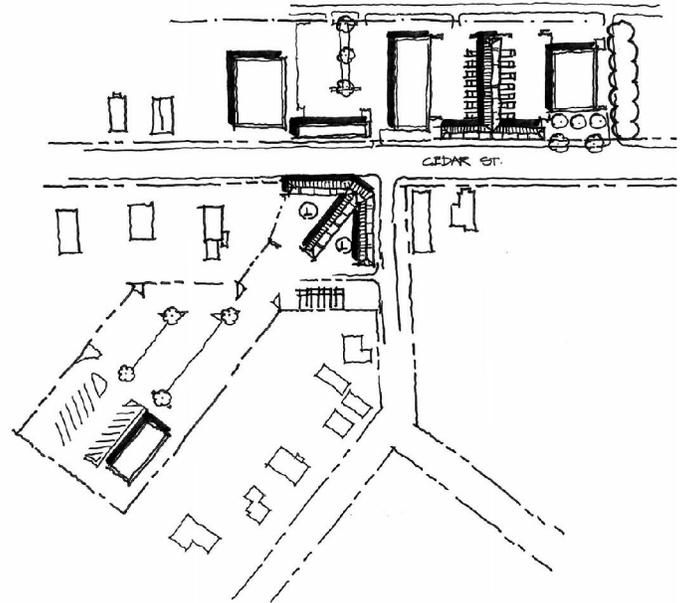
Existing Conditions

The Downtown Node is mostly located on currently vacant parcels, which means there is a prime opportunity for redevelopment at this location

Farmer's Market Node: Low-Intensity – Outdoor Market

This scenario envisions a stronger node at this location anchored by an existing Farmer's Market that has been expanded to include formal outdoor sales. Covered aisles have been delineated for the protection of outdoor market activities and the market itself is shown to continue across Cedar Street and to the west.

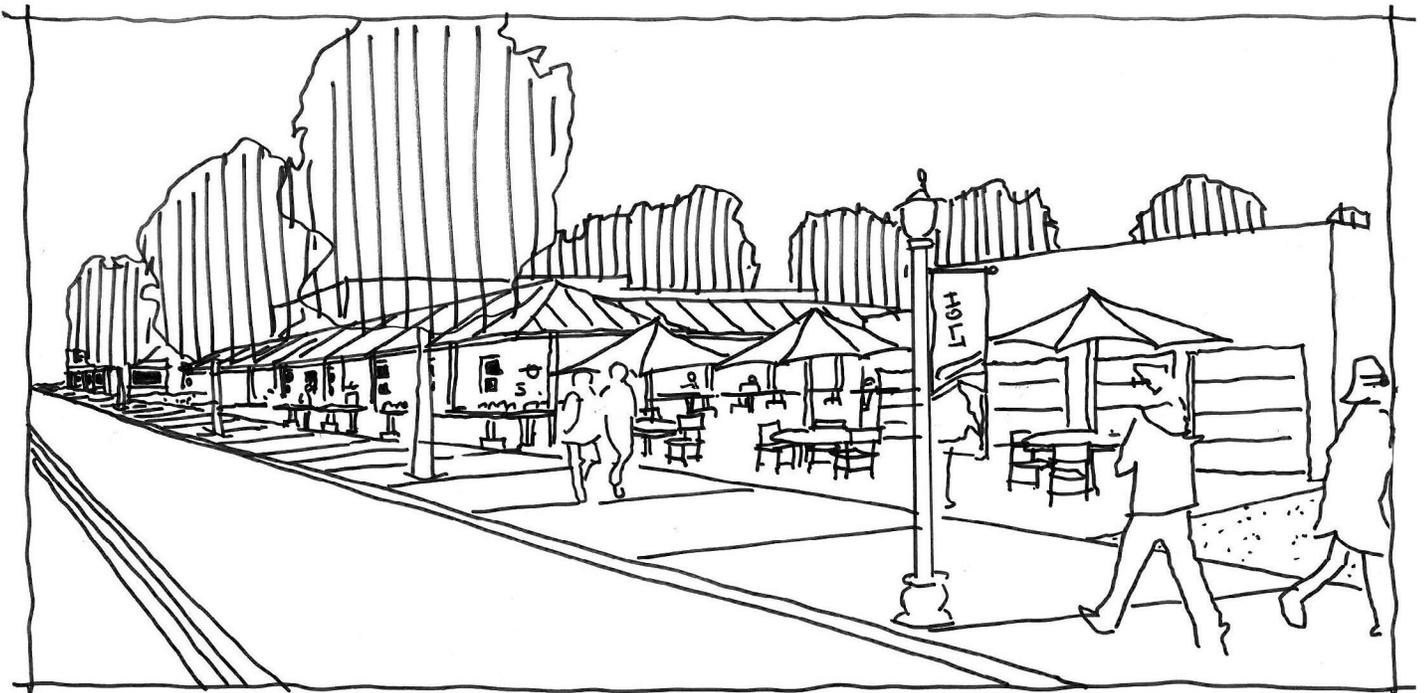
New liner buildings along the east side of Cedar Street conceal new parking while parking is greatly expanded west of Cedar Street by a new lot consisting of parking to be shared with the existing Post Office on N. Aurelius Road.

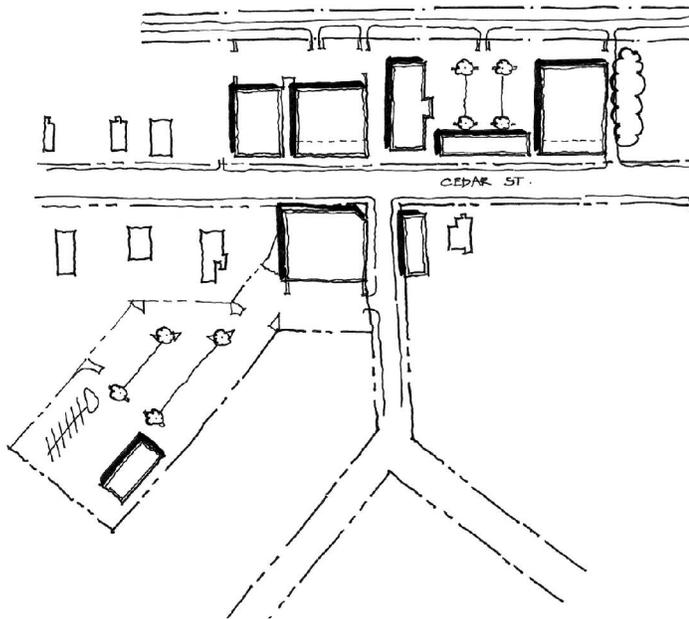


Low-Intensity Plan View

(Right) The low-intensity scenario for the Farmer's Market Node envisions an extension of the outdoor market with a covered vending/parking area

Low-Intensity Perspective View (Below)





Farmer's Market Node: High-Intensity – Mid-Rise / Mixed-Use

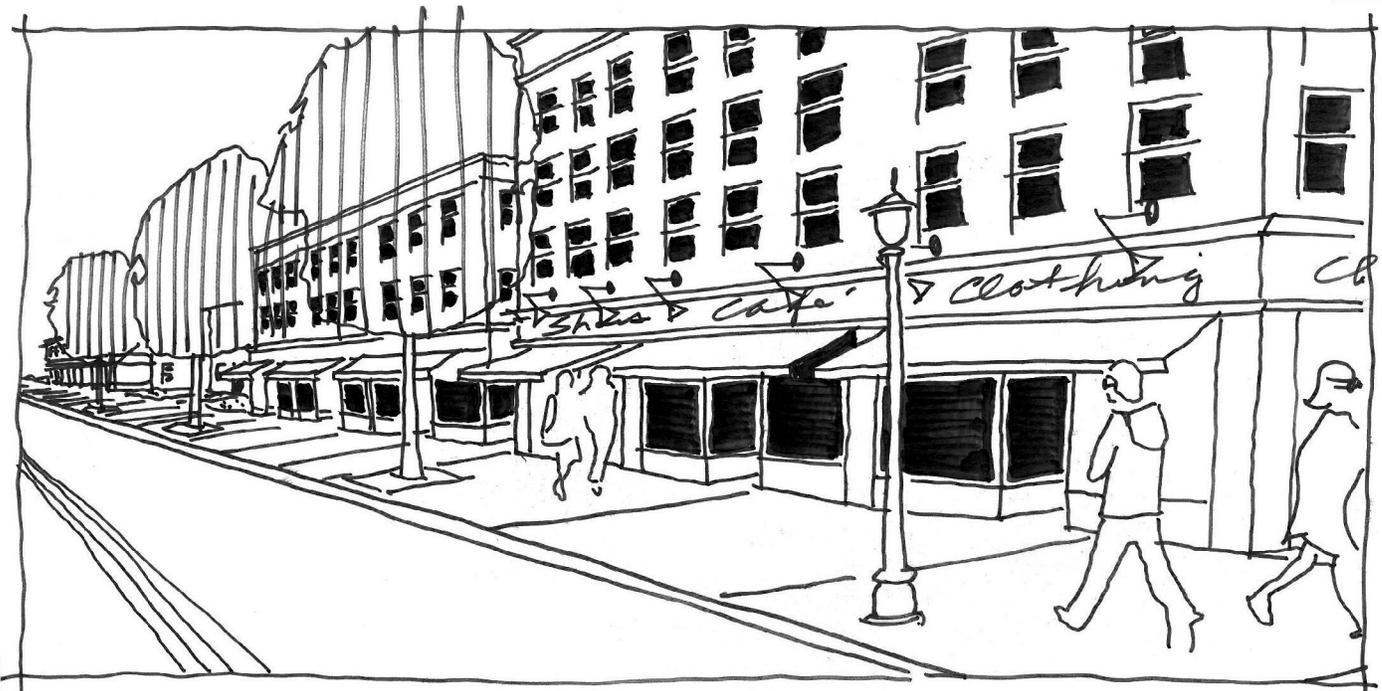
In this scenario, taller Mixed-Use buildings with larger footprints occupy much of the ground plane, forcing some parking indoors at the ground-floor level. Where parking is to be accommodated as such, the first 20 feet of the corresponding ground floors of such buildings are envisioned to have retail uses adjacent to the sidewalk, concealing the proposed parking use behind.

Since the new building shown west of Cedar has the potential luxury of sharing a large parking lot with the existing Post Office along N. Aurelius Road, it can have its entire ground floor dedicated to retail or restaurant uses.

High-Intensity Plan View

(Right) The preferred high-intensity scenario for the Farmer's Market Node envisions mid-rise mixed use structures that could have office, retail, and service based uses, as well as be new indoor sales or kitchen space for the market.

High-Intensity Perspective View (Below)



Preferred Farmer's Market Node: Medium-Intensity – Low-Rise / Mixed-Use

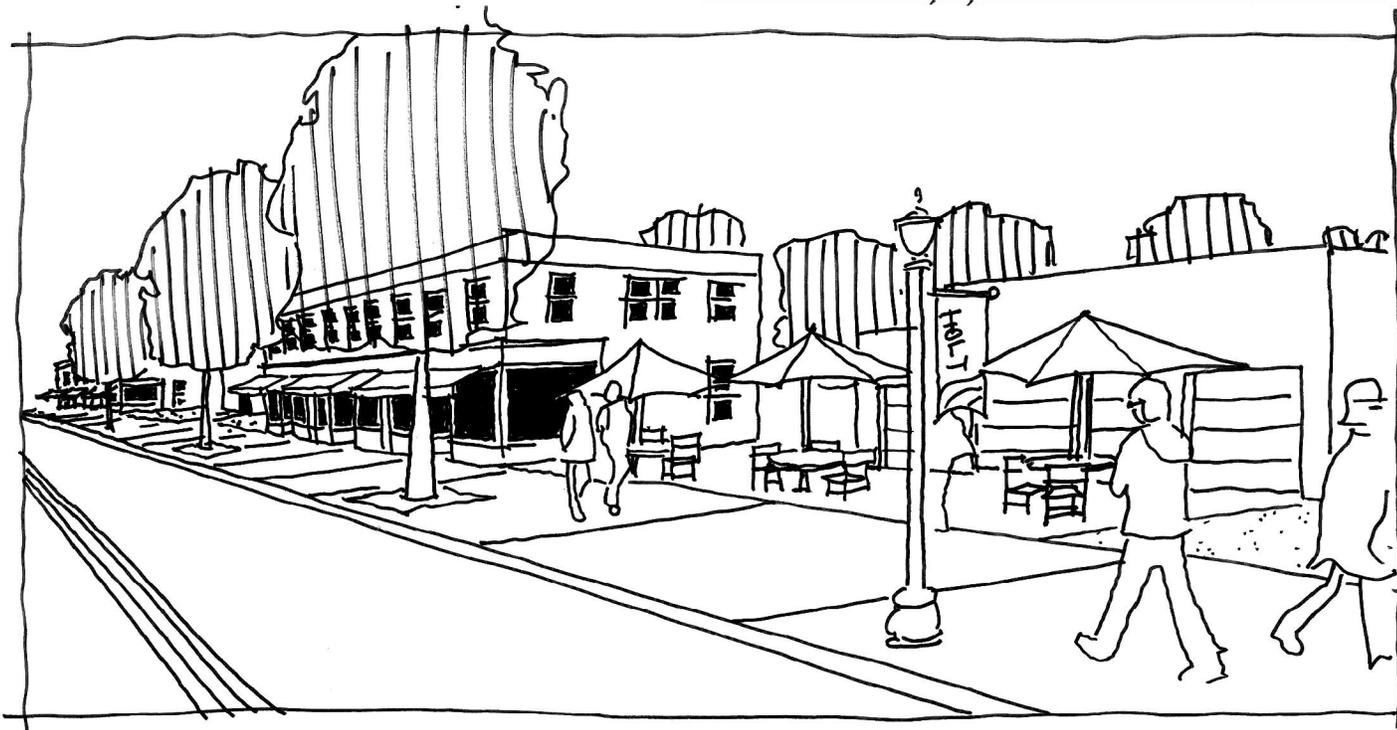
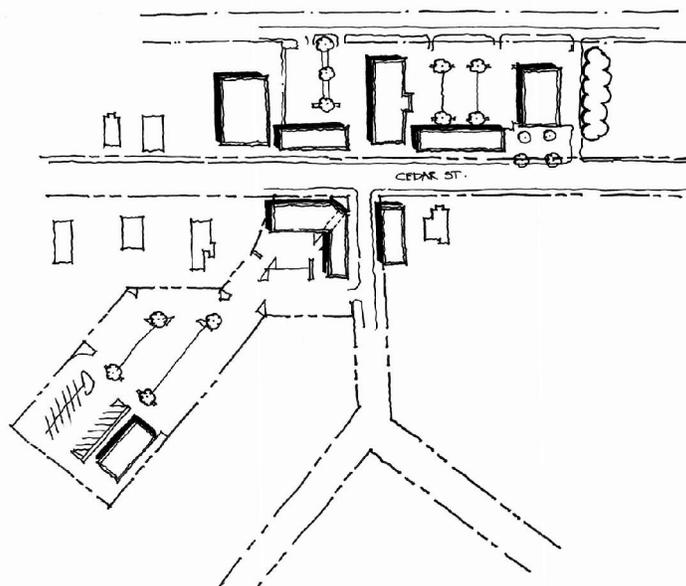
Along the east side of Cedar Street, the existing parking lot, immediately adjacent to the Farmer's Market building, has now been concealed with shallow retail liner buildings one to two stories in height, while the paved apron in front of the Farmer's Market building has been configured to accommodate seasonal outdoor sales.

At the northwest quadrant of Cedar Street and North Street, a new two-story mixed-use building is envisioned up to the Right-of-Way, including a pedestrian cut-through extending from that corner to a new parking lot behind shared with the existing Post Office along N. Aurelius Road.

Medium-Intensity Plan View

(Left) The medium-intensity scenario for the Farmer's Market Node envisions single story infill development on sites to accent the market

Medium-Intensity Perspective View (Below)



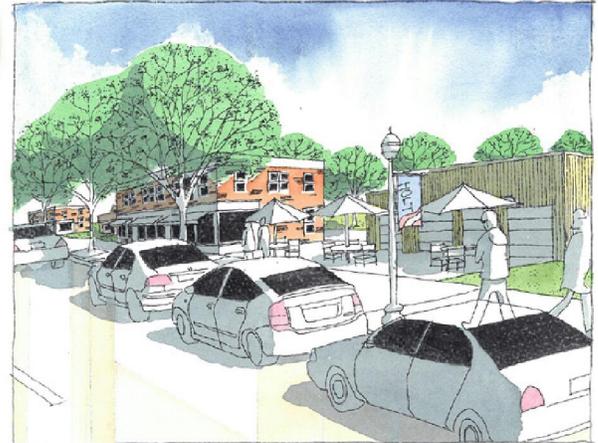
Farmer's Market Node Preferred Development Concept

Preferred Development Concept Rendering



Existing Conditions

The Farmer's Market site provides an opportunity to increase density and create an activity hub at a central part of the corridor



Preferred Development Concept Perspective

Perspective sketch of the Preferred Development Concept along the east side of Cedar Street

Farmer's Market Node Preferred Development Concept

Preferred Development Concept Rendering
Perspective sketch of the Preferred Development Concept along the west side of Cedar Street

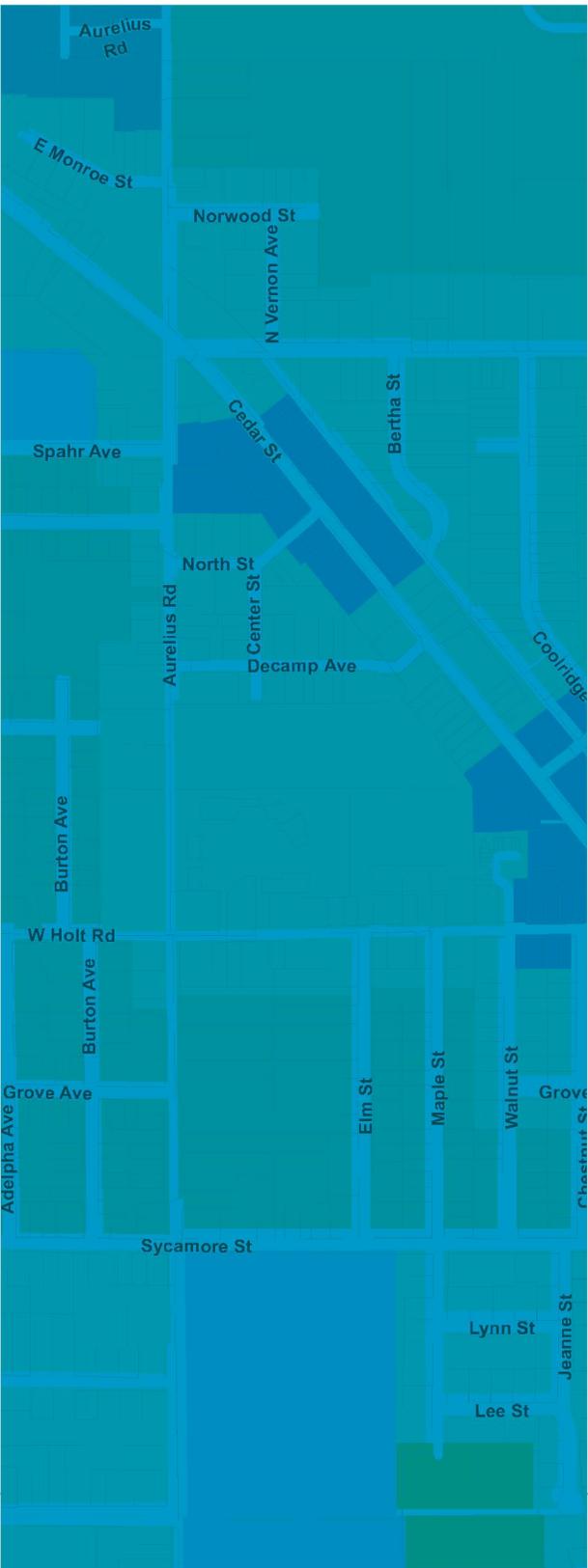


Existing Conditions

The vacant parcel at the corner of Cedar and North is an opportunity for redevelopment to connect the Farmer's Market with the Post Office



Preferred Development Concept Perspective
Color rendering of the Preferred Development Concept along the west side of Cedar Street



2.2

Future Land Use

The Development Framework includes two modifications to the Township’s Future Land Use Map. A new designation—Community Core Area—and an expansion and modification to the previous designation—Community Activity Area.

Community Core Area

The Community Core Area is a new land use category recommended to implement the 2016 Realize Cedar Urban Design Framework. The Community Core Area has two focal points, as designated on the Future Land Use Map. These are envisioned as the new commercial focal points of the Township and are made up exclusively of parcels fronting Cedar Street. The vision for this area shall be achieved primarily through the development of Mixed-Use and Retail Building Types (to the exclusion of other Building Types) built to frontage lines with on-street parking and landscaped sidewalks accommodating shoppers and other pedestrians. Other features of this area include pedestrian-scaled building proportions and amenities, off-street parking located behind buildings, high-back concrete curbing separating vehicular lanes and sidewalks from one another, and a vertical mix of uses for multi-story buildings that places retail and restaurant uses at the ground-floor level with office, light industrial, and residential uses located above.

The Community Core Area, along with the Community Activity Area described below, can be most effectively regulated by Building Types. Allowable building uses, setbacks, lot sizes, and heights can be assigned to specific Building Types to regulate these areas. The zoning code of Delhi Township should be updated to reference this framework with corresponding zoning categories for these land use areas to be regulated. A schedule of allowable Building Types, “Schedule of Regulations,” is provided here at the end of this section.



Music in the Garden
Residents take in a show at
Veterans Memorial Gardens

The Community Core Area will be most effective and more urban if only mixed-use and retail building types are permitted because they will provide a continuity of activity, frontage type, and building setback. The “Schedule of Regulations” provided has been designed to achieve this objective.

To foster success in the commercial center, the Township must require continuity of frontages and building setbacks within retail centers and limit the extent of the center to the designated areas. This strategy accommodates pedestrian shoppers and keeps them continually engaged while recognizing that there is a limit to how far and long this activity can continue before individuals tend to stop, turn around, and head home. This practice also lends itself to the creation of shopping nodes near prominent intersections, as opposed to endless shopping corridors.

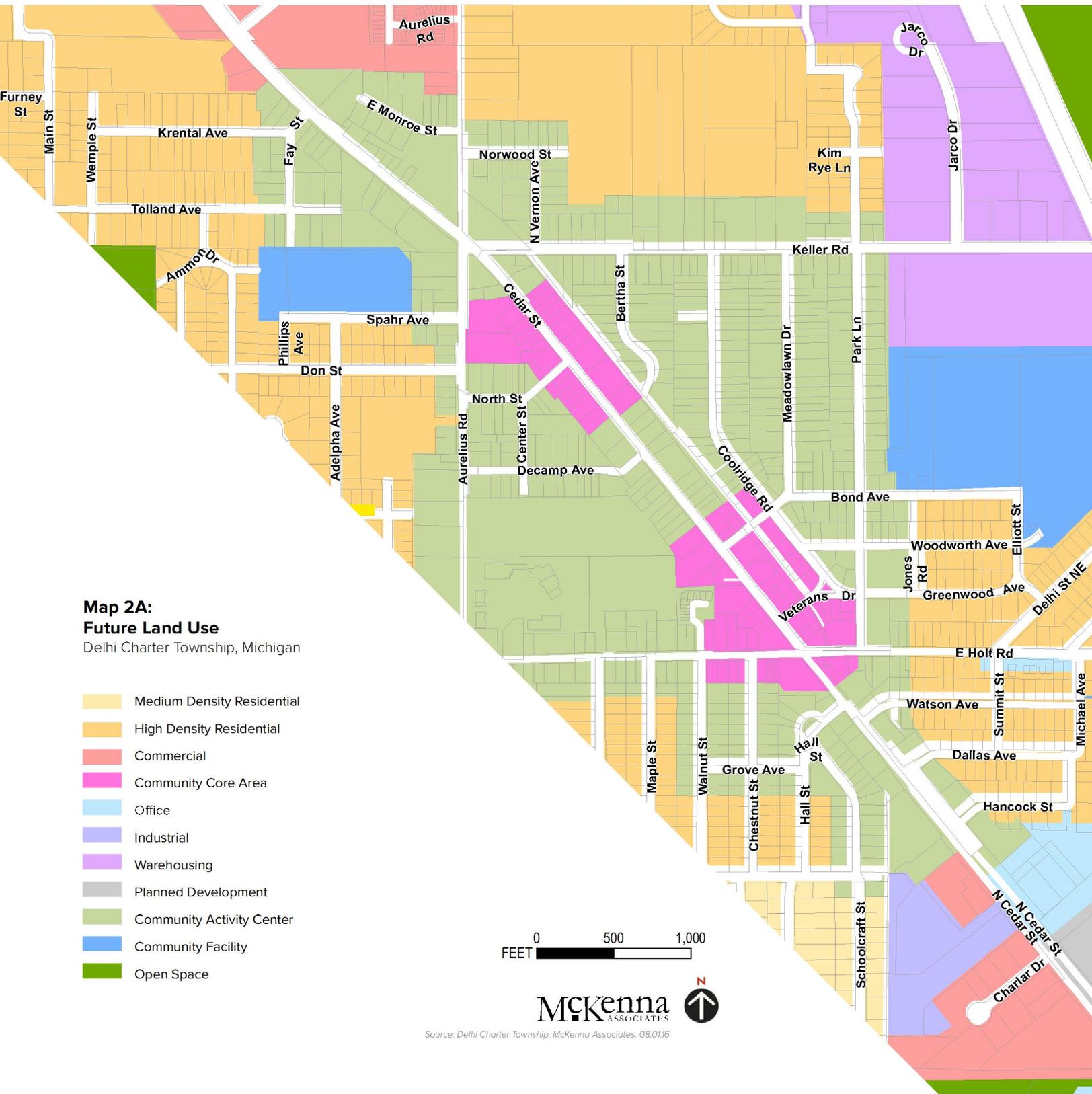
Community Activity Center

The Community Activity Center land use area is a land use area recommended for expansion to implement the 2016 Realize Cedar Urban Design Framework. Given the introduction of a new land use category Community Core Area (as described above), the Community Activity Center area is no longer intended to act as the focal point of commercial activity for the Township. This area is now instead intended to serve as a transitional zone between the more recently designated Community Core Areas and surrounding residential neighborhoods. Expansion and densification, through the inclusion of additional building types such as duplexes and rowhouses, as well as improved connection into the newly designated Community Core Areas, are recommended for the Community Activity Center.

Mixed-Use and Retail Building Types (which occur at the frontage lines) are no longer envisioned for this land use area and are now confined to the designated Community Core Areas. Thus, commercial uses within the Community Activity Center area are envisioned to take place instead within residentially styled building types referred to as Cottage Retail. While such building types do indeed have storefronts incorporated within them, they do not provide a continuity of frontage. Where shopfronts are setback they can serve a variety of purposes, from outdoor dining to product display, as well as receiving a variety of landscape treatments, from hardscape to manicured lawns with decorative fencing, shrubbery, hedges, and ground covers.

Additionally, the Community Activity Center area now accommodates, in addition to abundant existing single-family homes, a variety of “missing middle” residential building types including apartment buildings, rowhouses, duplexes, and garage apartments.

Accordingly, the vision for the Community Activity Center is that of an area not just in transition from residential to commercial activity, but also in a gradual transition from single-family to multiple-family uses. Multiple-family housing accommodates a greater density of population and both the Community Activity Center area and its adjacent Community Core areas will benefit from a correspondingly higher level of foot traffic, because more people on the street should correspond to higher sales revenue, contribute to the general success of the district, and increase property values.



Map 2A:
Future Land Use
 Delhi Charter Township, Michigan

- Medium Density Residential
- High Density Residential
- Commercial
- Community Core Area
- Office
- Industrial
- Warehousing
- Planned Development
- Community Activity Center
- Community Facility
- Open Space

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Source: Delhi Charter Township, McKenna Associates, 08.01.16





2.4

Building Types

The Community Core and Community Activity Center land use categories of Delhi Township can be effectively regulated by Building Type. This system is highly intuitive for the user and well suited to the particular range of Building Types typically found in Midwestern towns and cities. Thus, these two future land use categories are targeted by form-based codes which have been organized around Building Types. The other areas may remain regulated by their corresponding zones.

Additionally, since permitted building setbacks, building heights, and zoning categories can be assigned by Building Type, these attributes need not be regulated elsewhere within the zoning code; but instead referenced to this document.

Following here is a comprehensive list of Building Types recommended for form-based zones in Delhi Township and their recommended associated regulations. A custom Schedule of Regulations is subsequently provided for these Building Types.



Mixed-Use

The Mixed-Use Building type is a multi-story Building Type with storefronts along all primary frontage lines and extending, from the primary frontage, minimum 20-feet into secondary frontages) that has been assigned setbacks at frontage lines of zero feet. Storefronts should have minimum 60% glass at the ground-floor level, doors should be recessed minimum 3.5 feet from primary frontages lines, and minimum 5-foot deep canvas or metal awnings should be provided above all storefront windows. Upper level windows should be no more than 50% glass. All exterior building glass should be clear.

This Building Type should also have a vertical zoning requirement. Ground floor

permitted uses are restricted to retail and restaurant uses, while the upper floors are restricted to office, light industrial, and residential uses. These buildings should also be large enough to extend along the majority of all frontage lines thus, due to their zero-foot maximum setback, providing an immediate physical presence along frontages.

This Building Type is ideal for downtowns and the retail segments of downtown shopping streets.



Retail

The Retail Building type is a single-story limited-use building with storefronts along all primary frontage lines and extending, from the primary frontage, minimum 25 feet into secondary frontages. Storefronts should have minimum 50% glass, doors should be recessed minimum 3.5 feet from frontage lines, and minimum 5-foot deep canvas or metal awnings should be provided above all storefront windows. This building has frontage setbacks of zero feet. Permitted uses are limited to uses that serve to create continuity of activity along the street, such as retail, restaurant, and some entertainment-based uses. These buildings should also be large enough to extend along the majority of all frontage lines thus, due to their zero-feet

maximum setback, providing an immediate physical presence along frontages.

This Building Type is ideally configured for downtowns and in the retail segments of downtown shopping streets.



Liner

The Liner Building type is merely a Mixed-Use or Retail Building Type (see descriptions of those above) that has been limited in depth to between 20 and 36 feet from frontage lines and used to conceal parking behind. Grade level permitted uses include uses that serve to create activity along the street such as retail, restaurant, and some entertainment-based uses. If multi-story, upper floor uses permitted include residential, office, service, or light industrial.

This Building Type is ideally configured for mid-block conditions, secondary streets in downtowns, and adjacent to (located toward the edges of) the retail segments of downtown shopping streets. If extending to corner locations, then storefronts should extend into the secondary frontage for minimum 25 feet or the depth of the building, whichever is greater.



Cottage Retail

The Cottage Retail Building Type is a mixed-use building type with a residential building form that permits storefronts along all primary frontage lines and, where storefronts have been employed, extending minimum 7.5 feet from the primary building frontage down the sides of the corresponding building. Storefronts should have minimum 60% glass at the ground-floor level and doors recessed minimum 3.5 feet from the frontage line. This Building Type emulates or repeats a building form that has often evolved to become an existing condition in older neighborhoods adjacent to formal retail centers. The resulting form is a modestly-scaled building, including a gable and a pitched roof, usually with a storefront at the ground floor. Uses on the ground floor behind the storefront may or may not

include retail or restaurant uses and the storefront may or may not be setback from the frontage line.

Permitted uses include retail, restaurant, office, service, or light industrial. Residential uses may be located behind other uses on the ground floor level and/or on upper levels. These buildings may be designed from scratch or result from the modification of any residential Building Type (building code permitting), within designated zones.



MIN. 12'- 0" WIDE BY 7'- 0" DEEP FRONT PORCH REQUIRED

Rowhouse

The Rowhouse Building Type consists of a contiguous row of individual residential units (three or more) side-by-side, sharing common walls with one another, and with each unit extending front to back and continuously from below grade through to the roof. Another term for rowhouses is townhouses. Additionally, each unit features a main exterior entrance along a frontage line, and typically in the Midwest, such buildings are set back from that frontage line with individual or shared front porches accessed from each unit.

In addition to parking and residential, permitted uses for this Building Type include home occupations and retail.

Permitted uses in this Building Type are restricted to residential uses.



DOUBLE-LOADED SINGLE CORRIDOR FRONT TO BACK OR COURTYARD OR FORECOURT MODELS ALLOWABLE

1ST FLOOR FINISH LINE 26" TO 34" BELOW EXTERIOR GRADE ALONG PRIMARY AND SECONDARY FRONTAGES. 1ST LEVEL USES MAY INCLUDE RESIDENTIAL, PARKING, MECHANICAL, LAUNDRY OR COMMON MEETING ROOMS

Apartment Building

Apartment buildings may take on a small variety of multi-family building configurations, three units or more, that do not correspond to the rowhouse configuration. For instance, apartment buildings do not have units continuous from the ground floor to the roof. This small variety of configurations includes shotgun (one or two units wide, front to back), courtyard, and forecourt configurations.

All of these apartment building configurations feature significant building setbacks, around 10 - 15 feet, on all sides except along secondary frontages and alleys, which often do not include building setbacks.

Additionally, apartment buildings are limited to 3 - 4 stories in height, where the lowest level is usually partially below grade and the second level partially above grade in order to achieve a privacy separation between the unit and the adjacent street and sidewalk. Building entry is typically at-grade.

Permitted uses in this Building Type are restricted to residential uses.



Duplex

The Duplex Building Type is any independent building configuration consisting of exactly two residential units, usually surrounded by a private or common yard, meeting minimum room quantity and size requirements as dictated by the local building code, zoning code, or both.

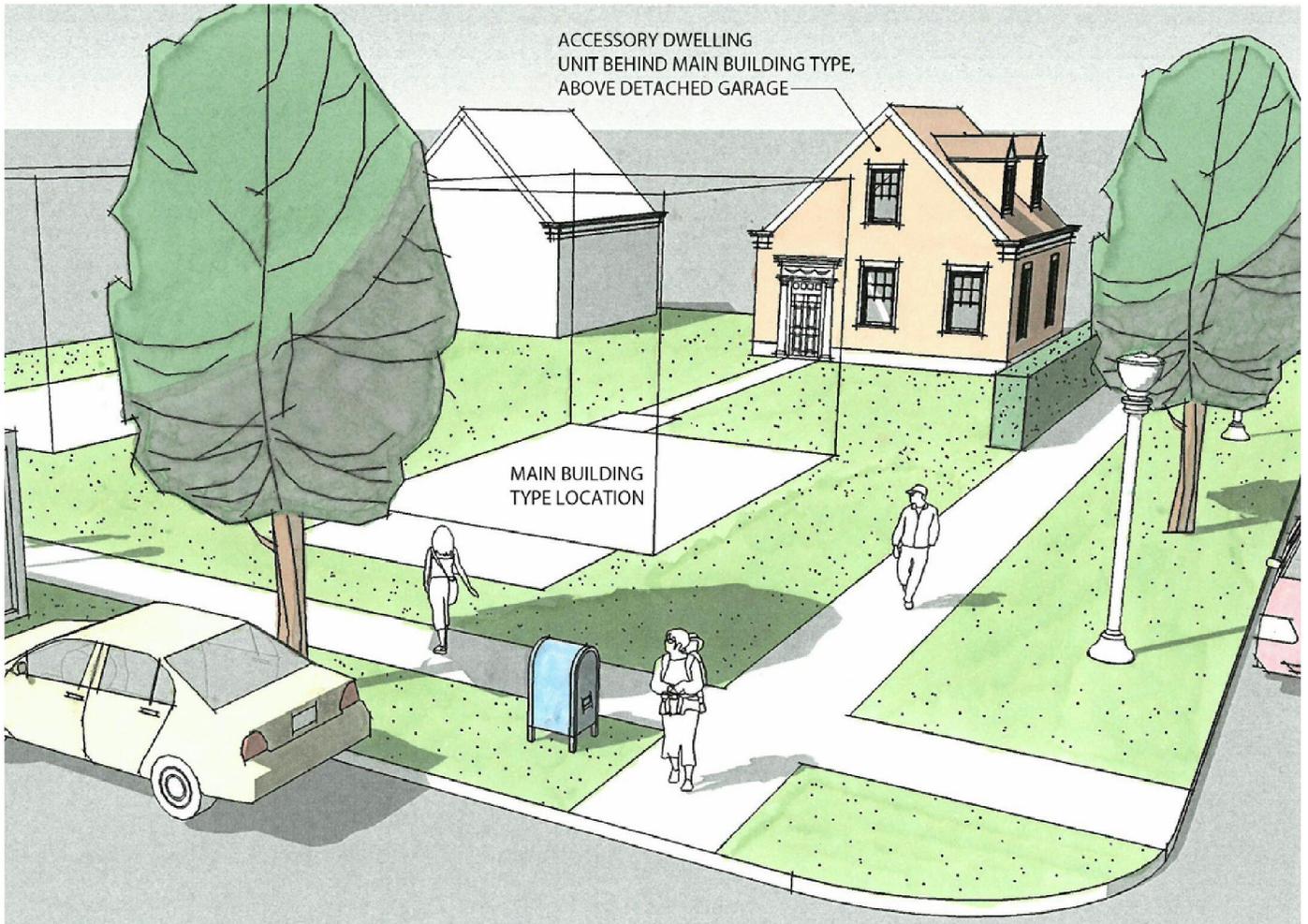
The units can be side-by-side (similar to rowhouses) or stacked one above the other. Similarly, to single-family residential buildings, these buildings include front porches that encroach into the established building setback and optional detached garages.

In addition to parking and residential, permitted uses for this Building Type include home occupations and retail.



Single-Family

A Single-Family Building Type consists of a detached building containing one residential unit, usually surrounded by a private or common yard, and meeting minimum room quantity and size requirements as dictated by the local building code, zoning code, or both. Similar to duplex residential building types, these buildings include front porches that encroach into the established building setback and optional detached garages. In addition to parking and residential, allowable uses for this Building Type include home occupations, restaurant, light industrial, and retail.



Accessory Dwelling Unit

Accessory Dwelling Units consist of one or more apartment units located above a detached garage. Like other detached garages, these buildings are typically setback 3 feet from an alley easement and adjacent property lines. Entry is at grade with an interior stairway servicing the upper level.

In addition to parking and residential, allowable uses for this Building Type include service, light industrial, office, and retail.

Schedule of Regulations

Building Type	Front Setback	Side Setback	Rear Setback	Height	Allowable Zones	Maximum Lot Size
Mixed-Use	Max. 0'	Min. 0'	Min. 0'	Max 42' / 3 Stories	Community Core	50' Width, 150' Depth
Retail	Max. 0'	Min. 0'	Min. 0'	18' Max. / 1-Story	Community Core	50' Width, 150' Depth
Liner	Max. 0'	Min. 0'	Min. 0'	30' Max. / 2 Stories	Community Core	60' Width, 36' Depth
Cottage Retail	Min. 0'	Min. 10'	Min. 10'	42' Max. / 2 ½ Stories	Community Activity Center	50' Width, 150' Depth
Apartment	Min. 10' / Min. 0' at Secondary Frontages	Min. 10'	Min. 10' / Min 0' at alley easements	42' Max. / 3 ½ Stories	Community Activity Center	100' Width, 150' Depth
Rowhouse	Min. 25' / Front porches may encroach 12'	Min. 10'	Min. 10' / Min. 0' at Secondary Frontages	42' Max. / 3 Stories	Community Activity Center	140' Width, 150' Depth
Duplex	Min. 25' / Front porches may encroach 12'	Min. 10'	Min. 10'	42' Max. / 2 ½ Stories	Community Activity Center	50' Width, 150' Depth
Single-Family	Min. 25' / Front porches may encroach 12'	Min. 10'	Min. 10'	42' Max. / 2 ½ Stories	Community Activity Center	50' Width, 150' Depth
Accessory Dwelling Units (and other detached garages)	Min. 60' / Min. 10' from Main Building Type	Min. 3'	Min. 3'	42' Max. / 2 ½ Stories	Community Activity Center	N/A

- Notes: 1. Front Setback requirements apply along all frontage lines.
 2. Buildings with 0' side setbacks may open into one another.
 3. If the right-of-way line is modified setbacks shall be taken from the new line.





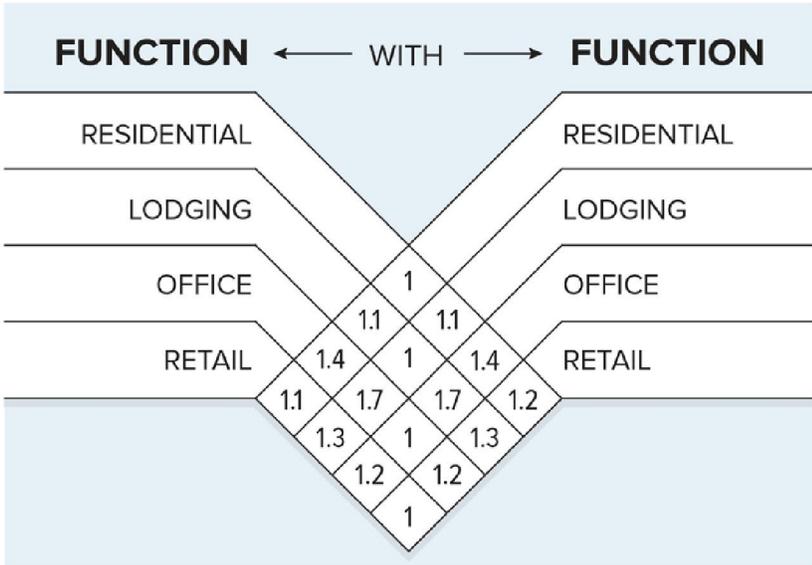
2.5 Parking

Current zoning in Delhi Township permits parking reductions corresponding to mixed-use developments that contain uses with differing parking demand peaks. Shared parking is permitted when the proposed uses within a development have their highest demand for parking at different times of day and or different days of the week.

This *Development Framework* recommends a straight-forward method for determining parking requirements in the Community Core area and the Community Activity area using the following two tables. The first table provides required parking based upon use. The second table provides a denominator for every combination of those use categories that can be divided into the required parking totals which have been derived from the first table. This methodology reduces the required parking total based upon the sharing of those particular uses.

Building Use / Zone (or Land Use)	Community Activity Area	Community Core Area
Residential	1.5 / dwelling	1.0 / dwelling
Lodging	1.0 / bedroom	1.0 / bedroom
Office	3.0 / 1000 sq. ft.	2.0 / 1000 sq. ft.
Retail	4.0 / 1000 sq. ft.	3.0 / 1000 sq. ft.
Civic	To be determined	To be determined
Other	To be determined	To be determined

Adopting shared parking standards along Cedar Street will facilitate ease of use for prospective developers.



Shared Parking
Diagram of shared parking factors





2.6 Architecture

The following general architectural standards are strongly encouraged for developments along Cedar Street, in the Community Core and the Community Activity Center areas.

Further, a Cedar Street overlay district is recommended to apply special development review processes to north and south Cedar.

General Architectural Standards:

1. Storefronts, where applicable to particular Building Types, are always located at grade-level and consist of minimum 60% glass (between 2 feet and 10 feet above finish grade or sidewalk) and doorways (main entrances) recessed minimum 3.5 feet. Refer to the Mixed-Use Architectural Standards diagram (ground floor level), for additional storefront requirements.
2. Exterior finish materials on all façades shall be limited to brick, cut stone, wood siding or shingles, cementitious siding or shingles, and/or Portland Cement stucco (no E.I.F.S. or other synthetic stucco or rusticated elements).
3. All window glass shall have a minimum transparency of 80%.
4. Wall materials may be combined on each façade only horizontally (one above the other, not side-by-side), with the heavier material below the lighter.
5. Use fine and smooth textured surfaces when using materials such architectural pre-cast concrete, textured block or stucco for exterior cladding. Rusticated stone is prohibited.
6. Allow any natural color of primary materials such as stone or brick to dominate the majority of façade surface as its base color.
7. Use accent colors for elements such pilasters, horizontal bands, cornices and window frames to complement the shade of the base color.
8. Flat roofs shall be enclosed by parapets a minimum of 42 inches above the roof surface, or as required to conceal rooftop mechanical equipment.
9. All wall openings, including porches, galleries, arcades and windows (with the exception of storefronts) shall be square or vertical in proportion.
10. Excluding storefronts at grade, wall openings shall be punched through an opaque façade and not exceed 50% of the total building wall area, with the façade corresponding to each structural bay calculated independently.
11. Doors and windows that operate as sliders are prohibited along frontages.
12. Pitched roofs, if provided, shall be symmetrically sloped no less than 5:12, except that roofs for porches and attached sheds may be no less than 2:12.
13. Balconies and porches shall be made of painted wood, decorative iron, or steel.
14. Along Mixed-Use, Liner, and Retail Building Type frontages, include a minimum 72-inch height manicured hedge, a low brick wall with a 4 inch concrete cap (between 32 and 36 inches above sidewalk in height, including wall and cap), or decorative metal fencing inset between capped brick piers as a parking screen where said frontage line is not already occupied by the corresponding building façade.
15. Pertaining to sites with other than Mixed-Use, Liner, or Retail Building Types, fences within the first 25 feet of the primary building frontage shall be painted wood or decorative metal and be 30 to 36 inches in height. Fences otherwise may be of wood board or chain link up to 6 feet in height.
16. Additionally, street screens should be constructed of a material matching the adjacent building facade.
17. Employ a minimum 11 feet and maximum 15 feet height floor-to-floor height between finish grade and/or sidewalk surface at the primary frontage of the building and the second floor finish floor line. Employ a maximum 10.5 feet floor-to-floor height between upper floors.
18. Accessory Dwelling Units excepted, locate the main entrance and any signage of all buildings so as to address a street (not at the rear of building or addressing a parking lot).
19. Construct all facades and façade segments parallel with a street at the corresponding frontage line (or, in cases where there is a building setback along the frontage of minimum 25 feet, alternately provide decorative metal fencing inset between capped brick piers at the R.O.W line).
20. Pertaining to Mixed-Use Building Types, create a sense of scale and proportion with the street level façade by using storefront spacing and rhythm that provides for a visually interesting façade. Rhythm implies that storefront spacing repeats and that pilasters and entryways have been provided to accommodate repetition. Provide a hierarchy of architectural details and features with the emphasis on the street level.
21. Flat-roofed buildings should have a base, shaft, and capital similar to that of a column. A building base can be created minimally with the use of storefronts while a building capital can be achieved with the inclusion of a building cornice line. The shaft, in this case, would be implied by the remaining body of the building itself. See the Mixed-Use Architectural Standards diagram for an

example of a flat roofed building with a base, shaft, and capital.

22. Set storefront window frames 15 to 30 inches above the finished grade to provide durability and to accommodate traditional main street building features, such as base panels, sills, and display windows.
23. Recess all window frames (including at storefronts) 4 to 8 inches to provide a shadow line and accentuate exterior wall thickness and, correspondingly, employ exterior wall thicknesses sufficient to provide a such shadow line.
24. Storefront glass excepted, all building windows should be operable.
25. Provide awnings or building overhangs to shade storefront glass.
26. For storefront and display windows along frontages, provide and maintain at least 80% of the storefront and display windows as free from visual obstructions such as signs, logos, advertisements, window screens, security grille, blinds or window covering.

27. Employ awning and canopy materials such as canvas, metal or glass. Vinyl and plastic are unacceptable materials for awnings and canopies.
28. Internally illuminated awnings are unacceptable.
29. Use awnings to define individual storefront openings only. The continuation of awnings along blank walls is unacceptable.
30. First floors not associated with storefronts (or contiguous with lobbies) should be elevated minimum 18 inches above exterior finish grade.
31. Sloped roof materials may include slate, terracotta, cedar shingles, standing seam metal, dimensional (or solid dark green, dark red, or dark gray) asphalt shingles.

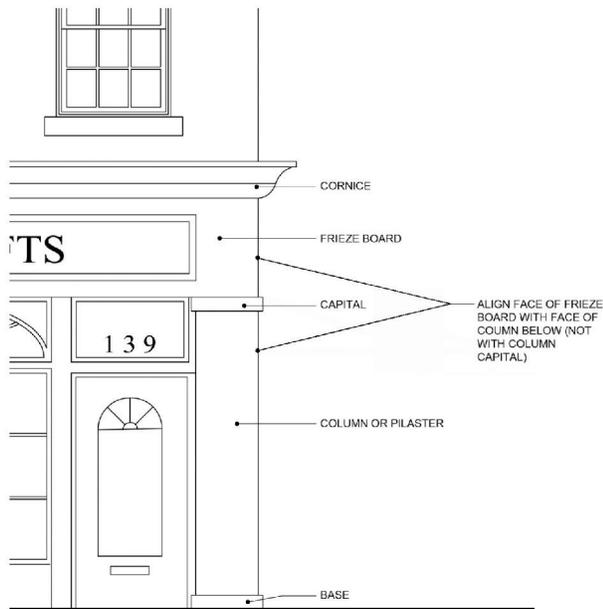
Mixed-Use Building Regulations



Miscellaneous Building Detail Requirements

Frieze Board Location

For roofs and upper floors that are supported by, or appear to be supported by, columns or pilasters.



Frieze Boards

Close-up of architectural regulations for frieze boards



Masonry Windows

Close-up of architectural regulations for masonry windows

MISCELLANEOUS HORIZONTAL BANDS:
MIN. HT. 5 1/2" + 1 1/16" HT. WOOD DRIP

MIN. 5 1/2" CASING HT. +
MIN. 1 1/16" HT. WOOD DRIP (OR
CROWN)

MIN. 3 1/2" WIDE TRIM & CASING WIDTH

MIN. 1 1/2" THICK WOOD SILL

MIN. 5 1/2" HT. WOOD WATER TABLE +
MIN. 1 1/16" HT. WOOD DRIP

Siding and Trim Casing

(Below) Close-up of architectural regulations for siding and trim casing

Connectivity Framework

REALIZE **CEDAR** URBAN DESIGN FRAMEWORK

3

Acknowledgments

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Jon Harmon — Delhi Township Board Trustee
Evan Hope — Delhi Township Clerk
David Leighton — DDA, Leightronix
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*This Plan Approved by the Delhi Charter Township
Planning Commission on October 24, 2016.*



*Matt Lincoln, Chairperson
Delhi Charter Township Planning Commission*



*Kimberly Berry-Smokoski, Secretary
Delhi Charter Township Planning Commission*

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3.1 Complete Streets

Complete Streets are designed and operated to improve safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities must be able to safely move along and across a Complete Street.

On June 19, 2012 the Township adopted a Complete Streets Ordinance. The Complete Streets Ordinance demonstrates that elected officials and decision makers are dedicated to improving multimodal access to all residents. Creating the Ordinance required the coordination and input of multiple jurisdictions, including the Ingham County Road Department, as well as the dedication of Township planning and engineering staff.

The recommendations to increase connectivity along Cedar Street are consistent with the Township's Complete Streets Ordinance, as follows.

- **Public Process:** Significant public engagement was conducted and substantial need for pedestrian and bicycle improvements was expressed. This need will be addressed through reconfiguring the Cedar Street roadway to support new development, a 4-3 lane conversion, and an enhanced streetscape.
- **Evaluation:** Data collected, including 2016 traffic counts for Cedar Street of 10,550 cars per day, indicate that vehicle impacts, if any, can be mitigated with signal timing improvements or use of alternate routes. Pedestrian and bicycle accommodations and safety will be significantly improved.
- **Exceptions Not Warranted:** Cedar Street does not qualify for an exception to the Complete Streets Ordinance. The modifications recommended in the Realize Cedar Urban Design Framework will be financially, geometrically, operationally, and physically feasible.

The Realize Cedar Urban Design Framework, is an adopted subcomponent of the Township Master Plan and the non-motorized recommendations supplant the Township Non-Motorized Plan.

Resolution of Support

The Delhi Township Planning Commission, in recommending the adoption of this plan, effectively passes a resolution of support for a roadway reconfiguration project on Cedar Street and the creation of an active and walkable district. This action is consistent with the Federal Highway Administration's (FHWA) recommended best practices for the implementation of Road Diets.

Pedestrian First Mode Hierarchy

The Realize Cedar Urban Design Framework adopts a pedestrian-first mode hierarchy. This mode hierarchy shall be used to evaluate design objectives throughout project design, construction, and maintenance and shall take precedence in the consideration of geometric optimization and traffic operations.

Unless otherwise noted, the mode hierarchy assignment shall be pedestrian > bicycle > vehicle > transit, to inform a continuum of design considerations. All modes should be considered to ensure Cedar is a Complete Street. However, reconfiguration may force trade-offs between competing priorities.

Mode Hierarchy

Mode hierarchy shows how a community chooses which users of the road take precedence when designing a roadway and a complete network prioritizes the safety of vulnerable road users





3.2 Street Typology

The design of Cedar Street’s roadway and streetscape—the public realm—utilizes a roadway’s design context approach to integrating user needs with land use transitions, called *Street Typology*. A focus on roadway characteristics, such as traffic volume, speed and functional classification, is less effective at achieving a complete network than a contextual approach based on people and places.

Each Street Typology noted below has its own particular feel and role to play within the transportation and land use systems. Currently, the corridor has developed haphazardly and without a cohesive vision and areas blend together without intentional urban design. However, there are common elements between segments to build upon, like the Township’s standard street lamp, similarity of building types and setbacks, and consistency in the desired land use patterns.

Exceptions to the desired land form in each area can detract from the overall user experience. To address this, key places along the corridor are prioritized for reinvestment and design transitions between street types. While elements like landscaping and identity signs are recommended to be consistently utilized along Cedar Street, areas like the Farmer's Market Node and the Downtown Node are recommended for more substantial investments in on-street parking, hardscaping, street furniture and off-street parking. In the minds of visitors and residents alike Cedar Street will have entrances to each distinct area, a central district, and a unified character.

Street Typologies

The Street types recommended are Core Street, Cottage Retail Street, Community Avenue, Commercial Boulevard, and Commercial Parkway.

- **Core Street:** Corresponds to locations intended to become the central places in Delhi Township, centered on the Farmer's Market and Downtown Holt nodes.
- **Cottage Retail Street:** Corresponds to the area between the two Core Street areas, centering on Veterans Memorial Gardens and the Sam Corey Senior Center.
- **Community Avenue:** The Community Avenue is a transitional typology between the two Commercial Boulevard Areas located to the north and south of the Community Activity Center Future Land Use designation. The Community Avenue is designed to become the entrance to the proposed three-lane segment of Cedar.
- **Commercial Boulevard:** The area north of Fay Street and south of Dallas, which will be designed to continue support of vehicle-oriented commercial business, but with aesthetic enhancements and complete streets elements.
- **Commercial Parkway:** Corresponds to the area south of the Holbrook roundabout, which is largely rural and industrial in character. Identity enhancements and landscaping to unify the Cedar Street corridor are recommended.

Transition Elements

Transitions elements are recommended to be installed at changes in the street typologies. These locations are important places to provide visual cues to denote the change in roadway context. These locations are noted on the *Street Typology Map* as Nodes, Gateways and Transitions.

- **Nodes:** Corresponds to the Core Street typology and the Community Core Future Land Use area. Pedestrian priority should be established through traffic calming, frequent and safe crosswalks and midblock crossings.
- **Gateways:** Located at the entrances to the Community Activity Center Future Land Use area and the entrance to the Community Avenue typology from the south and the north. Prominent gateway features, public art, lane narrowing and bump outs are recommended to begin the transition to a three lane roadway profile.
- **Transitions:** Spaced every ¼ mile to ½ mile throughout the Commercial Boulevard, Community Avenue, Core Street and Cottage Retail typologies. Landscaping, identity features and public art are appropriate design treatments.

The design palettes included in *Design Framework (Book 4)* contain guidelines for installing traffic calming, landscaping, street furnishing, wayfinding, and identity features in these locations to enhance the user experience and operations of Cedar Street.



Map 3A:
Street Typology
 Delhi Township, Michigan

- Cottage Retail Street
- Core Street
- Commercial Boulevard
- Community Avenue
- Commercial Parkway
- Gateway
- Node
- Transition

FEET 0 500 1,000



Source: Delhi Charter Township, McKenna Associates. 08.01.16





3.3

Reconfiguration

The character of the Cedar Street corridor in Delhi Township changes context from one end to the other. This section identifies specific points where changes in existing infrastructure or land use types are planned to occur. At these points, gateways or speed control elements will be utilized to effectively divide the corridor into the character segments.

The opportunity to implement a unified vision for Cedar Street that enhances and defines its character segments will require a concentrated approach to address urban design inconsistencies in both the private and public realms. Cedar Street has many outstanding features to enhance with design improvements as well as places to preserve. Future development should enhance rather than further obscure the sense of place.



Commercial Boulevard 1: Location
 (Above) Cedar Street from
 Willoughby Road to Fay Street
 (Right) Aerial view

Commercial Boulevard 1: Willoughby Road to Fay Street

This character segment is zoned for General Business and Highway Service and is characterized by commercial enterprises that are designed to be accessed by private vehicle. This development pattern is desirable and many residents want to see newer chain restaurants and shopping area reinvestments along this segment of the corridor. The challenge is to improve the aesthetic and safety of this stretch of Cedar Street and turn it into a vital entryway to Delhi Township from the north.

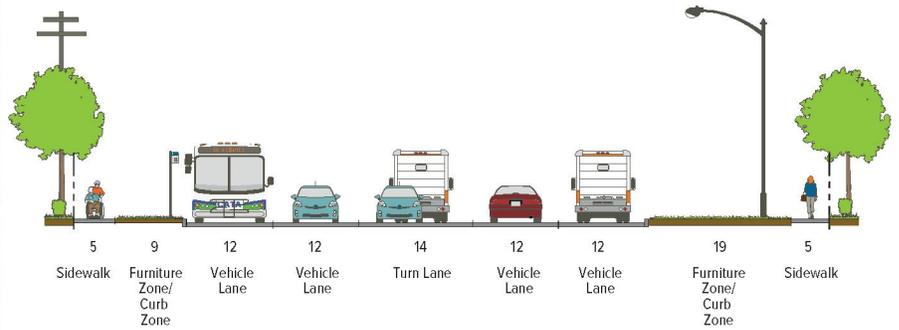
This segment of Cedar Street contains a “Welcome to Delhi Township” sign that greets motorists and passengers coming from Lansing or the nearby I-96 freeway interchange, and therefore acts as the face of the Township. There are prominent redevelopment sites in this segment that could include new housing, including the site at the corner of Cedar Street and Cedar Park Drive. Delhi Village Square, at the corner of Cedar Street and Delhi Commerce Drive, is an underutilized shopping at the south end of this segment.

Improvements can be made to encourage walking, biking, and the use of transit on the corridor to while maintaining the form and function of a commercial boulevard. While walking is not necessarily promoted in this area by the current development pattern, there are sidewalks and bus service, which can be enhanced with landscaping, shared used paths, medians and improved business signing. Additionally, public art could be used to enhance the character of the entrance corridor to Delhi Township.

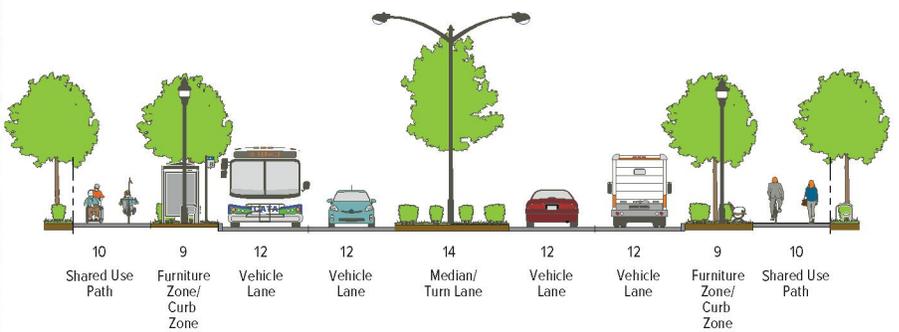
Parking should remain off-street but driveways should be consolidated. Rear access drives should be developed to connect between parking lots. Median islands are recommended to be installed in areas where driveways have been consolidated to calm traffic and reduce turning conflicts.

The roadway is recommended to remain two lanes of traffic moving in each direction separated by a center turn lane or median lane. A shared use path is recommended for the east side of the street. Utilities should be buried and a shared use path should be considered on both sides of the street.





Commercial Boulevard 1 - Existing Typical
 ROW = 100
 Curb to Curb = 62



Commercial Boulevard 1 - Proposed
 ROW = 100
 Curb to Curb = 62
 Mode Hierarchy = A>T>P>B

Not to architectural scale.





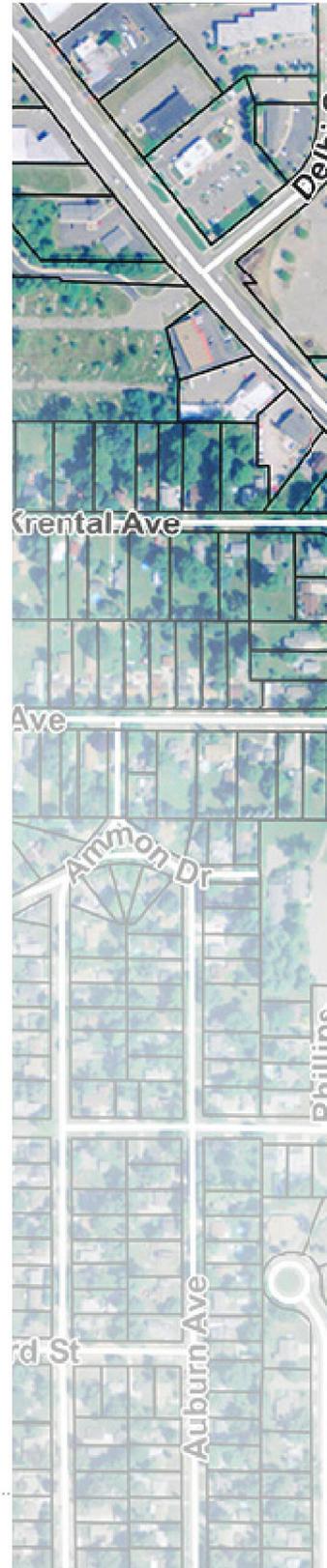
Community Avenue 1: Location
 (Above) Cedar Street from
 Fay Street to Keller Road
 (Right) Aerial view

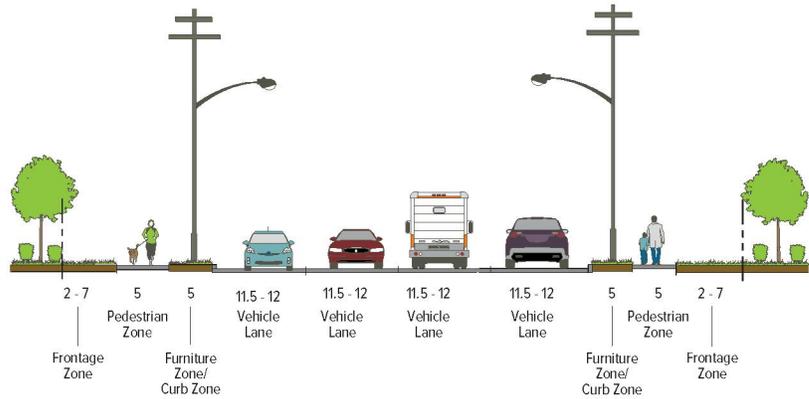
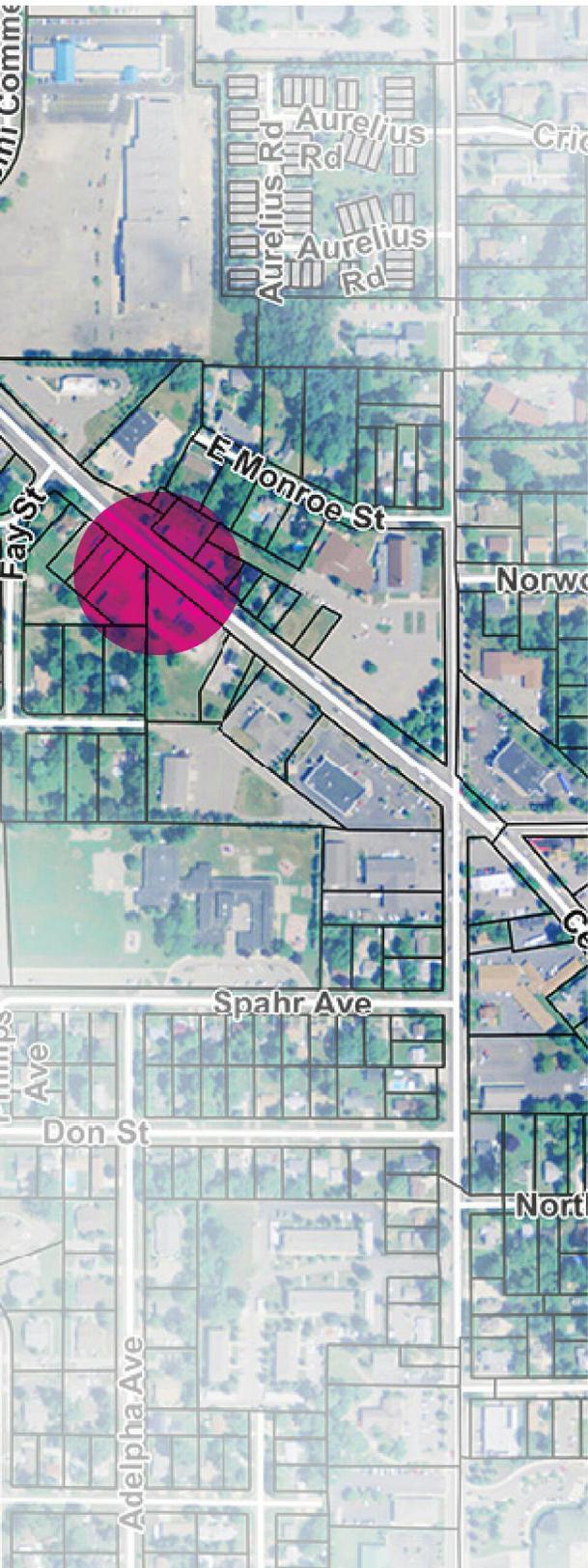
Community Avenue 1: Fay Street to Keller Road

This character segment starts at Fay and continues to Keller. It is zoned General Business, Low-Impact Commercial, and Residential. The Future Land Use plan for this area recommends the expansion of the Community Activity Center Designation. The Community Avenue typology is intended to transition traffic from the Commercial Boulevard typology into the Core Street typology.

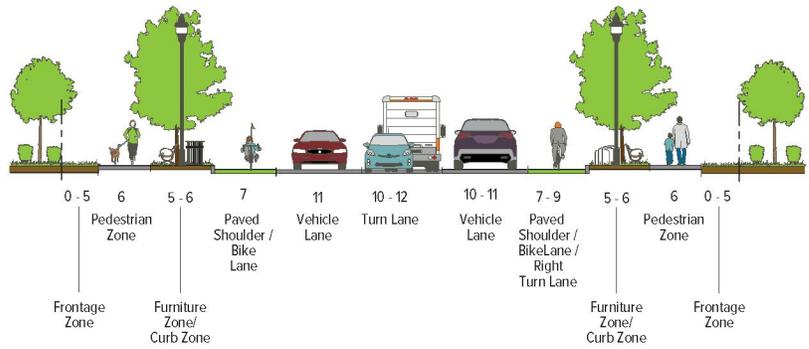
There are some vacant sites that could be redeveloped in this area, including the old Marathon filling station site, located southeast of Fay Street. Additionally, a large church parking lot near the intersection of Cedar Street and Aurelius Road is an opportunity for development to enhance the street frontage. The church site has a well maintained green space at the corner and a bus shelter.

Beginning at Fay Street and also continuing south the pavement narrows from five lanes to four and the placement of mature and new shade trees is adjacent to the sidewalk, opposite the roadway, consistent with a residential porch and lawn frontage type. Fay Street is the start of the four lane to three lane conversion from the north. On street parking is not recommended, instead a paved shoulder or a conventional marked bike lane can be used to connect to the shared use path recommended to the north. Right turn lanes are recommended when feasible, however, when there are right turn lanes, bike lanes must transition to marked shared lanes or be located between the right turn lane and the travel lane per AASHTO guidance.





Community Avenue 1 - Existing
 ROW = 70 to 80
 Curb to Curb = 46 to 48



Community Avenue 1 - Proposed
 ROW = 70 to 80
 Curb to Curb = 46 to 48
 Mode Hierarchy = V>P>B>T

Not to architectural scale.





Core Street 1: Location
 (Above) Cedar Street from
 Keller Road to Bertha
 Street
 (Right) Aerial view

Core Street 1: Keller Road to Bertha Street

This character segment starts east of Keller Road and includes the Farmer's Market node. It is zoned Town Center with a few sites zoned Public Property. The Future Land Use plan recommends the creation of a new Community Core land use designation to correspond with this area.

The current uses and single-family residential site configurations generally reflect these zoning classifications, although there are some existing buildings setback and off-street parking on the street side. These sites are priorities for redevelopment, with the Farmer's Market node as the focus point. This area has a parking lot of considerable size and several buildings that front to the sidewalk. The intersection of Cedar and North Street includes several redevelopment site opportunities. The northwest corner is recommended for the development of a mixed-use building with a public parking lot that links to and shares parking with the Post Office, which fronts on Aurelius Road.

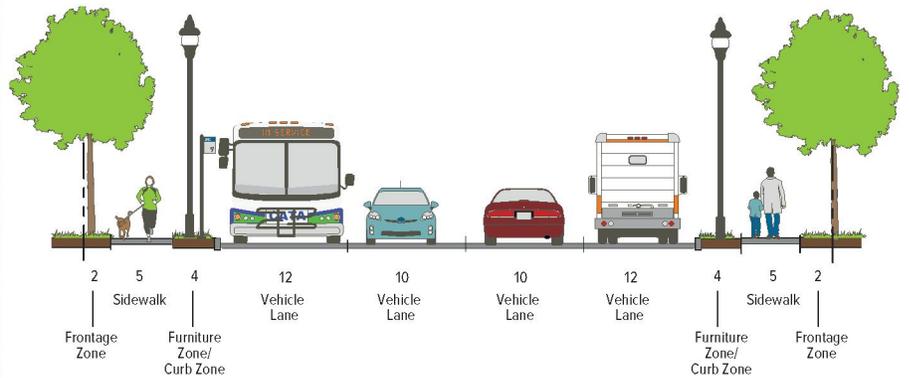
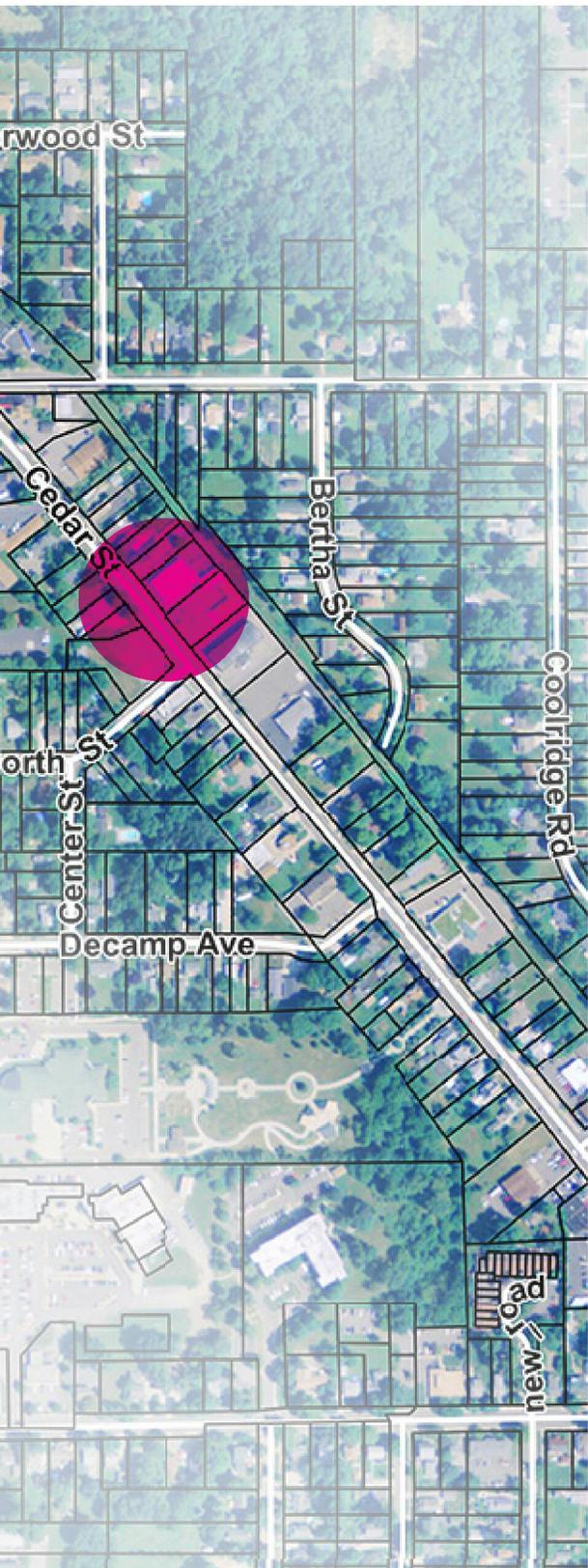
Streetscape and hardscape elements will complement the Township's traditionally-styled pedestrian-oriented lights, which begin at Aurelius Road and continue south until Watson Road. The spacing of these lights should be 40 to 80 feet and complemented with landscape islands. This area should be prioritized for on-street parking with bump-outs.

The curb line could be moved in sections with on-street parking to provide 8-foot parking lanes, or 11-foot travel lanes, depending on engineering judgment, however, a 10.5-foot travel lane and 7-foot parking lane will be more cost effective. Additionally, if turning movement analysis concludes that a center turn lane is not a necessary design feature in the sections where on-street parking is proposed, 8-foot parking lanes and a 14-foot marked shared lane is preferred.

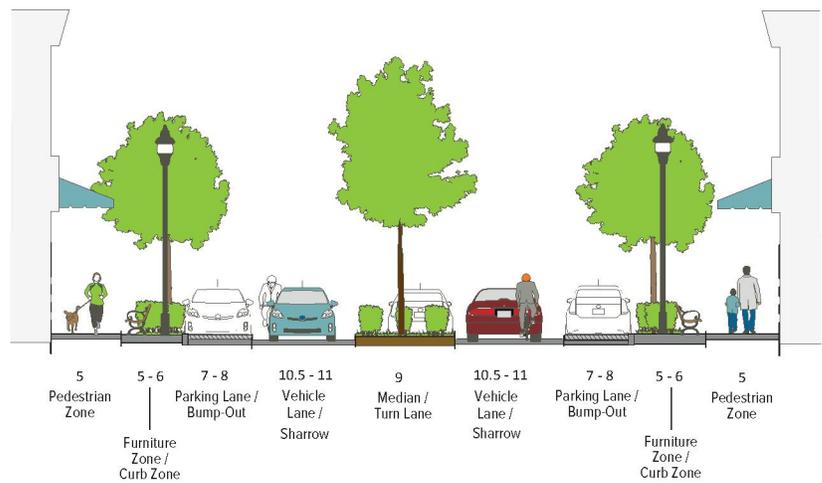
Bicycles should be accommodated through the use of marked shared lanes (sharrows). The optimal lane width for a marked-shared lane is 13 feet. For a 10-foot marked shared lane, the sharrow marking should be placed in the center of the travel lane because there is not room for vehicles to safely pass cyclists and cyclists must take the lane. This condition is appropriate for short intervals of 600 to 800 feet (1/8 mile) to accommodate a connected bikeway system.

Utilities are located in a separate utility corridor that runs parallel on the north/east side of Cedar. The utilities should be buried to create a rear alley for pedestrian, bicycle and vehicle circulation. This can be achieved iteratively through site planning or as a single project. Streetscape and hardscape elements will complement the Township's traditionally-styled pedestrian-oriented lights, which begin at Aurelius Road and continue south until Watson Road. The spacing of these lights should be 40 to 80 feet and complemented with landscape islands. This area should be prioritized for on-street parking with bump-outs.





Core Street 1 - Existing
 ROW = 66
 Curb to Curb = 44



Core Street 1 - Proposed
 ROW = 66 - 69
 Curb to Curb = 44 - 47
 Mode Hierarchy = P>B>V>T

Not to architectural scale.





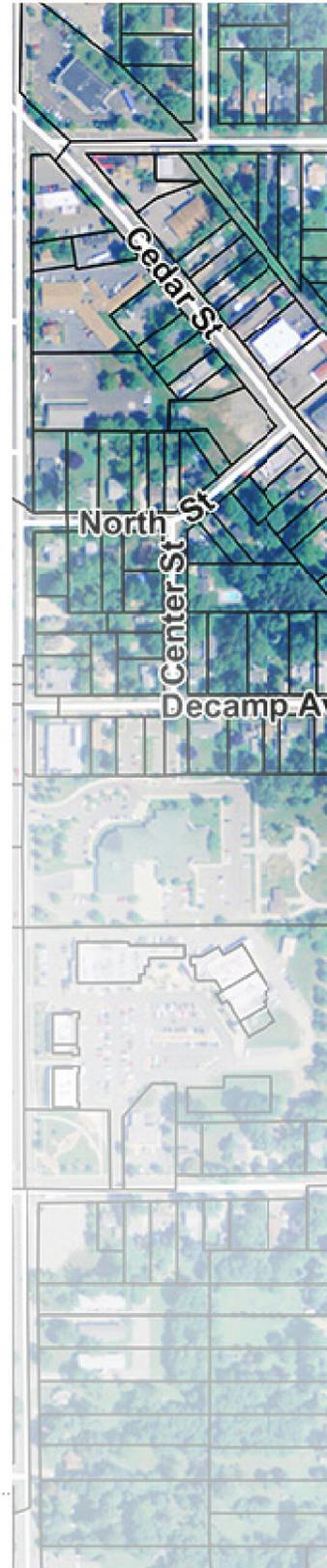
Cottage Retail Street: Location
 (Above) Cedar Street from Bertha Street to Bond Avenue
 (Right) Aerial view

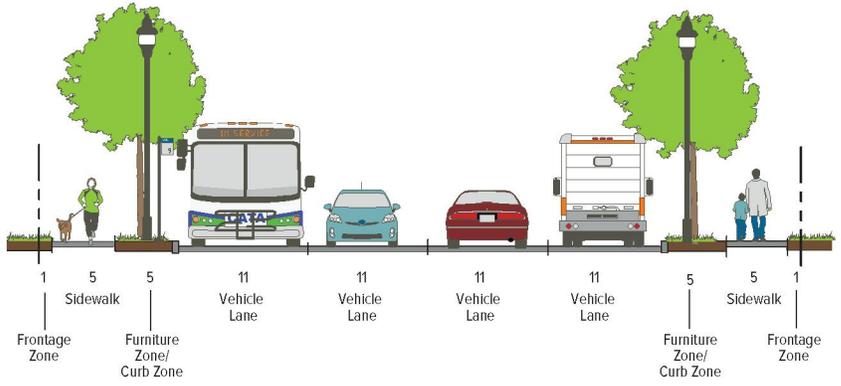
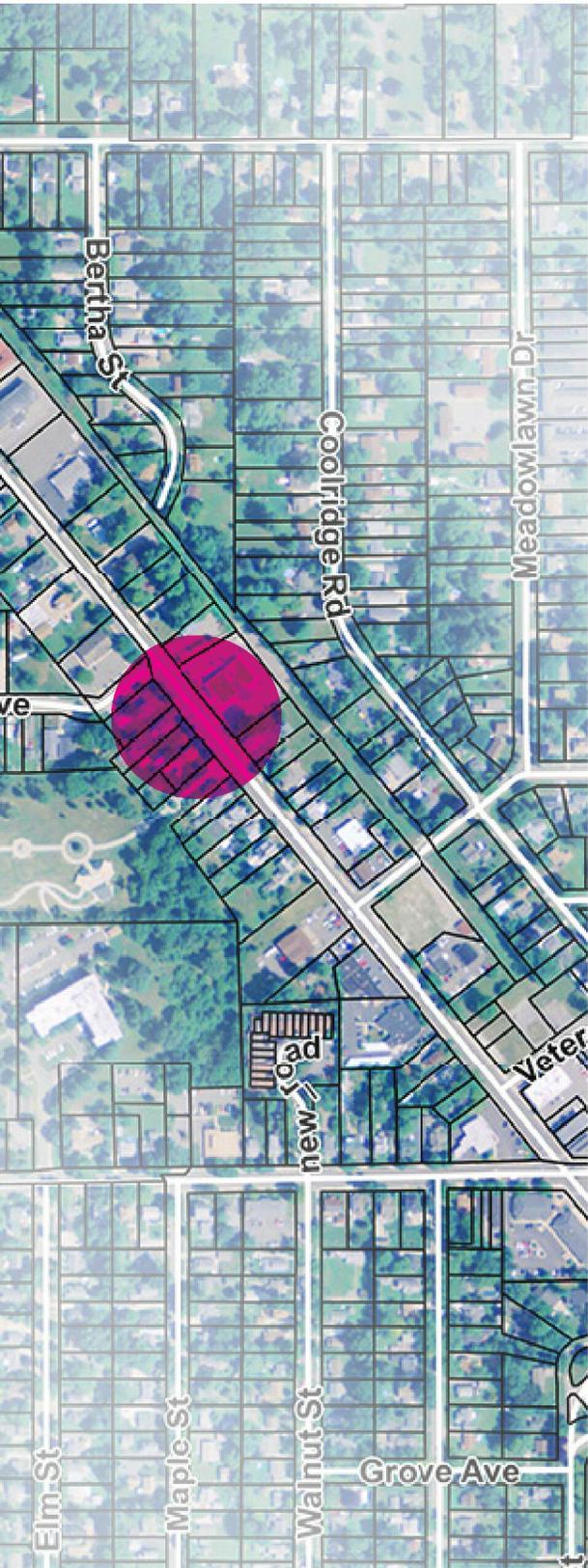
Cottage Retail Street: Bertha Street to Bond Avenue

The segment between the Farmers Market and the Bond Street is characterized by either single-family homes with uniform setbacks, porches and lawn frontages, or commercial enterprises and building types setback from the right-of-way and landscaped in a manner more or less consistent with these homes. The major development objective for this character segment will be to reinforce the character of these buildings to enhance walkability and a sense of place.

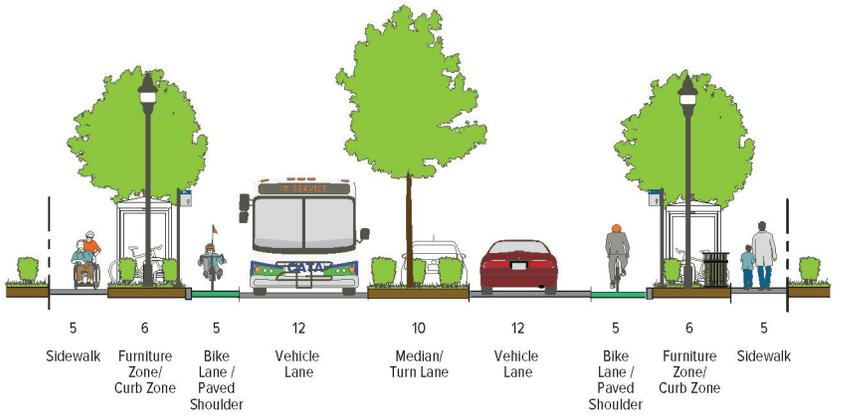
The focal points of the Cottage Retail Area are civic uses, including the Sam Corey Senior Center and the Veterans Memorial Gardens, which link to Township Hall. An existing mid-block crossing has been installed at this location, but the beacon only flashes yellow and does not have an all-red phase. This beacon could easily be updated to a High-Intensity Activated Crosswalk beacon (HAWK) to improved crossing safety. When the three lane profile is installed a median island is recommend at this crossing as well.

On-street parking is not as needed in this section of the street. Alternatively, a paved-shoulder or on-street bike lane is recommended on both sides of the street. Driveway consolidation and access management is recommended if sites are assembled and redeveloped together. A rear alley can be created if the utilities are buried on the north/east side of Cedar would benefit circulation. Additionally, circulation to the neighborhoods would be improved if Bertha Street were connected into Cedar. Minimally, a bicycle and pedestrian connection to Bertha Street should be considered.





Core Street 1 - Existing
 ROW = 66
 Curb to Curb = 44



Core Street 2 - Proposed
 ROW = 66
 Curb to Curb = 44
 Mode Hierarchy = P>B>V>T

Not to architectural scale.





Core Street 2: Location
 (Above) Cedar Street from
 Bond Avenue to Holt Road
 (Right) Aerial view

Core Street 2: Bond Avenue to Holt Road

This intersection also represents the commercial center of the unincorporated community of Holt, Michigan. This report refers to the area as the Downtown Nodes, although Downtown Holt may be a more appropriate moniker.

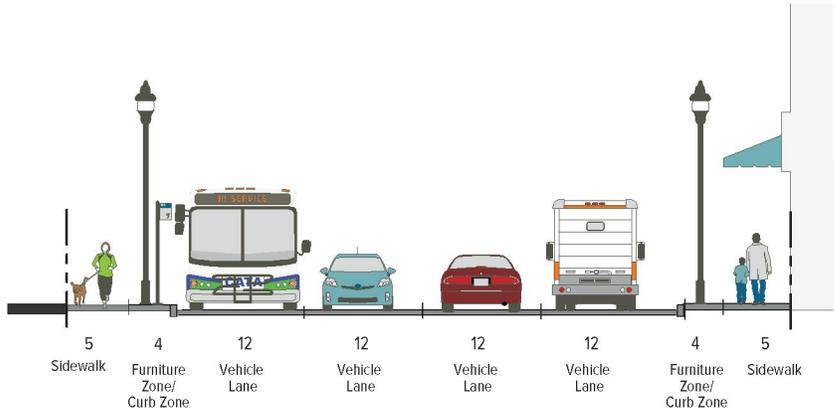
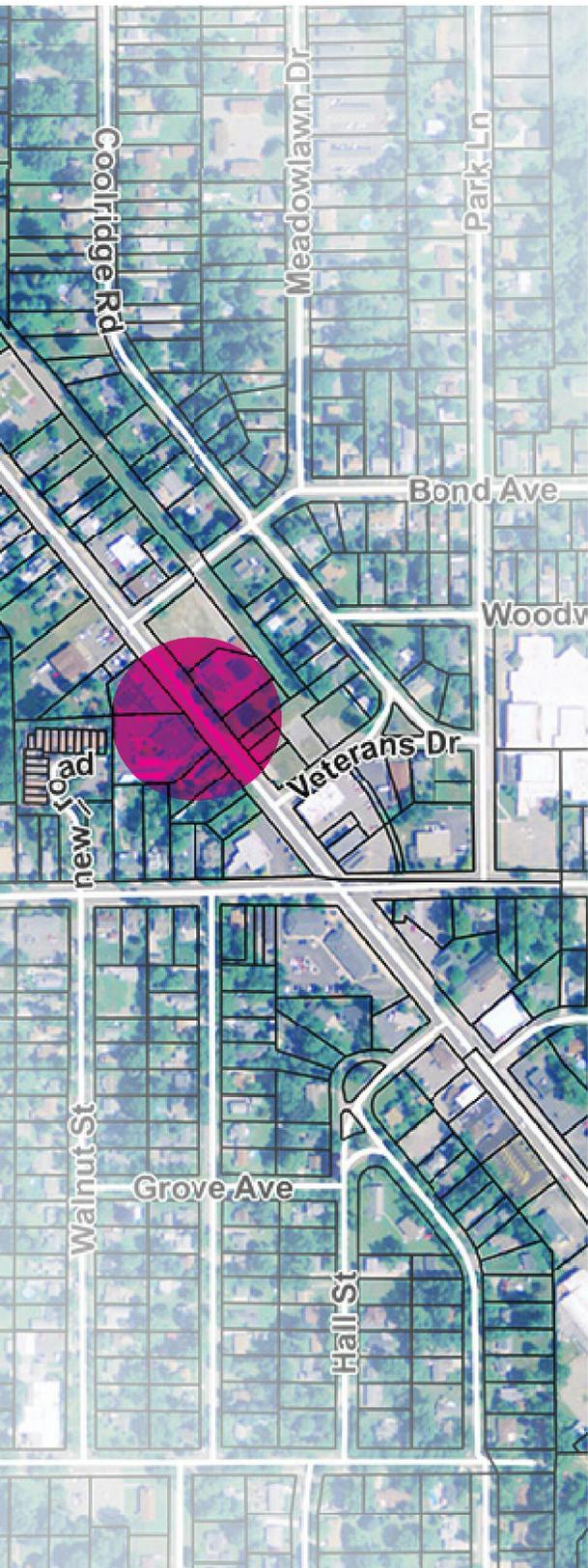
High quality traditional downtown anchor buildings are located at the portion of Cedar Street within one block of Holt Road. Many of the existing buildings do not have side-yards and are close to the sidewalk, resulting in a pedestrian friendly environment. The entire north/east block between Bond Street and Veterans Drive is a high priority for redevelopment. This site is the heart of a future downtown district and it is large enough to provide, retail, shopping, office, and residential uses, as well as a formal public parking area with rear alley access.

The bank site at the northwest corner of Holt Road and Cedar Street has off-street parking in the front, which presents a challenge for the further development of a walkable town center at this location.

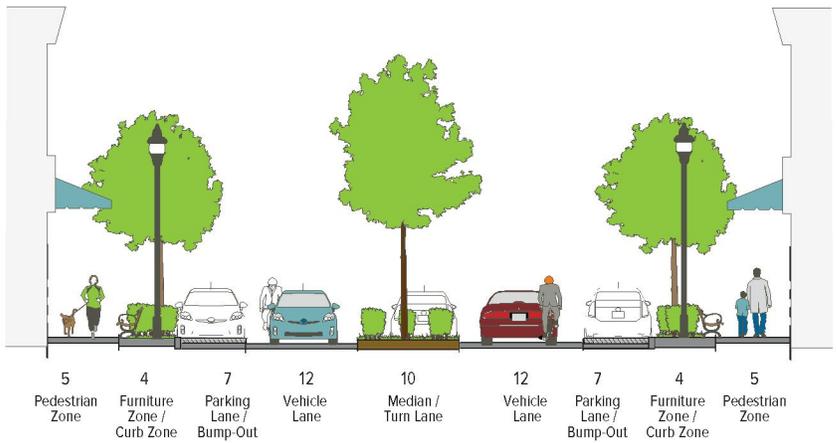
Street lamps, landscaping islands, benches, bike parking, and other street furnishing and hardscape elements are recommended. This area is prioritized for on-street parking with bump-outs. Bicycle accommodations are recommended through the use of marked shared lanes (sharrows).

Refer to the discussion in the Core Street 1 section for design considerations related to on-street parking and marked shared lanes.





Core Street 1 - Existing
 ROW = 66
 Curb to Curb = 48



Core Street 1 - Proposed
 ROW = 66
 Curb to Curb = 48
 Mode Hierarchy = P>B>V>T

Not to architectural scale.





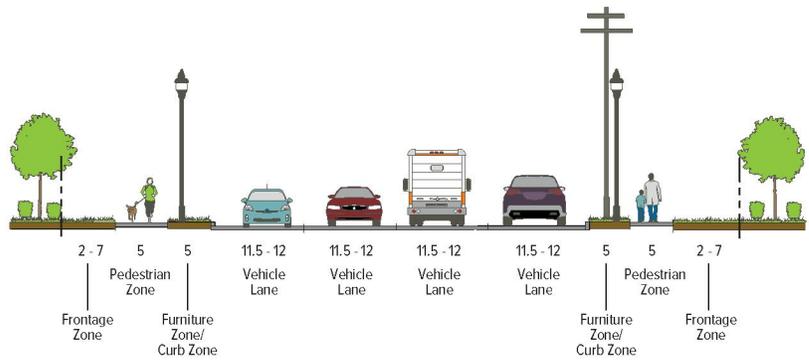
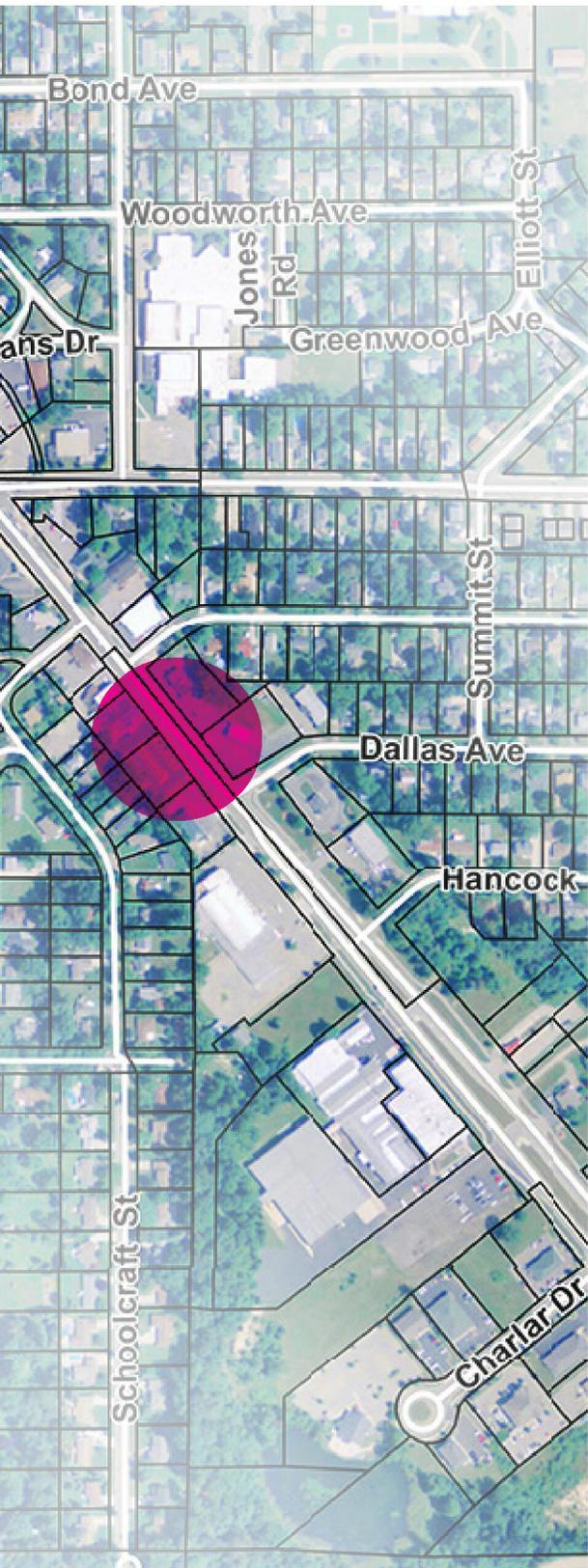
Community Avenue 2: Location
 (Above) Cedar Street from Holt
 Road to Dallas Avenue
 (Right) Aerial view

Community Avenue 2: Holt Road to Dallas Avenue

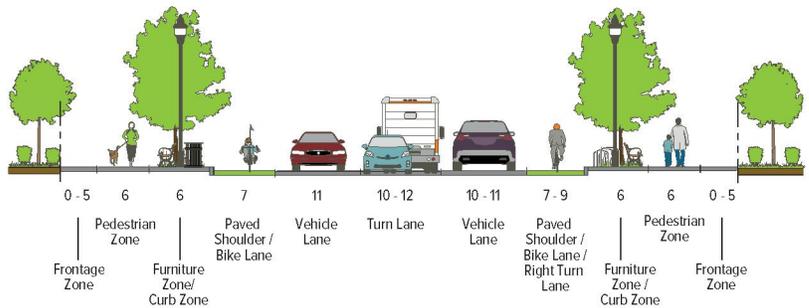
This segment of Cedar Street traverses the Town Center zoning and General Business districts. The area is recommended for the expansion of the Community Activity Center Future Land Use area. The existing cross-section throughout this segment of the Cedar Street corridor remains at four lanes, without a center turn lane. Street tree placement through this segment of the corridor continues adjacent to the sidewalk but opposite the roadway.

Traditionally-styled and pedestrian-oriented light standards are located along Cedar Street throughout this character segment, spaced for an urban context. This area is recommended to begin the four lane to three lane conversion from the south. On street parking is not recommended, instead a paved shoulder or a conventional marked bike lane can be used to connect to the shared use path that begins on the east side of Cedar and extends south to the roundabout. Right turn lanes are recommended when feasible, however, bike lanes must become marked shared lanes or be located between the right turn lane and the travel lane per AASHTO guidance.





Community Avenue 2 - Existing
 ROW = 70 to 80
 Curb to Curb = 46 to 48



Community Avenue 2 - Proposed
 ROW = 70 to 80
 Curb to Curb = 46 to 48
 Mode Hierarchy = V>P>B>T





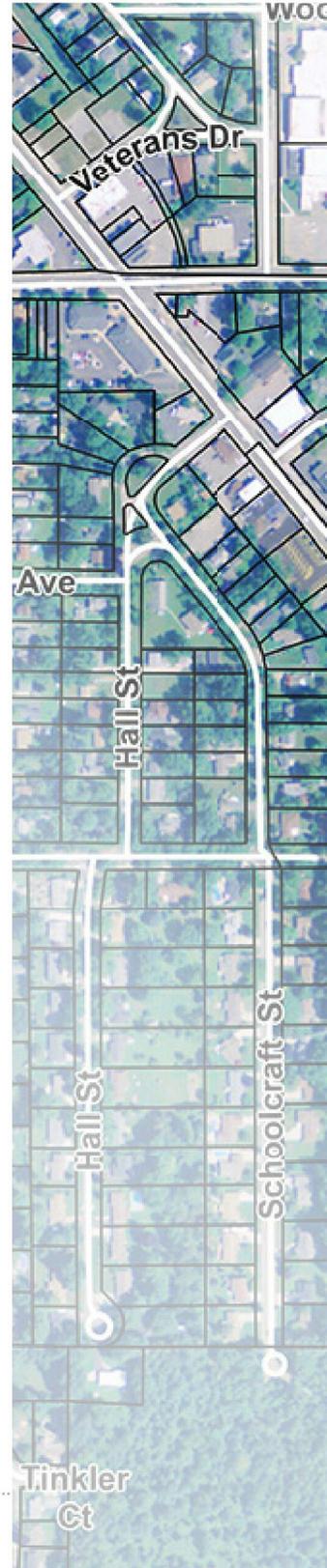
Commercial Boulevard 2: Location
 (Above) Cedar Street from Dallas Avenue
 to Holbrook Drive
 (Right) Aerial view

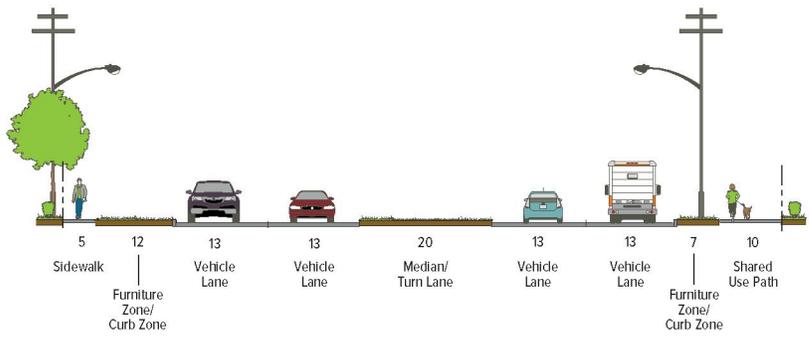
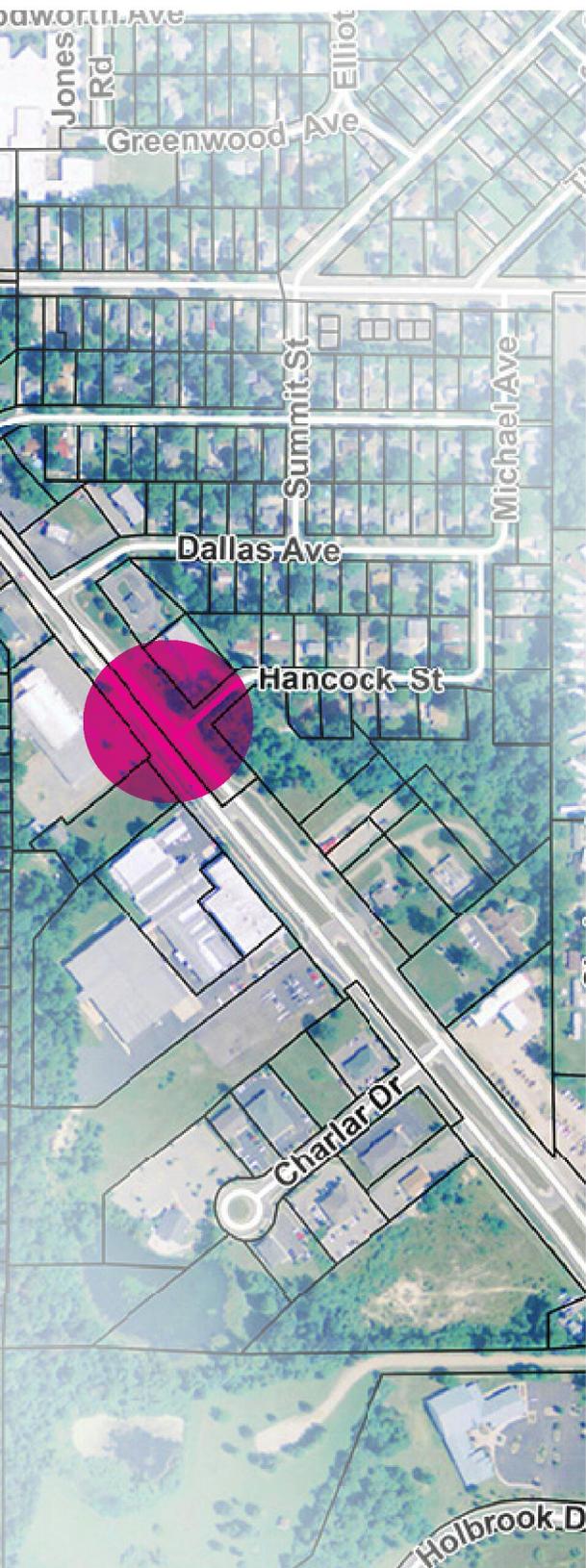
Commercial Boulevard 2: Dallas to Holbrook

Zoning classifications along this character segment vary widely including Town Center, General Business, Low Impact Business and Industrial. At approximately Dallas Avenue the building character abruptly changes back to auto-oriented design, similar to the northernmost segment of Cedar. Setbacks and frontages are less consistent in styles and the quality of building type varies notably. Beyond Hancock Drive building setbacks increase and industrial or campus office uses begin to dominate.

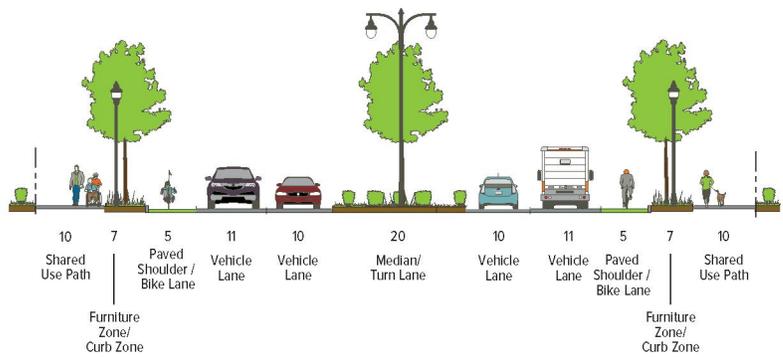
The roadway is recommended to remain two lanes of traffic moving in each direction separated by a center turn lane or median lane. A shared use path exists on the east side of the street. Utilities are overhead and adjacent to the west side of the roadway seems to be established and viable. If utilities can be feasibly buried, a shared use path should be considered for the west side of the street as well.

This area of the street is recommended for lane narrowing and landscaping to encourage reduced travel speeds. The current configuration encourages high-speeds prior the roundabout. A commercial boulevard should support more site access and landscaping islands and lane narrowing may be the most effective treatments. Chicane-style bump-out islands, or shoulders should be added on the east and west curb side and lane width should be reduced to 10 to 11 feet. A median is existing and can be used for public art and plantings.





Commercial Boulevard 2 - Existing
 ROW = 110
 Curb to Curb = 72



Commercial Boulevard 2 - Proposed
 ROW = 110
 Curb to Curb = 72
 Mode Hierarchy = A>T>P>B

Not to architectural scale.





Commercial Parkway: Location
 (Above) Cedar Street from Holbrook Drive to College Road
 (Right) Aerial view

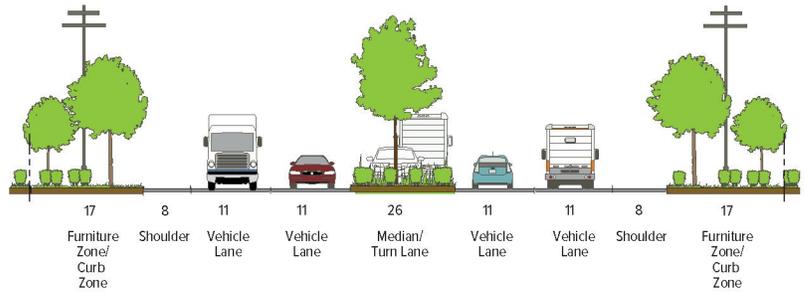
Commercial Parkway: Holbrook to College

South of the Holbrook roundabout the building setbacks become greater and the built environment gives way to a natural or agrarian landscape. Where existing businesses can share access drives, driveway consolidation is recommended.

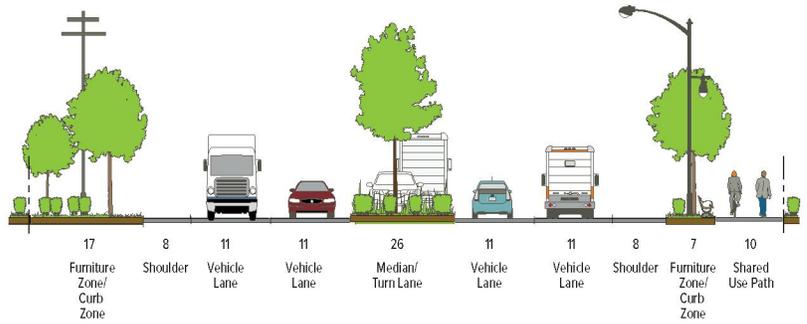
The current roadway configuration is consistent with a parkway typology and a few minor modifications will greatly improve Cedar's entrance into Delhi Township from the south. Signing and other identity features should be consistent with the rest of the corridor to create a unified identity. Additionally, landscaping elements are recommended for the median and along business frontages. A native prairie and/or street trees are recommended to be installed in the entire median from College to Holbrook.

A shared use path or trail is recommended to be installed on the east side of the roadway. Where feasible, trail separation of greater than 10 feet from the roadway is desirable and a screen row of shrubs, native grasses and trees should be used to improve the comfort level of trail users.





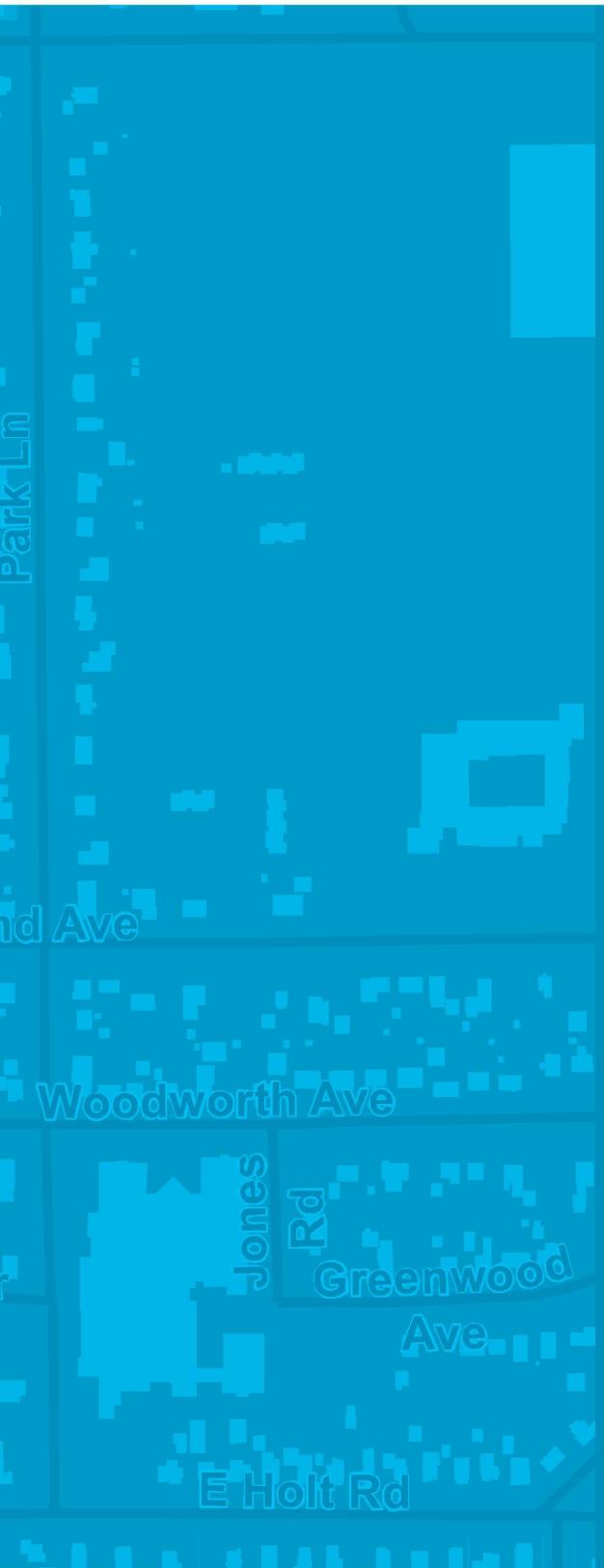
Industrial Parkway - Existing
 ROW = 120
 Curb to Curb = 86



Industrial Parkway - Proposed
 ROW = 120
 Curb to Curb = 86
 Mode Hierarchy = A>T>B>P

Not to architectural scale.





3.4 Grid Retrofits

Currently, there are some limitations in the intersection density of the street grid in the triangle area on Cedar between Holt and Aurelius. The segment is approximately $\frac{2}{3}$ of a mile or 3,427 feet and has only two intersections on each side. A desirable standard block length for walkability and vehicle circulation in a downtown area is 300 feet to 600 feet. On the east side of the street, the Bond to Keller block is approximately 2,400 feet.

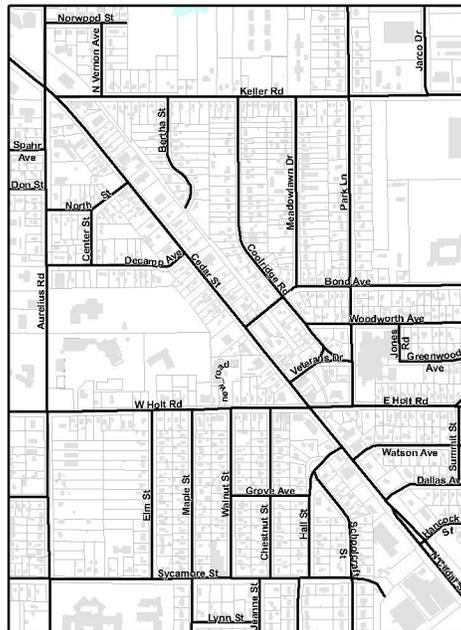
On the west side of the street, the De Camp to Holt block is approximately 1,600 feet. The other blocks, range roughly from 600 feet to 800 feet.

Grid Retrofit

This diagram shows the existing street grid and the proposed additional connections to the surrounding neighborhoods.

Existing (top)

Proposed (bottom)



Map 3B: Proposed Grid

— New Connections

— Pedestrian Link

While it is not practical to completely retrofit the street grid to create 300 to 600 foot block lengths, there is potential to add a few key retrofits to the network to eliminate the two mega-blocks noted above, as follows:

- Realign Keller Street by moving it approximately 200 feet to the south to create more than 300 feet of distance between the Aurelius Road intersection
 - Realigning Keller will permit the intersection to be on a separate signal, or possibly a stop sign
 - The realignment can improve the signal phasing and functioning of both Aurelius and Keller to allow shared phases, currently each direction of travel has its own dedicated signal phase
- Connect Bertha through to Cedar between North and De Camp
- Add a rear alley from Keller to Veterans on the parallel to Cedar in the north/east utility corridor
 - For bicyclists less comfortable biking on-street or in shared travel lanes with vehicles, the rear ally will provide an alternate bike connection along Cedar between Keller and Holt
- Link Elm Street through to Cedar between De Camp and Bond with a pedestrian and bicycle connection
- Connect Sycamore through to Cedar south of Hancock
- Convert Veterans Drive to an alley, shared street, or parking lot driveway to discourage cut-through traffic and prioritize walking and biking connectivity

New connections should be skinny streets or alleys with target vehicle speeds of 15 mph to 20 mph, and 16 to 22 feet curb to curb, shared biking and pedestrian access and two-way traffic. Where feasible, to match the context of the residential neighborhoods, a 5 foot sidewalk with a 5 foot separation lawn should be added.

Currently, every site in the district manages its own parking, with no on-street parking, shared parking, or cross site access. Adding new streets will provide circulation and access to new on-street parking, shared private parking, and new public parking areas so customers can park once to access multiple destinations.



3.5 Access Management

Another way to improve pedestrian and traffic circulation along Cedar Street is through the application of access management. Access management reduces the number of points of access to the street from adjacent properties.

This benefits pedestrians by reducing the number of points along a sidewalk where they may encounter a vehicle, and it benefits traffic by reducing the number of points for other vehicles to enter the street. Cross access should be required on Cedar Street and the total number of driveways should be reduced as sites are redeveloped. An alley should also be constructed in the utility corridor on the east side of Cedar Street.

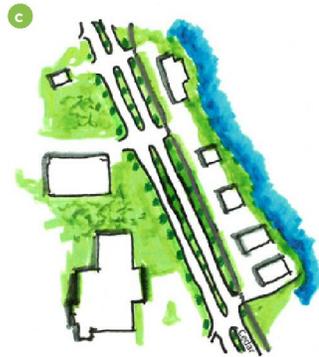
Although access management reduces the number of access points, an adequate supply of parking still must be provided. Part of the proposed Cedar Street redesign includes on-street parking near nodes of activity. Public off-street parking can use existing parking lots at the Holt Farmer's Market and the Post Office, as well as new parking lots behind the buildings within new developments. Providing consistent and adequate public parking, along with cross access parking lot connections, will encourage people to use businesses along Cedar Street by enabling people to park once and visit multiple destinations. This allows for a decrease of turning movements, a reduction of traffic looking for open parking spaces, and an increase in pedestrian activity especially in the Community Core and Community Activity Center.

Commercial Boulevard 1

Commercial Parkway

a Existing Access Management
The existing driveway and access conditions in the Commercial Boulevard 1 area allow several driveways that are close together, creating potential vehicle conflict points.

b Proposed Access Management:
Proposed access management for the Commercial Boulevard 1 area consolidates several driveways, allows cross access at the rear of sites, installs medians where turning movements are no longer needed, and allows for walking and biking access.



c Existing Access Management
The existing driveway and access conditions in the Commercial Parkway area permit several driveways on the east side which are inaccessible for the traffic going southbound on Cedar Street.

d Proposed Access Management:
The proposed access management for the Commercial Parkway area consolidates several driveways, continues the existing cross access at the front of sites, enables all driveways to be accessible for both directions of traffic, and allows for the future construction of a trail on the east side of the roadway.



3.6 Mode Accommodation

Improving the pedestrian and bicycle networks in Delhi Township with connections to the employment and shopping destinations along Cedar Street will support residents' health and wellness. With network improvements, more Township residents will be able to make safe, short trips to parks, schools, and even downtown entertainment and shopping, all without getting in the car. Bicycle network improvements are recommended based on the need for separation from vehicle traffic, existing signal locations to cross major roadways, and alignment with desirable community destinations, like schools, parks, public facilities, and commercial areas.

Shared Use Paths and Trails

Shared use paths and trails are paved concrete or asphalt paths wide enough to accommodate both pedestrians and bicyclists. They are typically a minimum of 10 feet wide with 2 feet of clearance on either side of the path. Shared use paths offer cyclists a safe place to bike off-street when there is no space for a bike lane, or it is unsafe to bike on the street.

Conventional Bike Lanes and Paved Shoulders

Bike lanes create a dedicated space for cyclists on a roadway. They are appropriate on streets with moderate to heavy traffic. Bike lanes are indicated by on-street markings, which can be supplemented with signage. Bike lanes reinforce proper roadway etiquette, raise the visibility of bicyclists, and help both bicyclists and drivers behave predictably when sharing road space. For safe cycling, bike lanes should be 4 feet to 6 feet wide.

Marked Shared Lanes or Sharrows

Marked shared lanes use a double chevron and bicycle marking, or “sharrow,” in a lane intended for the joint use of motorized and bicycle traffic. Chevron symbols direct bicyclists to ride in the safest location within the lane, outside of the door zone of parked cars and areas where debris is likely to collect. Generally, marked shared lanes are a low-cost treatment suitable for lightly traveled collector and arterial roads.

Improved Pedestrian Crossings

Improved and frequent pedestrian crossings are recommended to support safety, comfort, speed, and convenience of walking trips. Pedestrian crossings also serve bicyclists. The crosswalk at Sam Corey Senior Center was cited as dangerous for pedestrians because the traffic does not slow down or stop, even when the light is activated.

a Shared Use Path
Shared use paths of 10 feet are ideal for shared pedestrian and cycling spaces on higher speed commercial corridors with limited driveways

b Bike Lane
Bike lanes create a separate operational area for cyclists and should be striped at 5 to 6 feet

c Sharrows
Sharrows can be used to indicate the preferred space for a bicycle to operate on the roadway, especially for streets that are too narrow to install a bike lane; enough space should be provided to prevent "dooring" by parked car doors and, in tight areas, markings should be placed in the center of the vehicle lane

d Crosswalks
Example of a ladder, or continental style crosswalk that features highly visible roadway markings





Non-Motorized Connections
 Map showing potential biking and walking connections from Cedar Street to other parts of the Township and to the region

Map 3C:
Non-Motorized Connections
 Delhi Charter Township, Michigan

-  New Existing Trail
-  Marked Share Lanes
-  On Street Bike Lanes
-  Paved Shoulders
-  Shared Use Path
-  New Grid Connections
-  Shared Bicycle Alley
-  Improved Pedestrian Crossings

0 500 1,000
 FEET



Source: Delhi Charter Township, McKenna Associates. 08.01.16





3.7 Feasibility

A four lane to three lane roadway conversion, or "road diet" is essential to achieve the redevelopment vision for Cedar Street in Delhi Township and improve the safety of all potential users along the corridor. Between Fay Street and Dallas Avenue, Cedar Street currently has a four-lane profile with two travel lanes for through traffic in each direction. This road design increases the probability of rear-end crashes and left-turn crashes from drivers attempting to maneuver behind or around turning traffic.

Safety Factors

Crash Analysis

Cedar Street has two major intersections near the downtown area of the Township, with Aurelius Road and Holt Road. The design and operation of these two intersections make them susceptible to crashes. Cedar Street and Aurelius Road is essentially a five-way intersection with Keller Road enabling traffic to and from the east Cedar Street intersects Aurelius Road at a sharp angle, reducing visibility. The Cedar and Aurelius intersection is one of the most crash-prone within Ingham County. According to Michigan Traffic Crash Facts data, there were a total of 14 crashes in 2015 and 21 crashes in 2014 within 150 feet of this intersection. Cedar Street and Holt Road is another intersection at an angle, although less sharp of an angle than at Aurelius Road. The intersection had 8 crashes in 2015 and 10 crashes in 2014 within 150 feet according to Michigan Traffic Crash Facts.

The data shows a significant number of pedestrians or bicyclists involved in crashes, with 2-3 on average in the entire Township per year. Additionally, there may not be a large amount of walking or biking activity along major corridors in the Township since not all major destinations are reachable on foot or on a bike. As Cedar Street is redeveloped, it is important to keep in mind bicycle and pedestrian safety with the expected increase in walking and biking activity.

The northern end of Cedar Street has had a high number of crashes causing injury, with approximately 12-15 injury crashes each year over the past 4 years. Injury crashes were generally concentrated near Cedar and Holt, Cedar and Aurelius, and along Cedar between Delhi Commerce and Willoughby. These crashes imply that operational improvements can be made to the roadway to reduce the likelihood of future crashes, including improved signal timing on Cedar at both Holt and Aurelius, and shared access drives with reduced driveways on Cedar especially near Willoughby and Delhi Commerce.

Crosswalks (Pedestrian Issues)

The four-lane profile of Cedar Street presents several conflicts for pedestrians traveling in the corridor. The only mid-block crossing between Aurelius and Holt is located at the Sam Corey Senior Center. The pedestrian crossing is controlled by a pedestrian-activated light which only warns traffic to slow down. This light does not stop traffic and the design of the street does not encourage traffic to slow down.

Driveway Access

Cedar Street contains a high frequency of driveway access points. This frequency encourages weaving around turning traffic and creates conflicts between drivers traveling in different directions. The road diet would provide an opportunity for drivers turning left to move out of the travel lane and would result in fewer conflict points, easier maneuverability, and improved sight distance.

Crosswalks

The crosswalk at Sam Corey Senior Center was cited as dangerous for pedestrians because the traffic does not slow down or stop, even when the light is activated





Context Sensitive Solutions and Complete Streets

Design Excellence and Geometrics

A road diet on Cedar Street would support the existing and future land uses desired in the community. People in the community and Township leaders have expressed a goal of making the segment of Cedar Street between Aurelius and Holt Roads feel more like a downtown. Redesigning the street profile will create a safer environment for pedestrian traffic, provide opportunities for on-street parking, and calm the speed of through traffic.

Community Support

Delhi Township has undergone extensive public engagement to determine how Cedar Street can best serve the community in the future. The Township held three focus groups to gauge ideas about Cedar Street: one each for senior citizens, residents in the corridor, and business owners. Attendees at each focus group were asked about their big ideas for Cedar Street, participated in an exercise to rank goals and priorities, and took part in a visual preference survey. Residents were also asked to contribute big ideas and take the goal and priority ranking exercise through online surveys. Throughout all the public engagement, people expressed an interest in improving pedestrian safety and movement along Cedar Street, improving the flow of traffic and signal timing at key intersections, and adding new land uses to the corridor especially between Aurelius and Holt Roads. These goals can be supported by a road diet.

Pedestrian / Bicycle Accommodation and Mode Hierarchy

Discussion with Township staff and engagement with the public produced the desired modal hierarchy for Cedar Street between Aurelius and Holt Roads. Pedestrians will be given the highest priority, followed by bicyclists, vehicles, and transit respectively. There was a strong desire to improve pedestrian safety in this segment, but also a recognized need to allow for the movement of cars and to improve safety near several key intersections. Cedar Street is a key connection between both existing and planned bikeways and parallel bike routes. Adding marked shared lanes to Cedar Street will support potential bicycle riders there, which is a beneficial outcome of the road diet. The transit route serving Cedar Street only goes northbound toward Lansing, and pullout areas will be created along this section to provide operational space for buses. These pullout areas will also allow pedestrian bump outs to be constructed, and a future design operational analysis will not be needed for these bump outs based on the AADT of only 10,550 cars per day.



Cedar Street Operations

(Top) Because of the frequency of driveway access points and the lack of a center turn lane, parts of Cedar Street with four lanes function as if there were only three lanes

3Q Signal Timing

(Bottom) The intersections at Cedar and Aurelius and at Cedar and Holt would be improved with shared signal phasing to allow both directions of the road to move at once

Operations

De Facto Three Lane Operation

The segment of Cedar Street between Aurelius and Holt Roads often functions as a de facto three lane roadway. There are several small lots with small commercial buildings, single family houses, converted single family houses for offices, and others, resulting in a high driveway frequency. Traffic turning into these driveways can cause backups in either through lane, and drivers will often weave around turning cars to avoid having to stop. A three-lane profile moves left turning traffic to its own lane and does not allow for weaving around right turning traffic.

Speed and Traffic Calming

Pedestrian safety and the streetscape environment can be improved by reducing speed along this segment of Cedar Street. The overall operation of Cedar Street can also be improved by streamlining speed limits along the entire corridor. The speed limit south of the roundabout currently is 50 mph. This decreases to 25 mph in the roundabout, then up to 45 mph exiting the roundabout. The speed limit becomes 35 mph leading into and through the downtown area. The speed limits create erratic speed patterns and cause safety issues for all users of the corridor.

Delay

Based on traffic counts, minimal impact to the vehicle level of service (LOS), especially at off-peak times, is expected. Significant improvement in safety and operations, especially at on-peak times, is expected. Some delay should be tolerated based on the volume of peak hour traffic and the loss of a through lane in each direction. However, the safety and operation of the roadway can be improved by adding the left turn lane and eliminating the possibility of weaving.

Signal Timing

Signal timing at Cedar and Aurelius and at Cedar and Holt will be adjusted to improve the operation of the roadway. The signal at Aurelius currently allows only one segment of each road the chance to move per phase, meaning a complete cycle must go through four steps to go through each direction of each road. The signal at Holt currently has two phase cycles on Cedar and a dedicated left phase on Holt. With a three-lane profile, the approaches to these intersections will have a more natural separation of left turning traffic and through traffic, and the signals will be timed to allow both directions of the road to move at once. Operations analysis shows that shorter and more shared signal phasing will improve traffic flow on Cedar, as well as on Aurelius and Holt Roads and wait times will be reduced by a three lane profile. New on-street parking and off-street parking will reduce turning movements when motorists visit multiple destinations because they can park once.

Quality of Service (Multimodal Level of Service)

The multimodal level of service is likely to increase with a road diet. Pedestrian LOS scores are likely to improve due to the lane reduction, speed reduction, and addition of on-street parking. A refuge island for the crossing at Sam Corey Senior Center, as well as a HAWK signal, would greatly improve safety at this key mid-block crossing. Adding a refuge island would not require an operational analysis based on the Annual Average Daily Traffic (AADT) of 10,550 cars per day.

Annual Average Daily Traffic

The AADT for Cedar Street is approximately 10,550 vehicles per day based on data from May 18-19, 2016. Road diets are generally feasible for roads with an AADT of up to 24,000 cars per day, so Cedar Street falls well into the acceptable range.

Based on FHWA guidance, a roadway that has a design year AADT under 15,000 does not require an operational analysis. The current AADT based on our counts from May 18-19, 2016 is substantially lower than this benchmark. The amount of growth needed to reach 15,000 AADT would be about 36% growth over the next 10-20 years. There was construction on Cedar under Interstate 96 when the counts were taken, which may have diverted some traffic away from Cedar, but the Township engineer estimates the impact to be approximately 10%.

Peak Hour Peak Direction

The segment of Cedar Street between Aurelius and Holt Roads has a flat peak traffic time based on the proximity of several schools. Peak traffic is split among morning commute to work, morning drop off at school, afternoon pickup from school, and evening commute from work. A road diet will not adversely affect the peak traffic. Defined spaces for the different turning motions allows for better management of traffic at peak times.

Frequent Stopping/Slow Vehicles

Some transit and truck traffic exists along this portion of Cedar Street. There is a bus that only reaches as far south as Holt Road, and only travels north between Aurelius and Holt Roads. The proposed road design after the road diet includes designated pullout areas for buses and designated loading areas for delivery trucks. These spaces will help keep the flow of traffic moving while still providing the benefits of the road diet to the corridor, and bump outs can provide specific benefits to pedestrians without the need for an operational analysis.



Frequent Stopping Vehicles
Pullout areas for frequent stopping vehicles such as delivery trucks and buses will reduce the interruption of traffic flow



Rooftop art at Edru Skate

Bicycle, Pedestrian, Transit, and Freight Considerations

The three-lane profile of a road diet for Cedar Street can reduce conflicts between vehicles, bicyclists, and pedestrians, and decrease the complexity of traffic crossing maneuvers. Pedestrian activity would be expected to increase with improved safety and future land uses along the corridor. Bicycle activity would likely increase, as Cedar Street is near a regional trail network and the road diet will help fill a gap in this network. Transit and freight traffic would each be provided with their own spaces to pull out of travel lanes and not interrupt the traffic flow.

Other Factors

Cost and Right-of-Way

A road diet is feasible for Cedar Street because it can be accommodated using the width of the existing right of way. A road diet can be accomplished solely by re-striping the lanes. No additional right of way purchase is necessary, and the curb line does not need to be moved further back. Thus, a road diet can be accomplished within a reasonable budget.

Parallel Roadways

The segment of Cedar Street within Delhi Township is not a State Highway, but it is an National Highway System Map-21 Primary Arterial. Cedar is used mostly as a connector from Lansing to Mason. Parallel routes are available in the area. Traffic between Lansing and Mason, which acts as cut through traffic within Delhi Township, can use the freeway system including I-96 and US 127. Local traffic can use some nearby streets, although many of these streets go through neighborhoods and cut through traffic is discouraged. A bypass road was once considered for this corridor, and if necessary the bypass could be reconsidered in 20-30 years in case traffic volumes warrant such consideration.

Parking

Parking availability was cited as a key need in the corridor. The road diet will allow on-street parking to be added within strategic locations between Aurelius and Holt Roads. On-street parking will add to the total supply of parking in the area, support existing and future businesses, and help create a downtown feel along this section of Cedar Street.

Public Outreach and Political Considerations

The public engagement process has shown broad support for this project. People have cited key issues such as pedestrian safety, parking, and the lack of a downtown, which can all be addressed with a road diet. The Township and other regional stakeholders such as the Ingham County Road Department, the Lansing Economic Area Partnership and others support the Realize Cedar project.

Design Framework

4

REALIZE **CED\N**R URBAN DESIGN FRAMEWORK

Acknowledgments

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Howard Haas — Delhi Township DDA Executive Director
Jon Harmon — Delhi Township Board Trustee
Evan Hope — Delhi Township Clerk
David Leighton — DDA, Leightronix
Steve Warfield — Cedar Street Resident
Jamie Burton, PE — Hubbell, Roth, & Clark

Board of Trustees

C.J. Davis — Supervisor
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*This Plan Approved by the Delhi Charter Township
Planning Commission on October 24, 2016.*



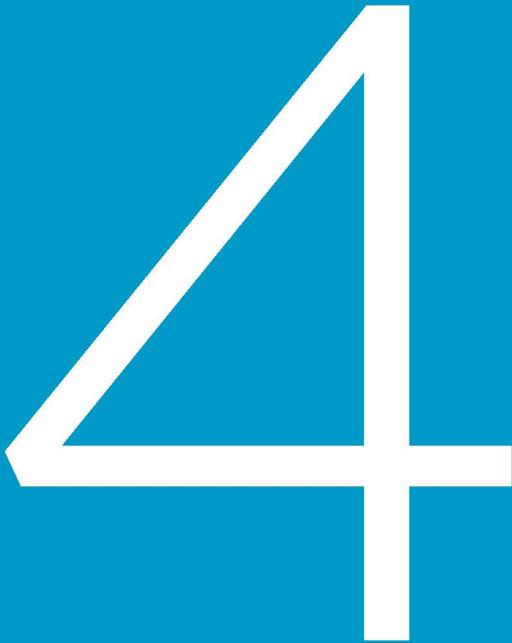
*Matt Lincoln, Chairperson
Delhi Charter Township Planning Commission*



*Kimberly Berry-Smokoski, Secretary
Delhi Charter Township Planning Commission*

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4.0 Design Framework

An improved identity for the Cedar Street corridor will be created by enhancing the streetscape through a high-quality built environment boasting safe accessible pedestrian circulation, traffic calming measures, marked shared bike lanes, on street parking, streetscape furniture, and plantings. The rhythmic placement of the streetscape elements establishes a cohesive streetscape setting.

The overarching goal of the proposed Realize Cedar Design Framework promotes pedestrian safety, accessibility and unified design treatment. Modified widths of vehicular travel lanes provide ample room for on street parallel parking, and marked shared lanes reinforce the Township's commitment to introducing traffic calming measures and multimodal circulation systems.

Streetscape enhancements will be focused in the Community Core area, which has two prominent locations; the intersection of Holt Road and Cedar Street (Downtown Node) and the intersection of North Street and Cedar Street and the current location of the Farmer's Market (Market Node). The development of the streetscape in these two areas will establish the design framework and palette of the proposed streetscape elements.

Many of the enhancements noted in the *Design Framework* are also recommended for installation along the entire corridor to foster a unified aesthetic to the entire Delhi Township portion of Cedar Street, from Willoughby to College.

Aerial Image of Market Nodes
Highlights of the portions of Cedar Street that links the two key redevelopment sites

Cedar Street 
Redevelopment Nodes 





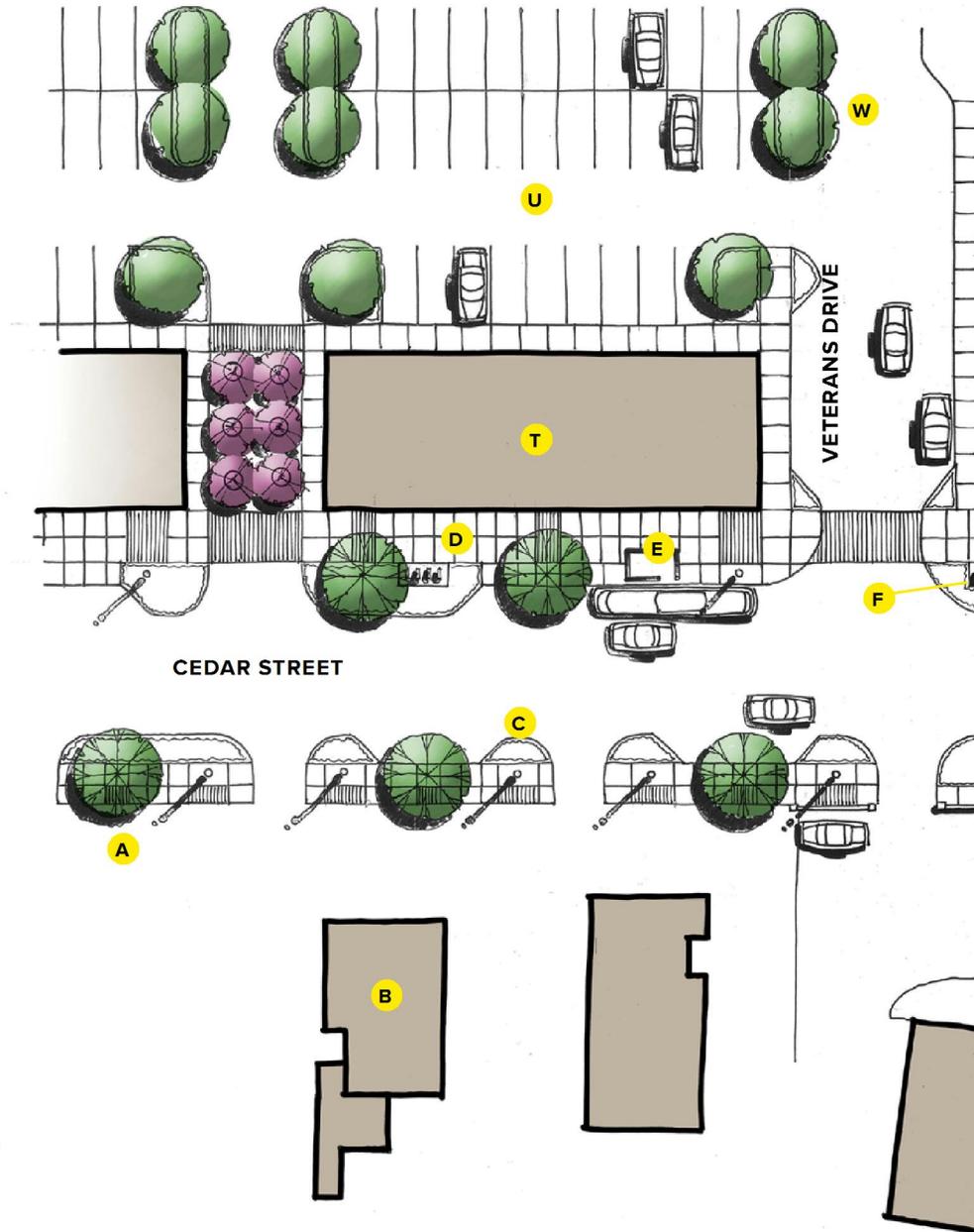
4.1 Downtown Node

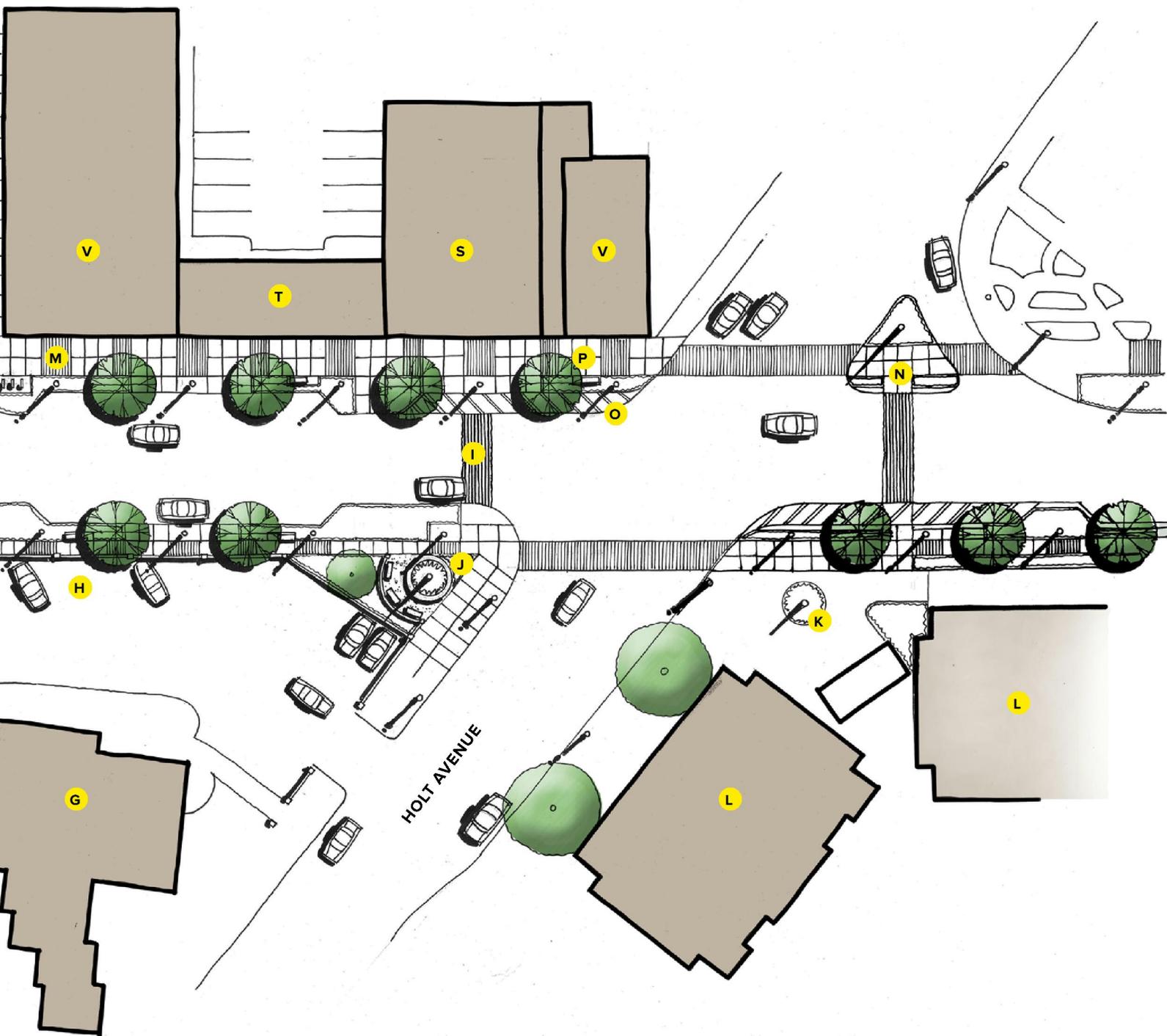
The Downtown Node is recommended to be developed to incorporate the following design features, which are shown on the *Downtown Node Plan*.

**Figure 4A:
Downtown Node Urban Design Plan**

Plan view of proposed streetscape and urban design features of Cedar Street near the Downtown Node redevelopment site.

- A. Street tree
- B. Residential
- C. Street light
- D. Concrete paving
- E. Bus stop with shelter
- F. Bike rack
- G. PNC Bank
- H. Low masonry wall to screen parking
- I. Crosswalk
- J. Small pocket park with feature
- K. Add feature to existing planter
- L. Office/Commercial
- M. Decorative paving
- N. Add new directional island w/feature
- O. Loading area/Future transit stop
- P. Bench
- Q. Planting bed
- R. Original Okinawan Karate
- S. Biggby Coffee
- T. New mixed-use building
- U. New Parking Lot
- V. McPhail Insurance
- W. Canopy Tree
- X. Movable planters with flowering trees to allow possible vehicular circulation (festivals)





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HOLT AVENUE

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4.1

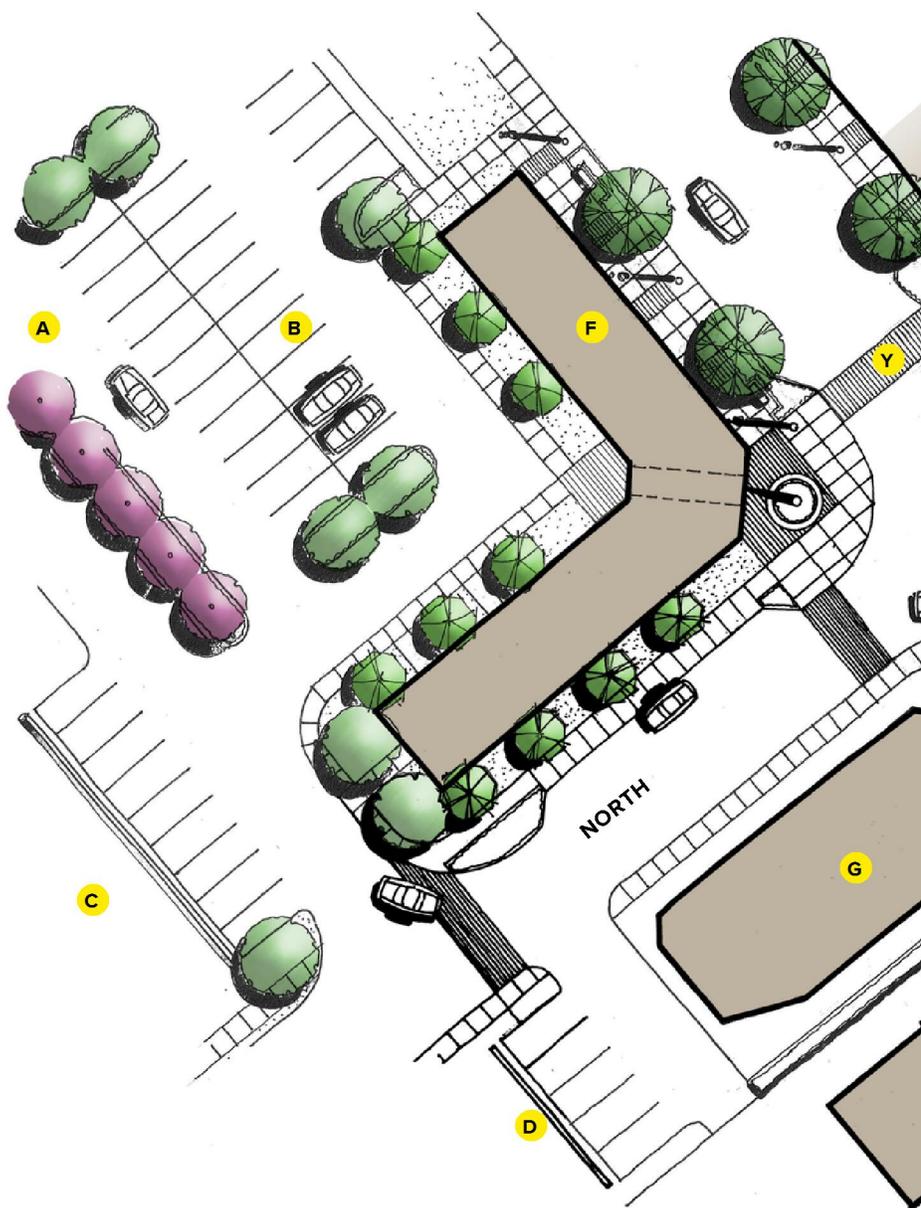
Farmer's Market Node

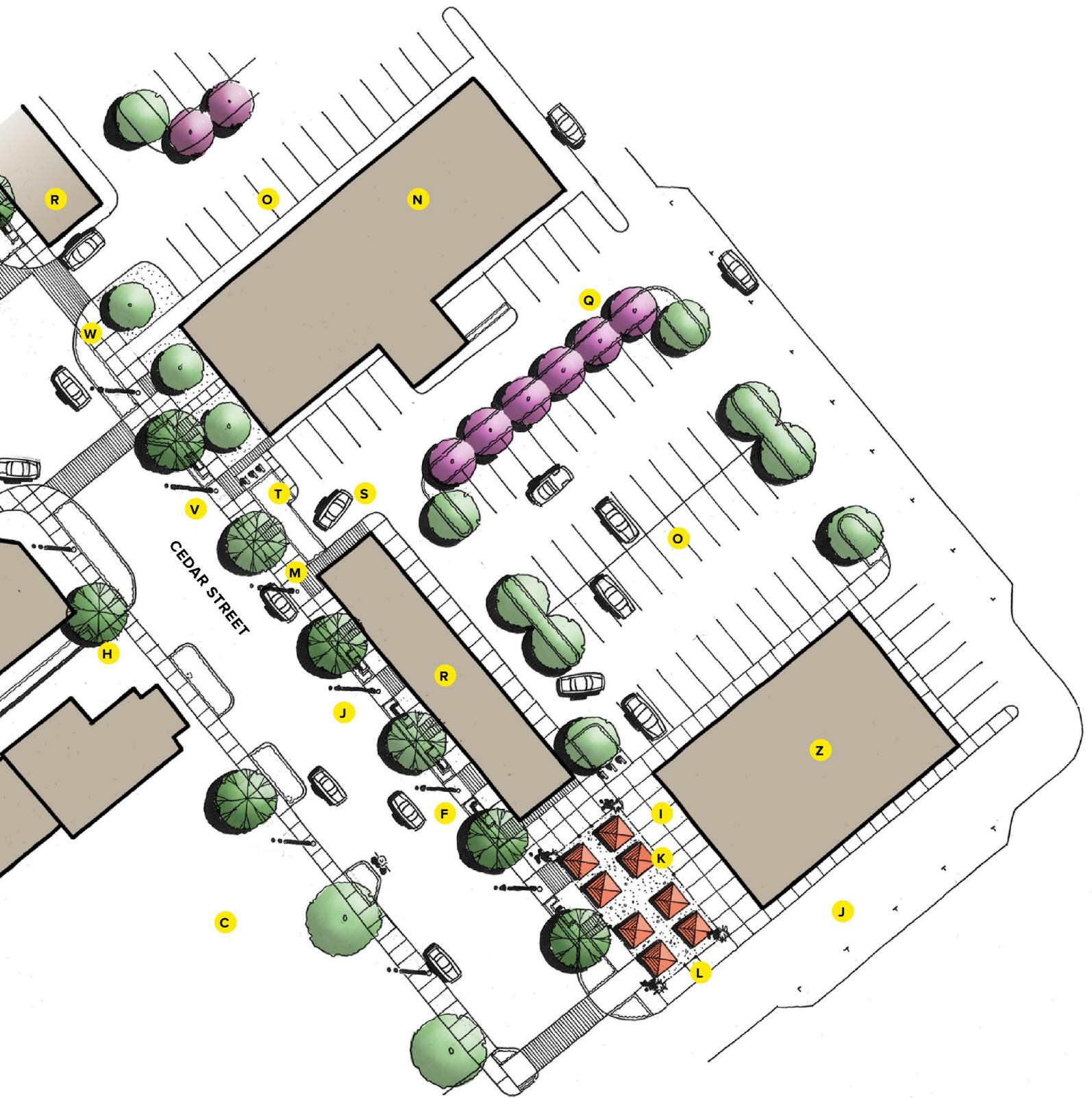
The Farmer's Market Node is recommended to be developed to incorporate the following design features, which are shown on the *Farmer's Market Node Plan*.

**Figure 4B:
Farmer's Market Node Urban
Design Plan**

Plan view of proposed streetscape and design of Cedar Street near the Farmer's Market Node redevelopment site.

- A. Access to post office
- B. New parking lot
- C. Residential
- D. Low masonry wall to screen parking
- E. Deciduous accent tree
- F. Mixed-Use Building with Arcade
- G. Office
- H. Street tree
- I. Concrete paving
- J. Parallel parking
- K. Multi-use area w/ decorative paving/ ornamental fencing
- L. Decorative pier with seasonal plantings
- M. Decorative paving
- N. Farmers Market
- O. New parking lot layout
- P. Deciduous canopy tree
- Q. Deciduous flowering tree
- R. New mixed-use building
- S. Close existing drive
- T. New planting area
- U. Bike rack
- V. Street Light
- W. Planting area
- X. Small plaza w/ feature
- Y. Crosswalk
- Z. Fusion Dance









4.3

Streetscape Palette

Each individual streetscape element contributes to the overall identity of Cedar Street. Collectively they help to improve the aesthetics and function of the corridor to establish a comprehensive design theme that focuses on pedestrian safety and circulation. The elements that make up the streetscape design palette include;

- Parking
- Curb Bump Outs
- Curbed Planters
 - Crosswalks
 - Bus Stops
 - Bike Lanes
 - Medians

Parking

Parking is an essential component in promoting commercial, economic, and social development. Seven-foot wide parallel parking located on both sides of the street buffers pedestrians from the three travel lanes. Adjacent to the parking, a 24-inch clear zone is proposed to allow for safe entry and exit from parked vehicles and ensure adequate distance for car doors to open without damaging the proposed landscape or car doors.

Curb Bump Outs

Bump outs are concentrated at street intersections to provide an area for pedestrians to pause prior to crossing the street. Bump outs are used at intersections to shorten the distance a pedestrian must travel to cross the street. Bump outs are introduced and are proposed to have planting areas where feasible to enhance the aesthetics of the streetscape.

Curbed Planters

Curb planters allow for plantings along the streetscape. The curbed planters are constructed of broom finished concrete and are 4 inches tall by 8 inches wide. The curbed planters elevate the plantings above the sidewalk to increase the depth of the planting medium and decrease the possibility of damage from de-icing products used in the winter months on the adjacent sidewalks.

Crosswalks

Crosswalks are located along Cedar Street for safe pedestrian access. Crosswalks become an important element in the streetscape environment by physically and visually linking opposite sides of the street. Audible crossing signals should be implemented to facilitate the safe crossing for people with visual limitations.

Each bus stop will have a shelter to protect patrons from inclement weather. Adequate space adjacent to the shelter will be provided to ensure patrons are not forced to wait in unsafe positions without interrupting pedestrians traversing the streetscape.



a On Street Parking

On street parking helps buffer pedestrians from vehicular traffic

b Bump Outs

Bump outs are used to shorten the distance needed for a pedestrian to cross the street and to make pedestrians more visible to motorists

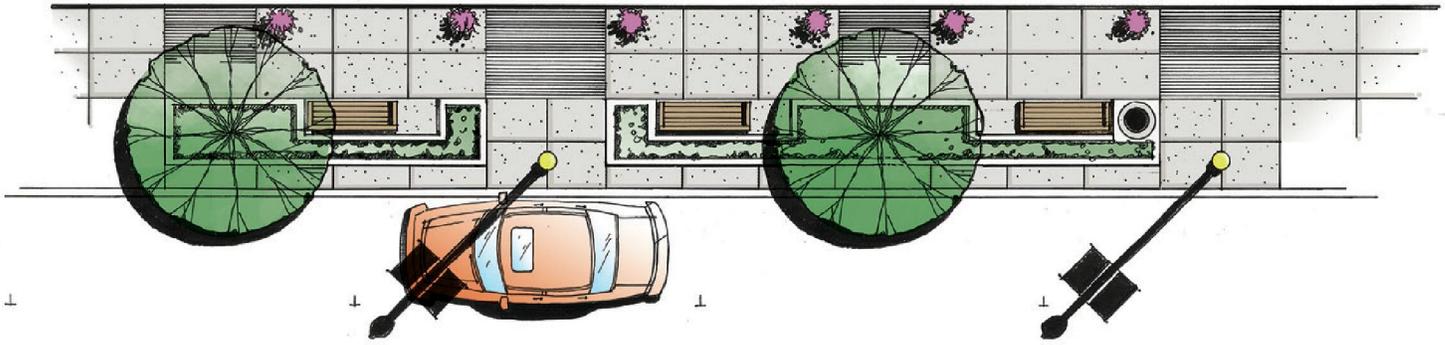
c Planter Boxes

Curbed planter boxes provide space for landscaping along the street and also buffer the sidewalk from the vehicular traffic

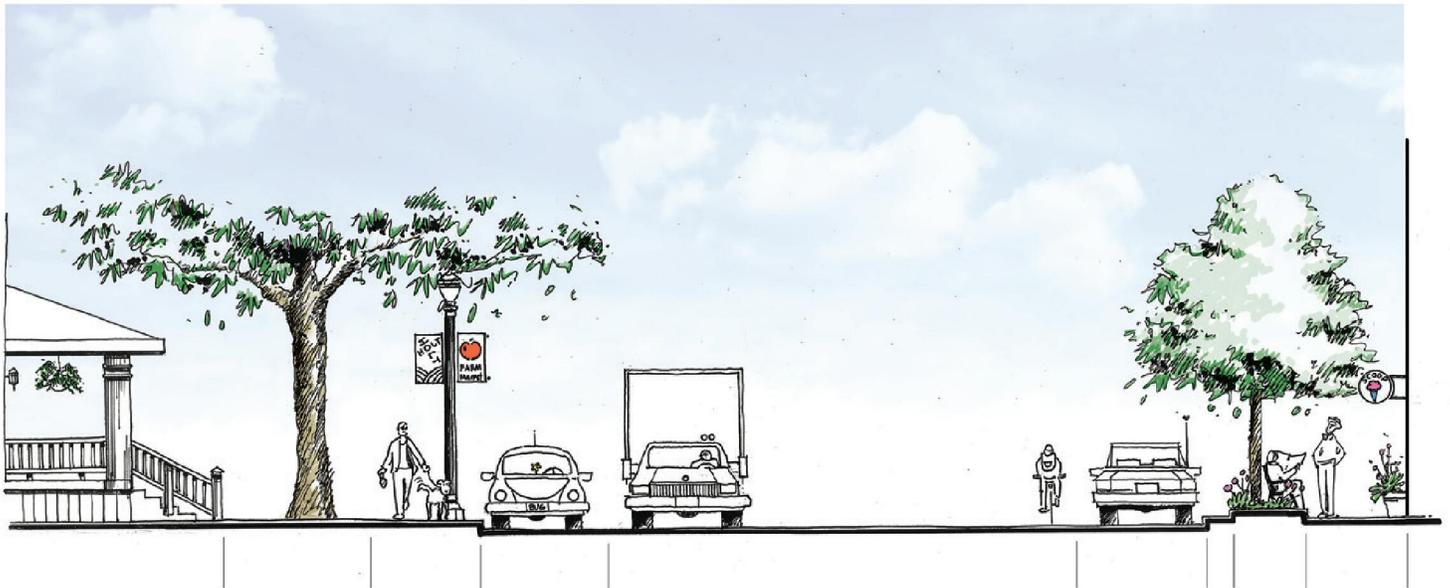
d Crosswalks

Pedestrian crossing signs and prominent markings alert vehicle drivers to the location of crosswalks

Typical Streetscape



Streetscape Cross Section



Bike Lanes and Marked Shared Lanes

Conventional bike lanes and marked shared lanes are incorporated in the vehicular lane adjacent to the parallel parking and promote transportation alternatives, recreation, and environmental awareness. Bike lanes achieve a shared streetscape experience between sidewalk, parking lanes, and travel lanes.

Shared Use Paths and Trails

Shared use paths are recommended to improve bike connectivity and the pedestrian experience in the Commercial Boulevard area on Cedar north of Fay Street and between Dallas and Holbrook. While both sides are preferred, the east side should be prioritized. A trail connection is recommended on the east side of Cedar south of Holbrook in the Commercial Parkway area.

Medians

Median plantings should be used where feasible to enhance visual characteristics of corridors and boulevards. Low maintenance, native drought tolerant species are encouraged. Incorporating rain gardens and bioswales is also encouraged to help manage storm water runoff.

Lighting

Pedestrian-scale lighting is recommended along sidewalks, shared used paths and trails. Lighting will use the existing pedestrian fixture previously selected by the Township. Existing cobra lights on Cedar north of Aurelius and south of Dallas can be enhanced with a pedestrian fixture, or replaced with pedestrian-scale fixtures. When feasible, vehicle-scale fixtures are recommended to be moved to medians.

Utilities

Utilities are recommended to be buried along Cedar Street to reduce visual clutter and create space for landscaping. The utility corridor on the east side of Cedar between Keller and Veterans Drive is the highest priority for underground utilities, as a rear-alley circulation drive would have a benefit to businesses in this area.

a Bike Lane

Enough space should be provided to bikes away from the parked cars to avoid being struck by open car doors

b Marked Shared Lanes

Marked Shared lanes or “sharrows” can be used to indicate the preferred space for a bicycle to operate on the roadway, especially for streets that are too narrow to install a bike lane

c Trails

Trails provide long-distance and regional opportunities for biking and walking

d Median Islands

A mid-block crossing median island allows pedestrians and bicyclists the ability to cross only one direction of traffic at a time

e Pedestrian-Scale Lighting Fixture

The existing Delhi Township standard lighting fixture can be used along the Cedar corridor

f Utility Poles

Utility poles along Cedar Street are recommended to be buried







4.4

Landscape Palette

Plants make positive contributions to the economy, the aesthetics of the streetscape, and to the safety of the area. Selection of plant material must consider plant performance in the urban environment, and visibility of adjacent merchant signage. Plants must be durable and withstand seasonal urban conditions such as drying winds, salt, and snow.

Trees planted along the street at even intervals provide continuity of the streetscape, human scale and shade. Trees also contribute form, color, and texture along the streetscape while encouraging decreased vehicular traffic and increased awareness of pedestrians.

Shrubs and ground cover plantings are planted in visual harmony with the street trees and enhance the identity of the streetscape.

The plant recommendations include the following:

- Inkberry Shrub
- Princeton Elm
- Liriope Ground Cover
- Skyline Honey Locust
- Myrtle Ground Cover

Soil and Drainage

Proper planting soils in the streetscape is important for successful plant growth as well as drainage.

Planting soils that contain a blended mixture of a sandy-loam topsoil, sand and compost is essential for the proper establishment of plant material. Balanced commercial fertilizers are also necessary to ensure the health and vigor of the plantings.

Shredded hardwood mulch or peat moss should be installed at the time of planting to help maintain soil moisture.

Supplementing the planting beds with a perforated drainage system should also be considered to prevent standing water and saturation of the plant materials.

The drainage system will also leach salt and other unwanted chemicals from the soil. Sidewalk drainage is taken into consideration when designing the placement of curbed planters. Sidewalks are sloped so that water on the sidewalk can drain in between the planters to the street.



a Inkberry
Upright-rounded broadleaf evergreen shrub with glossy dark green leaves

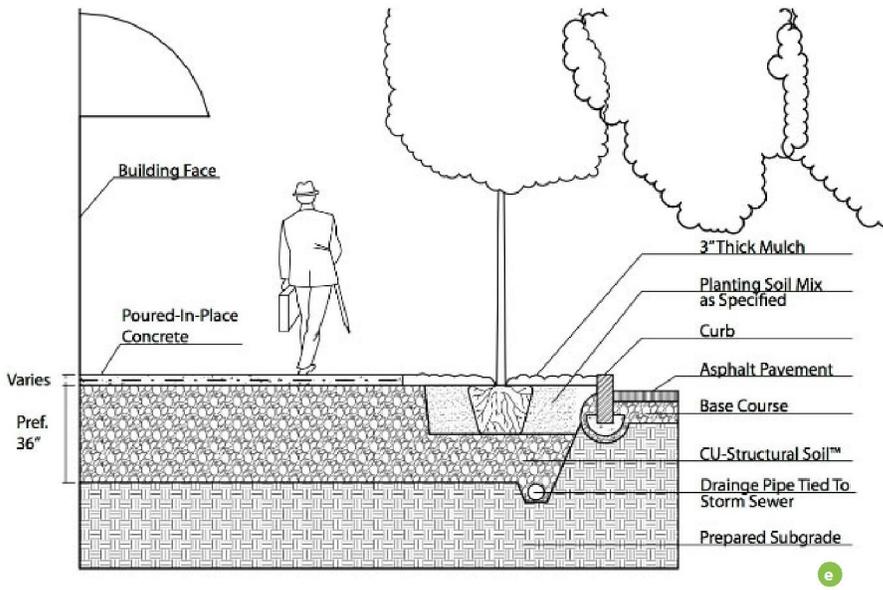


b Princeton Elm
Vase shaped deciduous tree with a broad rounded crown and yellow fall color



c Liriope
Grass like perennial with clumps of strap-like, arching, glossy, dark green leaves and showy flowers with dense violet-purple flowers

d Skyline Honey Locust
Deciduous tree with pyramidal growth and dark green leaves that turn yellow in the fall



g Ground Materials

Composition of soils, concrete, and asphalt along the road to provide adequate soils for plants to grow, as well as adequate drainage

g Myrtle

Evergreen ground cover with smooth green leaves and lavender flowers in the spring that continue to flower intermittently though summer into fall

g Soils

Planter beds will provided with soils suitable for the plant materials selected







4.5 Hardscape Palette

The hardscape elements of the Cedar Streetscape will provide a unifying design theme. The materials recommended are durable, cost effective, and readily available to ensure the feasibility of long-term maintenance.

Hardscape recommendations include the following:

- Streetscape furniture
- Hardscape materials
 - Maintenance

Streetscape Furniture

Site furnishings provide important amenities for pedestrians by adding functionality and vitality to the pedestrian realm. Site Furnishings include the following:

- Sorella Planters
- Plainwell Bench
- Plainwell Trash Receptacle
- Ring Bike Rack

These Streetscape palette elements will complement the existing Delhi Township standard streetlamp and are available for purchase from Michigan based Landscape Forms, Inc.

Contact Information:
Landscape Forms Inc.
431 Lawndale Ave.
Kalamazoo, MI 49048
Tel: 800.430.6209
www.landscapeforms.com



Planter
Bench
Waste Receptacle
Bicycle Rack

Hardscape Materials

Exposed Aggregate and Concrete Paving

The mixture of exposed aggregate and concrete paving reinforces the area as the downtown and central hub of activity, distinguishing it from other areas.

Detectable Warning Strips

Detectable warning surfaces are applied to ramps to indicate interference with the street. The finished detectable warning surfaces contrast the surrounding materials.

Maintenance

Maintenance is essential to the success of the streetscape. Maintenance and available budget must be considered when making material selections for the streetscape. Surface materials with low maintenance requirements and high durability must be selected when possible.

Maintenance may include regular attention to landscape materials such as pruning, removing, and replacement of plantings as needed, as well as regular care, fertilizing and replacement of irrigation systems.



a



b



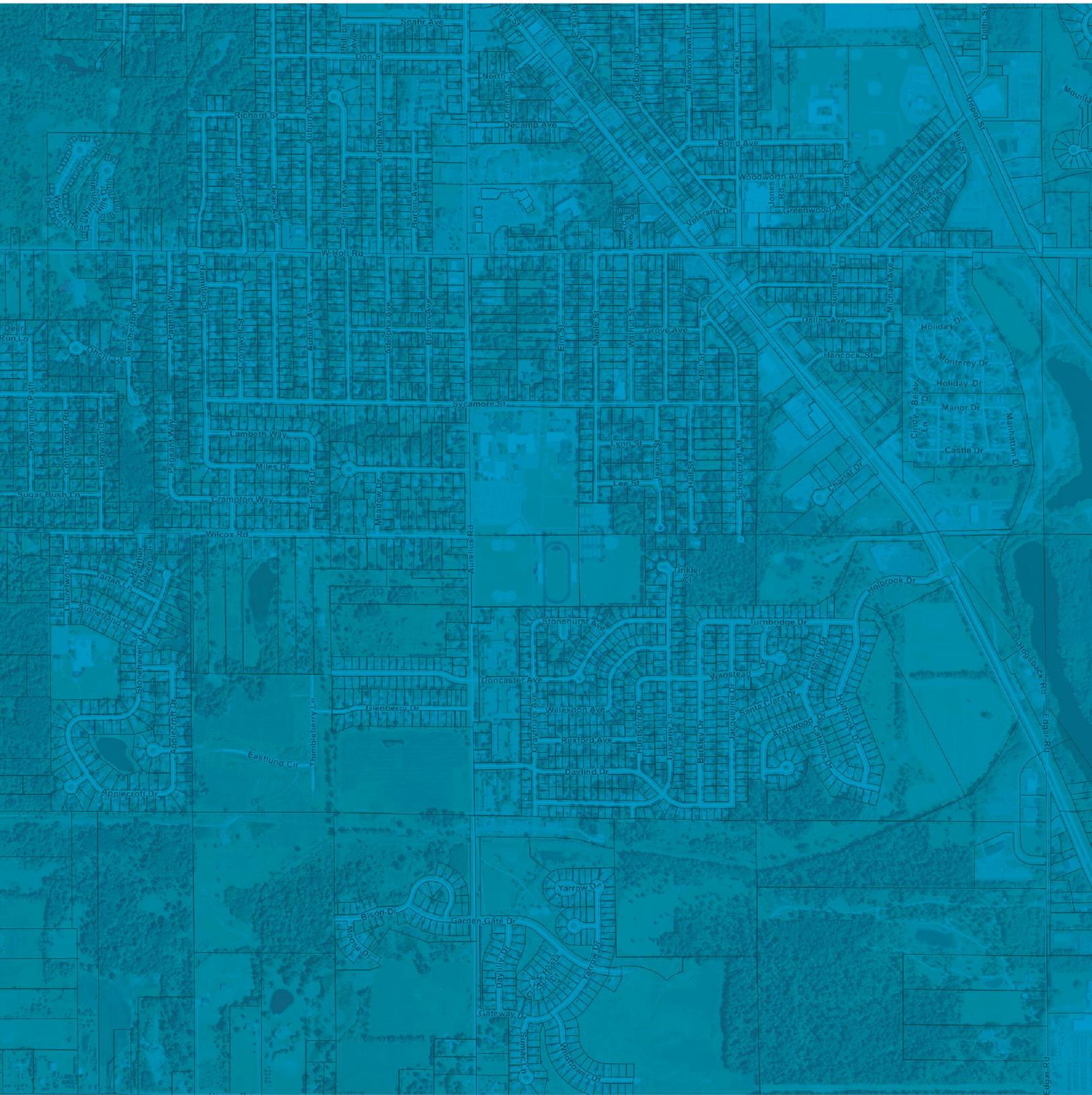
c



a Construction Materials
Concrete and exposed aggregate help define the streetscape as characteristic of a downtown hub of activity

b Warning Strips
Detectable warning strips or truncated domes are an example of tactile paving and provide a delineation between the sidewalk and the street

c Maintenance
Because ongoing maintenance will be required to keep a functioning streetscape and landscape, materials with low maintenance requirements shall be used whenever possible





4.6

Identity Palette

Identity elements are recommended on Cedar Street to enhance identity and promote interaction and engagement between people and the streetscape environment. Interpretive signs can identify a district's name and entrances, announce important events, or display environmental information. Some identity features include gateways, signs, historical markers, installations, and banners.

Gateways

The Cedar Gateway will identify entrances to the downtown district and mark the beginning of the roadway conversion from four lanes to three lanes. The gateway design is a simple stone masonry base, evoking the Cedar “triangle”, with ¼ inch rusted steel letters affixed to the hypotenuse. The base should be oriented so that the angle aligns with the direction of the street—southeast to northwest – but the lettering can flip. The lettering should be placed to be prominently viewed from one direction. Landscape screens or buildings can be used as a back drop. The Cedar lettering can also be back-lit for night visibility.

- Kiosks and informational signs can be used proximate to gateway signs, can be attractive, useful street features. Kiosks can be used to display maps, bulletin boards, community announcements, and other important information.
- Installations of public art can be considered to enhance or replace the gateway elements.

The Township's existing “Welcome to Holt” signs should remain in place. The Cedar signs will complement rather than replace them.

Signs

Signs are an effective way to welcome, alert, inform and direct users, especially at transition points. The Michigan Manual of Uniform Traffic Control Devices (MUTCD) contains guidelines for sign use in the transportation network, including pedestrian and bicycle signs.

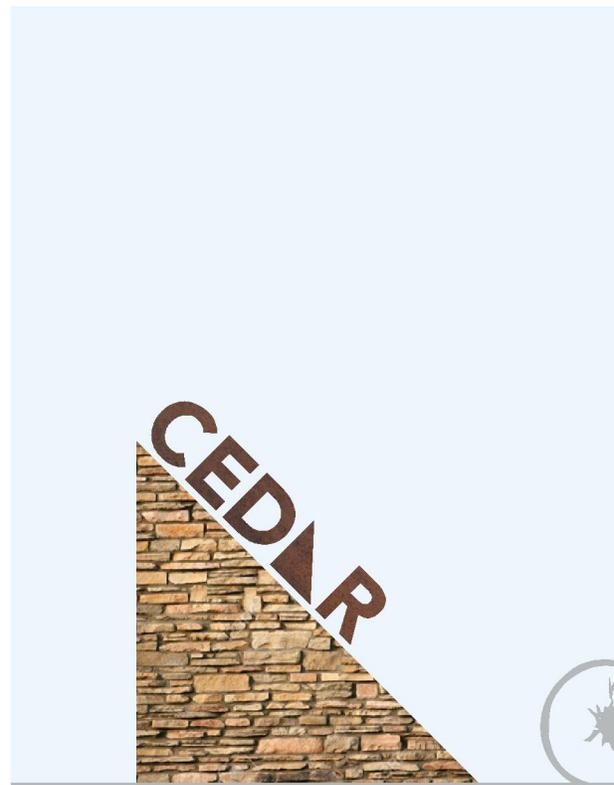
Sign branding for Cedar Street should be used to enhance the character of the corridor. Distinctive directional signs, monument signs and banners will provide user information and convey a sense of local identity.

- Sign stands can be used for temporary purposes or in permanent installations, such as district maps and informative displays.
- Cedar banners can be displayed on new poles or hang from existing lighting and utilities. Banners can be permanent district markers or rotated to note seasons or significant events.

Wayfinding Signage
A series of wayfinding signs should be used along Cedar Street to orient users and to provide an identity for the corridor

Realize Cedar Logo/Brand

The Cedar logo is recommended to be an established brand for the corridor. The use of this logo by local organizations, businesses, and residents is encouraged.



Gateway

Cedar Street Branding
Variations of the Realize
Cedar logo for use by
organizations, businesses,
and residents



Monument

Directional

Banner





4.7 Public Art

Art installations along Cedar Street are encouraged in the Farmer’s Market node and Downtown node areas, as well as at gateway and typology transition locations. Sculptures and murals can greatly accentuate the transportation network and improve the value of a place. Art can be effective traffic calming and can be substituted for gateway signs and wayfinding signs to reduce sign clutter. These features should be carefully placed so that they improve the walkability and bikeability of the roadway without creating hazardous obstacles or distracting drivers.

Public Art (Examples)

Public art can be used to bring attention to a specific place, give a unique character to the corridor, and promote community pride





Sculpture
Evanston, IL

Catenary Lighting
Northville, MI

Wall Mosaic
Chicago, IL

Wall Art
Chicago, IL

Boulevard Art
Chicago, IL

Tribute Art
Royal Oak, MI

Median Sculpture
Detroit, MI

Wall Mural
Ann Arbor, MI







4.8 Design Framework

The following table describes the recommended application of the Design Framework in accordance with the Street Typology Map.

Table 4A: Design Framework Application Guidance

Street Typologies	Streetscape Palette	Landscape Palette	Hardscape Palette	Identity Palette	Public Art
Core Street	R	R	R	R	R
Cottage Retail Street	E	R	E	P	D
Community Avenue	E	E	P	P	D
Commercial Boulevard	E	E	P	P	E
Commercial Parkway	E	E	D	P	E
Transition Elements					
Node	R	R	R	R	R
Gateway	D	P	E	R	R
Transition	D	P	E	E	E

R = Required
E = Encouraged
P = Permitted
D = Discouraged

North Cedar Existing



The Design Framework, when applied will provide unifying aesthetic to the Delhi Township portion of Cedar Street, from Willoughby on the north to College on the south. These enhancements will help define Delhi Township's borders and encourage quality development.

While the streetscape is recommended to be installed in and around the Community Core area, which include the Farmers Market and the Downtown Node, identity features, landscaping, shared use paths, driveway consolidation, medians are recommended to be considered along the entire corridor. As is illustrated in the adjacent perspective view rendering of the Taco Bell located on Cedar just north of Commerce Drive.



Example Monument Sign (Right)
North Cedar Perspective View (Below)



