

Draft

Reiner Neighborhood Development Plan

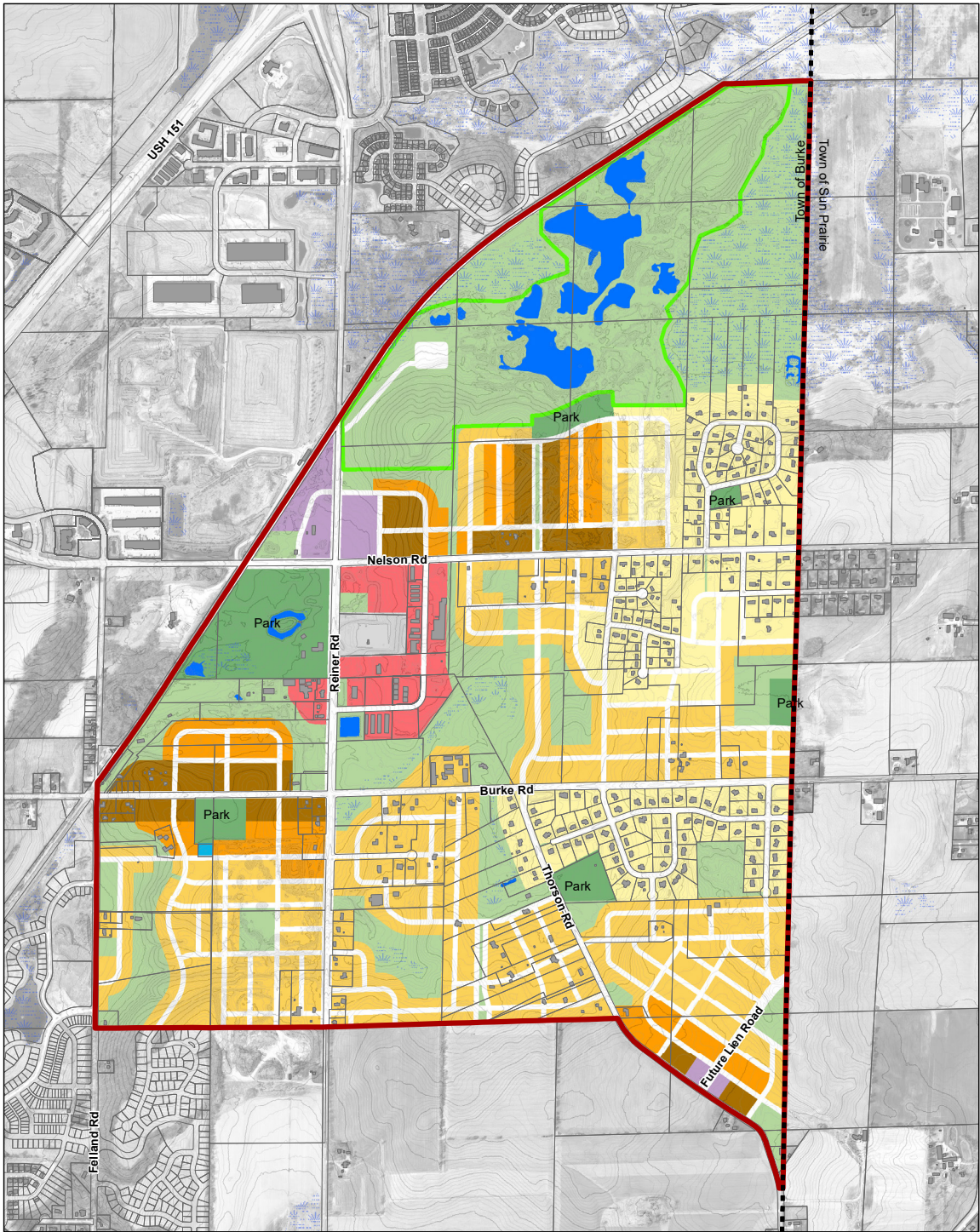


**City of Madison, Wisconsin
Department of Planning and Community and Economic Development
Planning Division**

June 6, 2022

Enactment Number: 0000

Legislative File ID: 0000



Map 6: Future Land Use and Street Plan
Reiner Neighborhood Development Plan

DRAFT

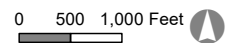
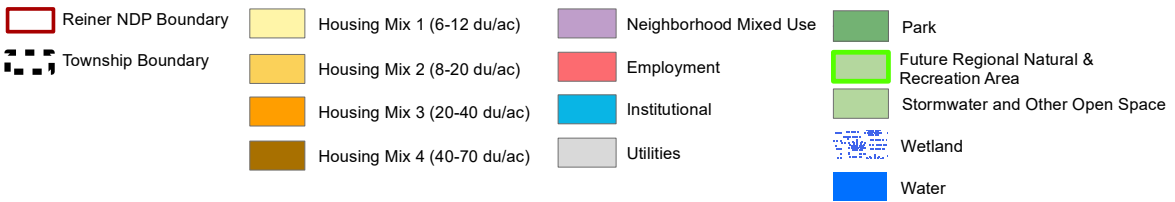


Table of Contents

INTRODUCTION	1
BACKGROUND INFORMATION AND PLANNING CONTEXT	1 - 2
RECOMMENDED LAND USES	3 - 9
SUSTAINABILITY	10 - 12
TRANSPORTATION	13 - 19
UTILITIES AND DEVELOPMENT PHASING	19
PLAN IMPLEMENTATION	20 - 21
ADOPTING RESOLUTION	

List of Tables

Table 1: Existing Land Use	1
Table 2: Recommended Land Uses	3
Table 3: Estimated Dwelling Units	7
Table 4: Recommended Arterial and Collector Cross-Sections	13

List of Figures

Figure 1: Reiner Road Cross-Section for High Density	14
Figure 2: Reiner Road Cross-Section for Low Density	14
Figure 3: Nelson Road Cross-Section with 90 Feet Right-Of-Way	15
Figure 4: Nelson Road Cross-Section with 120 Feet Right-Of-Way	15
Figure 5: Lien Road Cross-Section for Higher Density	16
Figure 6: Lien Road Cross-Section for Lower Density	16
Figure 7: Burke Road Cross-Section for Higher Density	17
Figure 8: Burke Road Cross-Section for Lower Density	17
Figure 9: Thorson Road Cross-Section	18
Figure 10: Mixed-Use Development Concept	22
Figure 11: Employment Development Concept	23

List of Maps

Map 1: Planning Area
Map 2: Municipal Jurisdiction and Property Ownership
Map 3: Natural Features
Map 4: Elevation Model
Map 5: Existing Land Use
Map 6: Future Land Use and Street Plan
Map 7: Parks and Open Space Plan
Map 8: Transportation Plan: Roadways
Map 9: Transportation Plan: Pedestrian/Bicycle Facilities
Map 10: Future Transit
Map 11: Utilities, Service Areas & Phasing
Map 12: Flood Inundation
Map 13: Madison-Burke-Sun Prairie-DeForest Cooperative Plan
Map 14: Comprehensive Plan Generalized Future Land Use
Map 15: School Districts

INTRODUCTION

The Reiner Neighborhood Development Plan (NDP) was prepared to guide the future growth on the City of Madison’s northeast side. The planning area comprises a portion of a near term Peripheral Planning Area (PPA-B) in the [Comprehensive Plan’s](#) Growth Framework, that recommends that a detailed plan for the area be prepared and adopted. Most of the lands within the planning area are currently in the Town of Burke, which will eventually be attached to the City of Madison by 2036 under the [Burke Cooperative Plan](#).

This Plan was prepared through a process that included the participation of neighborhood residents, property owners, local officials, and other affected groups and individuals. The plan designates the locations, and amounts of land recommended for the different types of land uses (such as residential, employment, and parks and open space) and provides for the compact, logical, efficient expansion of the City. It establishes the parameters of acceptable development, and will be implemented through the actions of City staff, the Plan Commission, and City Council, using the City’s subdivision and zoning codes as development proposals are submitted for consideration.

BACKGROUND INFORMATION AND PLANNING CONTEXT

Planning Area

The Planning Area covers approximately 1,500 acres generally bounded by Felland Road and the Wisconsin & Southern railroad to the west and north, the Burke Town line to the east and Thorson Road on the south. The boundaries of the planning area are shown on **Map 1: Planning Area**.

Municipal Jurisdiction and Property Ownership

The larger property ownerships within the planning area are shown on **Map 2: Municipal Jurisdiction and Property Ownership**.

Natural Features

The planning area consists of a rolling terrain. A major ridgeline runs through the middle of the planning area dividing it between the Starkweather Creek and Upper Koshkonong Creek watersheds. See **Map 3: Natural Features** and **Map 4: Elevation Model**.

Existing Land Use

The majority of the planning area comprises of the agriculture or vacant land use. The remainder consists of a mix of residential, commercial, industrial, institutional, parks and open space and road right-of-way land uses. Existing land uses are listed in **Table 1** and shown on **Map 5: Existing Land Use**.

Table 1: Existing Land Use

Land Use	Acres	% Of Total
Agriculture/vacant	450	30%
Residential	233	16%
Commercial/Employment	15	1%

Land Use	Acres	% Of Total
Industrial	2	0%
Institutional	9	1%
Parks and Open Space	550	37%
Transportation, Communications and Utilities	107	7%
Water	37	3%
Mineral Extraction	73	5%
Total	1,476	100%

Source: Dane County

School District

The planning area is entirely within the Sun Prairie Area School District. Children in the planning area currently attend Creekside Elementary School, Patrick Marsh Middle School and Sun Prairie East High School. The School District owns a site along Felland Road in the Village at Autumn Lake subdivision to the southwest of the planning area. It is expected that an elementary school will be constructed on that site. Elementary-age children from the planning area would potentially attend that school. There are also two future school sites shown south of the planning area in the Northeast Neighborhoods NDP. See **Map 15: School Districts** for Sun Prairie School District boundaries and planned school sites.

City of Madison-City of Sun Prairie-Village of DeForest-Town of Burke Cooperative Plan

In 2007, the City of Madison, Town of Burke, Village of DeForest and City of Sun Prairie entered into a Cooperative Plan that extends to 2036. The Cooperative Plan determines the ultimate absorption of the Town of Burke by these municipalities when it dissolves in 2036. The plan is intended to assure orderly development, eliminate annexation disputes and plan for the increased provision of public services. Most areas within the Town of Burke can be attached to their respective future municipalities prior to 2036 if the property owners request to do so. On October 27, 2036 a final attachment of all remaining lands within the Town of Burke including any Protected Areas will occur and the Town of Burke will be permanently dissolved.

The Cooperative Plan establishes each municipality’s powers and duties as far as development review and infrastructure, with the cities and the village having substantial review authority over development occurring on land within their future municipal boundaries. See **Map 13: Madison-Burke-Sun Prairie-DeForest Cooperative Plan** for the Town properties that will become part of the City of Madison.

Dane County Park and Open Space Plan

The Dane County Parks and Open Space Plan (2018-2023) identifies a portion of the planning area, northeast of the intersection of Reiner and Nelson Road in the Koshkonong Creek Natural Resource Area. See **Map 20: Dane County Natural Resource Area of [Dane County Parks and Open Space Plan](#)**.

Natural Resource Areas are generally large corridors that contain valuable natural resources recommended for preservation. They typically include features such as steep topography, waterways, wetlands, prairie forests and agricultural working lands.

RECOMMENDED LAND USES

General Development Concept

The planning area contains a significant amount of existing development. This plan recommends additional residential development that provides a wide variety of housing choices, mixed-use districts, new parks and the expansion of existing parks to serve recommended development areas, employment areas, an open space area for community separation and preservation of natural features, as well as stormwater management.

Map 6: Land Use and Street Plan shows the planned land uses and street network for the area. **Table 2** below summarizes the acreages of recommended land uses.

Table 2: Recommended Land Use

Use	Acres	% Of Total
Housing Mix 1	192	13%
Housing Mix 2	301	20%
Housing Mix 3	60	4%
Housing Mix 4	52	4%
Neighborhood Mixed-Use	19	1%
Institutional	0	0%
Employment	41	3%
Parks	63	4%
Other Open Space, Stormwater Management	502	34%
Street Right-of-Way	237	16%
Utilities	9	1%
Total	1,476	100%

Residential Uses

Much of the existing residential development in the planning area is single family housing in Town subdivisions. This plan recommends a mix of housing types listed below to provide diversity of housing to meet the needs of existing and future residents in various stages of life.

Housing Mix 1

The predominant housing type in the Housing Mix 1 designation is detached single-family housing on individual lots, but limited areas may be developed with other lower-intensity housing types such as duplexes or townhouses at appropriate locations.

Housing Types

- Single-family detached homes with a wide range of house and lot sizes
- Duplexes
- Four units
- Townhouses

Density Ranges

- Individual developments: 12 dwelling units or less per net acre
- District average density: 8 dwelling units per net acre

Height & Lot Layout

- Buildings up to two stories in height
- Building lots generally provide front, side and rear yards

Single-family housing developments should include a range of house types and lot sizes, with buildings up to two stories in height. Duplexes, four units and townhouses integrate housing options into streets and neighborhoods, and can be appropriate at some limited locations. In general, larger groupings of these housing types should be located closer to Housing Mix 2 or Housing Mix 3 areas, where they will help provide a transition to the higher intensity development found in those areas. Individual duplexes or small groups of townhouses might be interlaced within areas primarily comprised of single-family homes, but careful site and building design is important in order to maintain compatibility and consistency with the character of surrounding development.

The use of alleys to provide rear access to garages is encouraged at appropriate locations. Alley-loaded garages can provide additional design flexibility and improve the appearance of neighborhood street-scapes, particularly on streets with relatively small or narrow lots. Fewer driveway openings can also allow for more on-street parking, and potentially result in a narrower street if parking can be accommodated on one side of the street.

Housing Mix 2

Housing Mix 2 includes smaller-lot single family development, however there is a greater share of other housing types compatible with single-family homes including duplexes, four units, townhouses and small-scale multifamily buildings.

Housing Types

- Single-family detached houses on small lots
- Duplexes
- Four units
- Townhouses
- Small multifamily buildings (generally ≤ 20 units in a building)

Density Range

- Individual developments: 8-20 dwelling units per net acre
- District average: 15 dwelling units per net acre

Height & Lot Layout

- Buildings one to three stories in height
- Building lots generally provide front, side and rear yards
- Main entrances to units should face the public street

Higher density development in Housing Mix 2 locations gives residents the opportunity to live within convenient walking and biking distance to mixed-use areas, parks and open space, and other neighborhood amenities and features.

Dwelling unit types in Housing Mix 2 areas should be varied. Large areas of one housing unit type should be avoided and there should be a mix of owner-occupied and rental dwelling units. Detached single-family, duplexes and four units should generally be developed on relatively small lots consistent with the higher average density recommended for the category. Townhouses may be more predominant than in Housing Mix 1 and could be developed along an entire block face, or mixed with multi-unit buildings or detached housing.

Housing Mix 3

Housing types within Housing Mix 3 areas should consist of a mix of owner-occupied and rental townhouses, condominiums, and apartment buildings. Buildings will likely be larger and taller than in Housing Mix 2 areas but should retain a neighborhood scale.

Housing Types

- Duplexes
- Four units
- Townhouses
- Multifamily buildings

Density Range

- Individual development: 20-40 dwelling units per net acre
- District average: 30 dwelling units per net acre

Height & Lot Layout

- Buildings generally two to four stories in height
- Limited side yards when buildings are located along standard streets
- Buildings may include front plazas or be grouped around courtyards to create defined common space
- Ground floor units in multifamily buildings that front a public street should have direct entrances to the unit accessible from the sidewalk. Other ground-level units are encouraged to have direct unit access from courtyards, private streets/drives, etc.

Housing Mix 3 is used to designate medium intensity residential development at locations close to mixed-use areas, transit corridors, parks, and other neighborhood amenities. Concentrating medium intensity housing development near these amenities will provide easy access for more residents, reduce driving, increase pedestrian and bicycle activity for short trips, and help support the development of neighborhood-serving businesses. The larger scale of buildings should help define, but not dominate, open spaces such as parks.

Multifamily residential buildings may be larger and closer together compared to those buildings in Housing Mix 2. Single-family detached housing should not occur in Housing Mix 3 areas since the intent of the district is to encourage higher-intensity uses. Parking should be provided behind or beneath buildings, minimizing its visual impact on the neighborhood. Buildings can vary between two and five stories tall, depending on the context and size and scale of surrounding developments. Multi-unit developments should include a mix of unit sizes, including larger two and three-bedroom units suitable for families with children.

Buildings should be oriented to and front on adjacent streets and be designed to help define and enhance the public realm along the street edge. On a few larger, deeper properties where it is not

possible or practical to add public streets, a multi-building complex of multifamily residential may have a limited number of buildings that are not located directly on a public street. The design of these complexes should incorporate interior access drives and walkways that establish direct connections across the site in order to prevent isolated islands of development. Courtyards and other defined open spaces are potential methods of organizing buildings within Housing Mix 3 areas.

Housing Mix 4

Housing Mix 4 is primarily located near larger mixed-use nodes and transit corridors. While building types within this category might include limited townhouse development at higher intensities than other housing mix types, most structures will be multifamily residential buildings. The district should feature a mix of owner-occupants and renters.

Housing Types

- Townhouses at relatively high densities
- Multifamily residential

Density Range

- Individual developments: up to 70 dwelling units per net acre
- District average: 40 dwelling units per net acre

Height & Lot Layout

- Buildings generally three to five stories in height
- Larger building forms
- Limited side yards when buildings are located along standard streets
- Buildings may include front plazas or be grouped around central courtyards to create defined space
- Limited on-site open space. May include more formal entry plazas, patios, roof gardens and balconies
- Ground floor units in multifamily buildings that front a public street should have direct entrances to the unit accessible from the sidewalk. Other ground-level units are encouraged to have direct unit access from courtyards, private streets/drives, etc.

Locating Housing Mix 4 near mixed-use areas will help support the development of neighborhood-oriented businesses that will create an engaging focal point for neighborhood activity and convenience shopping. Apartment and condominium buildings will be the predominant housing type in this district, and will include buildings that are generally two to five stories in height with relatively high lot coverage. Development should include a mix of unit sizes, including larger two and three bedroom units suitable for families with children.

While high intensity development is encouraged as part of Housing Mix 4 areas, individual developments at or near the 70 dwelling unit per acre density are recommended only as part of well-designed projects that are coordinated with the development of mixed-use areas. These neighborhood-oriented retail and service uses support and provide amenities to a larger population in neighboring residential buildings.

Estimated Amount of Future Residential Development

If all of the lands in the planning area recommended for residential and mixed-use development were built out at the densities in **Table 3**, there would be approximately 8,468 units. This is a general estimate

for planning purposes and the number of future dwelling units depends on the amount of land developed with residential use and the actual density of individual projects. See **Table 3**.

Table 3: Estimated Dwelling Units

Use	Existing Units	Acres Undeveloped	Assumed Density (units/acre)	Additional-Units	Total Units
Housing Mix 1	216	0	8	0	216
Housing Mix 2	0	301	12	3,612	3,612
Housing Mix 3	0	60	30	1,800	1,800
Housing Mix 4	0	52	40	2,080	2,080
Neighborhood Mixed-Use	0	19	40	760	760
Total	216	432		8,252	8,468

Neighborhood Mixed-Use

Neighborhood Mixed-Use is recommended at the intersection of Nelson Road and Reiner Road and the intersection of Thorson Road and Future Lien Road.

Recommended uses can include residential uses, as well as retail, restaurant, service institutional, and civic uses primarily serving nearby residents. These areas should be developed and designed using transit-oriented development standards.

Recommended Uses

Nonresidential uses in this district typically focus on serving nearby residents. Uses such as cafes, specialty retail (e.g. bicycle shop, clothing store), restaurants and similar uses are recommended. Large commercial uses, such as a big box store, are not recommended in this district. The district is intended to be pedestrian friendly and should include pedestrian connections to nearby land uses.

It is recommended that relatively high-density residential uses be developed within these areas. Residential dwellings could be part of exclusively residential buildings or located within mixed-use buildings with ground floor retail, service, or office uses and upper floor residential uses. The following housing types are recommended (consistent with Housing Mix 4 building forms).

Housing Types

- Townhouses at relatively high densities
- Multi-unit apartment buildings
- Larger building forms
- Limited side yards when buildings are located along standard streets
- Buildings may include front plazas or be grouped around central courtyards to create defined space
- Limited on-site open space. May include more formal entry plazas, patios, roof gardens and balconies

Net Density and Height Ranges

- Individual developments: up to 70 dwelling units per net acre

- District average: 40 dwelling units per net acre
- Buildings 2 to 4 stories in height

See **Figure 10** for a conceptual neighborhood mixed-use center.

Employment

An Employment District comprising approximately 41 acres is recommended for the area southeast of Nelson Road and Reiner Road and also west of Reiner Road. Part of this area is already developed with commercial and light industrial uses such as Maly Ceramic Tiles, E & E Self Storage, Burke Truck & Equipment and Midwest Veterinary Supply. Some of these uses will likely exist for a longtime however, it is recommended that over time this area transition to an employment district. See **Figure 11** for a conceptual design for employment district.

Recommended uses may include business, professional and corporate offices, research and development and light industrial uses. Service and restaurant uses that generally serve the surrounding area and/or are associated with a larger office use may be integrated as ground-floor uses in Employment areas. Employment areas should be comprised of compact, pedestrian-friendly multi-story development to encourage transit use and make surrounding areas more accessible by pedestrians and bicyclists.

In general, the Employment District should be designed as a compact, integrated district rather than a string of low-density suburban style developments. Given the visibility of this area along Nelson and Reiner Road, high quality design of buildings and landscaping is recommended to create an attractive appearance. Adequate site landscaping must be provided on all sides, and parking areas should not dominate a development. Buildings should front adjoining public streets and have public entrances accessible from the street to encourage walking and transit use.

Buffering between the district and any adjacent development that is primarily residential is necessary. Effective and attractive buffering between residential and non-residential uses is essential in creating an environment that meets the needs of both employment and residential areas.

Height Ranges

- Buildings two to four stories in height

Civic and Institutional Uses

The only civic/institutional use in the planning area is the Burke Station Cemetery. While no further civic or institutional uses are planned, they may be added as needed, provided they fit within the surrounding context.

The planning area is within the Sun Prairie Area School District. There are no planned schools within the NDP boundary. A new elementary school is planned to the west, in the Village at Autumn Lake neighborhood. The Northeast NDP recommends a potential Elementary/Middle School site along Lien Road and another potential site for Elementary School along the east side of Felland Road across from the Bridle Downs subdivision. (**See Map 15**)

Parks

Parks are located to provide open space and recreational opportunities to nearby residents. Specific amenities and programming will be determined through a Parks Division master planning process.

There are currently three existing park and recreational areas within the planning area. A portion of the Burke Town Hall property is public parkland. A neighborhood park is located east of Thorson Road and Oak Ridge Park is located off of Broken Bow Road.

In addition to these existing parks, three new parks are recommended within the planning area. One park is recommended south of Burke Road and west of Reiner Road which would expand the current Town of Burke owned open space adjacent to the Burke Station Cemetery, the second park is recommended on the eastern edge of the planning area between Nelson Road and Burke Road and a third park is recommended north of Nelson Road just south of the quarry ponds. **See Map 7: Parks and Open Space Plan.** These new parks are recommended in locations likely to see higher projected residential populations when the neighborhood is fully developed. The Park recommended north of Nelson Road is proposed to serve as a gateway entrance to the larger open space/recreational area north of the proposed park.

Future Regional Natural and Recreation Area

The open space north of Nelson Road is recommended as a Regional Natural and Recreation Area. This site owned by Madison Crushing and Excavating, was formerly used for extraction and has some gravel ponds. The Plan recommends recreational opportunities such as shore fishing and trails for hiking and mountain biking, snowshoeing, cross-country skiing, bird watching and so on. A north-south boulevard provides access to this area from Nelson Road. A secondary access to the site is provided from Reiner Road. See **Map 7: Parks and Open Space Plan.**

To implement this Future Regional Natural and Recreation Area, the plan recommends investigating acquisition opportunities by Dane County or consider a joint collaboration between the local units of government as well as non-profit organizations.

Other Open Space/Stormwater Management

Approximately 500 acres, or one-third of the planning area, is recommended for Other Open Space and Stormwater Management. This category includes areas that cannot be developed such as low-lying areas with ponds, wetlands, floodplain or hydric soils most of which are located along the northern edge of the planning area. Areas with steeper slopes are similarly unsuitable for development. The Future Land Use and Street Plan also sets aside areas for stormwater management which is required as part of future development.

The planning area is located within the Starkweather Creek Watershed study area. The Reiner Neighborhood Development Plan was paused while this Watershed Study was being conducted. With this Watershed Study, Engineers reviewed the existing stormwater system to determine the causes of flooding and then develop projects to reduce the risk of flooding.

Computer modeling results of existing conditions from this watershed study were used to identify additional areas for stormwater management. **See Map 12: Flood Inundation** that indicates the anticipated flooding that would result from a 100 year storm given the existing topography, amounts of impervious surface and existing stormwater infrastructure such as culverts. The Flood Inundation Map shows unintended detention within the study area. At the Southwest corner of the Burke and Reiner Road intersection further analysis is needed to determine if there is a need to reserve area for stormwater at this location or if the stormwater areas shown in the other quadrants of the intersection can address the

stormwater needs.

In addition, as development starts to occur in this area, all developments will need to meet the City's Stormwater requirements included in Chapter 37 of the Municipal Ordinance.

SUSTAINABILITY

Madison has a long-standing commitment to protecting the natural environment, and the City must continue to lead in this realm as new neighborhoods develop. The [Comprehensive Plan \(2018\)](#) commits Madison to being a leader in stewardship of our land, air, and water resources, and identifies several strategies and actions related to sustainability. This section focuses on specific strategies, policies, and actions to accomplish the City's sustainability objectives. Recommendations in this section are specific to the planning area; general citywide strategies are not included in this discussion. While some recommendations in this section can be achieved or directed by the City, many of these actions will require cooperation from future developers, builders, residents, businesses, and users of the neighborhood.

In the general planning of this area, Comprehensive Plan Land Use and Transportation Strategy 6, which states that Madison should facilitate compact growth to reduce the development of farmland, is particularly important. Related actions pertinent to this plan recommend the City continue to update plans to increase allowable development intensity and create density minimums and steer peripheral growth towards mapped priority areas, with a focus on land already served by utilities. This Plan also aims to advance the following strategies from the Green and Resilient chapter of the Comprehensive Plan:

1. Protect Madison's water supply and infrastructure to provide safe, clean drinking water.
2. Improve lake and stream water quality.
3. Increase the use and accessibility of energy efficiency upgrades and renewable energy.
4. Acquire parkland and upgrade park facilities to accommodate more diverse activities and gatherings.
5. Improve and preserve urban biodiversity through an interconnected greenway and habitat system.
6. Develop a healthy and diverse urban tree canopy.
10. Support sustainable farming and gardening practices that protect the ecosystem and public health.

Transportation and Land Use

This Plan seeks to increase trips via walking, bicycling, or transit by persons living in the NDP area through the use of transit-oriented and mixed-use development, traditional neighborhood development, transit access, walkable environments, bike facilities, or other transportation-demand management practices. Primary benefits of these recommendations include decreased consumption of fossil fuels, decreased production air pollution, and health benefits for residents.

Recommendations:

- Encourage compact, mixed-use development, with environmentally-conscious designs.
- Implement the future transit network as recommended in the Plan. See **Map 10**.
- Implement the bicycle network as recommended in the Plan. See **Map 9** Include at least one bicycle crossing of the railroad on north side of planning area and establish a bike connection toward East Towne.

- Both residential and office buildings are encouraged to host shared vehicles to allow residents to reduce or eliminate car ownership.
- Employer-based Transportation Demand Management (TDM) measures and other incentives to help enhance the desirability of non-single-occupancy vehicle-based transportation modes should be considered as part of an overall TDM program or strategy for the planning area.

Energy Generation, Consumption, and Efficiency

This Plan seeks to establish neighborhoods with reduced household consumption of fossil fuel-generated electricity and heat. Progress towards attaining these goals will be through the use of energy efficient construction, alternative energy sources, distributed on-site energy production, and conservation education and outreach. Further, all City agencies will work to identify ways of providing services to the planning area in the most energy-efficient methods possible and seek partnerships with other entities for service delivery energy savings. Primary benefits of these efforts will include decreased consumption of fossil fuels and decreased emissions of air pollution and greenhouse gases.

Recommendations:

- Use energy efficient designs, sustainable building materials, and energy-efficient appliances and fixtures in public buildings and encourage these in private construction.
- Implement district-wide distributed alternative energy generation such as wind or photovoltaic.
- Implement renewable energy programs (incentives/funding options include Focus on Energy, MadiSun, and others).
- Reduce or eliminate dependence on fossil fuels for heating by using heat pumps, geothermal heating, solar thermal, passive house designs and other methods.
- Explore the feasibility of a geothermal system under planned new parks, open space, or alleys and other public and semi-public spaces for adjoining properties. Sewer pipes can also be used for heat sources.
- Integrate renewable energy into building design (such as rooftop solar panels or solar-ready design that does not conflict with any green roof designs).
- Builders and homeowners are encouraged to engage with the ENERGY STAR and Focus on Energy programs, which provide numerous discounts and rebates on products and projects that reduce consumption and systems that produce renewable energy.
- Use efficient city vehicles, routes, and route tracking.
- Co-locate community facilities.
- Require buildings/projects seeking City funding assistance to describe how they will exceed energy efficiency and sustainability requirements in existing building codes.

Water Resources

The planning and future development of this NDP area can address and support water resources through two primary methods: water use reduction and stormwater management and infiltration. By reducing per capita water use through the use of low-flow appliances and fixtures, rain barrels, and low-impact irrigation systems, impacts on the groundwater supply and surface water features such as springs and streams can be minimized. Additionally, these methods can result in decreased need for additional wells and water distribution infrastructure, decreased energy consumption by the Water Utility, and benefits to end users through reduced Water Utility bills. Unregulated runoff from urban sources contributes to pollution in local lakes and streams and poor management can cause a variety of flooding issues. Infiltrating a greater stormwater volume on or adjacent to points of generation through the use of rain gardens, green roofs, porous sidewalks and drives, or other on-site stormwater management practices can help address these issues. Achieving infiltration and stormwater management goals

will require cooperation by several parties, including developers, builders, property owners, property managers, homeowners associations, and City Engineering staff. Primary benefits of these water use reduction and stormwater management and infiltration strategies include minimized impacts to the groundwater system and surface water features, a reduction of the amount of infrastructure needed for stormwater conveyance, and reduced erosion.

Recommendations:

- Implement recommendations included in the City’s Starkweather Creek Watershed study to reduce flooding and create a more resilient stormwater management system.
- Integrate stormwater management into site design through features like permeable paving, raingardens, and low impact, native, and xeriscape plantings.
- Integrate stormwater management as a feature of buildings through features like green roofs, blue roofs, rain barrels, and cisterns.
- Robust leaf waste management and responsible salt application.
- Builders and homeowners are encouraged to use EPA WaterSense fixtures & homes and engage with Project Home/Water Utility conservation programs.

Land Resources

In order to ensure residents of the planning area will experience the benefits of a livable and healthy environment, a model open space system that preserves our significant natural features and offers resident amenity will be pursued. Primary benefits of this commitment to land resources include improved urban biodiversity, interconnected greenway and habitat systems, a healthy and diverse urban tree canopy, parkland and park facilities that accommodate diverse uses, and local community food production.

Recommendations:

- Maximize the planting of canopy trees, native landscaping and pollinator habitats.
- Builders are encouraged to maximize the use of terrace plantings, rain gardens, living walls, green roofs.
- Ensure district-wide greenway connectivity.
- Work with partners to continue to support community gardens and associated infrastructure.
- Encourage pre-development sustainable interim agriculture.

TRANSPORTATION

This Plan recognizes that, given the existing development pattern in the planning area and the location on the edge of the city, driving cars will continue to be a major mode of transportation. However, recommended investments to improve the streets to make them more pedestrian friendly, expand the bicycle network, and future expansion of transit allow more transportation alternatives for neighborhood residents and employees. Combined with encouraging site design that facilitates the use of alternative transportation options (see the Recommended Land Uses section of the Plan), this could enhance the use of non-automobile transportation modes by future residents and hopefully employees as well. The sections below describe the planned investments in streets, pedestrian and bicycle facilities, and transit for the planning area.

Roadways

Planned future improvements to arterial and collector streets are discussed below, including planned future cross-sections for the streets that will be upgraded/improved as development progresses. See **Map 8: Transportation Plan - Roadways** for the planned street network and **Table 4** for recommended cross-sections.

All new local streets proposed within the planning area are recommended as narrow as allowed under the City’s subdivision ordinance. Right-of-ways for local streets will fall within a 54 foot to 60 foot range, and pavement width will be between 26 or 28 feet from curb face to curb face. Local streets that have multifamily developments or are adjacent to parks may have wider right of way (66 feet) and wider pavement (36 feet). Grades of proposed new local streets should generally stay below 10%, per City guidelines. The roads are shown at this point to express a desire in the plan to create a highly connected development pattern within the neighborhood.

Table 4: Recommended Arterial and Collector Cross-Sections

Roadway	Recommended Right-of-Way	Type of Bicycle Facility	On-Street Parking	Terrace Width
Reiner (Higher Density)	130'	Shared-Use Path	Yes	12'
Reiner (Lower Density)	120'	Shared-Use Path	No	14'
Lien (Higher Density)	120'	Shared-Use Path	Yes	7'
Lien (Lower Density)	108'	Shared-Use Path	No	8'
Nelson (East of Reiner)	90'	Shared-Use Path	No	15'
Nelson (West of Reiner)	120'	Shared-Use Path	No	14'
Burke (Higher Density)	90'	Buffered Bike Lane	Yes	15'
Burke (Lower Density)	80'	Buffered Bike Lane	No	14'
Thorson	80'	Buffered Bike Lane	No	14'

Reiner Road

Reiner Road is the only north-south arterial street within the planning area that continues northward beyond the planning area. As adjacent development starts to occur Reiner Road will be upgraded with an urban cross-section with sidewalk, terrace, curb and gutter. The expansion of the right-of-way and pavement section will have to be coordinated with the overhead electric transmission line and existing

development located along the roadway. It is likely that the road will be expanded away from the transmission line, given the cost of relocating the line's support poles.

The Reiner Road right of way is currently about 66 feet as it runs through the planning area. The northern segment of Reiner Road in the City of Sun Prairie has a right of way of 140 feet.

Two cross-sections are recommended for Reiner Road to address the different types of land uses recommended along the corridor.

Segments of Reiner Road that are adjacent to areas recommended for mixed-use and higher density development should use the cross-section shown on Figure 1 that includes on-street parking. This cross-section recommends 12 feet terraces to incorporate rain gardens. This cross-section also recommends shared-use paths on both sides of the street to support a low stress bike network on this arterial road.

The second cross-section is recommended for lower density development along Reiner Road. On-street parking is not recommended along lower density areas.

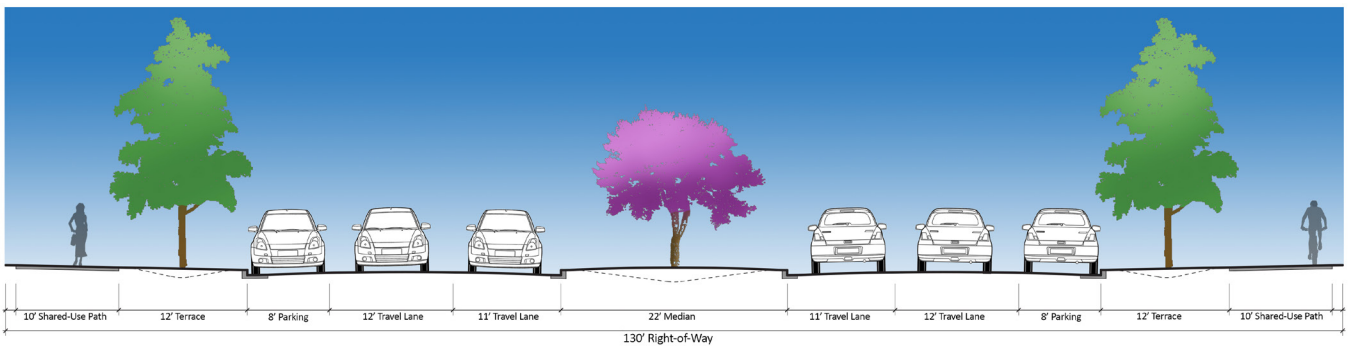


Figure 1. Reiner Road Cross-Section for Higher Density

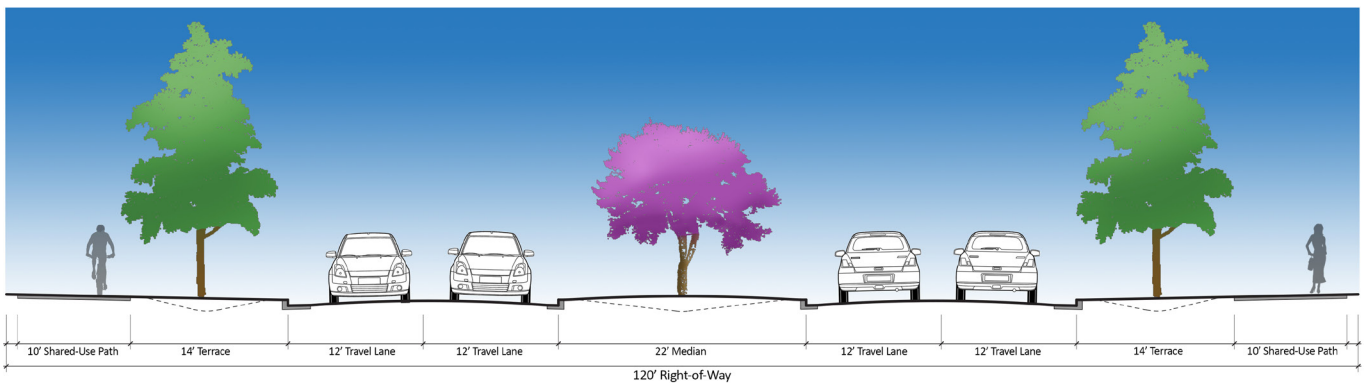


Figure 2. Reiner Road Cross-Section for Lower Density

Nelson Road

Nelson Road is an east-west arterial road that continues eastwards beyond the planning area. Nelson Road west of the planning area has direct access to US Highway 151 and carries high traffic volumes.

As development occurs along Nelson Road and the area starts to get more urbanized the cross-section of Nelson Road should be upgraded to make it multimodal and safer for bicyclists and pedestrians.

Two cross-sections are recommended for Nelson Road to make it multimodal and safer for bicyclists and pedestrians to access and use.

The first cross-section recommends shared-use paths, terraces, travel lanes in each direction and a center two-way left turn lane (TWLTL) for the section of Nelson Road east of Reiner Road.

The second cross-section recommends shared-use paths, terraces, two travel lanes in each direction and a center median for the section of Nelson Road west of Reiner Road.

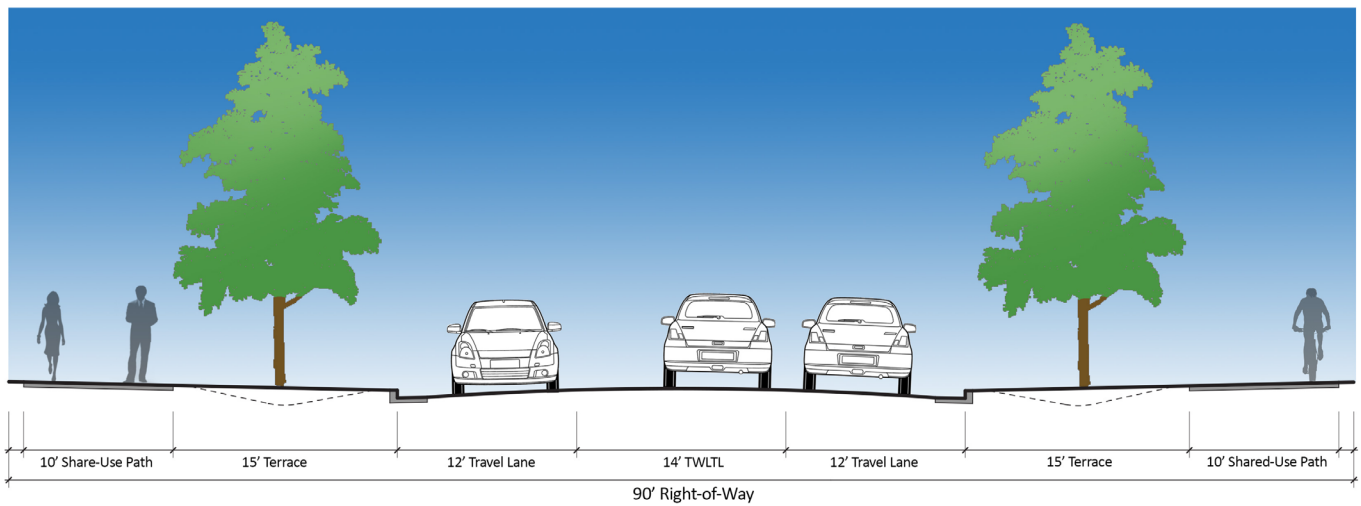


Figure 3. Nelson Road Cross-Section with 90 feet Right-Of-Way, east of Reiner Road

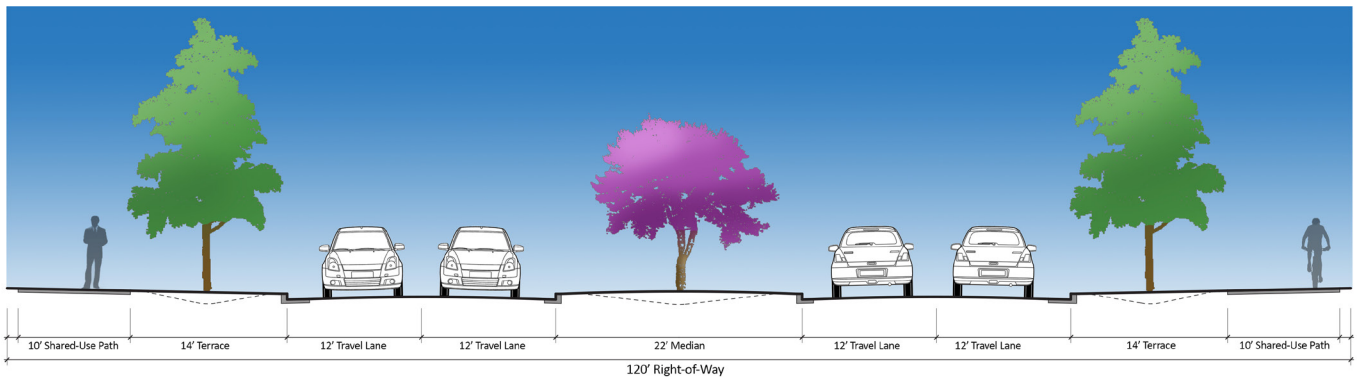


Figure 4. Nelson Road Cross-Section with 120 feet Right-Of-Way, west of Reiner Road

Lien Road

The Northeast NDP recommends extending Lien Road east to connect with Thorson Road from its current terminus at Felland Road and function as an arterial roadway. This plan recommends extending Lien Road further east to connect with Bailey Road. Lien road provides a connection to the East Towne retail area and the East Washington Avenue corridor further to the west.

Two cross-sections are recommended for Lien Road to address the different types of land uses recommended along the corridor.

Segments of Lien Road that are adjacent to areas recommended for mixed-use and higher density development should use the cross-section shown on Figure 5 that includes on-street parking, two travel lanes in each direction, shared-use paths, and a median.

The second cross-section is recommended for lower density development along Lien Road. On-street parking is not recommended along lower density areas.

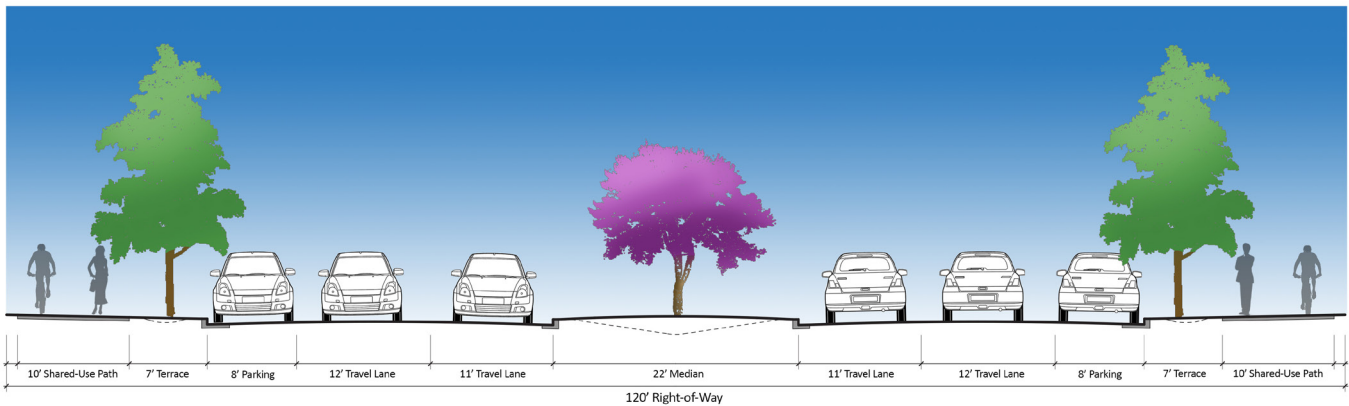


Figure 5. Lien Road Cross-Section for Higher density

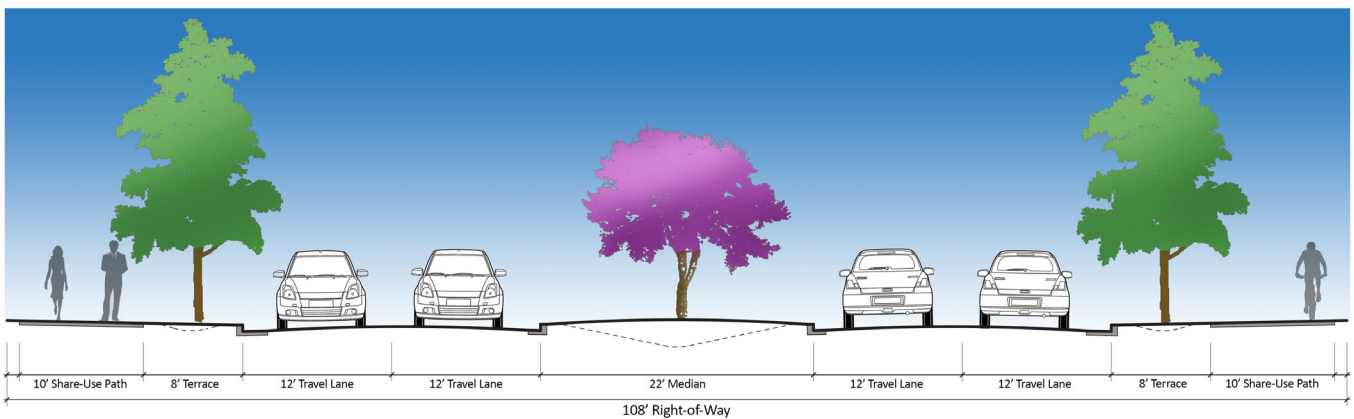


Figure 6. Lien Road Cross-Section for Lower density

Burke Road

Burke Road is currently a collector street running east-west through the planning area. It is recommended that Burke Road remain a collector street. The Burke Road right-of-way currently varies from 65 to 80 feet as it runs through the planning area.

Two cross-sections are recommended for Burke Road to address the different types of land uses recommended along the corridor.

The cross-section shown on Figure 7 includes one side of on-street parking and is recommended for higher density development along Burke Road and for developments that have direct access from Burke Road.

The second cross-section is recommended for lower density development along Burke Road. On-street parking is not recommended along lower density areas.

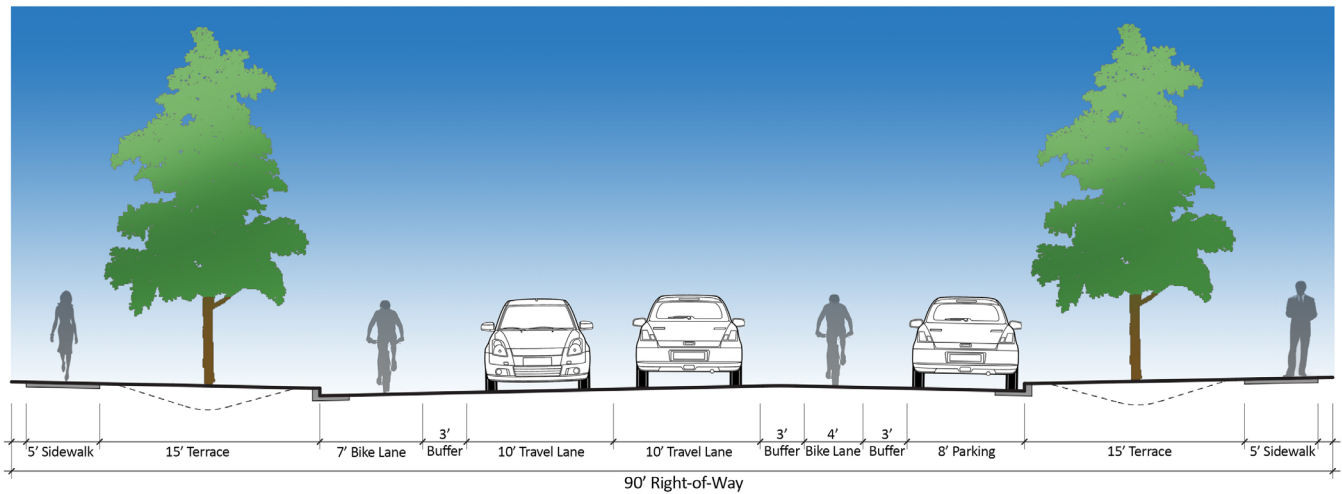


Figure 7. Burke Road Cross-Section for Higher density

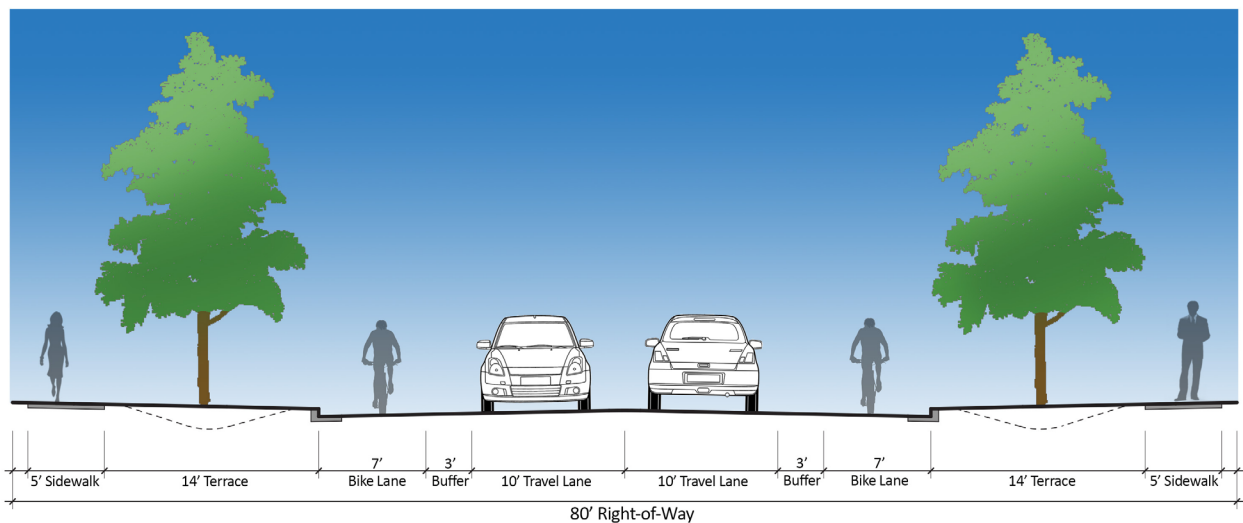


Figure 8. Burke Road Cross-Section for Lower density

Thorson Road

Thorson Road is currently a collector street running north-south through the planning area that terminates at Burke Road. Thorson Road is recommended to extend north to Nelson Road.

Figure 9 shows the cross-section recommended for Thorson Road which includes one travel lane and buffered bicycle lane in each direction.

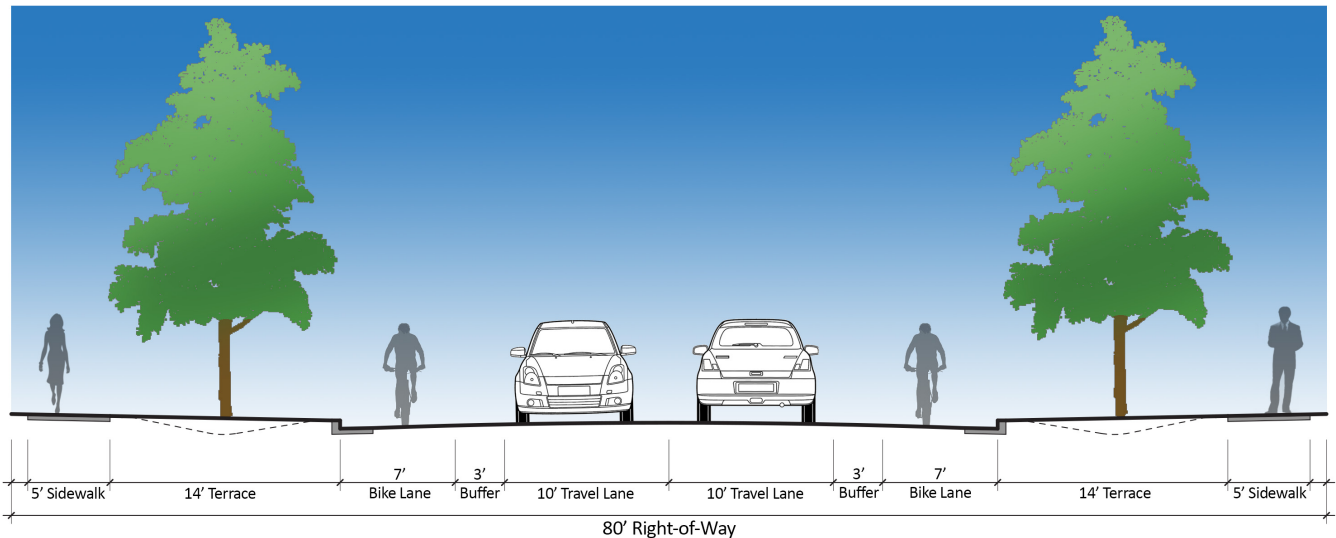


Figure 9. Thorson Road Cross-Section

Pedestrian and Bicycle Facilities

This plan recommends substantial improvements to pedestrian and bicycle facilities. **Map 9: Transportation Plan: Pedestrian/Bicycle Facilities** illustrates the current and planned pedestrian and bicycle facilities in the planning area.

All new planned streets should include sidewalks on both sides of the streets, consistent with existing City policy. Generally, sidewalks will be added to existing streets as part of long-term street reconstruction projects.

This plan also recommends an off-street shared-use path network to ensure connectivity in the planning area. Five off-street shared use paths are recommended: Railroad Path, East-West Greenway Path, North Pipeline Path and Town Center Path.

The proposed *Railroad Path* is recommended to run adjacent to the Wisconsin & Southern railroad tracks that forms the western and northern boundaries of the planning area. The *North Pipeline Path* is recommended to run adjacent to the natural gas pipeline that travels north-south direction within the planning area, it will then connect to the shared-use path recommended along Reiner Road and continue further north towards Sun Prairie. The proposed *East-West Greenway Path* is recommended to travel through the greenway area between Nelson Road and Burke Road. The *Town Center Path* was recommended in the Northeast NDP which is recommended to continue through the planning area between Reiner Road and Felland Road and then cross the railroad tracks to connect west to the Nelson NDP area. The East-West Path is located along the southern limits of the planning area that was recom-

mended in the Northeast NDP.

Two railroad crossing are recommended in the planning area. One crossing is recommended just south of Reiner Road to connect the Town Center Path to the neighborhoods to the west. The second crossing is recommended east of the natural gas pipeline to connect the Railroad Path to the planned shared-use paths in Sun Prairie's Smith's Crossing subdivision.

Metro Transit

The closest bus stops with regularly scheduled transit service through most of the day are located west and north of the planning area. Sun Prairie's Park & Ride lot is located at the corner of Reiner Road and O'Keeffe Avenue. This lot provides access to the Route 23 bus route during peak commuting periods. Future Bus Rapid Transit (BRT) is expected to serve the Park & Ride lot as well.

Future Madison Metro service to the area would come through an extension of current routes in the area, or through the creation of new transit routes. Ridership potential will remain relatively low until substantial additional development has occurred. Future transit routes within the neighborhood would most likely travel along Reiner Road with longer term possibility for Nelson Road, Burke Road, and Lien Road corridors. See **Map 10: Future Transit**

Utilities and Development Phasing

Map 11: Utilities, Service Areas and Phasing shows the existing utilities, the Capital Regional Planning Commission's Urban Service Areas (USA) and the general, anticipated phasing of extension of urban services.

Sanitary Sewer Service

City and Madison Metropolitan Sewerage District (MMSD) interceptors will be extended as future development occurs in the planning area. Sanitary interceptors located in the Village at Autumn Lake subdivision will be extended into, and serve, the Phasing Area A that drains into the Starkweather Creek watershed. The Phasing Area B that drains east into the Koshkonong Creek watershed, will be served by future installation of sanitary interceptors. (See **Map 11: Utilities, Service Areas and Phasing**).

Public Water Service

Water service will be supplied by Madison Water Utility. The planning area is located close to the Feland Rd Reservoir Pipeline Zone 3. This zone will serve this area. A well with a booster station is relatively close so water utility has the capacity to serve the area but does not have current infrastructure because of lack of demand. As new growth occurs existing water mains will be extended to support the growth.

Central Urban Service Area (CUSA)

Currently the planning area is not within the Central Urban Service Area (CUSA). In order for the City of Madison to provide sanitary service in the planning area, the lands to be served must first be added to the CUSA. Prior to urban development or to extend public sanitary sewer to serve existing developments that currently do not have it, the City will need to submit an application(s) to the Capital Area Regional Planning Commission requesting all or portions of the lands within Phasing Areas A and B to be added to the Central Urban Service Area.

Plan Implementation

Town of Burke Attachments

All Town of Burke land within the planning area is subject to the Town of Burke, Village of DeForest, City of Sun Prairie and City of Madison Cooperative Plan, and will eventually come into Madison. Town Lands may be attached to the City of Madison if requested by the property owner and approved by the City. Any development, as defined in the Cooperative Plan, should occur only after land is attached to the City and the relevant zoning and subdivision approvals have been secured. Development within the City requires tying in to the City's municipal water and sanitary sewer service.

Zoning Map Amendments

The Dane County Zoning Ordinance applies to lands in the Town of Burke. Most of the lands within the planning area are zoned Agricultural District, and the remaining lands are zoned for residential and for commercial uses. When the Town of Burke properties attach to the City of Madison a zoning district will be assigned from the City's Zoning Districts.

It is recommended that future zoning of land within the planning area conform to the land use recommendations within this Plan. Land should only be rezoned to another zoning district in conjunction with consideration of a specific subdivision or a specific development proposal sufficiently detailed to ensure that development within the district will be consistent with this Plan.

Land Subdivision Regulations

Rural land within this NDP area will need to be subdivided into smaller parcels before it can be developed with urban uses. Many of the recommendations in this Plan can be implemented through the review and approval of subdivision plats and application of the City of Madison's land subdivision regulations as land is proposed for development. Requests for approval of a land division are nearly always considered in conjunction with a request to rezone undeveloped property to allow urban development (see "Zoning Map Amendments" above).

Future subdivisions in the planning area should conform to the recommendations in this Plan, particularly regarding street connectivity, shared-use paths, parks, and stormwater management facilities. Future subdivisions should provide building lots that facilitate development of the types of land uses recommended in the plan. Proposed high intensity development may also be required to provide information showing how lots may be developed with building designs that maintain the street orientation and pedestrian-friendly street character specified in this Plan.

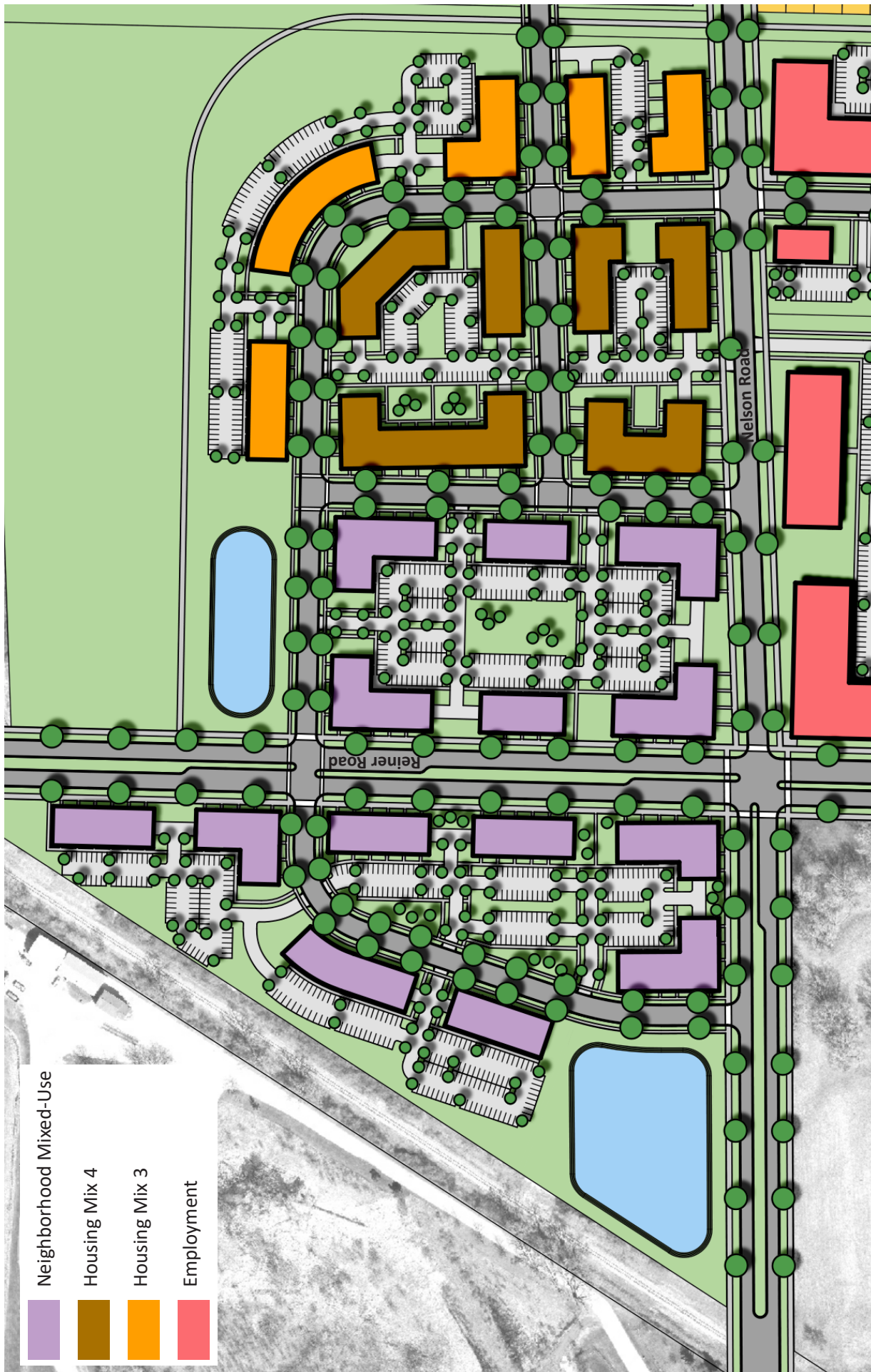
Local streets within proposed subdivisions should either generally conform to the pattern of local streets shown in this Plan or reflect the objectives illustrated in this Plan. Some of these objectives include the provision of connecting streets through the neighborhood, provision of multiple routes to neighborhood destinations, the orientation of streets to visual features in the neighborhood, breaking up existing large blocks, and the streets' function as part of the stormwater management drainage system.

Official Map

The City of Madison Official Map is used to reserve rights-of-way and other sites for specified future public uses until such time as they are acquired through dedication or other means. It is recommended

that the City of Madison Official Map be revised to include the proposed alignment and right-of-way widths of the planned extension of Thorson Road and Lien Road recommended in the Plan.

In addition, it is recommended future extension of Nelson Road to CTH T and Lien Road to Bailey Road, further east of the planning area should be considered for official mapping.



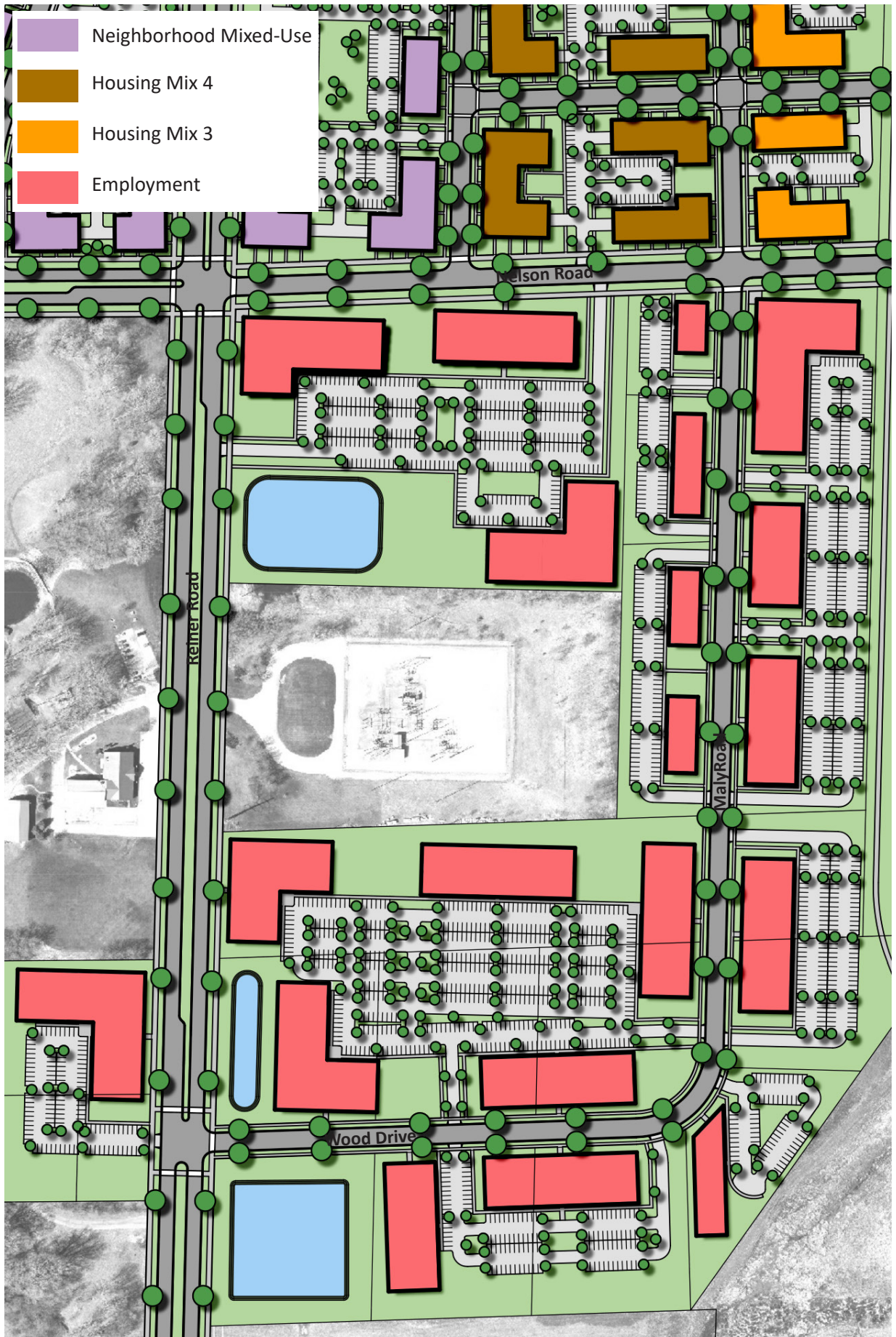


Figure 11: Employment Development Concept