Northeast Neighborhoods Development Plan
Adopted October 20, 2009

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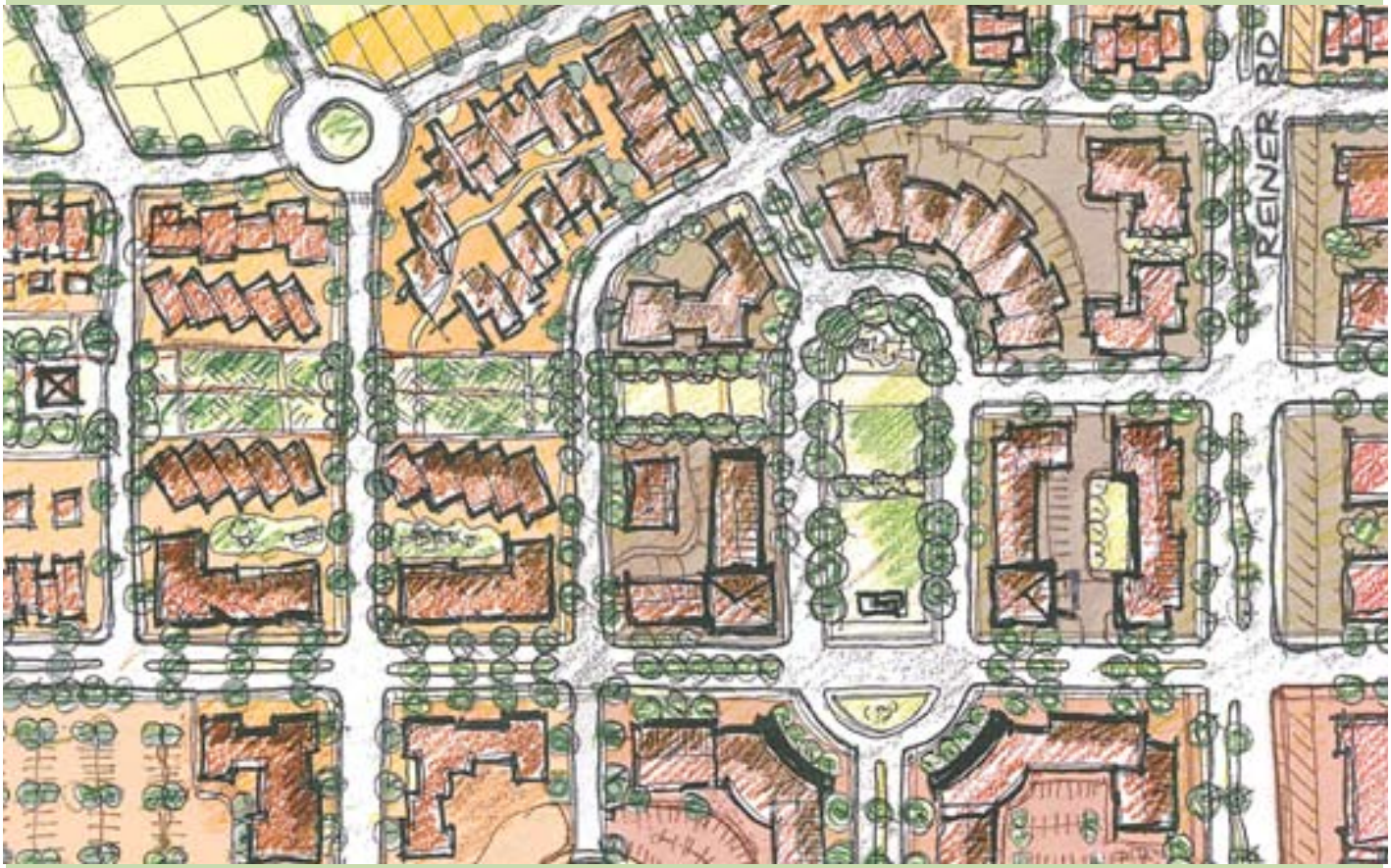

Reiner/CTH T Town Center Illustration

Madison

City of Madison, Wisconsin

Map 6: Land Use and Street Plan
Phase 1 Planning Area

Northeast Neighborhoods Development Plan
October 2009

- Planning Area
- Phase 2 Planning Area
- Street Right-of-Way
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- Housing Mix 1
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- Community Mixed-Use
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- Employment
- Civic/Institutional
- Utilities
- Park
- Other Open Space and Stormwater Management
- Wetland

0 0.25 0.5 Miles

January 3, 2022

City of Madison Planning Division

Acknowledgements

Public Officials

Mayor Dave Cieslewicz
Alder Lauren Cnare
Alder Joseph Clausius

City of Madison Staff

Mark A. Olinger, Director, Dept. of Planning & Community & Economic Development
Bradley J. Murphy, Director, Planning Division
Rick Roll, Planning Division
Dave Larson, Planning Division
Brian Grady, Planning Division
Ryan Jonely, Planning Division
David Trowbridge, Planning Division
Rebecca Cnare, Planning Division
Andrew Statz, Office of the Mayor
Mario Mendoza, Office of the Mayor
Larry Nelson, Engineering Division
Rob Phillips, Engineering Division
Jeanne Hoffman, Engineering Division
Greg Fries, Engineering Division
Mike Dailey, Engineering Division
Tony Fernandez, Engineering Division
Genesis Bichanich, Engineering Division
Ed Ruckriegel, Fire Department
Michael Dirienzo, Fire Department
Tim Sobota, Madison Metro
Kevin Briski, Parks Division
Kay Rutledge, Parks Division
Jill Klubertanz, Police Department
Richard Bach, Police Department
David Dryer, Traffic Engineering
Dan McCormick, Traffic Engineering
Bob Arseneau, Traffic Engineering
Arthur Ross, Traffic Engineering
Tom Heikkinen, Water Utility
Dennis Cawley, Water Utility
Gail Gawenda, Water Utility

Other Organizations

Larry Huber, ANR Pipeline
Brand Smith, Alliant Energy
John Garvin, American Transmission Company
Rod Clarke, American Transmission Company
Kamran Mesbah, Capital Area Regional Planning Commission
Mike Kakuska, Capital Area Regional Planning Commission
Bob McDonald, Madison Area Transportation Planning Board
Bill Schaefer, Madison Area Transportation Planning Board
Kathy DeMets, Madison Gas & Electric
Cathy Mackin, Madison Gas & Electric
Phil Frei, Sun Prairie Area School District
Amy Rosebrough, Wisconsin Historical Society

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I. INTRODUCTION

The Northeast Neighborhoods Development Plan (referred to as the "*Plan*") was prepared to guide the future growth and development of new neighborhoods located on the City of Madison's northeast side. The planning area was recognized as a potential location for future urban expansion in the 1990 Peripheral Area Development Plan, which identified lands at the edges of the City most suitable for Madison's near and longer-term growth. An update of the Peripheral Area Development Plan, completed as part of the 2006 City of Madison Comprehensive Plan, identified the planning area as having near-term potential for beginning urban development and recommended that a detailed plan for the area be prepared and adopted.

The City's Comprehensive Plan includes a goal that the City grow and develop in a sustainable way that will protect the high quality natural environment, promote energy efficiency and conservation of natural resources and create a built environment that is adaptable to future changes in conditions. The *Plan* is intended to demonstrate how the City can enhance the sustainability of new development. In March of 2009, the Common Council adopted a resolution that includes five sustainability goals for the planning area. These goals pertain to: 1) reducing dependence on automobiles, 2) reducing energy consumption, 3) reducing water consumption, 4) increasing on-site stormwater infiltration and 5) delivering city services in an energy efficient manner.

The planning area was recognized as a potential location for future urban expansion in the 1990 Peripheral Area Development Plan, which identified lands at the edges of the City most suitable for Madison's near and longer-term growth.

The *Plan* was prepared through a joint planning effort that included the participation of planning area property owners, City staff and officials, representatives of other municipalities and other interested individuals and organizations. Throughout the planning process, there was communication between property owners and City staff as public and private planning objectives were identified. Three public meetings were held at the Burke Town Hall in the planning area to present and discuss background information, conceptual land use plans and the draft *Plan*. The *Plan* reflects an effort to balance the interests and objectives of all participants, while providing a comprehensive, long-range vision for the future development in the planning area.

The *Plan* includes recommendations for land use and design, open space preservation, transportation, urban services delivery, development phasing and plan implementation. It will be adopted as a supplement to the City of Madison Comprehensive Plan and serve as a guide for future development within the planning area and the vision against which future development proposals will be evaluated.

II. BACKGROUND INFORMATION AND PLANNING CONTEXT

A. Planning Area

The planning area is generally bounded by Interstate Highway 94 on the south, Interstate 39-90-94, the Village of Autumn Lake subdivision and the Wisconsin Department of Transportation railway on the west, Nelson Road on the north, and Thorson Road and County Trunk Highway T on the east. The planning area covers 2,861 acres. Given the large size of the planning area, it has been divided into two phases. The recommendations in this document apply to the Phase 1 area, which is generally the southern two-thirds of the planning area. A separate document will be prepared in the future that contains the recommendations for the Phase 2 area. The boundaries of Phase 1 and Phase 2 are shown on **Map 1**.

Map 1: Planning Area (excerpt)

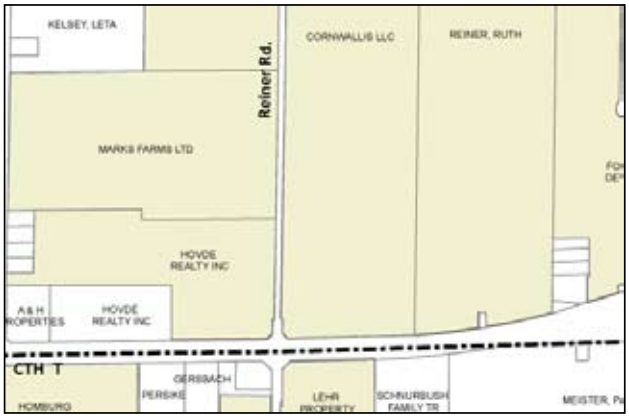
B. Municipal Jurisdiction

The planning area is currently comprised of lands within the City of Madison or the towns of Burke, Blooming Grove, Sun Prairie and Cottage Grove. About 1,129 acres (39%) are in the City of Madison, 1,388 acres (49%) are in the Town of Burke, 121 acres (4%) are in the Town of Blooming Grove, 191 acres (7%) are in the Town of Sun Prairie and 32 acres (1%) are in the Town of Cottage Grove. **See Map 2.**

The lands that are currently in the towns of Burke and Blooming Grove will eventually be attached to the City of Madison under Cooperative Plans for these respective areas. The Town of Burke, Village of DeForest, City of Sun Prairie and City of Madison Cooperative Plan governs the Town of Burke lands. The Town of Blooming Grove and City of Madison Cooperative Plan governs the Town of Blooming Grove lands. These Cooperative Plans provide that development, as defined in the respective Plans, on lands that will eventually be in Madison will be guided by the City of Madison's adopted plans, policies, standards and procedures and may require attachment to the City at the time of development.

C. Property Ownership

The planning area is primarily comprised of relatively large, unplatted parcels. Larger property ownerships within the planning area are listed in **Table 1** and shown on **Map 2.**



Map 2: Municipal Jurisdiction/Property Ownership (excerpt)

D. School District

The planning area is entirely within the Sun Prairie Area School District and is currently served by Creekside Elementary School, Patrick Marsh Middle School and Sun Prairie High School. **See Appendix Map 1**.

E. Natural Features

1. Topography

The planning area consists of primarily rolling terrain. Areas with the greatest amount of topographic relief are located in the western, northern and southeastern parts of the planning area. Extraction activities have created steep slopes in the quarry areas along Reiner Road and Nelson Road. The elevation in the planning area ranges from approximately 900 feet U.S.G.S. along Door Creek near Gaston Road to approximately 1,060 feet U.S.G.S. in the vicinity of the City of Madison water reservoir off of Felland Road and also near Thorson Road where the three major ridgelines within the planning area converge. Topography and other natural features are shown on **Map 3**.

Table 1: Property Ownership

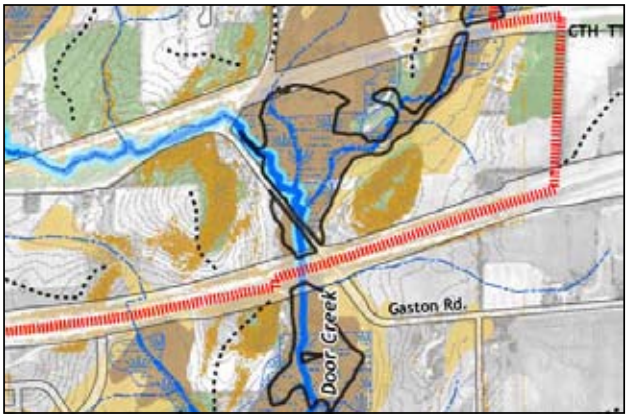
Property Owner	Acreage
Homburg Equipment, Inc.	157.3
Reiner, Ruth	154.7
Cornwallis, LLC	153.0
Great Dane Investments, LLC	115.3
Forest Oaks Development	99.8
TOB 200 Limited Partnership	94.7
Meister, Paul & Kathryn	82.8
Marks Farms Ltd.	81.1
Sun Prairie Concrete Inc.	81.0
Ziegler, Calvin	64.3

2. Woodlands

The larger woodland areas remaining within the planning area are primarily found on ridges, hillsides and along drainageways and streams. These woodlands likely remain because they are located in areas that are less desirable for agriculture uses since they would require clearing and grading to be productive.

3. Watersheds

The planning area includes parts of three watersheds. The northwest portion of the planning area is located within the Starkweather Creek watershed. The southern portion of the planning area is located in the Door Creek watershed. A small portion of the planning area along Thorson Road is located in the Upper Koshkonong Creek watershed.



Map 3: Natural Features (excerpt)

4. Streams

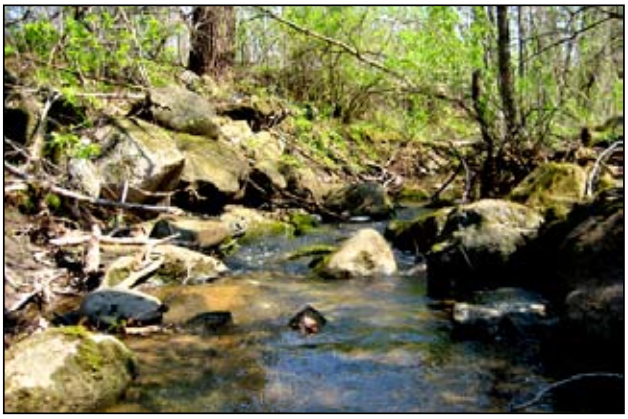
Door Creek

Door Creek travels in a southerly direction through the planning area. Within the planning area it travels through agricultural lands and then parallels both CTH T and Gaston Road. The segment north of CTH T is classified as an intermittent stream. The segment south of CTH T is classified as a perennial stream. The entire length of the Creek within the planning area is considered a navigable waterway by the Wisconsin Department of Natural Resources. Beyond the planning area, the Creek continues to the south and eventually drains into Lake Kegonsa. The entire Door Creek watershed primarily contains rolling agricultural land and drumlin-marsh areas. The quality of the Creek has been diminished over time, primarily due to modifications to improve drainage to make more land suitable for agriculture. Modifications to the Creek date back to at least 1919 when the Door Creek Drainage District was organized. The primary modifications have included channelization, dredging and the draining and filling of wetlands. Secondary effects of agricultural uses within the watershed such as sedimentation from soil erosion and nutrient loading have also impacted the Creek. In some locations along the Creek, there are four to six feet of silt below two feet of water. The Creek has also been impacted by the effects of urban development such as urban stormwater runoff, high-capacity well pumping and wastewater diversion. The Creek's fishery is mostly composed of forage species such as minnows. In its current channelized condition, Door Creek can only be expected to support a limited warm water sport fishery.

Starkweather Creek

The northwest portion of the planning area contains several intermittent streams that drain to the East Branch of Starkweather Creek. Some of these segments are classified as navigable waterways by the Wisconsin Department of Natural Resources. Beyond the planning area, Starkweather Creek travels to the west and eventually drains into Lake Monona.

Starkweather Creek is a unique resource, as it is one of a few streams located almost entirely within the highly developed Madison urban area. Since the time of first settlement, multiple factors associated with development have significantly altered the Creek from its natural state.



Door Creek in the Seminary Springs area

Over the years, degradation in both water quality and baseflow has occurred as the result of activities such as stream channelization and dredging, draining and filling of wetlands, contamination from industrial uses on adjoining lands, general urban and agricultural stormwater run-off, poor stream bank maintenance, high-capacity well pumping and wastewater diversion. More recently, there has been interest in preserving and improving Starkweather Creek. Several major studies conducted in the 1980s and 1990s helped energize efforts to both improve the water resource and enhance creekside amenities such as bicycle paths, walking trails and adjacent parklands. The *1983 Starkweather Creek Water Quality Plan* provided a summary of background information specific to the Creek and its history and included goals and specific recommendations for stream improvement. Other subsequent studies and plans provided additional information and analysis particularly relevant to Starkweather Creek and the Yahara-Monona watershed. These documents were used during the preparation of an update to the Starkweather Creek plan in 2005.

The *Starkweather Creek Master Plan 2005 Update* was prepared by the City of Madison Engineering and Parks Division staff, working with City and Dane County elected officials, the Wisconsin Department of Natural Resources, the Dane County Watershed Coordinator, Town governments, the Friends of Starkweather Creek and other neighborhood and citizen groups. The purpose of this project was to revise the earlier plan's goals and proposed improvements to reflect regulatory changes and to add new goals and recommended improvements that would address environmental concerns and recreational opportunities within the watershed. *Master Plan 2005* focuses on the area from the mouth of the Creek at Lake Monona upstream along both branches to their junction with Interstate 39-90-94. Reaches of the Creek beyond the Interstate were to be addressed as part of the neighborhood planning process and through application of the mandatory stormwater management plans required by state law.

5. Navigable Waterways

During the planning process, staff from the Wisconsin Department of Natural Resources field checked the mapped perennial and intermittent streams in the planning area to determine if any of the streams were navigable. Streams are considered navigable if they can float a small watercraft under defined conditions. DNR staff indicated that within the planning area, Door Creek and some of the stream segments in the Starkweather Creek watershed are considered navigable.

Navigable waterways must be maintained as open drainageways and are subject to the requirements of the Dane County shoreland zoning regulations. Shoreland areas are defined to include all lands within 300 feet of the ordinary high-water mark or the landward side of the floodplain of the navigable reaches of rivers and streams. Special regulations applicable to shoreland areas include: 1) Lots served by sanitary sewer must be at least 15,000 square feet in area. 2) Lots must be at least 100 feet in width at the building setback line. 3) The footprint of primary and accessory buildings cannot occupy more than 30 percent of each lot. 4) Buildings must be set back at least 75 feet from the ordinary high-water mark of the waterway.

6. Wetlands and Floodplain

According to the Wisconsin Department of Natural Resources Wetland Inventory maps, the primary mapped wetland areas are found along or near Door Creek. The maps also indicate areas that contain soil types that often signify the existence of wetlands. Wetlands shown on the Wetland Inventory maps are preliminary determinations based largely on the interpretation of aerial photographs. The exact boundaries of wetland areas must be delineated in the field prior to development. For example, the wetland on the Cornwallis LLC property

northeast of the Reiner Road and CTH T intersection and the wetland immediately east of the intersection of Burke and Reiner roads have been field-delineated. Federal Emergency Management Agency (FEMA) floodplain maps also classify much of the area that is adjacent to Door Creek between CTH T and Interstate 94 as being within the 100-year floodplain. Special regulations apply to developments that contain or are adjacent to wetlands or floodplains.

7. **Hydric Soils**
   There are areas with hydric soils and soils with hydric inclusions located in the lower elevations of the planning area and along the natural drainageways such as Door Creek. These soils are generally less suitable for development, and are primarily located where development is limited or not recommended, or where stormwater management facilities are likely to be located. Soil conditions will need to be carefully evaluated on any lands with these soil characteristics that may be considered for development.

F. Existing Land Use

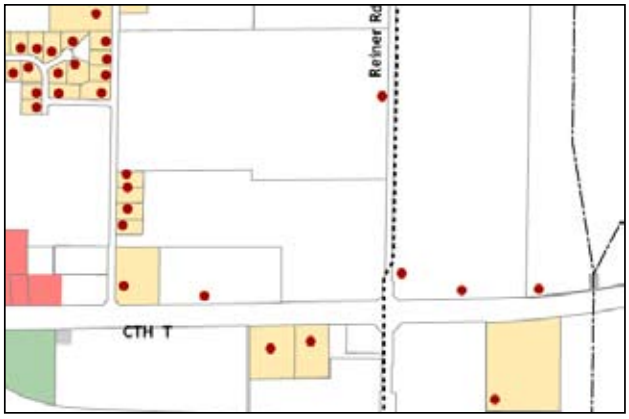
Most of the planning area is currently in an agricultural or vacant land use. The balance of the planning area consists of a mix of land uses including residential, commercial, industrial, institutional, park and open space and road right-of-way. Residential uses are the predominant use on lands that are developed. Existing land uses are listed in **Table 2** and shown on **Map 4.**

Table 2: Existing Land Use - Entire Planning Area

Land Use	Acres	Percent of Total
Agricultural/Vacant	2065.2	72.2%
Residential	291.6	10.2%
Commercial	33.2	1.1%
Industrial/Utilities	142.5	5.0%
Institutional	5.5	0.2%
Parks and Open Space	46.3	1.6%
Road Right-of-Way	276.2	9.7%
Total	**2,861.4**	100.0%

1. **Agricultural and Vacant Land**
   Most of the land in the planning area is either being farmed or is vacant land. The vacant lands are primarily areas with steeper topography or unproductive soils that are less desirable for farming.

2. **Residential**
   There are approximately 291 acres of residential land use within the planning area containing 158 homes. The majority of the residences are distributed along the existing primary roadways within the planning area. Cul-de-sac streets have been developed in several locations that provide access to homes. There are 18 homes residences located within Bridle Downs, the only platted subdivision within the planning area.



Map 4: Existing Land Use (excerpt)

3. **Commercial**
   There are approximately eight commercial uses located in the planning area. These include Proscapes LLC, Apex—Warehouses for Rent, Affordable Self Storage and Capitol Decorating located on CTH T, Camp K-9 Pet Care Center and Lucky Dog Daycare on Felland Road, Little Explorers Nature Center Preschool on Reiner Road and the Seminary Springs Tavern on Gaston Road.

4. Industrial

The industrial uses are primarily located in the northern portion of the planning area. These include Wolf Paving, Rural Masonry, Burke Truck & Equipment and Burke Electric located on Reiner Road. Maly Tile, GBS Concrete and Midwest Veterinary Supply are located on Maly Road.

An industrial use on Maly Road

Quarry Sites

Madison Crushing and Excavation, Madison Sand and Gravel and Sun Prairie Concrete conduct sand, gravel and limestone extraction activities on several parcels southwest of the intersection of Burke Road and Reiner Road. As part of the extraction process, there is occasional blasting to loosen the material. Also, extracted material is crushed and washed on site. While there are restrictions on these activities through Dane County's conditional use permit zoning process, there can be negative impacts on nearby properties. The operators anticipate that these activities will continue for many years. New development on nearby lands will have to take into account that there will likely be noise and vibration from these operations.

A quarry along Reiner Road

A site northeast of the intersection of Nelson Road and Reiner Road owned by Madison Crushing and Excavating was formerly used for extraction but is currently being utilized for storage of excess material from construction sites. This site is considered "non-conforming" under Dane County's land use regulations since extraction activities were already underway when the County's conditional use permitting process for extraction was adopted. Therefore, there are no specific zoning regulations if extraction activities were to resume in the future.

5. Utilities

Communication Towers

There are three communication towers located in the planning area. Two towers are located northeast of the Interstate 39-90-94 and Interstate 94 interchange. The third tower is located southeast of Maly Road.

Water Reservoir

The Madison Water Utility recently constructed a water reservoir on a ridge west of Felland Road and south of Lien Road. The reservoir currently provides enhanced water pressure to areas located west of Interstate 39-90-94. It may eventually serve development within the planning area.

Overhead electric transmission lines along Reiner Road

Electrical Substation

Wisconsin Power and Light operates an electrical substation on a 9-acre site along the east side of Reiner across from the Burke Town Hall. The substation converts power from the transmission lines for use on the local electrical grid.

Overhead Electric Transmission Lines

There are American Transmission Company (ATC) high-voltage overhead electric transmission lines within the planning area. The Sprecher-Reiner line runs the length of the planning area adjacent to Reiner Road and crosses the roadway at several locations. The Sycamore-Reiner line runs along the Wisconsin Department of Transportation railway and along Burke Road between the railway and Reiner Road. Both of these lines were recently upgraded from 69 kilovolts to 138 kilovolts.

The presence of the transmission lines results in unattractive views of both the lines and support poles that are located at approximately 325-foot intervals. Additionally, easements for the transmission lines apply to a portion of the road right-of-way and private property located along the corridor. The easements carry restrictions that prohibit structures and taller vegetation that will interfere with the lines or access to the lines. There are also limitations on modifying the elevation of the ground within the easement areas to ensure that an appropriate clearance underneath the lines is maintained.

Natural Gas Transmission Pipelines

The ANR Pipeline Company has three underground natural gas transmission pipelines within the planning area that extend from a substation located on the north side of CTH T east of Reiner Road. A 12-inch diameter pipeline extends to the north from the substation within an approximately 50-foot wide easement. Two pipelines, 6-inches and 8-inches in diameter, extend to the northeast from the substation within one approximately 75-foot wide easement.

The pipeline easements carry restrictions on development activities and structures to prevent damage and provide access to the pipelines. For example, grading activities cannot reduce the vertical distance from the ground elevation and the pipeline beyond a certain extent. Utility crossings such as sanitary sewer, water mains and stormwater mains generally must provide about 18" of vertical separation from the pipeline. Permanent structures and stormwater basins are not permitted within the easement. With an encroachment agreement, fences are typically permitted within the easement and plantings that do not exceed 5' at maturity are typically permitted at the outer edges of the easement. An encroachment agreement allows the pipeline operator to remove the obstruction to provide access to the pipeline without being responsible for its replacement.

6. Civic and Institutional

Institutional uses in the planning area include the Burke Town Hall and Burke Station Cemetery, both of which are owned by the Town of Burke.

Town of Burke Town Hall

7. Parks and Open Space

There are two existing park and recreational areas within the planning area. A portion of the Burke Town Hall property is public parkland. Kennedy Little League Baseball, Inc. has a private baseball facility immediately northeast of the Interstate 39-90-94 and Interstate 94 interchange.

8. Historical and Cultural Structures and Sites

The Wisconsin Historical Society's Architecture and History Inventory identifies five notable structures in the planning area. Three of the structures are in relatively good condition, while two of them are in deteriorated condition. Two of the structures in good condition are located on Gaston Road in the Seminary Springs area. The Seminary Springs School No. 7, a small, red brick schoolhouse, is located at 3153 Gaston Road. The Francis Good House, located at 3108 Gaston Road, is a red brick Queen Anne farmhouse constructed in 1887. The other structure that is in good condition is a Victorian farmhouse located at 2001 Reiner Road, which was built in approximately the 1880s or 1890s. The deteriorated structures are a wood frame Victorian farmhouse located at 5329 Reiner Road and a sandstone barn located at 5263 Reiner Road. It is recommended that the structures that are in good condition be preserved and perhaps restored back to their original appearance. The deteriorated structures should be preserved and restored if economically feasible.

The Wisconsin State Historical Society also identifies the Burke Station Cemetery as a notable site. It is located on the south side of Burke Road between Felland Road and Reiner Road. The cemetery dates back to the 1850s.

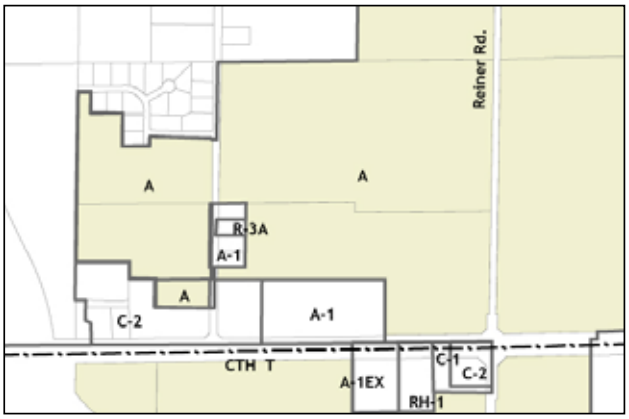
A sandstone barn located along Reiner Road

G. Existing Zoning

The zoning in the planning area is a combination of City of Madison zoning regulations, which apply to lands within the City, and Dane County zoning regulations, which apply to lands within the towns. **See Map 5.**

1. City of Madison Lands

Almost all of lands within the planning area that are in the City of Madison are zoned Agriculture. Although most farming operations and other agricultural uses are permitted uses in the Agriculture district, the District is primarily used as an interim zoning designation on future development lands annexed or attached to the City. Properties intended for eventual urban development will be rezoned to a more appropriate zoning classification as part of the future approval of a development project. One of the key factors in determining whether a development should be approved, and which zoning district classification should be assigned, is the consistency of the proposed development with the recommendations of the adopted neighborhood development plan. Existing uses at the time of attachment to the City may continue under the Agriculture district classification either as conforming or non-conforming uses, but only conforming uses may be expanded.



Map 5: Existing Zoning (excerpt)

2. Town Lands

The Dane County Zoning Ordinance applies to lands in the towns. Most of the lands currently in the Town of Burke are classified A-1 Agriculture district (Non-Exclusive). This district permits agricultural uses, but also allows single-family homes and other selected uses. Most of the residential areas within the planning area are zoned A-1. Other residential areas are zoned to a variety of residential districts that permit homes on a variety of lot sizes. The business uses are primarily within the C-1 and C-2 commercial districts, but these uses are also classified within agricultural and other commercial zoning districts. The majority of the land within the towns of Blooming Grove, Cottage Grove and Sun Prairie is zoned A-1 Exclusive Agriculture which allows a variety of agricultural uses, residential uses for farm owners and operators, single-family homes for owners of at least 35 acres and other selected uses. The remaining areas are zoned to a variety of agricultural, residential and commercial districts.

3. Dane County Regional Airport – Height Limitation Zoning Ordinance

The planning area is in the vicinity of the Dane County Regional Airport and falls within the area covered by the Airport's Height Limitation Zoning Ordinance. The Ordinance stipulates maximum building heights within approximately three miles of the Airport, which includes about the western two-thirds of the planning area. Within the planning area, the Ordinance allows structures up to 100 feet, at a minimum, since the planning area is at least one mile from the Airport. The Ordinance permits higher structures depending on the specific location and elevation of the land. It is anticipated that the recommendations for the planning area will not be affected by these regulations. Prospective developers should, however, review the Height Limitation Zoning Ordinance when considering specific proposals.

The Airport will request that most property owners and developers of property within three miles of the airport provide avigation easements. The avigation easements notify property owners of potential impacts from airport

operations, and typically include a provision prohibiting owners from suing the airport for any noise impacts that may be experienced.

H. Existing Transportation Facilities and Plans

1. Roadways

Existing roadways in the planning area are classified as arterial, collector or local roads according to the Madison Area Metropolitan Planning Organization. Interstate Highway 39-90-94, Interstate Highway 94, CTH T, Reiner Road and Nelson Road are classified as arterial roads. Lien Road, Felland Road and Gaston Road are classified as collector roads. The remaining roadways within the planning area are classified as local roads and primarily provide access to the existing development.

Looking south along Reiner Road

Interstate 94 Expansion

The Wisconsin DOT has plans to expand Interstate 94 between the Interstate 39-90-94 and Interstate 94 interchange and CTH N in Cottage Grove. This segment of the Interstate currently has four travel lanes, but will be reconstructed and expanded to six lanes in 2010 and 2011. Also, the merging lanes associated with the Interstate 39-90-94 and Interstate 94 interchange will be lengthened. The expansion project will require a relatively small amount of right-of-way from properties in the planning area. The additional travel lanes will be added within the existing median area. Since opposing travel lanes will be in closer proximity, barrier walls will be constructed along the center of the Interstate. The Interstate project also includes reconstruction of the existing Interstate bridges over Sprecher Road and Gaston Road and the construction of bridges over the planned extension of Milwaukee Street.

Interstate 94 Access

There is not direct access to the Interstate from the planning area. The Sprecher Neighborhood Development Plan, which applies to lands south of the planning area, identified a location for a potential interchange at the planned northerly extension of Milwaukee Street.

2. Transit Service

Currently, there is no transit service to the planning area. There are several routes that travel near the planning area. Route 25 provides limited reverse commute service to The American Center during weekdays, with two trips outbound during the peak morning hours and two buses returning downtown during the peak afternoon hours. Route 26 provides limited weekday service between East Towne Mall and The American Center. Route 30 provides service between the East Transfer Point and East Towne Mall and Route 36 provides service between East Towne Mall and the High Crossing area.

3. Pedestrian and Bicycle Facilities

Pedestrian and bicycle facilities are currently limited within the planning area. Currently, the only sidewalks and bicycle lanes are located along Lien Road, which was recently reconstructed.

The Madison Area Metropolitan Planning Organization's Regional Transportation Plan recommends on-street and off-street facilities within the planning area that connect with other segments of the regional bicycle network. The Dane County Parks and Open Space Plan recommends a portion of the Blooming Grove Drumlin/Door Creek Park Trail between the Door Creek Corridor in the southeast portion of the planning area and the recommended Starkweather Creek Trail that parallels Starkweather Creek and the Wisconsin DOT railway. A portion of the McCarthy County Park Connector Trail is located in the southeastern limits of the planning area. These paths are intended to connect population centers with County park facilities and other regional trails.

4. Rail

Freight Rail

The Wisconsin Department of Transportation owns the railroad right-of-way that forms the northwest boundary of the planning area. The right-of-way extends from the City of Madison to the City of Watertown where it meets a Canadian Pacific rail line. The track is currently utilized solely for freight rail with trains passing the planning area about two times each day. Travel is typically conducted between noon and midnight. With the increasing demand for freight transportation, it is anticipated that additional trains will utilize the line.

Midwest Regional Rail Initiative – High-Speed Passenger Rail

There are two proposals to implement passenger rail service on the rail line—the Midwest Regional Rail Initiative and Transport 2020. The Midwest Regional Rail Initiative is a proposal for high-speed passenger rail throughout the Upper Midwest. It would utilize the railway as part of the Madison to Milwaukee segment. This proposal envisions trains traveling up to 110 miles per hour in rural areas. There would be about six to ten round trips per day between Madison and Milwaukee. Implementation of high-speed rail service would require many upgrades to the rail corridor including an upgraded track with welded rail and concrete ties, improved grade crossing protection and fencing of the corridor.

Transport 2020 - Commuter Rail

Transport 2020 is a study of transportation improvement alternatives for the Dane County and Greater Madison Metropolitan Area sponsored by Dane County, the City of Madison and the Wisconsin Department of Transportation. The current alternatives include a combination of commuter buses, commuter rail and park and ride lots in a variety of geographical configurations. These alternatives are being studied to determine their costs and benefits.

At this point, the preferred Phase 1 option includes new commuter rail service on this rail line. The initial service would extend from the City of Middleton, travel through the City of Madison's isthmus, and terminate near the intersection of Nelson and Reiner roads. Service would be provided between approximately 6:00 a.m. and 11:00 p.m. seven days a week with the most frequent service provided during the morning and afternoon commutes. The existing 100-foot railroad right-of-way would be sufficient for this proposal. However, the existing track would require significant improvements or additional track would have to be built to accommodate passenger cars. Funding sources for this proposal are being studied but have not been secured.

I. Adopted Land Use Plans and Cooperative Plans

The City of Madison has adopted a wide array of plans to guide land use and development within the City and its planned growth areas. Several of these plans include recommendations that specifically address the planning area or lands that are adjacent to the planning area.

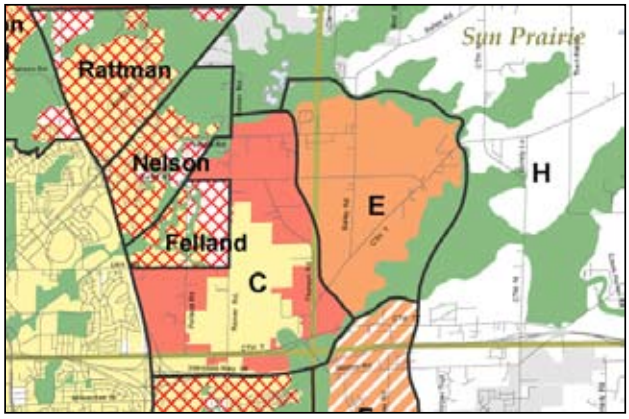
1. City of Madison Comprehensive Plan

The City of Madison Comprehensive Plan, adopted in January 2006, includes numerous goals, objectives, policies and recommendations that apply generally to all areas. These recommendations are not limited to land use and development, but cover all of the elements of a Comprehensive Plan including, for example, transportation, housing, utilities and community facilities, agricultural, natural and cultural resources, economic development and intergovernmental cooperation. However, two sections within the Land Use chapter of the Comprehensive Plan provide the initial framework for the Northeast Neighborhoods Development Plan.

a) 2006 Peripheral Planning Areas

The Comprehensive Plan defines nine Peripheral Planning Areas (PPAs) at the edges of the urban area. The PPAs are areas that have at least some near or long-term potential for future urban development and City of Madison expansion, but for which no detailed planning has been done to define the City's interests and develop more refined recommendations. The PPAs are recommended as planning areas, and more detailed planning will not necessarily recommend that all lands within each PPA should eventually be developed with urban uses, or that Madison should seek municipal jurisdiction over the entire area.

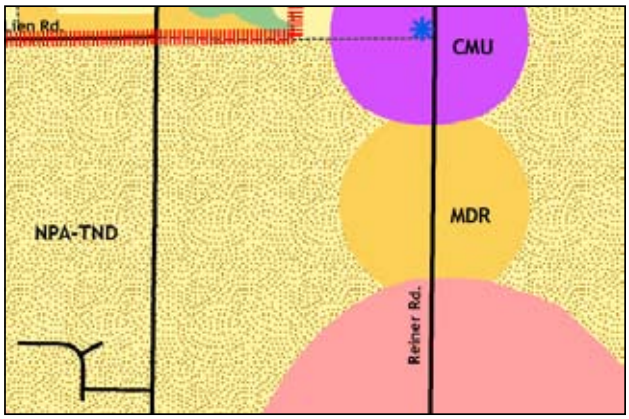
The planning area is located within Peripheral Planning Area C, a "Group 1" District recommended as a potential location for relatively near-term City of Madison expansion and future urban development. Urban development under City of Madison jurisdiction is anticipated to begin in at least portions of all of the Group 1 Peripheral Planning Areas within one to five years. A key recommendation in the Comprehensive Plan is that a detailed neighborhood development plan must be prepared and adopted prior to initiating urban development in any peripheral area. **See Appendix Map 2.**



Appendix Map 2: 2006 Peripheral Planning Areas (excerpt)

b) Generalized Future Land Use Plan

The Comprehensive Plan also makes broad land use recommendations for the entire City of Madison planning area, including the Peripheral Planning Areas beyond the current City limits that do not have a detailed neighborhood development plan. The land use recommendations for the PPAs are necessarily relatively broad, and provide the initial framework for the more detailed recommendations in the neighborhood development plans that will be prepared for these areas. The Comprehensive Plan's Generalized Future Land Use Plan Map identifies six recommended land uses within the planning area, which are described below. **See Appendix Map 3.**



Appendix Map 3: Generalized Future Land Use (excerpt)

Neighborhood Planning Area - Traditional Neighborhood Development

This two-part designation is applied to the majority of the planning area. Neighborhood Planning Areas are areas for which a neighborhood development plan with detailed land use recommendations has not yet been adopted, and needs to be prepared before urban development can begin. Plans for new neighborhoods are encouraged to incorporate the concepts of Traditional Neighborhood Development (TND). Basic TND concepts include compact, mixed-use development with a variety of housing types located close to neighborhood-serving businesses or activity centers; an interconnected, pedestrian and bicycle-friendly street network supplemented with off-street paths and trails; a system of neighborhood parks, plazas, squares and greens; and neighborhood schools and other neighborhood-scale civic and institutional uses. Traditional Neighborhood Development seeks to create an attractive and engaging "public realm" which is essentially the spaces within the public rights-of-way defined by the buildings and other structures along and within them. High-quality urban design, site design and architectural design are also important components of a successful TND neighborhood.

Employment

The Comprehensive Plan recommends that an Employment district be considered generally along the planning area's Interstate frontage and the southern limits of Reiner Road. Employment districts are recommended as predominantly office, research and specialized employment districts, and generally do not include retail and consumer service uses serving the wider community. Limited retail and service establishments primarily serving employees and users of the District are encouraged. The Comprehensive Plan's Generalized Future Land Use Plan Map includes a note (Note 16) that provides further direction for planning an Employment district in this area. Note 16 states:

It is recommended that a future major Employment District be developed in the area located generally north of Interstate Highway 94. This location has high-visibility frontage along Interstate Highways 94, and 39-90-94, and good accessibility via Reiner Road/Sprecher Road and County Trunk Highway T. County Trunk Highway T also provides a connection to the Interstate Highway 94 access ramps at County Trunk Highway N to the east. Because a detailed plan has not yet been prepared for this area, the boundaries of the proposed Employment District are only conceptual. Some Medium

Density Residential uses should be located in close proximity to the proposed Employment District to provide convenient workforce housing opportunities.

Community Mixed-Use
The Comprehensive Plan recommends a Community-Mixed-use district along Reiner Road at a proposed easterly extension of Lien Road. Community Mixed-Use districts are recommended locations for a relatively high-density mix of residential, retail, office, institutional and civic uses in a compact urban setting. Compared to Neighborhood Mixed-Use districts (described below), Community Mixed-Use districts are typically larger, may extend several blocks in each direction and are intended to include a much wider range of non-residential activities.

Neighborhood Mixed-Use
The Comprehensive Plan recommends a Neighborhood Mixed-Use district at the intersection of Reiner and Burke roads. Neighborhood Mixed-Use districts are the recommended locations for clusters of relatively small convenience shopping and service uses that serve as activity centers and gathering places for the surrounding neighborhoods or districts. These districts typically form activity centers located along relatively important streets within or adjacent to residential districts. Most Neighborhood Mixed-Use districts are relatively compact, often consisting of only several buildings on one or more corners of a street intersection. These districts also may be stretched out for several blocks along a local business street.

Medium Density Residential
The Comprehensive Plan recommends Medium Density Residential at two locations along Reiner Road near areas recommended for Mixed-Use development. Medium Density Residential districts are locations recommended primarily for relatively dense multi-family housing types, such as larger apartment and condominium buildings. An average of 16 to 40 dwelling units per net acre is recommended in these districts.

Park and Open Space
The Park and Open Space designation is applied to three areas within the planning area. At the northern limits of the planning area, the area recommended for Park and Open Space includes the northern portions of the Sun Prairie Community Church Inc. and Madison Crushing & Excavating Inc. properties. The Wolf (Wolf Paving) and Burke Town Hall properties are also included. The second area is a wooded ridge east of Felland Road and south of Burke Road. The third area covers a portion of the Door Creek corridor. This area includes the Creek, wetlands and uplands including two drumlins. These areas are proposed for consideration as potential open space preservation areas in more detailed planning such as this Plan. At the scale of the Comprehensive Plan, recommended locations for smaller open space features, such as municipal parks or stormwater management greenways are generally not identified in areas where a neighborhood development plan has not been prepared.

Transit-Oriented Development
The Comprehensive Plan recommends Transit-Oriented Development at several locations along Reiner Road within areas recommended for Community Mixed-Use, Neighborhood Mixed-Use and Employment development. Transit-Oriented Development is characterized by a compact, mixed-use development pattern that focuses the highest development densities and intensities in very close proximity to high capacity transit stops. It is recommended that special land use and design standards be applied in Transit-Oriented Development areas in order to achieve this development pattern and foster travel via mass transit.

2. City of Madison Neighborhood Development Plans

The City has adopted neighborhood development plans for areas adjacent to the planning area. The Nelson Plan covers lands to the northwest of the Wisconsin DOT railway, the Felland Plan covers lands adjacent to the west and the Sprecher Plan covers lands south of Interstate Highway 94. Phase two of the Northeast Neighborhoods planning area overlaps portions of the Felland and Nelson planning areas. The recommendations in the Northeast Neighborhoods Development Plan are intended to revise and supersede the recommendations for these overlap areas and be consistent and compatible with the recommendations in all three of these adopted neighborhood plans.

a) Felland Neighborhood Development Plan
The Felland Neighborhood Development Plan, adopted in 2002, applies to an area west of the planning area. The Felland Plan centers on the Village at Autumn Lake project by Veridian Homes, which is primarily a residential community with a limited amount of commercial and institutional uses. The project includes creation of a lake and development that would replicate the qualities of a historic, lake-oriented community in Wisconsin. The Plan recommends additional residential development outside of the Village at Autumn Lake, with some Mixed-use and office development for the primary intersections and an area adjacent to Interstate 39-90-94. An elementary school site is recommended along Felland Road.

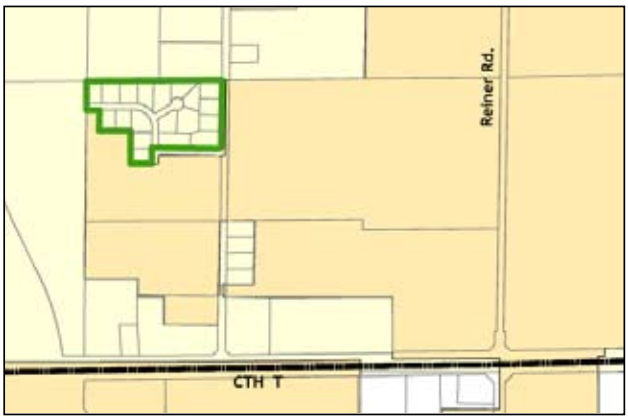
b) Sprecher Neighborhood Development Plan
The Sprecher Neighborhood Development Plan, adopted in 1998, applies to lands south of the planning area across Interstate 94. This Plan recommends a mix of uses including residential, commercial, institutional and open space. A large employment area that is proposed to include business and professional offices, commercial and mixed-use development is recommended along portions of the Interstate 94 corridor north of Milwaukee Street. The Plan identifies a potential new Interstate 94 interchange at the planned extension of Milwaukee Street, although an interchange is not being proposed at that location at this time.

c) Nelson Neighborhood Development Plan
The Nelson Neighborhood Development Plan, adopted in 1992, covers land northwest of the planning area. It recommends commercial uses along USH 151 and High Crossing Boulevard and residential uses for the area between High Crossing Boulevard and the Wisconsin Department of Transportation railway.

3. Town of Burke-Village of DeForest-City of Sun Prairie-City of Madison Cooperative Plan
In January 2007, the Town of Burke, Village of DeForest, City of Sun Prairie and City of Madison entered into a Cooperative Plan under the authority of Section 66.0307 Wisconsin Statutes. The Cooperative Plan is intended to provide an orderly, planned transition of the current Town of Burke territory to DeForest, Sun Prairie and Madison municipal jurisdiction over the next 30 years and to maintain the fiscal viability and operational efficiency of the Town of Burke during the transition period.

The Cooperative Plan provides that all Town territory will be attached to the designated Village or City no later than October 2036. In the interim, owners of property not located within a designated "Protected Area" which will generally remain in the Town until 2036, may attach their property to the designated Village or City if that jurisdiction approves the attachment request. Property owners must attach prior to any development of the land, as defined in the Cooperative Plan. These attachments may create Town or City/Village islands, which are typically not permitted by State Statute. The Protected Areas in the planning area, which include the Burke Town Hall property and the Bridle Downs subdivision, will remain in the Town until the final attachment in 2036. **See Appendix Map 4.**

Development, as defined in the Cooperative Plan, on lands that are within the Town but will eventually be in the City of Madison will be guided by the City of Madison's adopted plans, policies, standards and procedures; and may require attachment to the City at the time of development. There is also an agreement to establish and maintain local street connections between existing and future subdivisions. The Cooperative Plan reconfigured the Madison-Sun Prairie Community Separation Area. The Community Separation Area includes the northern portion of the Sun Prairie Community Church Inc. and Madison Crushing & Excavating properties at the northeast corner of Reiner and Nelson roads that includes a relatively steep wooded hillside. It is anticipated that cooperation on many issues will continue in the future, since Madison will share a border with the Town of Burke in the planning area for up to 28 years.



Appendix Map 4: Burke Cooperative Plan (excerpt)

4. **Town of Blooming Grove and City of Madison Cooperative Plan**
   The Town of Blooming Grove and City of Madison Cooperative Plan, which was approved in 2006, includes provisions for the transfer of Town lands to the City of Madison and development requirements that are similar to the Burke Cooperative Plan. The Town of Blooming Grove lands within the planning area are part of the Cooperative Plan's "North Phased Attachment Area." Property in this area may be attached to the City of Madison by a property owner's petition or consent. If this area has not been voluntarily attached by January 1, 2015, the City may attach the property on that date. The Cooperative Plan also permits the City and Town to agree on a different schedule for attachment if the area is not attached on the designated January 1, 2015 date.

5. **Dane County Parks and Open Space Plan**
   The Dane County Parks and Open Space Plan's Koshkonong Creek Natural Resource Area cover portions of the planning area. Specifically, it includes lands northeast of the intersection of Reiner and Nelson roads near Koshkonong Creek and lands in the southeast corner of the planning area that contain Door Creek and adjacent wetlands and drumlins.

   Natural Resource Areas are larger corridors containing valuable natural resources recommended for preservation. They typically include features such as steep topography, water bodies and waterways, wetlands, prairie, forests and agricultural working lands. These areas contain both public and private land and participation by private property owners in conservation programs is voluntary. Permanent preservation within these areas is accomplished by acquiring land or conservation easements from willing sellers and often occurs in cooperation with other units of government and organizations.

J. Sustainability Goals

The City of Madison has become a leader in advancing the principles of sustainability. Sustainability is defined as meeting today's needs without compromising the ability of future generations to meet their own needs. A sustainable development is a development whose patterns of production and consumption can be reproduced indefinitely without doing irreparable damage to essential natural ecosystems. Sustainable development is achieved by bringing environmental, economic and social equity into balance.

The City recognized that the area offered a tremendous opportunity to implement its sustainability objectives. During the planning process, it was decided to pursue quantifiable sustainability goals for future development within the planning area.

In 2004, the City adopted Building a Green Capital City—A Blueprint for Madison's Sustainable Design and Energy Future. One of the recommendations of the report was to adopt a guiding principle on sustainability. In 2005, the City adopted The Natural Step Model for Communities as the guiding framework on sustainability. Using this framework, the City aspires to be an ecologically, economically and socially healthy community for the long-term. The Natural Step (TNS) is based upon four "system conditions" or "sustainability principles" (SP) which are outlined below:

In a sustainable society, Nature is not subject to systematically increasing:
SP 1: Concentrations of substances from the Earth's crust—fossil fuels, heavy metals and minerals
SP 2: Concentrations of man-made substances—chemicals and un-natural products
SP 3: Degradation by physical means—deforestation, land, air and water pollution
SP 4: People are not subject to conditions that systematically undermine their capacity to meet their needs

The TNS program is used to guide many City processes. Each year the City solicits recommendations from staff for an annual "top ten" list of TNS projects that would enhance the sustainability of the City's functions. The TNS projects are then implemented throughout the year with progress reports shared at monthly TNS project team meetings. A particularly relevant example, the rewriting of the City's zoning code is an important TNS project that has identified many sustainable development aspects of land use decisions (open space, limits on impervious surfaces, mixed use and transit-oriented development, walkability, renewable energy, etc.). The new code will be in place as development occurs in the Northeast Neighborhoods.

The planning process for the Northeast Neighborhoods became one of the City's TNS projects for 2009, when the City recognized that the area offered a tremendous opportunity to implement its sustainability objectives. During the planning process, it was decided to pursue quantifiable sustainability goals for future development within the planning area. On March 31, 2009, the Common Council adopted a resolution with the following five sustainability goals:

1. Reduce dependence on the automobile
2. Reduce energy consumption
3. Reduce water consumption
4. Increase on-site stormwater infiltration
5. Deliver City services in an energy efficient manner

These goals guided preparation of the Northeast Neighborhoods Development Plan and the Plan is intended to serve as a guide for achieving these goals. Background information regarding each goal is provided below. Recommendations and implementation steps to achieve the goals are also provided later in this document.

1. Reduce Dependence on the Automobile

a) The Goal

Capture 25% of all trips made by persons living in the planning area by walking, bicycling or transit and/or reduce household motor vehicle miles of travel (VMT) by 25% (in comparison to a baseline to be determined by staff) through the use of transit-oriented development, traditional neighborhood development, mixed-use development, transit access for early neighborhood residents, transportation-demand management plans, walkable environments, bike facilities, or other transportation-demand management practices.

b) Sustainability Benefits of the Goal

Addresses sustainability principles 1 through 4 by reducing dependency on fossil fuel consumption (#1) that increases air pollution, water pollution and degradation of land at the oil, natural gas and coal production site and within the planning area (#3). Heavy metals (#1) and man-made material consumption (#2) will also be reduced and quality of life for residents will be enhanced (#4).

Goal 1: Capture 25% of all trips made by persons living in the planning area by walking, bicycling or transit and/or reduce household motor vehicle miles of travel (VMT) by 25%

c) Background Information/Baseline

Household Trip Reduction

According to a survey completed in 2001 as part of the National Household Travel Survey, the modal split for travel by City of Madison residents was as follows:

- Automobile: 80.3%
- Walk: 13.5%
- Bicycle: 2.4%
- Bus: 1.9%
- School Bus: 0.7%
- Inter-city Bus: 0.2%
- Other (air, taxi, etc.): 0.9%

The goal for the planning area is to have walking, biking or transit account for at least 25% of all trips made by residents of the planning area. Transit includes the bus, school bus and inter-city bus categories above.

Household Vehicle Miles Traveled (VMT) Reduction

It is also desirable to reduce household vehicle miles traveled by 25%, in comparison to a baseline, for the planning area. At this time, the data collection and monitoring methods for household VMT (or VMT per capita) are under development. A specific measurement and monitoring program will be developed as VMT data collection technologies and techniques are refined over time.

2. Reduce Energy Consumption

a) The Goal

Reduce household consumption of natural gas and fossil fuel-generated electricity by 25% compared recent residential construction. Progress towards attaining these goals will be through the use of energy efficient construction, alternative energy sources, on-site energy production, conservation education and outreach, or other energy conservation practices.

b) Sustainability Benefits of the Goal

Addresses sustainability principles 1 through 4 by reducing dependency on fossil fuel consumption in electrical power generation (#1), that increases air pollution, water pollution and degradation of land at the oil, natural gas and coal production site (#3) and within the planning area. Heavy metals (#1) and man-made material (#2) disposal issues will also be reduced and quality of life for residents will be enhanced (#4) by having greater energy efficiency that increases comfort at home and work.

c) Background Information/Baseline

The baseline for this goal is the average annual energy use of "recent residential construction." Recent residential construction is defined as a dwelling unit built within the City from January 1, 1999, through December 31, 2007. Newer dwelling units are used for the baseline since they typically include improvements in energy efficiency not found in older units. This time period allows for using full calendar year billings in the calculation of the baseline.

Goal 2: Reduce household consumption of natural gas and fossil fuel-generated electricity by 25% compared to recent residential construction

According to the Energy Center of Wisconsin, about 80% of natural gas use is for space heating, and about 10% of electricity use is cooling-related. Weather conditions can impact the consumption of natural gas and electricity. It is common to account for varying seasonal weather conditions by calculating heating degree days (HDD) and cooling degree days (CDD).

Because natural gas consumption is heavily driven by cold winters, it is important to choose a baseline that reflects an average winter. Because the impact in hot summers is substantially less, it is less critical to make this distinction. The winter of 2007 was about 2.5% below the 1989-2008 average for Madison HDD. Accordingly, 2007 is considered an average winter with an average annual residential consumption of natural gas. Even though CDD were 25% above the 20-year average in 2007, because space cooling is only about 10% of total usage, its impact on electricity use is only slightly above average. Accordingly, 2007 is considered an average summer with an average annual residential consumption of electricity.

Based on data obtained through Madison Gas & Electric (MGE) service records, the average annual household consumption of natural gas for recently constructed homes in 2007 was 525 therms and the average annual consumption of fossil fuel-generated electricity is 6,455 kilowatt hours (kWh). These figures serve as the baseline for the Northeast Neighborhoods residential energy consumption baseline.

Therefore, a 25% reduction goal equates to an annual household consumption of natural gas of 395 therms and an annual household consumption of fossil fuel-generated electricity of 4,840 kWh.

Since there is a mix of housing types included in the "recent construction" figures and there will be a mix of housing types in the planning area, there will not be a distinction between detached (or single-family) and attached (or multi-family) housing types. Further, it is not intended that there will be a distinction regarding consumption per square foot of living area, development density or family size.

3. Reduce Water Consumption

a) The Goal

Reduce residential per capita water use by 25% compared to current city-wide per capita levels through the use of low-flow appliances and fixtures, dual-flow and low-flow toilets, rain barrels, low-impact lawn care design,

conservation education and outreach, or other water conservation practices, and to strongly encourage the use of EPA Water Sense-labeled water fixtures, and strongly discouraging the use of outdoor lawn irrigation systems.

b) Sustainability Benefits of the Goal
Primarily addresses sustainability principle 3 by decreasing the impact on the groundwater supply and water surface features such as springs and streams. Other sustainability principles are met because it also decreases the energy consumption of the water utility (#1) needed for pumping water, decreases the need for additional wells and water distribution infrastructure and assures that current and future human needs for water will be met (#4).

Goal 3: Reduce residential per capita water use by 25% compared to current city-wide per capita levels

c) Background Information/Baseline
The current residential per capita water use, based on an average over recent years, is 73.6 gallons per day. The goal of a 25% reduction equates to a per capita use of 55.2 gallons per day.

The aquifer underlying Dane County is the source of the City's water supply. The Madison Water Utility withdraws approximately 30 million gallons of water per day from the aquifer. Treated wastewater is not returned to the groundwater system, but rather to the Mississippi River watershed via Badfish Creek and the Rock River. This net transfer of water has led to an average 60-foot decline in the water table over pre-development levels. Area springs have dried up, and this has led to a loss of aquatic habitat as well stresses on surface water quality, especially Lake Wingra. Additionally, pumping water from deep wells and distributing it throughout the City is an energy intensive operation. The Water Utility is the largest consumer of electricity in the City.

For these and other reasons, the City of Madison established water efficiency as a priority with the adoption of the 2008 Water Conservation and Sustainability Plan. The Plan sets a goal of reducing city-wide household water consumption by 20% by 2020. The Plan includes information on current usage and strategies to reduce consumption. Many of the strategies to reduce water consumption are included in this *Plan*.

4. Increase On-site Stormwater Infiltration

a) The Goal
Infiltrate 25% of the 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.

Goal 4: Infiltrate 25% of the stormwater volume on or adjacent to points of generation

b) Sustainability Benefits of the Goal
Infiltration of stormwater back into the ground on or adjacent to the point of generation minimizes impact on ground water supplies and could eventually help replenish the aquifer (#3). The multiple infiltration methods provide sustainable ways to reduce erosion, reduce the infrastructure needed to handle stormwater run-off and reduce the overall impact on surface water features. This will also impact long-term quality of life for residents (#4).

c) Background Information/Baseline
Under current stormwater regulations, 90% of the pre-development stormwater volume for residential development projects and 60% of the pre-development volume for commercial development projects must "stay-on" the development site through a combination of infiltration (into the ground), evaporation (into the air) and transpiration (into the air through plants). The goal is to infiltrate 25% of the stay-on volume on or adjacent to the point of generation.
The stay-on requirement is typically met by directing stormwater to a retention pond, which is a permanent pool of water where sediments carried by stormwater are filtered out, and an infiltration basin, which facilitates the movement of stormwater into the ground. These facilities are typically located at the lowest point of the development site and serve the entire development if the topography permits. While constructing large facilities

that serve an entire development is considered efficient, infiltrating stormwater on or adjacent to the source through multiple systems is more effective.

5. Energy Efficient Service Delivery

a) The Goal

The City delivers services in the most energy efficient method possible.

b) Sustainability Benefits of the Goal

The goal addresses sustainability principles by decreasing energy consumption (#1), reducing air and water pollution (#3) and enhancing the quality of life for residents (#4) through sustainable design and land use planning.

Goal 5: The City delivers services in the most energy efficient method possible

c) Background Information

As a service provider, the City of Madison and its facilities and operations have a major impact on the environment, the economy and our community. Since the City is both a steward of our environment and a consumer of its resources, it must incorporate the principles of sustainability to ensure that our current and future needs can be satisfied.

Using *The Natural Step* sustainability framework, the City is working to enhance the sustainability of its facilities and operations by reducing its consumption of fossil fuels and other materials extracted from the Earth, reducing its dependence on synthetic and persistent chemicals, and mitigating its impact on physical ecosystems. Since our community will not be truly sustainable unless our residents are healthy, safe and prospering, the City will continue to pursue policies and actions that minimize the barriers that get in the way of residents' ability to meet their basic needs. The City also intends to lead by example.

III. RECOMMENDATIONS

A. Phase 1 Area

As noted earlier, the planning area has been divided into two phases. The recommendations in this document apply to the Phase 1 area, which is generally the southern two-thirds of the planning area. A separate document will be prepared in the future that contains the recommendations for the Phase 2 area.

B. General Development Concept

The general development concept for the planning area envisions neighborhoods characterized by a wide variety of housing choices, mixed-use districts, employment areas, two potential school sites and a system of well-located public parks and permanent open space areas. The neighborhoods are based on a framework of one-quarter mile pedestrian sheds, which represents a five-minute walk from center to edge and comprises approximately 160 acres. These neighborhoods are centered around organizing features such as mixed-use areas and parks.

The neighborhoods are based on a framework of one-quarter mile pedestrian sheds, which represents a five-minute walk from center to edge and comprises approximately 160 acres. These neighborhoods are centered around organizing features such as mixed-use areas and parks.

Housing choices include single-family homes with a wide range of house and lot sizes, duplexes, rowhouses, town homes, smaller apartment and condominium buildings and relatively high-density developments within and adjacent to the mixed-use districts. A well-integrated mix of appropriate housing types is provided in all parts of the planning area. All housing types include units suitable for households of different sizes, ages, incomes and lifestyles, including families with children. It is recommended that the housing units be a mix of owner occupied and rental units.

Several mixed-use districts are recommended throughout the planning area. These districts are intended to provide goods and services for the neighborhood and also be engaging focal points for neighborhood gatherings and activities. A Community Mixed-Use District is planned for the intersection of Reiner Road and CTH T. A Neighborhood Mixed-Use District is planned for the intersection of Reiner and Lien roads. A smaller Neighborhood Mixed-Use District is recommended for the intersection of Thorson Road and Lien Road.

Three smaller potential mixed-use areas are recommended at the intersections of Felland Road and CTH T, Felland Road and Lien Road, and Forest Oaks Drive and CTH T. The mixed-use designation for these areas is intended to be flexible and the locations may move depending on future planning and market conditions. They may be developed with mixed-uses, but the primary recommendation is for a different land use district, such as residential or employment uses as shown on the Land Use and Transportation Plan map.

An Employment District is proposed along Interstate 94 and CTH T. This District is intended to accommodate corporate and professional offices, services and ancillary uses such as business services, conference centers, childcare, small-scale retail and lodging.

Other neighborhood focal points include a large area park along Lien Road near the center of the planning area and many smaller parks distributed throughout the neighborhood so they are within easy walking distance for most residents. Two potential public school sites are recommended. If constructed, they would become important community assets for the planning area.

There are numerous natural features within the planning area including stream segments associated with Door Creek and Starkweather Creek, wetlands, wooded ridges, valleys and drumlins. Many of these features will be protected through various local, state and federal development regulations. Careful site planning will be utilized to preserve sensitive areas not covered by these regulations.

Travel within the planning area is provided through an interconnected network of streets that provides multiple routes to most destinations. A network of on-street bicycle lanes and off-street paths linked to the regional bicycle network supplements bicycle and pedestrian travel on local streets. All City of Madison streets will have sidewalks and are

designed to also accommodate bicycle travel. The compact, mixed-use development pattern will support future transit service within the planning area. Transit service will be integrated with commuter rail service if it is implemented.

C. Traditional Neighborhood Development Design Principles

The 2006 Madison Comprehensive Plan recommends Traditional Neighborhood Development (TND) within peripheral neighborhoods. The development concept for the planning area incorporates the following TND design principles. Many of these principles also support the sustainability goals for the planning area and sustainable development in general.

1. Mix of Land Uses

TND neighborhoods provide a variety of neighborhood-supporting activities in close proximity to residential areas, including shopping, work, recreation and civic activities. In general, relatively higher-density housing is located closer to the activity centers to provide convenient access to the most residents and encourage walking and bicycling as means of travel. In the activity centers, mixed-use developments are encouraged, including buildings with apartments or offices located above storefronts, for example. In the planning area, the mixed-use districts and employment area will provide opportunities for commercial, employment and residential development.

2. Variety of Housing Choices

TND neighborhoods include a wide variety of housing choices. In the planning area, four broad residential land use districts are proposed that emphasize different combinations of housing types and densities. Recommended housing types within the planning area include single-family detached houses on both large and small lots, duplexes, rowhouses, townhouses, apartment and condominium buildings and residential units in mixed-use buildings. These housing types could be part of co-housing, clustered housing and other multi-density configurations or alternative ownership structures. A range of housing types is recommended within each of the four residential districts and all housing should provide opportunities for households of different sizes, ages, incomes and lifestyles.

3. Interconnected Street Pattern

An interconnected street network and easy travel within the planning area are important elements of TND design. The *Plan* features a "grid-like" street pattern that provides multiple routes to destinations and encourages pedestrian and bicycle travel. The *Plan* creates relatively small blocks that are generally about 300 feet wide and 600 feet long with mid-block paths provided where needed. Narrow street pavement widths are encouraged, particularly in low density single-family areas and areas served by alleys. Development generally should be oriented to the public street system rather than creating isolated enclaves with private streets.

4. Land Use Transitions

The planning area will include a mix of land uses. It is recommended that transitions between different land uses, and between uses with significantly different intensity, be well-designed. In general, major changes in land use, density or the scale of development should occur at mid-block so that similar uses face each other.

5. Strong Orientation to the Street

It is generally recommended that both residential and non-residential buildings be oriented toward the street to provide definition to a block face and create a more engaging street environment. Commercial buildings located close to the sidewalk and relatively small front yards in residential areas are also recommended to help to define the block. Homes with porches are encouraged to provide community interaction at the street level.

Street trees are important elements in establishing the visual framework, which defines the space along public right-of-way provides a physical environment desirable to pedestrians. While the selection of street trees needs to be coordinated with the design width of street terraces and other street characteristics, it is recommended that street trees be full-canopy trees where possible.

6. Limited Visual Exposure of Garages and Parking Areas

The design of developments should locate garages and parking areas where they will not dominate the view from the street. In general, parking facilities should be located behind, beneath, or at the sides of buildings, rather than in front. Development on alleys can be used to prevent garage doors from dominating the front facades of homes,

particularly on relatively narrow lots. On-street parking should be available on most streets and can reduce the need for off-street parking.

7. Architectural Character

While this *Plan* can lay the foundation, individual development projects will to a large extent determine the future character of the planning area and how well they reflect TND design principles. The design and architectural character of the buildings and other structures are important elements in creating the unified "feel" of a Traditional Neighborhood Development, and in creating an attractive and engaging "public realm." Design objectives include providing architectural variety while maintaining general neighborhood harmony in building characteristics such as height and massing; roof pitch; the proportion and profile of windows, doors and other elements of the facade; the orientation of doors, windows, balconies, porches and roof decks toward the street; and the choice of facade materials and colors.

D. Land Use

The recommended land uses are shown on the Land Use and Street Plan and summarized below. **See Map 6 and Table 3.**

Table 3: Recommended Land Use - Phase 1 Planning Area

Recommended Land Use	Acres	Percent of Total
Housing Mix 1	488.4	23.8%
Housing Mix 2	197.2	9.6%
Housing Mix 3	93.4	4.5%
Housing Mix 4	53.9	2.6%
Community Mixed-Use	30.8	1.5%
Neighborhood Mixed-Use	22.1	1.1%
Employment	89.4	4.4%
Utilities	2.6	0.1%
Civic/Institutional	16.4	0.8%
Parks	55.7	2.7%
Other Open Space and Stormwater Management	440.6	21.5%
Street Right-of-Way	562.9	27.4%
Total	**2,053.4**	**100.0%**

1. Residential Districts

The *Plan* recommends development of a variety of housing types within the neighborhoods to meet the needs of households of different sizes, ages, incomes and lifestyles. Although the recommended mix of housing types varies in different parts of the neighborhoods, it is specifically intended that all housing developed within the neighborhoods be well integrated into the community as a whole, and be located and designed to enhance neighborhood identity and encourage engagement and participation in neighborhood activities. Housing units should be a mix of owner occupied and rental housing.

Map 6: Land Use and Street Plan (excerpt)

Variety of Housing Within Each District

Recommended residential land use areas are divided into four broad districts, Residential Housing Mix 1, 2, 3 and 4. A variety of housing types and densities is expected to be developed at appropriate locations within each of the four Residential Housing Mix Districts, but many alternative development patterns could create the desired

mix and variety of housing types and still be consistent with the general location and design recommendations of the *Plan*. For this reason, specific locations for each of the individual housing types recommended within a residential district are not identified on the Land Use and Street Plan. This approach provides prospective developers with reasonable flexibility and maximum opportunities to be creative and innovative in advancing the objectives of the *Plan*. However, the residential land use district recommendations are not equivalent to zoning district designations, and all developments are expected to provide a variety of housing choices. Specific locations for particular housing types will be identified during the review process as proposed development projects are brought forward for consideration and approval.

Density Organized Around Mixed-Use Districts, Parks
As shown on the Land Use and Street Plan, relatively higher-density housing types are generally recommended at locations closest to the planned Mixed-use Districts, with lower-density types of housing recommended at locations more distant from these Districts. This arrangement places the highest concentration of residents within the closest distances to primary destinations. It also helps reduce vehicular traffic on interior streets since the higher-density uses are also closest to the major streets providing access to the neighborhoods. The exact boundaries between the four Residential Housing Mix Districts shown on the Land Use and Street Plan are somewhat conceptual. Modifications may be considered as specific developments are proposed, provided that the general land use pattern is consistent with the *Plan*'s objectives.

The four recommended Residential Housing Mix Districts are described and illustrated below.

a) Residential Housing Mix 1

The predominant recommended housing type in Housing Mix 1 areas is detached single-family housing on individual lots, but limited areas within these districts may be developed with duplexes, rowhouses and townhouses at appropriate locations identified as development plans for specific subdivisions are prepared.

Single-family homes are the primary housing type in the Housing Mix 1 District

Housing Types
- Single-family detached homes with a wide range of house and lot sizes
- Duplexes
- Rowhouses and townhouses

Density Range
- Individual developments: less than 16 units per acre
- District average: less than 8 units per acre

The Housing Mix 1 District comprises the largest portion of the recommended residential area. It is specifically recommended that single-family housing developments include a range of house types and lot sizes. The use of alleys to provide rear access to garages is encouraged at appropriate locations. Alley-loaded garages can provide additional design flexibility and reduce the tendency for garages to dominate the streetscape, particularly on relatively small or narrow lots.

Duplexes, rowhouses and townhouses provide higher-density housing options that can be appropriate at some locations. In general, larger groupings of duplexes, rowhouses and townhouses should be located closer to the Housing Mix 2 or Housing Mix 3 Districts, where they will help provide a transition to the higher densities found in those areas. Individual duplexes or small groups of rowhouses also 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 density of the individual housing types in the Housing Mix 1 District should be within the Low Density Residential range of less than 16 units per acre defined in the Comprehensive Plan. The average density of the

District as a whole should be less than eight units per acre. An average net density of 6 units per acre is assumed for purposes of estimating the potential dwelling units in the Housing Mix 1 district.

b) Residential Housing Mix 2

The predominant recommended housing types within the Housing Mix 2 District are single-family houses developed at relatively high densities on smaller lots, duplexes, rowhouses, townhouses and small-scale apartment and condominium buildings.

Housing Types

- Single-family detached houses on relatively small lots
- Duplexes
- Rowhouses and townhouses
- Smaller apartment and condominium buildings
- Buildings with up to 12 units
- Building lots generally provide front, side and rear yards
- Buildings up to two stories in height

Density Range

- Individual developments: less than 16 units per acre
- District average: more than 8 and less than 16 units per acre

Housing Mix 2 Districts are recommended in numerous locations within the planning area as shown on the Land Use and Street Plan. Relatively higher density development at these locations will give more residents the opportunity to live within convenient walking and biking distance to mixed-use areas, parks and open space, schools and other neighborhood amenities and features.

Duplexes will be one of the housing types located in the Housing Mix 2 District

Dwelling unit types in Housing Mix 2 Districts should be varied. Large areas of one housing unit types should be avoided. There should be a mix of owner occupied and rental dwelling units.

Detached single-family or duplex units within the Housing Mix 2 districts should generally be developed on relatively small lots consistent with the higher average density recommended for the District. Rowhouses and townhouses will be more predominant than in the Housing Mix 1 Districts. Rowhouses could be developed along an entire block face, or smaller groupings of rowhouses might be interlaced with multi-unit buildings or detached housing. Apartment and condominium developments should feature relatively smaller buildings of up to 12 units and should include a mix of unit sizes, including larger two and three bedroom units suitable for families with children.

The density of the individual housing types developed in the Housing Mix 2 District should generally be within the Low Density Residential range of less than 16 units per acre defined in the Comprehensive Plan. The average density of the District as a whole should be in the 8 to less than 16 units per acre range. An average net density of 12 units per acre is assumed for purposes of estimating the potential dwelling units in the Housing Mix 2 district.

c) Residential Housing Mix 3

Housing types within the Housing Mix 3 Districts should primarily consist of a mix of owner occupied and rental rowhouses, townhouses and apartment or condominium buildings. Buildings may be larger and taller than in the Housing Mix 2 districts.

Housing Types
- Rowhouses and townhouses
- Apartment and condominium buildings
- Relatively larger buildings than those in Residential Housing Mix 2 Districts
- 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
- Buildings up to three stories in height

Density Range
- Individual developments: up to 40 units per acre
- District average: between 16 and 25 units per acre

The Housing Mix 3 District is recommended to encourage higher residential densities at locations closest to the Mixed-use Districts and Employment District. Concentrating relatively high-density housing near these Districts will provide easy access for more residents, increase activity in them and help support the development of neighborhood-serving businesses. At some locations, the Housing Mix 3 District also provides a transition zone between the smaller-scale, lower-density development recommended in the Housing Mix 2 District, and the larger-scale, higher density development recommended in the Housing Mix 4 District and the Mixed-use Districts.

Rowhouses could be built in the Housing Mix 3 District

Detached housing types are not generally recommended since the intent of the District is to encourage higher-density uses. Apartment and condominium buildings may be relatively larger and closer together compared to those buildings in the Housing Mix 2 District. Parking should be provided behind or beneath the buildings, or in separate parking courts. In this District, buildings may be up to three stories in height, but the height considered appropriate on a specific property will partly depend on the size and scale of surrounding developments. In general, an "urban" rather than "suburban" design and architecture is recommended. Multi-unit developments should include a mix of unit sizes, including larger two and three-bedroom units suitable for families with children.

Buildings located on the street grid should maintain a "street" orientation and be designed to help define and enhance the public realm along the right-of-way. On a few larger, deeper properties, a multi-building complex of apartments or condominiums may have some buildings that are not located directly on a public street. The design of these complexes should incorporate interior access drives, walkways and courtyards to establish and define common spaces and create strong linkages back to the local street system.

The density of individual developments within the Housing Mix 3 areas will generally fall within the lower end of the Medium Density Residential range of 16 to 40 units per acre defined in the Comprehensive Plan. The average net density for the District as a whole should be between 16 and 25 units per acre. An average net density of 20 units per acre is assumed for purposes of estimating the potential dwelling units in the Housing Mix 3 district.

d) Residential Housing Mix 4

The Housing Mix 4 District is primarily recommended adjacent to the Mixed-Use Districts. While building types within this District might include rowhouse and townhouse development at relatively high densities, apartment and condominium buildings will be the predominant housing types. Dwelling units in this District should include both owner occupied and rental units.

Housing Types
- Rowhouses and townhouses at relatively high densities
- Apartment and condominium buildings
- Relatively larger buildings than those in Housing Mix 3 Districts
- Developments more likely to have underground parking
- Limited side yards when buildings are located along standard streets
- Buildings should be placed close to the street to create a defined "street wall"
- Buildings may also front plazas or be grouped around central courtyards to create defined common space
- Limited on-site open space which could include more formal entry plazas, patios, roof gardens and balconies
- Buildings up to four stories in height

Density Range
- Individual developments: up to 60 units per acre
- District average: between 26 and 60 units per acre

Recommended Housing Mix 4 Districts include lands adjacent to the recommended Mixed-use Districts, with the exception of the small Neighborhood Mixed-use District at Lien and Thorson Roads. Relatively high-density development is recommended to help support the development of businesses that will help establish the mixed-use activity centers as engaging focal points. Apartment and condominium buildings will be the predominant housing type in this District. Buildings are recommended to be up to four stories in height, with relatively high lot coverage. Multi-unit developments should include a mix of unit sizes, including larger two and three-bedroom units suitable for families with children.

Higher-density development will located in the Housing Mix 4 District

While relatively high density is encouraged, individual developments near the upper end of the 26 to 60 unit density range are recommended only as part of well-designed projects that are coordinated with the development of retail and service uses in the Mixed-Use Districts that can support and provide amenity to a larger residential population. The site designs of development projects in the Mixed-Use Districts and the adjacent Housing Mix 3 and Housing Mix 4 districts should create an engaging relationship between residential and non-residential activities and encourage pedestrian movement among the various uses and activities. The design quality of buildings and streetscape is critical to creating a unique destination for area residents and others.

The average net density of the District as a whole should be between 26 and 60 units per acre. This is a wide range, and the actual densities that can be supported here will partly depend on detailed development plans for the Mixed-Use Districts areas as a whole. An average net density of 35 units per acre is assumed for purposes of estimating the potential dwelling units in the Housing Mix 4 district.

e) Estimated Dwelling Units and Population

If all of the lands in the Phase 1 planning area recommended for residential and mixed-use development were built out at the following densities, there would be approximately 10,257 dwelling units and 20,514 residents. This is a general estimate for planning purposes. The number of future dwelling units and residents will vary depending on the amount of land developed with residential uses and the actual density of individual projects. **Table 4** below shows estimated dwelling units and population for the Phase 1 planning area.

Table 4: Estimated Dwelling Units and Population - Phase 1 Planning Area

Recommended Land Use	Acres	Units Per Acre	Estimated Units	Estimated Population[2]
Housing Mix 1[1]	488.4	6	2,770	5,540
Housing Mix 2	197.2	12	2,366	4,732
Housing Mix 3	93.4	20	1,868	3,736
Housing Mix 4	53.9	35	1,887	3,774
Neighborhood Mixed-Use	22.1	20[3]	442	884
Community Mixed-Use	30.8	30[3]	924	1,848
Total	**885.8**	**10.9**	**10,257**	**20,514**

[1] Housing Mix 1 includes areas with existing residential development. The existing density of these areas were used in generating the estimated dwelling units.
[2] Based on two persons per unit.
[3] The net densities of residential development within the Community and Neighborhood Mixed-Use Districts will be higher than the estimated density in this table. Since portions of these Districts may include non-residential development, which will lower the overall density of the Districts, a lower net density estimate is used.

2. Mixed-Use Districts

Three Mixed-use Districts are recommended in the Phase 1 planning area. A Community Mixed-use District is recommended for the intersection of CTH T and Reiner Road. This District is intended to be the largest and most intensively developed of the three Districts. A Neighborhood Mixed-use District is recommended at the intersection of Lien Road and Reiner Road. This District is comprised of the blocks at each quadrant of the intersection. A small Neighborhood Mixed-use District is recommended at the intersection of Lien Road and Thorson Road which could accommodate smaller mixed-used buildings at the intersection.

Purpose

The two largest mixed-use districts are planned to be engaging, urban destinations that provide retail goods and services for the planning area and to some extent people traveling through the planning area. It is recommended that these districts also include employment, civic/institutional, residential and open spaces uses such as urban squares and formal greens. The Mixed-Use Districts will be within walking or biking distance for many residents within the planning area and will also be served by transit. It is intended that the Mixed-Use Districts' diversity of uses and accessibility will make them hubs for social interaction within the planning area.

Market Demand

The initial demand for commercial development within these districts will be limited by existing and planned large retail developments in Madison and Sun Prairie within just a couple miles of the planning area. However, the market for the districts will increase as the residential and employment population in the planning area increases. A location along the planning area's primary roads is important because although commercial development in the district is intended to primarily serve residents in the planning area, some market support from surrounding areas and persons traveling through the planning area will increase the range of businesses that will be viable.

Boundaries are Flexible

The boundaries of the mixed-use districts are somewhat flexible and the market will ultimately determine the proportion of non-residential and residential uses. It is recommended that sufficient areas be reserved for non-residential uses although the market potential for residential uses may be more immediate. It is also recommended that additional commercial development locations not be created, so that the Mixed-use districts can become well-established as the focal points of the neighborhoods' activity and commerce. Providing additional commercial development locations along the primary arterial or collector roadways, for example, or elsewhere in the neighborhood, would divert potential customers from the Mixed-use districts and reduce their market potential.

Street Pattern
It is anticipated that the street pattern within the Mixed-Use Districts on the Land Use and Street Plan will be further defined through development. The Districts will likely contain public or private streets, alleys, pedestrian and bicycle paths and open spaces. Development within the districts should be pedestrian and bike friendly and connections should be made to the adjacent development areas to encourage users to walk or bike to the districts. Transit service should be incorporated into the districts, which will bring activity and customers to the district. Parking should be accommodated on streets, underneath buildings or within parking structures whenever possible.

Frontage Along Arterials
Reiner Road and CTH T bisect two of the recommended three mixed-use districts. The future traffic volumes on these arterial roadways will help support commercial uses, but will make pedestrian movement between parts of the districts more difficult. Development in the districts should therefore be oriented towards the interior streets that will likely be the functional entry points, but also the arterial roadways. Both the interior streets and arterials are recommended to have on-street parking to increase parking opportunities in close proximity to the districts, provide a more urban form and potentially slow traffic.

Overhead Electric Transmission Lines
Development within the mixed-use districts along Reiner Road will also be required to accommodate the overhead electric transmission lines. The lines run the entire length of Reiner Road and cross the roadway at multiple locations. The lines will have an impact on the aesthetic quality of the District, affecting views to and from future buildings. The lines will also impact the desired compact, urban character of the district as the easements associated with the lines limit buildings and larger landscaping. Site and building designs will need to address the potential negative impacts of the overhead lines.

a) Community Mixed-Use District
A Community Mixed-use District comprising approximately 30 acres is recommended for all four quadrants of the Reiner Road-CTH T intersection. The District is planned to be a high-density mix of residential, commercial, service, office, institutional, urban open space and civic uses in a compact, highly defined urban form. Mixed-use, multi-story buildings are envisioned in this District. These buildings should front on and be placed close to streets to create a compact development pattern that is attractive to pedestrians and creates a sense of place. High quality architectural design, building materials, landscaping and other urban amenities such as plazas and squares, decorative furniture, fountains and lighting will be required in this District. The District is planned to be the primary activity center for the entire planning area. The Community Mixed-Use District should be developed using transit-oriented development standards.


The Community Mixed-Use District will include a wide variety of uses in an urban form

High traffic volumes are expected on Reiner Road in the future. County Trunk Highway T is also expected to experience increasing traffic volumes as the far-east side of Madison continues to develop. This increasing traffic will strengthen the viability of this area as a primary activity center for the planning area. The District is well-positioned to benefit from the visibility and accessibility that Reiner Road and CTH T provide as well as the increasing population base in the planning area. Further, the southwest and southeast quadrants of the District enjoy excellent visibility from Interstate 94, the primary travel corridor between the Madison and Milwaukee metropolitan areas.

The two northern quadrants of the District are located adjacent to recommended Residential Districts and an Employment District along CTH T. The District is intended to serve the adjacent neighborhoods as well as the larger planning area. The neighborhoods will provide an important market area for the District's non-

residential uses. The planned street network, land use pattern and block configuration are designed to maximize interaction between the district and adjacent lands, providing convenient access to and from the district by foot, bicycle, transit or motor vehicle. A significant amount of open space near the northeast quadrant of the district will provide an amenity for the area. The northwest quadrant includes a design that links a central green in the District to a formal park to the northwest and an attached greenway that extends north to the Village at Autumn Lake subdivision.

The two southern quadrants of the District are each approximately 12 acres. These areas abut the planned Employment District along Interstate Highway 94 and CTH T, where corporate and administrative offices, research and development facilities and similar uses are recommended. Strong land use, street, sidewalk and bicycle facility connections between the Community Mixed-use district and the Employment District are recommended. The Community Mixed-use District will provide numerous amenities for persons working in the Employment District. For example, Employment District workers and visitors will be able to dine, shop, watch a movie, or relax in an urban plaza or other open space.

Recommended Uses
Recommended commercial uses in this District include retail, service, financial, lodging, and entertainment. Civic uses such as a public library are also recommended. Development in this District should be compact and urban in character. This District is intended to be a focal point for the entire planning area, providing a wider range of goods, services and activities than are recommended in the Neighborhood Mixed-use District. Big box retail development and strip commercial development are not recommended in this District. Mid-size retail buildings such as a grocery store, may be allowed, provided they are part of an integrated urban development project that is highly connected with other non-residential and residential uses. Such buildings should be lined with retail, service, office and residential uses in order to create a more attractive and pedestrian friendly environment. The Copps grocery store in the Middleton Hills neighborhood is one example of how a mid-size grocery store might be designed as part of a mixed-use development. Large surface parking lots are not recommended in this District.

It is recommended that relatively high-density residential uses be developed within the District. Residential uses would add vibrancy to the District, especially in the evenings and on weekends when some non-residential uses are not in operation. 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 Residential Housing Mix 4 housing types are recommended in this District. A net density of 30 units per acre is used to calculate the number of dwelling units that are possible in this area.

Housing Types
- Same as Housing Mix 4 housing types

Density Range/Building Height - North of CTH T/TT
- Between 20 and 60 units per acre
- Up to 100 units per acre for buildings immediately adjacent to and fronting CTH T/TT depending on whether the project is consistent with the existing and planned development pattern in the area and a neighborhood or small area plan
- Maximum building height of 6 stories

Density Range/Building Height - South of CTH T/TT
- Between 20 and 60 units per acre
- Up to 100 units per acre depending on the context of surrounding development
- No maximum building height

Design Recommendations
High quality architectural and urban design is a critical component of mixed-use development. Design-oriented zoning standards and deed and plat restrictions are important tools in achieving a successful project. The design recommendations for the Community Mixed-use District are similar to those in the Neighborhood Mixed-use District. However, the Community Mixed-Use District is intended to be larger in size and have a higher density

and intensity than the Neighborhood Mixed-use District. Development in this District should meet the design recommendations for the Neighborhood Mixed-use District as well as the standards listed below:

- In general, when designing the Community Mixed-use District, the design emphasis should be on "place making" which is creating an identity and focal point for the area. This can be achieved by high quality architectural designs, and building materials; building placements and street designs that create a strong sense of spatial enclosure, urban landscaping, comfortable public gathering spaces, and visually interesting, lively, pedestrian-oriented streets and pathways, among others.
- Creation of a strong "sense of place" in the early stages of the project is essential to the success of this District. Two sided streets and enclosed public spaces should be completed in the first phase of the development to establish a sense of place.
- The District should have a center of gravity. This may be a main street, fountain, plaza, village green, clock tower or some other place to which people are drawn.
- A strong emphasis should be placed on creating interesting, diverse community gathering places that provide areas for meeting, mingling, relaxing and conversing.
- The design of the District should enhance the gateway to Madison via Interstate 94. High quality architecture, strategic building placement and superior site design can help achieve this recommendation.
- Underground and structured parking is encouraged.
- Wide sidewalks are recommended.

Figure 1: Reiner Road/CTH T Town Center Illustration (opposite page) shows a conceptual development concept for the northwest quadrant of the Community Mixed-use District. The concept shows potential street, block and lot patterns, building placement, streetscape treatments, and public and private greenspaces overlaid on the recommended Land Use and Street Plan. The concept illustrates how the area could be developed to create a compact, mixed-use development area. Buildings are placed close to tree-lined streets to create a feeling of spatial enclosure, which fosters pedestrian activity and helps establish a unique sense of place. Linked public and private village greens and squares provide focal points for the area and provide terminal views down primary travel corridors in the Community Mixed-use District. These areas create attractive gathering spots that enhance the area's sense of place and provide active and passive recreation opportunities for the community and visitors. A green corridor links the central green with a small urban park. The green corridor could include community gardens, rain gardens, walkways, bicycle paths and attractive "front yards" for homes fronting it. Commercial uses on the ground floor of mixed-use buildings create visual interest and generate pedestrian activity.

A wide range of housing unit types are recommended in the Community Mixed-use District including single-family houses, duplexes, rowhouses, townhouses and multi-family dwellings. Figure 1: Reiner Road/CTH T Town Center Illustration illustrates the design principle of placing buildings close to the street to create a well-defined pedestrian realm and frame views to and from key destinations (such as parks and greens) within the District. Parking is placed underneath, behind or beside buildings.

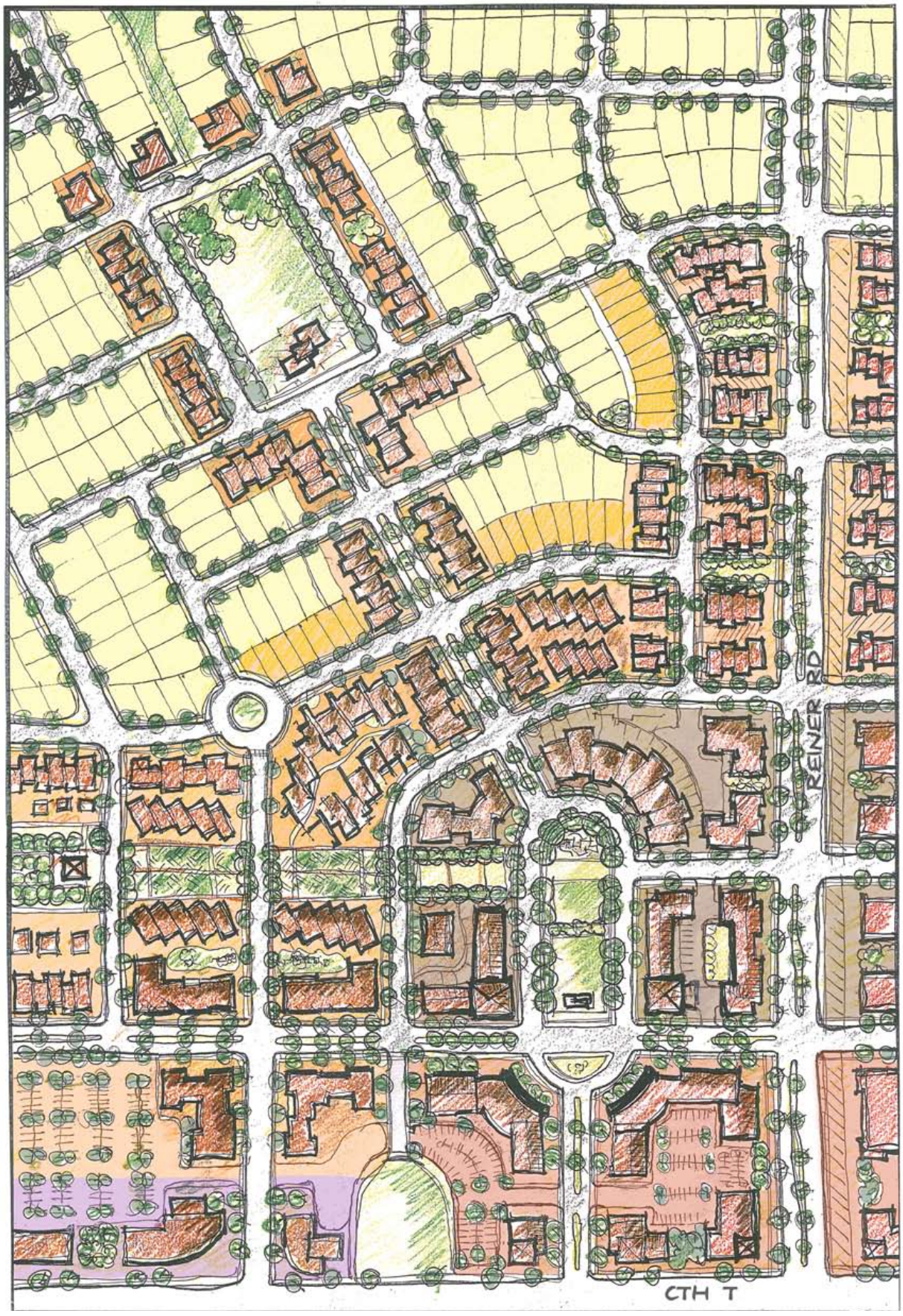
b) Neighborhood Mixed-Use Districts

Neighborhood Mixed-use Districts are recommended in two locations in the planning area. The largest Neighborhood Mixed-use District is recommended where the future extension of Lien Road will intersect Reiner Road. The District includes all four quadrants of the intersection and comprises approximately 20 acres. This District is a major focal point for adjacent neighborhoods. It is envisioned that it will front on Reiner Road and Lien Road and will include a mix of multi-story buildings occupied by retail, office, service, residential and institutional uses.

The Neighborhood Mixed-Use Districts will serve as as a focal point for the adjacent neighborhoods

A small Neighborhood Mixed-use District is recommended at the intersection of Lien Road and Thorson Road. The

Figure 1: Reiner Road/CTH T Town Center Illustration



area extends along Lien Road along the first block west of Thorson Road. It is envisioned that this District could include small mixed-use buildings that are two to three stories in height. Recommended uses include restaurants, coffee shops, small retail shops, personal and professional services and similar neighborhood serving uses. Auto oriented uses such as gas stations, are not recommended at this location. This small mixed-use area could also be developed with flex space buildings that could accommodate either residential or non-residential uses, depending on market conditions. Careful site design will be required to provide a smooth transition between this mixed-use area and adjacent residential areas.

Recommended Uses
Commercial development within the Neighborhood Mixed-use District is intended to accommodate relatively small-scale businesses primarily providing convenience goods and services to neighborhood residents. Anchor uses such as a small grocery store, or pharmacy may be desirable to support smaller commercial uses. Smaller uses might include a bakery, bank, bicycle shop, clothing store, coffee shop, dry cleaner, fitness center, florist, hardware store, salon, restaurant and video store.

Residential uses are encouraged as part of mixed-use developments that also include neighborhood-serving businesses, services or civic uses. Residential uses above storefronts on the ground floor of multi-story buildings are particularly encouraged at appropriate locations. The appropriateness of including residential uses in a specific development will depend to some extent on the location of the site and the opportunities to design a project with sufficient amenity to provide an engaging residential environment. Since the Neighborhood Mixed-use Districts have frontage on future four-lane arterial roadways, residential opportunities may be more attractive somewhat farther back from that street rather than right up to it. Residences could be located around a street-side or interior courtyard, for example. Buildings up to four or five stories in height are recommended, but developments with residential components will need to consider the potential need to provide usable open space or other on-site amenities. Development densities and intensities will need to be carefully considered in order to achieve a development pattern that successfully blends residential and non-residential uses.

It is recommended that relatively higher density residential uses be included within the District. Residential uses would add vibrancy to the District, especially in the evenings and on weekends when some non-residential uses are not in operation. 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 Residential Housing Mix 4 District dwelling unit types would be the most appropriate residential uses. A net density of 20 dwelling units per acre is being used to estimate the number of dwelling units in this District. This number could vary based on detailed planning for the area.

Housing Types
- Same as Housing Mix 4 housing types

Density Range/Building Height - Lien/Reiner Mixed-Use District
- Between 20 and 60 units per acre
- Maximum building height of 4 stories, with 5 stories allowed depending on the context and if the fifth story is stepped back, underground parking is provided and sustainable features are included.

Design Recommendations
High quality design is a very important element of successful mixed-use development. A combination of "design-oriented" or form-based" zoning standards and deed and plat restrictions will be necessary to successfully implement high quality mixed-use projects. The Neighborhood Mixed-use Districts are planned to become focal points for neighborhood activities and neighborhood-oriented commerce. It is recommended that the Districts be developed as mixed-use, pedestrian-friendly nodes with an "urban" character and closely integrated with the higher density residential development both on the site and adjacent properties. There should be a very strong pedestrian linkage between the Districts and adjacent areas. The following design elements are recommended as guidelines for future development in the Neighborhood Mixed-use Districts and should be reflected as appropriate in individual project proposals:

- An emphasis on creating integrated neighborhood business and activity centers, as distinct from an aggregation of essentially separate business sites.
- Multi-story buildings are strongly recommended, especially at corner sites. In general, buildings should not be less than two stories in height.
- Building massing should be used to create a definable public space.
- High quality building materials, such as brick or stone, are recommended.
- Building design and facade characteristics similar to those that are commonly found along the Monroe Street business district and in other urban mixed-use areas such as Cannery Square in downtown Sun Prairie are examples of the type of design character that is envisioned for this District.
- Mixed-use development is encouraged, such as office or residential uses above retail uses.
- Buildings are located close to the sidewalk, with parking lots to the rear or the interior of sites rather than in front of buildings.
- On-street parking is recommended.
- Small plazas or courtyards as gathering places for visitors and employees.
- Minimal "gaps" in the street-level retail and business frontage.
- High levels of pedestrian amenity in public and private areas, including street trees and other landscaping, walkways connecting public sidewalks and parking areas to building entrances or activity areas, benches and other street furniture, and special lighting.
- Wide sidewalks are recommended.
- High levels of bicycle amenity in public and private areas, including linkages to the neighborhood and safe access to convenient bicycle parking located near building entrances and activity areas.
- Neighborhood Mixed-use Districts should be designed to include transit-oriented development standards, such as those described in the City of Madison Comprehensive Plan.

c) Potential Mixed-Use Districts

Several areas are shown as Potential Mixed-Use Districts on the Land Use and Street Plan in addition to having an underlying recommended land use. These are indicated as Potential Mixed-Use Districts because they are located at prominent intersections or locations within the planning area where mixed-use development might be feasible. Having additional mixed-use areas within the planning area would be desirable as it would increase the convenience for nearby residents. These areas will be evaluated further as the planning area develops.

3. Employment District

An Employment District comprising approximately 90 acres is recommended for an area adjacent to CTH T and Interstate 94. This district is intended to provide high-quality employment opportunities for the planning area and the region. Recommended land uses include corporate and business offices, research facilities and laboratories, hospitals, medical clinics and similar uses. The District should provide a variety of flexible sites for small, local or start-up businesses, as well as sites for large national or regional companies. It is also recommended that complementary uses be located in the Employment District that will serve District employees and users and also provide the opportunity for shared parking. These uses could include business services, conference centers, childcare; restaurants, entertainment and other small-scale retail establishments on the ground floor of multi-story buildings; and lodging facilities.

In general, the Employment District should be designed as a compact, integrated district rather than a string of low-density suburban-style developments, although some users may require relatively large sites. Design and development standards are recommended for this District. Buildings up to 10 stories tall are recommended along Interstate 94 south of CTH T. Buildings up to 6 stories tall are recommended north of CTH T where the district abuts recommended residential development.

The exact block and street pattern within the Employment District is intended to be somewhat flexible in order to accommodate the needs of businesses that may require sites that are larger than those reflected on the Land Use and Transportation Plan map. If larger sites are needed, public streets should be provided. Private streets are not recommended.

Interstate 94 is a gateway to Madison from the east. Developments visible from the Interstate should have high

quality site and building design that creates an attractive appearance on all sides of the development. Adequate site landscaping should be provided on all sides. Parking areas should not dominate the view from any vantage point.

Strong street, path and sidewalk networks are recommended to provide circulation within the district and connections to surrounding transportation corridors and adjacent land use districts. Connections should be provided between the district and the adjacent Community Mixed-Use District and residential areas. The Employment District will provide an important retail, service and housing market for Community Mixed-Use District and people need to have safe, convenient and engaging travel routes between the Districts. The Employment District should be designed to facilitate transit service.

4. Parks and Open Space

The *Plan* seeks to preserve the significant natural features including streams, drainageways, wetlands, steep slopes and wooded areas. Where practical, the *Plan* recommends connecting these features into an interconnected system of open space corridors. These natural areas are complemented by a system of well-placed parks that will provide convenient access to a variety of recreational opportunities and add significant aesthetic character to the planning area. The open spaces and parks are also recommended to provide the opportunity for local food production through the creation of community gardens.

See Map 7 Parks and Open Space Plan

Map 7: Parks and Open Space Plan (excerpt)

a) Open Space Corridors

The open space corridors are intended provide environmental benefits such as protection of the significant natural features, opportunities for naturalized stormwater management and preservation of wildlife habitat areas. The corridors will also provide aesthetic value by separating planned development areas to provide a more natural setting for what will become an urban area. Most of the open space corridors are associated with the perennial and intermittent stream segments associated with Door Creek and intermittent stream segments associated with Starkweather Creek. It is recommended that most of these stream segments be preserved as open drainageways and remain in a relatively natural state. The stream segments that have been designated as navigable waterways by the Wisconsin DNR are required to remain in a relatively natural state. There are also wetlands along many of the stream segments, which likely require preservation under DNR regulations. Other corridors correspond with the steeper slopes and wooded areas within the planning area.

The open space corridors vary in width depending on the resource they are intended to preserve. In all cases, it is recommended that a natural corridor of at least 75 feet be provided. The natural corridor could be a part of private lots if restrictions are included that limit disturbance of the open space areas. It is anticipated that the ultimate width and ownership of these corridors will be determined through more detailed development planning. It is recommended that planned open space corridors that currently do not contain significant vegetation be enhanced with plantings such as native grasses, shrubs and trees.

b) Door Creek Corridors

Corridors associated with Door Creek are recommended for open preservation. Segments of Door Creek that drain from the east and west converge in the Seminary Springs area along Gaston Road. The Seminary Springs area also includes a large area of wetlands, which are bordered by other valley lowlands and uplands that include a mix of natural land and active agricultural land. The uplands include two very definable glacial drumlins on either side of Gaston Road. Preservation of these corridors are primarily intended to protect water quality in Door Creek and its associated wetlands, but also preserve the drumlins, woods and open fields along this segment of the Door Creek valley, which provide an irreplaceable natural setting for the creek and its wetlands. The uplands are important environmental features in their own right and are critical for maintaining wildlife habitat and the complex ecological relationships that exist within a larger natural area.

The corridors will become an integral part of a planned regional open space corridor along Koshkonong Creek and Door Creek. The proposed corridors cover a portion of the Dane County Parks and Open Space Plan's (POSP) Koshkonong Creek Natural Resource Area (NRA) and is adjacent to the Blooming Grove Drumlins NRA. NRAs are larger corridors containing valuable natural resources recommended for preservation. Preservation within these areas is accomplished by acquiring land or conservation easements from willing sellers, and often occurs in cooperation with other units of government and organizations.

The Koshkonong Creek NRA is primarily associated with a very large area of wetlands and floodplain in the Town of Sun Prairie that is intended to facilitate wetland restoration and provide flood mitigation. The POSP also envisions the NRA as part of a larger greenbelt corridor between Madison, Sun Prairie and Cottage Grove. Protection of these lands is expected to include working farms that exist in the area, which is also recommended in the City of Madison Comprehensive Plan. The POSP also recommends the development of recreational activities such as shore fishing and trails. To date, the County has not completed any projects in this recently established NRA, but discussions with County Parks Division staff have indicated that their highest priority would be the purchase of lands or conservation easements to facilitate wetland restoration and provide flood mitigation.

c) Parks

Several City of Madison parks are recommended at strategic locations within the planning area. The park distribution generally reflects the distribution of the projected residential population when the neighborhood is fully developed, with a large area-wide park centrally located within the planning area.

The recommended parks are located where they not only provide convenient recreational opportunities to the surrounding neighborhoods, but where they also enhance the visual character of the neighborhoods. The proposed park sites all have significant public street frontage, and will have high visibility to persons traveling along the neighborhood's roadways. Some of the park sites are designed to provide attractive "terminal views" at the end of local street segments. These relationships are considered important, and are among the many small attributes that collectively will make the planning area an interesting and enjoyable place.

Since the parks are located at prominent locations, it is recommended that a mix of tree varieties, including large canopy trees be planted in them. Full-canopy trees can be shown to full advantage in the open spaces of public parklands and can help create a dramatic setting for other park activities.

Area Park

An approximately 20-acre area park is recommended along the south side of the proposed Lien Road extension east of Reiner Road. Area-wide parks are intended to serve lands within about a one-half mile radius, and therefore, contain many recreational facilities and amenities to serve a relatively large residential population. Future detailed park development planning will be needed to determine the exact park configuration and facilities, but conceptually, the area-wide park might contain open playfields that can be adapted for soccer, softball, ultimate Frisbee and similar sports; tennis courts, basketball courts; a picnic shelter and a playground. The need for a parking area within the park will be partly dependent on the specific facilities developed and amount of on-street parking available. Since the park is proposed adjacent to a recommended school site, there may be an opportunity for each use to share parking. As noted above, the proposed park site has significant public street frontage.

Neighborhood Parks

A number of neighborhood and pocket parks are recommended in the planning area. These parks range in size from approximately 1 acre to 6 acres and are recommended to serve the recreational needs of the neighborhoods that are more distant from the proposed area-wide park. These parks provide facilities for active recreation, such as a playground, basketball court, tennis court and open field space, although the smallest parks would function as tot lots or formal urban squares, such as those found in Savannah, Georgia. Some of these parks are intended to provide amenity and more passive enjoyment. These parks could contain picnic areas, benches and naturalized areas.

Parkland Dedication
Residential developers are required to dedicate land or pay a fee in lieu of dedication to accommodate the recreational needs of a development's residents. This dedication is used to implement community, area and neighborhood parks. It is anticipated that some of the recommended parks will have to increase in size to correspond with the amount of dedication that will be received from development and to provide adequate space for desired recreation facilities such as field sports. It is also possible that the eventual park locations will differ from the locations illustrated in the *Plan*. Adjustments to the recommended parks should, however, maintain a balance of parks geared towards field sports that tend to be larger and parks geared for more passive recreation and neighborhood amenity that can be more effective when they are smaller in size.

Park Street Frontage
The parks recommended in the planning area have a substantial amount of frontage on public streets. There are multiple advantages to having streets front the parks, including increased visibility for the park and convenient access for the neighborhood. This configuration also creates potentially higher costs to the City, however, since fronting properties are generally responsible for street construction costs. If these costs become a potentially limiting factor in the ability to implement the recommended parks, it is recommended that alternative approaches to paying for street construction adjacent to public parks be explored, rather than modifying the park configurations to reduce street frontage.

Park Maintenance
The *Plan* primarily utilizes parks and open space to serve as the organizing feature for the neighborhoods within the planning area. This results in numerous parks, including smaller parks that are more costly to maintain on a per acre basis compared to larger parks. While it is recommended that arrangements for shared public and private park maintenance be pursued, the City will have to appropriately budget funds to ensure on-going maintenance.

d) Community Gardens
The Comprehensive Plan recommends that plans for future neighborhoods include recommended locations for community gardens. Community gardens are organized places where residents can rent small garden plots to grow produce for consumption. They also provide a place where people can meet their neighbors and enjoy shared interests. Community gardens have been established at various locations in Madison, but one problem community gardens face is finding suitable locations that can be maintained over time, rather than only temporarily until the land is needed for some other activity.


Residents can rent small plots in Community Gardens and produce food in close proximity to their home

At least one or two acres of suitable land with access to a water supply is considered desirable for establishing a community garden. Gardens should also be located where potential undesirable impacts on adjacent activities will be minimal. While community gardens on private land are encouraged, and can be provided as part of larger subdivisions or multi-family developments, community gardens can also be located on public land. The current feeling by City staff is that the gardens work best when located within or adjacent to City parks that also have other activities, rather than on isolated sites. Park locations typically provide greater visibility, playgrounds and playfields that non-gardening family members can use while others are working in the garden, opportunities for shared parking, and often, access to a water supply. It is recommended that the larger City parks in the planning area be considered for community gardens. The *Plan* identifies several potential locations for community gardens. These locations are conceptual and it is possible that community gardens may be located at other locations within the planning area. Nevertheless, the proposed locations provide a starting point for thinking about where community gardens might be located. The potential for locating a community garden in or near a park should be evaluated as part of more detailed park planning.

e) Urban Agriculture

Urban Agriculture could be located within the planning area and the City's draft Zoning Code takes significant steps toward promoting and permitting urban agriculture in the City. An Urban Agriculture zoning district is in included in the draft Zoning Code. This district allows numerous activities including cultivation and animal husbandry including the keeping of chickens, beekeeping and fish farming.

5. Civic and Institutional Uses

Given the size of the planning area, it is expected that numerous civic and institutional uses will be developed. In general, it is recommended that these uses locate within or near the Mixed-use Districts in proximity to the highest population densities and transit opportunities.

a) Potential Lien Road Elementary/Middle School Site

The planning area is entirely within the Sun Prairie Area School District. Preparation of the *Plan* included discussions with School District officials as they considered where and when additional school facilities might be needed in the District. The planning area currently generates relatively few students. However, Sun Prairie Area School District planners believe projections for future residential development indicate that the planning area will eventually support at least one elementary school and potentially a middle school. These schools would be in addition to the school site the School District has identified within the Village at Autumn Lake subdivision. The need for a future high school site in the planning area is considered unlikely because the planning area is at the southwestern edge of the School District and these facilities typically have a more central location.

A potential site for a future school is recommended along Lien Road adjacent to the proposed large area-wide park. The recommended location is at relatively central location within the planning area without being too near the School District's boundaries at Interstate 39-90-94 and Interstate 94. It is within a reasonable walking or biking distance for many residents and it is located adjacent to the proposed north-south regional bike path. Convenient vehicular access to the site is provided via Lien Road and the extension of Milwaukee Street. Neighborhood schools are important community assets and in addition to their educational activities, often become a focal point for a variety of other neighborhood meetings and events. The proposed school site's central location within a proposed residential area is well-suited to this enhanced community role.

The proposed Lien Road school site illustrated on the Land Use and Street Plan is about nine acres in size, and the site is designed to include a school building, parking areas, and a small on-site play area. An eight-acre site is appropriate for an elementary school. A middle school would require about 12 acres and a combined elementary-middle school site would require about 18 acres. The school site shown on the Land Use and Street Plan could be expanded by removing one or both of the short east-west residential streets south of the school site and west of Milwaukee Street extended. These modifications would not be detrimental to the overall land use and street pattern.

A school location next to the area-wide park would allow the school and the park to share some types of recreational facilities. It may be possible for school and park users to share some of the parking facilities as well, which would decrease parking needs within the park and on nearby residential streets. The opportunity to develop shared facilities reduces the size of site needed for the school, decreases land acquisition costs for the School District, and results in a more compact development pattern. Multi-story school buildings are desired in the planning area as a means of creating more pedestrian scale neighborhoods, with building traditional styles as opposed to single story suburban type buildings.

b) Potential Felland Road Elementary School Site

The *Plan* identifies a second potential school site along the east side of Felland Road across from the Bridle Downs subdivision. This location is centrally located to serve the planned neighborhoods in the area. Further, the site has excellent access to the planning area's transportation system and is very close to proposed parks and open space.

Sun Prairie Area School District staff has reviewed the *Plan* and the potential school sites, and generally support the concept of schools at these locations. These locations are conceptual and their locations are subject to change

over time if the City and School District deem it desirable to do so. The City of Madison will continue to work cooperatively with the School District to secure well-located school sites in the planning area as it develops.

c) Public Library

It is likely that a public library will be developed on the northeast side of Madison at some point. It is recommended that the planning area be considered as a potential location. Locating a library within one of the Mixed-Use Districts would be logical since it would be near a large population, would be located along a major travel corridor and would have the most frequent transit service.

d) Farmers' Markets

It is recommended that one or more farmers' markets be established in the planning area. Potential locations for a farmers' market include the recommended Mixed-use Districts or the Employment District. These areas would provide convenient access and high visibility. Developers are encouraged to work with the City to identify potential sites.

6. Special Planning Considerations

Parts of the planning area are located in close proximity to Interstate Highways and quarries which bring about special planning considerations for development. These special situations are described below.

a) Noise Mitigation Requirements Adjacent to the Interstate Highway

Residential developments on lands adjacent to the Interstate Highway will be required to comply with Wisconsin Department of Transportation TRANS 405 regulations regarding mitigation of traffic noise, which address noise levels outside of buildings as well as inside. Similar requirements apply to outdoor recreational uses. For other non-residential developments, only noise levels inside of buildings needs to be reduced below prescribed levels. Before any new residential or recreational development adjacent to an Interstate Highway can be approved, the developer must demonstrate that sound levels at the site are within permissible levels, or that adequate sound attenuation measures will be incorporated to reduce sound levels to permissible levels. This is reviewed as part of the development approval process.

The elevation is higher than the Interstate along most of the proposed residential frontages along the highway. The lands near the Bridle Downs subdivision are somewhat lower and may require sound mitigation measures. Therefore, construction of a berm along the edge of the highway right-of-way, or other approved attenuation measures, will be needed before residential development can occur. The need for noise attenuation is not viewed as something that should preclude consideration of residential development adjacent to the Interstate. Similar berms have been constructed in several newer Madison neighborhoods and have been successful in meeting the mitigation requirement and creating a quieter environment suitable for residential development. The buffer zone along the Interstate shown on the Land Use and Street Plan map conceptually illustrates the need for sound attenuation, but it is not a precise estimate of the area required to construct a berm or other attenuation measures. Property owners and potential developers have the responsibility to determine how sound attenuation regulations may affect the plans or costs to develop specific properties, and to take the measures needed to attenuate the noise or otherwise comply with the regulations.

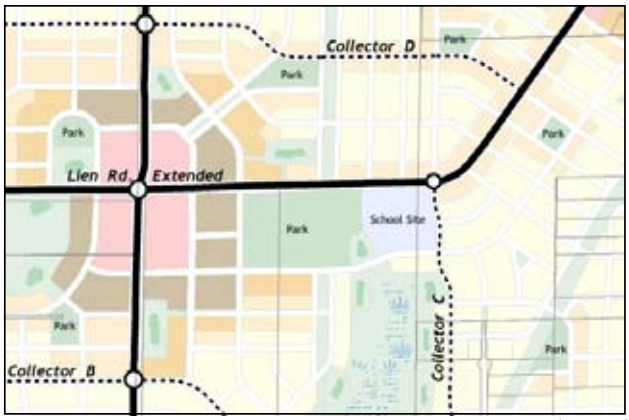
b) Residential Development Adjacent to Quarries

It is anticipated that operations at the Madison Crushing and Excavating facility on Reiner Road will continue for many years. Dane County regulations include some restrictions on the operations, but there are still impacts on nearby areas. Although blasting is infrequent, it can create vibrations in areas near the quarry. Rock crushing also takes place at the site and many dump trucks travel through the planning area hauling material from the site.

Development on adjacent or surrounding lands will have to recognize that there will be noise and vibration from operations at the quarries. As has been done in the past, it is recommended that potential owners of property near the quarry be required to sign a legal document acknowledging the presence and potential impacts of the quarry.

E. Transportation

The following recommendations are intended to achieve the goal of capturing 25% of all trips made by persons living in the planning area by walking, bicycling or transit and/or reducing household motor vehicle miles of travel (VMT) by 25% (in comparison to a baseline to be determined by staff). They will enhance the use of non-automobile transportation modes, such as public transit, bicycling and walking. Ways to reduce transportation demand, by utilizing demand management measures, are also included.



Map 8: Transportation Plan-Roadways (excerpt)

This goal will be accomplished through the implementation of numerous land use and transportation system strategies and approaches - including transit-oriented development (TOD), traditional neighborhood development, mixed-use development, high-quality public transit improvements (including early public transit service, as the planning area begins to develop), transportation demand management strategies and programs, the development of a walkable neighborhood environment (with high-quality pedestrian facilities), bicycle transportation facilities, neighborhood-friendly street design, and other transportation demand management practices.

1. Interstate Highway 94

The planned expansion of Interstate 94 from four lanes to six lanes and the lengthening of the Badger Interchange ramps will impact properties in the planning area. Private property will be acquired to accommodate road widening, grading and stormwater. Given the size of the properties along the Interstate, however, the amount of land that will be acquired should not dramatically affect the properties.

Currently, there is not direct access to Interstate Highway 94 from the planning area. The Interstate system can be accessed via interchanges within several miles. Providing direct access to Interstate 94 in the vicinity of Milwaukee Street has been suggested to meet future regional transportation needs and reduce travel time from the planning area to the regional transportation network. The 1998 Sprecher Neighborhood Development Plan discusses exploration of a possible interchange at the extension of Milwaukee Street. The plans for Interstate 94 reconstruction and expansion include an Interstate bridge over Milwaukee Street, but not an interchange at this time.

Providing additional access to the Interstate system requires approval from the Federal Highway Administration, following a formal feasibility study. An Interchange Justification Report/Environmental Assessment for a potential new access point is a major undertaking that needs to address specific justification criteria that have been established for the evaluation. An Interchange Justification Study also requires a local government sponsor such as the City of Madison.

2. Arterial and Collector Roadways

Existing or planned arterial roadways within the planning area include Reiner Road, Lien Road, CTH T and CTH TT. These roadways are intended to carry the highest traffic volumes and efficiently move travelers through and beyond the neighborhood. Felland Road, Gaston Road, Thorson Road, the extension of City View Drive (Collector A), the extension of Milwaukee Street (Collector C), and two east-west streets (Collectors B and D) that will be developed will serve as collector roads. These roadways will primarily carry traffic generated from within the planning area. The recommended typical cross-section for the arterial and collector roadways within the planning area is described below. The cross-section for these roadways may vary at intersections and in areas with special circumstances. See **Table 5** and **Map 8 Transportation Plan-Roadways**.

Table 5: Typical Arterial and Collector Cross-Sections

Roadway (Cross-section)	Appproximate Right-of-Way	Lanes	On-Street Parking	Driveways	Transit Priority Corridor
Reiner (Higher Density)	130'	4	Yes	Limited	Yes
Reiner (Lower Density)	120'	4	No	Limited	Yes
Lien (Higher Density)	120'	4	Yes	Limited	Yes
Lien (Lower Density)	108'	4	No	Limited	Yes
CTHT/TT(HigherDensity)	Existing ROW	4	Yes	Limited	Yes
CTHT/TT(LowerDensity)	Existing ROW	4	Yes	Limited	Yes
Felland	90'	2	Yes	Yes	No
Milwaukee extension	90'	2	Yes	Yes	No
Thorson	70'	2	Yes	Yes	No
Gaston	70'	2	Yes	Yes	No
Collectors A, B, C and D	70'	2	Yes	Yes	No

Right-of-way Expansions
Where the right-of-way for existing roadways will be expanded, the centerline of the roadway may have to shift slightly to avoid existing development and natural features.

Roadways with Medians
The arterials within the planning area are recommended to have a median. The collectors and other prominent roadways may have medians especially at key intersections. A median provides separation for opposing directions of traffic, space for a left turn lane, a safe place for pedestrians crossing the street, landscaping space and could contain rain gardens or similar features that provide localized stormwater infiltration.

Driveway Access and Building Orientation on Arterials
Driveway access for new development along the arterials should be limited. New development areas are designed to have lots take access from interior local streets or off of an alley rather than directly from the arterial road. Although it is recommended that driveway access be limited, land uses adjacent to the arterials should maintain at least a secondary orientation to the arterial roadway. This includes having buildings face both streets and have walkways and entryways on both streets where possible.

Transit Priority Corridors
The three arterials within the planning area, Reiner Road, CTH T/TT and Lien Road, are designated as transit priority corridors. These corridors are the most appropriate for consideration of transit as they are planned regional arterials and travel along the higher density residential areas, the two mixed-use districts and the employment area. These corridors are also adjacent or near potential commuter rail stations. Transit Priority Corridors are further described in the Transit section below.

a) Reiner Road
Reiner Road is the only north-south arterial street within the planning area and the only roadway that both crosses Interstate 94 and continues northward beyond the planning area. Expansion of the right-of-way and pavement section will have to be coordinated with the overhead power line and existing development located along the roadway. It is likely that the road will be expanded away from the power line, given the cost of relocating the line's support poles. This may result in minor shifts in the road since the line shifts from one side of the road to the other several times as it passes through the planning area.

Two cross-sections are recommended for Reiner Road to address the different types of land uses recommended along the corridor. It is recommended that segments adjacent to areas recommended for mixed-use and higher density development have on-street parking. On-street parking is not recommended along lower density areas.

b) Lien Road

Lien Road provides a connection to the East Towne retail area and the East Washington Avenue corridor further to the west. It is currently improved as a two-lane rural roadway near its intersection with Felland Road. West of the Felland Road intersection, it was recently reconstructed to a two-lane urban section with a sidewalk on the north side of the road and marked bicycle lanes. This reconstruction is part of an eventual expansion to four lanes.

It is recommended that Lien Road be eventually extended to Thorson Road from its current terminus at Felland Road and function as an arterial roadway. There are homes located along Felland Road that will be affected by the near term extension of Lien Road. Lien Road will shift northward slightly at the Felland Road intersection as the Village at Autumn Lake subdivision provided additional right-of-way dedication. Despite the additional dedication, one home, and potentially two homes, will have to be relocated. Two cross-sections are recommended for Lien Road to address the different types of land uses recommended along the corridor. It is recommended that segments adjacent to areas recommended for mixed-use development and higher density residential and the Area park have on-street parking. On-street parking is not recommended along lower density areas.

c) County Trunk Highway T/TT (east-west segment)

CTH T and CTH TT parallel Interstate 94 through the southern limits of the planning area and then continue along easterly routes towards CTH N, functioning as the primary east-west travel corridor through the planning area. The roads provide indirect access to Interstate Highway 94 via CTH N and to Interstate Highway 39-90-94 via USH 30 and USH 51. The right-of-way for the portions of CTH T and CTH TT that parallel Interstate 94 is over 200 feet in width although they are currently two lane roads. The wide right-of-way was obtained when the roadway served as U.S. Highway 30 prior to development of Interstate Highway 94.

Split Boulevard Cross-Section

It is recommended that a cross-section referred to as a "split boulevard" be considered for CTH T/TT since the roadway has a very wide existing right-of-way. This cross-section is similar to a divided roadway in the center. On either side of the divided roadway there is a median and a local street. The primary advantage to this cross-section is it serves as both a thoroughfare for traffic moving through the area and as a local street with on-street parking and development fronting the street. Traffic circulation with a split-boulevard is much different than with a typical divided roadway and would have to be evaluated in greater detail.

Non-Split Boulevard Cross-Section

If the split boulevard cross-section is not preferred, CTH T/TT is recommended to be a four-lane divided roadway with on-street parking adjacent to areas recommended for employment and higher density development. On-street parking is not recommended along lower density areas or areas not recommended for intensive development, such as adjacent to the Door Creek corridor.

It is recommended that CTH T/TT be no more than four lanes wide, irrespective of the cross-section that is used, unless further detailed study demonstrates the need for a six lane with roundabout configuration. Further detailed study of this corridor should take place soon, otherwise the opportunity for developers to cost-share for the facility may be lost.

If the eventual cross-section for CTH T/TT does not occupy the roadway's approximately 200-foot wide right-of-way, development would be set back from the roadway and the remaining right-of-way could be reserved for future transportation functions.

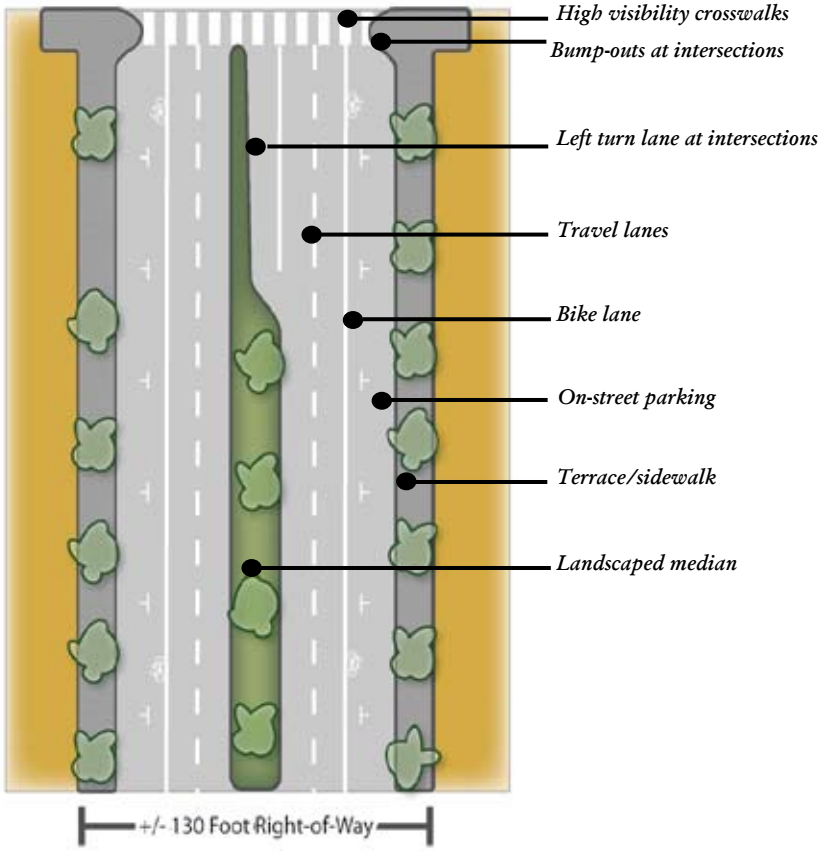
d) CTH T (northeasterly segment)

Planning for the Phase 2 planning area will evaluate whether this segment of CTH T should be shifted to the east from the current alignment. A shift from the current alignment would provide a larger separation between where CTH T and CTH T/CTH TT meet and the intersection of Gaston Road and CTH T/TT, thereby providing safer traffic movements. Additionally, expansion of the existing segment of CTH T might produce conflicts with the existing development and natural features adjacent to the roadway. The cross-section for this segment of CTH T will also be determined as part of planning for the Phase 2 planning area.

e) Felland Road
Felland Road will be converted from a 2-lane rural cross-section to a 2-lane urban cross-section

f) Milwaukee Street Extension
Milwaukee Street is planned to be extended to the north from its current location in the Sprecher Neighborhood. The roadway is planned to cross underneath Interstate 94 and continue northward into the planning area. This street will provide an additional crossing of the Interstate and will help distribute traffic in the area that would otherwise be limited to the Reiner Road/Sprecher Road corridor. As part of the Interstate 94 reconstruction and expansion project, an Interstate bridge over the future Milwaukee Street extension will be constructed. The actual construction of Milwaukee Street under the Interstate will likely occur later as it is dependent on coordination with affected property owners and the pace of development in the area.

Figure 2: Higher Density Cross-Section



g) Gaston Road
It is recommended that the northern end of Gaston Road be realigned to meet CTH T/TT at closer to a right angle to provide safer traffic movements.

h) Thorson Road
Thorson Road will be converted from a 2-lane rural cross-section to a 2-lane urban cross-section.

i) Collector A
Collector A provides an additional continuous north-south route near Interstate 39-90-94. It connects with the planned extension of City View Drive in the Felland Neighborhood.

j) Collector B
Collector B provides an additional continuous east-west route through the planning area. The planned route occupies a portion of the existing Forest Oaks Drive.

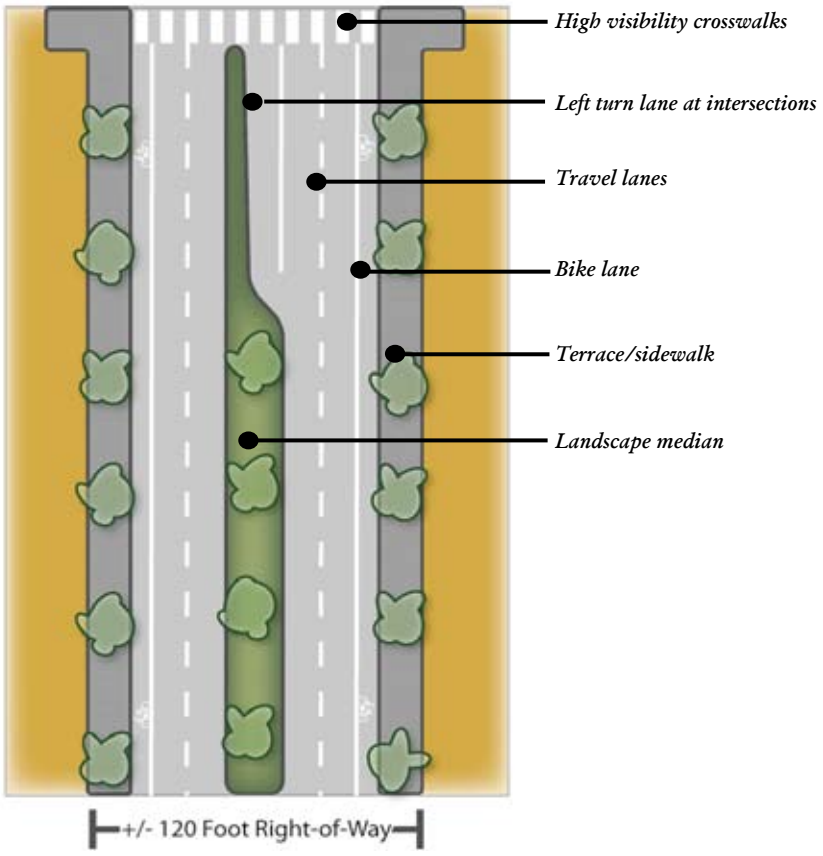
k) Collector C
Collector C provides an additional continuous north-south route through the planning area and connects the Milwaukee Street Extension (on the south) with Lien Road (on the north).

k) Collector D
Collector D provides an additional east-west route through the planning area to the north of Lien Road. It connects with a planned collector in the Village at Autumn Lake subdivision to the west of the planning area.

3. Local Streets
The proposed street layout is a "modified grid" pattern that includes relatively small blocks, provides a high degree of connectivity within the neighborhood and provides multiple routes to most destinations. The street pattern is designed to accommodate factors such as existing topography, property ownerships and solar orientation while still providing an engaging street pattern.

Topography
Areas with steep slopes are avoided and the street pattern seeks to minimize the amount of grading that will be required to accommodate development. Often, streets run up and down the more moderate slopes so that streets and development can follow the natural contour of the land. This arrangement minimizes the use of retaining walls and steeper slopes in backyards and provides positive drainage for sanitary and storm sewers. In areas of steep slopes, development is limited to the lower elevations and the sloped areas are recommended for open space.

Figure 3: Lower Density Cross-Section



Property Boundaries
The street layout largely respects existing property boundaries. The *Plan* minimizes any odd shaped development areas along property lines or where roads intersect property lines. In some cases, however, the most effective street pattern does leave small areas of a property that would be difficult to develop efficiently as a separate parcel. In these cases, property owners are encouraged to exchange land with adjacent owners to create parcels more suitable for development.

Solar Orientation
The street pattern also seeks to maximize solar orientation through both the street pattern and potential building placement and design. The City's Land Subdivision Regulations (Chapter 16.23) include standards for maximizing solar orientation of streets, blocks and lots.

Typical Local Streets
Most local streets will have a right-of-way width of 60 feet or less, depending on the location and the type of development along the street. The typical pavement width in a new residential subdivision is 32 feet. The City's Subdivision Ordinance does allow narrower street pavement in relatively low-density areas where criteria regarding average density, the amount of off-street parking provided and other factors can be met. Narrower streets and tighter corner radii are encouraged within the planning area as they enhance the pedestrian scale of the neighborhood and help encourage street-oriented development.

Other local street segments adjacent to larger parks or activity centers may have a 66-foot right-of-way to allow for a wider pavement width where considerable on-street parking is anticipated. Rather than being perfectly straight, longer neighborhood streets are planned to include curves and bends that will add interest and provide views of the streetscape in the distance while traveling through the neighborhood. Many local street segments also end opposite planned parks and activity areas to provide interesting terminal views; and all proposed parks have significant public street frontage to increase visibility and accessibility.

3. Woonerfs
Some the street segments within the planning area could be configured as woonerfs. A woonerf is described as a living street in which the needs of car drivers are secondary to the needs of users of the street as a whole. It is a shared space designed to be used by pedestrians, playing children, bicyclists and low-speed motor vehicles. They

become a public place for people instead of single-purpose conduits for automobiles. In a woonerf, vehicles may not impede pedestrians, who in turn may not unreasonably hinder the progress of drivers.

4. Roundabouts

Roundabouts may provide a cost-effective, safer alternative to other methods of traffic control at many types of street intersections. Well-designed roundabouts can reduce traffic speeds, improve traffic flow and increase safety for pedestrians and bicyclists. Roundabouts are conceptually illustrated on the *Plan* maps at selected intersections, but other intersections may also be good locations. It is recommended that the alternative of a roundabout be considered at all intersections where traffic signals are planned or may be planned in the future.

5. Pedestrian and Bicycle Facilities

Pedestrian mobility in the planning area is encouraged by the interconnected "grid-like" street system, which provides multiple routes to most destinations. All City of Madison streets will have public sidewalks and are designed to also accommodate bicycle travel. Mid-block pedestrian/bicycle paths are recommended where a reasonably direct street connection is not available. Marked bicycle lanes are recommended on principal streets, and off-street multi-purpose trails are integrated with existing and planned regional bicycle facilities.

Three types of bicycle facilities identified in the 2000 Madison Urban Area and Dane County Bicycle Transportation Plan are recommended in the planning area. Bicycle lanes on more heavily traveled roads such as arterials and collectors provide more-direct routes and have fewer stops, and are often preferred by commuters and long-distance bicyclists. The local neighborhood street network also provides relatively direct routes, but has much lower traffic volumes and is suitable for a wider biking population. Off-street pedestrian/bicycle paths also serve a wider population, including recreational riders and younger riders. Recommended bicycle facilities are shown on **Map 9 Transportation Plan-Pedestrian and Bicycle Facilities** and described further below.

a) Marked Bicycle Lanes

Marked bicycle lanes are recommended on all of the arterial or collector roadways. As the planning area develops, bicycle lanes may be appropriate on additional streets.

b) Local Street Network

While many roadways are planned to have dedicated bicycle lanes, the recommended street network also provides alternative routes for bicycle travel through the neighborhood on local streets that are relatively direct and continuous, but will generally have relatively low traffic volumes. The street alignments shown in a neighborhood development plan are sometimes modified as individual developments are approved, but it is important that the street linkages providing these low-traffic routes to be maintained and that other plan objectives are met.

Map 9: Transportation Plan - Pedestrian and Bicycle Facilities (excerpt)

c) Pedestrian and Bicycle Paths

Several long, primarily off-street pedestrian and bicycle paths are recommended through the planning area. These paths connect with the regional bicycle trail system and connect points within the planning area. Shorter path segments provide connections and amenity within the planning area. It is recommended that the bicycle and pedestrian paths be constructed at the time of development, as is done with other public transportation facilities such as streets and sidewalks.

Interstate Path

The proposed Interstate path is located adjacent to Interstate 39-90-94 and Interstate 94 within the planning area. Along Interstate 39-90-94, the path would be located immediately east of any sound attenuation berm necessary for the residential development planned in the area. Immediately south of Lien Road where there are relatively

steep slopes for biking, the path may have to shift to the east near the extension of City View Drive. Along Interstate 94, the path could be primarily located adjacent to the Interstate right-of-way as noise attenuation measures may not be provided given the non-residential uses planned in the area.

Planning for the path along Interstate 94 should be done in conjunction with the Wisconsin Department of Transportation's expansion of Interstate 94 to six lanes. The City of Madison could also investigate potential cost sharing with the State for the path as it provides an alternative mode of travel. This path could continue along Interstate 94 to the east beyond the planning area.

Town Center Path
The proposed Town Center path is primarily off-street but also includes on-street segments. The path travels between the Interstate Path on the south and extends to the northern limits of the planning area. The path passes though the Community Mixed-Use District and travels near the Neighborhood Mixed-Use District at the intersection of Lien and Reiner Road. The path also connects with planned paths in the Village at Autumn Lake subdivision.

North Pipeline Path
The proposed North Pipeline path is located adjacent to the ANR natural gas pipeline that travels in a north-south direction between Interstate 94 and the northern limits of the planning area. The plan recommends that a portion of the path be included within the wide boulevard of a planned parkway. If the path cannot be accommodated off-street in this area, it is recommended that homes along the street make use of an alley. This would eliminate the need for driveways and therefore reduce conflicts for bicyclists. Where the pipeline travels through a low-lying area associated with Door Creek, it may be advantageous to locate the path adjacent to future development. Since road crossings of the pipeline are minimized, there will be relatively few conflict points for users of the path. In the future, this path could continue along the pipeline easement beyond the planning area.
Northeast Pipeline Path
The proposed Northeast Pipeline path is located adjacent to the ANR natural gas pipeline that travels in a northeast-southwest direction between CTH T and Thorson Road. The path would generally be located immediately adjacent to the easement for the pipeline. Where the pipeline travels through a low-lying area associated with Door Creek, it may be advantageous to locate the path adjacent to future development. Since road crossings of the pipeline are minimized, there will be relatively few conflict points for users of the path. In the future, this path could continue along the pipeline easement beyond the planning area.

East-West Path
The proposed East-West path is located along the northern limits of the planning area. It would travel between the Town Center Path on the west and Thorson Road on the east. The portion of the path on the Sun Prairie Concrete Property is illustrated within a current quarry area. This illustrative alignment may change depending on the plans for the quarry and any future development in this area.

Seminary Springs Path
The proposed Seminary Springs Path runs adjacent to Door Creek between the Pipeline Path and the Seminary Springs area which includes a planned regional path along the Door Creek corridor. This path would provide a connection between areas that will include a greater population, such as the Community Mixed-Use District, with the numerous natural features located in the Seminary Springs area. These natural features will provide opportunities for wildlife observation, environmental education and passive enjoyment of nature.

d) Bicycle Wayfinding
It is recommended that a bicycle wayfinding system be developed for the planning area.

e) Bicycle Parking
Adequate bicycle parking facilities should be provided within the right-of-way and on development sites. These facilities should be located in prominent public areas, near building entrances and be appropriately sized and maintained.

f) Traffic Calming
Traffic calming mechanisms, such as bump-outs at intersections, should be considered to improve the pedestrian

and bicycle environment. These mechanisms may be especially important in high pedestrian and bicycle areas such as near schools and parks and within mixed-use centers

g) Snow Removal
Sidewalks, bicycle lanes and pedestrian-bicycle paths should be adequately maintain for year-round use including appropriate snow removal.

f) Mitigate Barriers to Pedestrian and Bicycle Mobility
Barriers to bicycle mobility, such as streets without adequate crossing facilities, should be identified. Locations where improvements are needed most should be prioritized and then improvements made.

Map 10: Transportation Plan - Initial Transit Service (excerpt)

6. Transit Service

The planning area is designed to facilitate future transit service through a relatively high overall density, recommended high-density nodes, mixed-use centers and employment districts. Further, individual development projects should incorporate transit-oriented development features such as buildings placed close to the street, convenient waiting areas for transit users and a mix of land uses that will foster the establishment of transit service in the neighborhood. It is recommended that improved transit service to the planning area be implemented at the earliest feasible time to help attract transit-oriented residents to the neighborhood and encourage transit usage from the beginning as the neighborhood develops.

Map 11: Transportation Plan - Future Transit Service (excerpt)

a) Madison Metro Transit
Two options for service to serve initial development in the planning area are illustrated on Map 10 Transportation Plan-Initial Transit Service. These routes are Peripheral Loop Option A that utilizes the East Towne Bus Stop and Peripheral Loop Option B that utilizes the East Transfer Point. Map 11 Transportation Plan-Future Transit Service illustrates potential transit service when the planning area is more fully developed and also incorporates commuter rail service. These routes are Connector Option C that travels through the planning area between the East Towne Bus Stop and the East Transfer Point and Local Circulator Option D that illustrates a service throughout the planning area based out of a commuter rail station at City View Drive. A brief description of the routes is provided on these maps. It is strongly recommended that the Common Council identify and provide budget authorization for funding of transit service to the Northeast Neighborhoods in its early phases of development. This funding should be provided when the planning area reaches 10% of projected residents or employees. This transit service should be provided during the very early phases of development in the planning area, in order to provide public transit opportunities to the first residents and employees to live and work in this area.

b) Paratransit Service
It is recommended that Metro Transit and other providers provide quality ADA paratransit services throughout the planning area.

c) Commuter Rail Service
As noted in the background section of this *Plan*, the potential for a commuter rail line along the Wisconsin Department of Transportation rail line is being considered. The line would extend from the City of Middleton through the City of Madison's isthmus and terminate near the intersection of Nelson and Reiner Roads. There

would be numerous stops along the route including a park and ride lot at Nelson and Reiner Roads. Service would be provided seven days a week from approximately 6:00 a.m. through 11:00 p.m. with the most frequent service during the morning and afternoon commutes.

At this point, the preferred Phase 1 option includes new commuter rail service on this rail line. The initial service would extend from the City of Middleton, travel through the City of Madison's isthmus, and terminate near the intersection of Nelson and Reiner roads. Service would be provided between approximately 6:00 a.m. and 11:00 p.m. seven days a week with the most frequent service provided during the morning and afternoon commutes

d) Transit Priority Corridors

The Transit Priority Corridor concept for the planning area includes public transit improvements that increase the attractiveness of bus services operated along the major the corridors within the planning area and creates high quality linkages to the multi-modal public transit system outside the neighborhood planning area. Madison Metro currently operates an expansive and well-utilized local bus system throughout the metropolitan area that would be enhanced with a number of bus rapid transit (BRT) elements, as described below. This concept represents an increased level of transit service and capital investment throughout the planning area. The following features should be considered for the Transit Priority Corridors.

Frequent, High-Quality Transit Service

Frequent bus service using vehicles with BRT elements will provide frequent service - every 30 minutes throughout the day in each direction between the East Transfer Point, a proposed new commuter rail station at City View Drive and the East Towne bus transfer location (along the service drive of East Towne Mall).

Traffic Signal Priority

Conditional traffic signal priority will be implemented at all feasible intersections in the Transit Priority Corridor. Conditional priority gives extra green time to buses that have significant passenger loads and are running behind schedule as a means to manage headways between vehicles.

Enhanced Transit Stops

Bus stops along the Transit Priority Corridor will be consolidated such that the average station spacing is between one-third and one-half mile. Express routes will skip some of these stops to serve only major activity centers.

Real-time Passenger Information

Enhanced transit stops along the Transit Priority Corridor will offer real-time schedule information and customer alerts. The route also will offer on-board passenger information, including automated next stop announcements.

7. Transportation Demand Management

In order to ensure the viability and desirability of non-automobile modes of transportation in the planning area, a number of transportation demand management initiatives are proposed.

a) Transportation Demand Management Plan and Program

A Transportation Demand Management Plan and Program should be developed for the planning area. Employer-based TDM measures should be instituted as part of a comprehensive planning area-wide TDM program in order to enhance the desirability of non single-occupancy vehicle transportation modes (i.e. public transit, walking, bicycling, carpooling).

b) Transportation Management Associations

The formation of Transportation Management Associations (TMAs) should be considered, where appropriate, as a mechanism to organize individual employers and administer TDM initiatives in the planning area. A TMA is an organized group that applies various approaches to help facilitate the movement of people and goods with an urban area, most often stressing the use of transportation demand management strategies and measures. TMAs are often legally constituted and frequently led by the private sector, in partnership with public sector entities, in an effort to address transportation challenges.

Potential TDM Measures

In general, "transportation demand management" refers to a set of actions or strategies that encourage travelers to use alternatives to driving alone, especially at the most congested times of the day. The term TDM encompasses both alternative modes to driving alone and the techniques, or strategies, that encourage use of these modes. TDM alternatives include travel options such as:

- Carpools and vanpools
- Public and private transit (including shuttles)
- Bicycling, walking and other non-motorized travel

TDM measures also can include "alternative work hours" program options that reduce the number of days commuters need to travel to the worksite. Alternative work hours can include:

- Compressed work weeks, in which employees work a full 40-hour work week in fewer than the typical 5 days
- Telecommuting, in which employees work one or more days at home or at a "satellite work center" closer to their homes

TDM strategies include improvements in alternative modes of transportation; financial and time incentives for commuters who use alternative modes; information dissemination and marketing activities that heighten travelers' awareness and interest in alternatives; and supporting services that make the use of alternatives more convenient or that remove psychological impediments to use of alternatives. Examples of TDM strategies are:

- Improvements to existing transportation services, such as shuttle buses and vanpool programs
- Financial and time incentives, such as preferential parking for ride sharers, subsidies for transit riders and transportation allowances
- Parking management programs
- Priority treatment for ride sharers, for example, high occupancy vehicle (HOV) lanes and freeway ramps
- Employer support measures, such as employee transportation coordinators, on-site transit pass sales and guaranteed ride home programs
- Marketing and promotion techniques such as transportation fares or periodic prize drawings for users of alternatives modes

TDM measures can be particularly effective in attracting public transit ridership from individuals who own their own vehicles. Possible transit service improvements that could help attract riders include:

- Pursuing the development of more pre-paid unlimited ride pass programs, commuter choice pass programs, and employer-subsidized transit fare programs with large employers and employer associations in the City
- Pursuing further introduction of Intelligent Transportation Systems (ITS) technologies that enhance service reliability, real-time information, convenience and security
- Continuing to install bicycle racks on buses

8. Car-Free or Car-Light Zones

Car-free or car-light zones have been used in some communities as a means of creating pedestrian friendly urban environments that reduce traffic congestion and air pollution. In car-free zones, motor vehicles are prohibited with the exception of delivery vehicles and short-term residential parking of one hour or less. Parking is typically provided in parking lots or ramps at the edge of the car-free zone. This strategy is common in European cities, but is not yet widely used in United States. The creation of car-free zones within the planning area's mixed-use districts should be considered.

F. Household Energy Consumption

The following practices are intended to achieve the goal of reducing household consumption of natural gas and fossil fuel-generated electricity by 25% compared recent residential construction. These practices generally include energy efficient site planning/design/certification; education and outreach; energy efficient appliances and fixtures; behavior; and renewable energy. Other practices will be utilized as they become available.

1. Energy Efficient Site Planning/Design/Certification

- Design lots and orient buildings to accommodate: 1) active solar for energy generation, 2) passive solar for heating and daylighting, and 3) trees to shade the house in the summer

- Build at higher densities which tends to be more efficient due to shared walls and smaller dwelling units
- Ensure homeowners' association regulations allow green building practices (e.g. renewable energy systems)
- Seek agreements between developers and builders that stipulate that builders will incorporate components of measurement programs such as Wisconsin ENERGY STAR Homes, Green Built Home, Green Globes and LEED.
- Encourage builders to build solar-ready homes
- Ensure development projects meet the City's dark sky (exterior lighting) ordinance

2. Education and Outreach

Many of the entities can help provide information regarding ways to reduce consumption. Provide education on the benefits and incentives to energy efficient construction: The following groups are targeted at specific points:

Provide information to Developers:
- While planning the development project
- When selecting builders and contractors
- When selling lots and constructing buildings

Provide information to Builders:
- When purchasing a lot
- When designing and selecting materials for the project
- When marketing homes to end-users

Provide information to End-Users:
- When purchasing a home or lot by including information in closing documents
- When considering remodeling or rehabilitation projects
- Include information in utility company materials sent to account holders
- Provide education to students through the schools that serve the planning area (Sun Prairie Area School District)
- Neighborhood newsletter

Provide information to all interested parties:
- Through the City website or Northeast Neighborhoods website
- Recognition programs for developers, builders and end-users that help achieve the goal

3. Energy Efficient Appliances and Fixtures
- Use energy efficient appliances and fixtures (such as ENERGY STAR qualified) including the furnace, air conditioner, hot water heater, refrigerator, dishwasher, clothes washer and dryer, water softener and stove/oven
- Use programmable thermostats
- Use clotheslines to dry clothes
- Use low-energy sources for indoor and outdoor lighting such as compact fluorescent (CFL) or light-emitting diodes (LED)
- Use master electrical switches that can power down a number of outlet throughout the house

4. Behavior
- Perform energy audits and track energy usage of appliances and the home to seek ways to decrease energy usage
- Reasonably turn down furnace and air conditioner
- Turn off appliances and lights when not in use
- Develop a Smart grid. Smart grid technology provides consumers with energy information instantly coupled with a rate structure that causes customer behavior to lower electrical needs especially at peak demand. To accomplish this objective, a smart grid incorporates consumer equipment and behavior in grid design, operation, and communication technologies, to reduce demand especially during peak usage periods. Metering tracks how much electricity was used and when electricity was used. The price of electricity used during high demand periods is increased and the price of electricity used during low demand periods is decreased.

5. **Renewable Energy**
   Numerous renewable energy sources are recommended to help achieve the goal. Some of these approaches are suited for use on a smaller scale such as an individual building or lot. Some of the approaches are more effective when developed as a large-scale system serving multiple buildings or lots, as they require a greater level of capital investment and expertise. Development of large-scale systems might involve assistance from the local utilities, for-profit and non-profit organizations, the City and other organizations. Systems that have greater spatial requirements could potentially be incorporated into areas such as parks, street right-of-ways and public or institutional facilities.
   - Solar thermal. A system that uses solar panels to provide hot water or heat for interior space.
   - Solar electric. A system that uses photovoltaic panels to produce electricity for direct consumption or credit from the utility.
   - Geothermal. A heating and cooling system that moves a substance through a series of tubes to draw heat from the earth in the winter and cold from the earth in the summer since the earth has a constant temperature.
   - District heating. A small power plant with a series of steam pipes underground that provides heat to the buildings that are connected to the plant. The heating plant could be run on biomass, such as wood pellets and may also be able to create some electrical load.
   - Solar thermal storage for heating. This system uses solar panels to store heat underground during the summer. Heat is then recovered and used for heating during the colder months.
   - Wind power. Wind power systems could range from small rooftop systems to tower mounted turbines. The planning area may have the potential to produce larger amounts of wind power through wind turbines or windmills. Larger systems would send electricity back to the grid and the residents would get a credit for the electricity the system creates.
   - Subscription to renewable energy. Residents could subscribe to receive renewable energy through the utility.

G. Household Water Consumption

The following practices are intended to achieve the goal of reducing residential per capita water use by 25% compared to current city-wide per capita levels. These practices generally include the use of water-efficient fixtures, the use of rainwater and grey water and education. Other practices will be utilized as they become available.

1. **EPA WaterSense Fixtures**
   Toilets account for more water use than any other fixture within a home. WaterSense toilets use a maximum of 1.28 gallons per flush (gpf) compared to the existing federally mandated standard of 1.6 gpf. WaterSense toilets must also meet a performance standard to ensure consumer acceptance. Other WaterSense fixtures such as faucets and showerheads should be used when they become available.

2. **EPA WaterSense Homes**
   The EPA has developed a WaterSense specification for new residential homes. Similar in concept to an ENERGY STAR home, WaterSense Homes combine WaterSense products with other water-efficient fixtures and practices to reduce the water consumption by about 20% over a typical new home. The following information comes from the EPA website:

   In addition to WaterSense toilets and faucets, these new homes include dishwashers and clothes washers with the ENERGY STAR label, if those appliances are installed when the home is built. WaterSense Homes will incorporate a hot water distribution system that decreases the amount of time it takes for hot water to reach the faucet or shower. Waiting for hot water wastes thousands of gallons of water per year. Pressure regulator valves will be installed downstream of the water meter to reduce the pressure of the water going into the home. This reduces the maximum water flow from fixtures and the likelihood of leaking pipes and hoses. Builders will have the option of developing an outdoor "water budget" and planning accordingly, or ensuring that the landscaping is designed efficiently. If the home has an outdoor irrigation system, it must be installed and audited by WaterSense irrigation partners to ensure efficiency.

3. **Low Impact Landscaping**
   Landscaping in public and private areas should be designed to minimize the need for watering. Native plants should be used extensively as they are adapted to natural rainfall patterns. If sprinkler systems are utilized, a system should be chosen that has the capability to detect soil moisture to prevent over watering.

4. **Rain Barrels and Cisterns**
   Rain barrels and cisterns are placed beneath redirected down spouts and store rainwater for watering rather than relying on the potable water supply.

5. **Greywater Systems**
   Greywater is wastewater that has not come into contact with human biological waste. Examples of domestic processes that produce greywater are washing dishes, washing clothes and bathing. Systems that treat and recycle greywater for non-potable uses such as outdoor watering should be considered.

6. **Automated Meter Reading and Frequent Billing**
   Automated Meter Reading would provide residents with close to real-time water use information and would allow the City to remotely read water meters. Remote meter reading would make it cost-effective for the Water Utility to bill on a more frequent cycle, perhaps as often as every month, compared to the current six-month billing cycle.

7. **Conservation Rate Structure**
   The Water Utility could implement a conservation rate structure, which rewards decreased water use more than the current rate structure. A change in the rate structure would require Wisconsin Public Service Commission approval and would likely require more frequent billing than the current six-month billing cycle.
8. **Conservation Practices**
   General water conservation practices should be utilized such as only doing full loads in the clothes washer and dishwasher.
9. **Education and Outreach**
   General education and outreach programs should be implemented to highlight ways to reduce water consumption.

H. On-Site Stormwater Infiltration

The following practices are intended to achieve the goal of infiltrating 25% of the stormwater volume on or adjacent to points of generation. These practices include rain gardens and porous pavement. Other practices will be utilized as they become available.

1. **Rain Gardens**
   Rain gardens are specially-designed gardens that collect and infiltrate stormwater from impervious areas. They are generally designed to be 6-8 inches deep, in order to retain stormwater long enough for it to infiltrate into the ground. Rain gardens are typically planted with native vegetation such as prairie grasses, though ornamentals may also be used. They can look as manicured or as natural as the gardener chooses. Maintenance is similar to that of any garden. Regular weeding is required the first couple of years, but once established, the native plants tend to crowd out most weeds.

   Rain gardens are sized depending on the area they are intended to serve. Relatively smaller rain gardens could be constructed on individual lots to infiltrate stormwater from the lot (building and driveway) and potentially the sidewalk and street. Larger rain gardens could be constructed at the low point on a block to provide infiltration for the whole block and potentially the sidewalk and street.

2. **Porous Pavement**
   Porous pavement is permeable and therefore allows stormwater to infiltrate into the ground. Currently it can be utilized for driveways, walkways and patios on private property within the City of Madison. The City does not support the use of porous pavement for public streets and some public sidewalks until it has a proven successful track record and installation costs are more competitive.

I. Energy Efficient Service Delivery

The following practices are intended to achieve the goal of the City delivering services in the most energy efficient method possible. Other practices will be utilized as they become available.

1. **Energy Efficient Design and Materials** for construction of municipal facilities such as parks, libraries, police

and fire stations and Water Utility wells and booster stations. Currently, the City of the Madison requires all new City-owned buildings and major renovations achieve a minimum of LEED Silver certification.

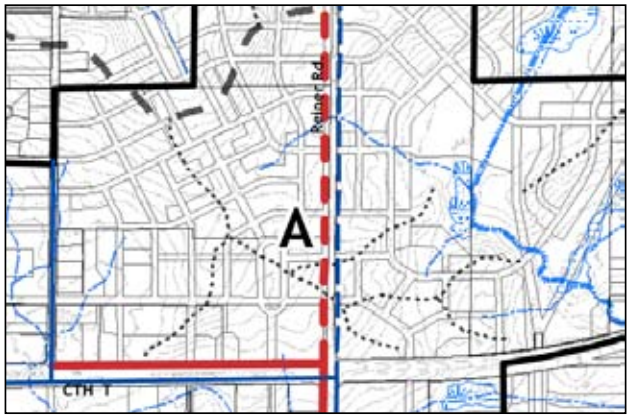
2. **Energy Efficient Fixtures** for municipal facilities
3. **Use of Renewable Energy** for operation of municipal facilities
4. **Efficient City Vehicles** that are fuel efficient, utilize alternative fuels or hybrid technology
5. **Efficient Routing and Tracking** for refuse and recycling pick up, snow and ice removal, tree maintenance, and street repair through the use of global positioning systems (GPS), automated vehicle location (AVL), automated work order systems and other technologies
6. **Automatic Meter Reading** systems for the Water Utility
7. **Zero Waste Projects** to increase recycling and reduce waste

J. Sanitary Sewer Service

The Phase 1 planning area is part of three watershed drainage basins and there are sub-basins within each of them. These drainage areas primarily determine how sanitary sewer service will be provided. **See Map 12 Utilities and Development Phasing.**

1. Door Creek Basin

The portion of the planning area in the Door Creek drainage basin will be served by extensions of the MMSD Far East Interceptor/Door Creek Extension and City of Madison sewers located south of the planning area in the Sprecher neighborhood. In 2008, MMSD constructed the Gaston Road Extension of the Far East Interceptor. This extension followed Gaston Road to the north underneath Interstate 94 to a point approximately 850 feet north of the Interstate. This interceptor will be extended to the northwest to serve the eastern portion of the planning area.



Map 12: Utilities and Development Phasing (excerpt)

In 2009, the City of Madison constructed the 12-inch Northeast Neighborhood Interceptor into the planning area. The interceptor was extended underneath Interstate 94 to the intersection of Reiner and CTH T/TT. It then continues to the west to Felland Road. In 2010, an 8-inch City of Madison interceptor will be extended northward from the intersection of Reiner and CTH/TT along Reiner Road to just south of the proposed extension of Lien Road.

In the future, an extension may be made from the interceptor located at the current eastern limits of Milwaukee Street. This extension will likely follow the future extension of Milwaukee Street into the planning area and be constructed in conjunction with the roadway project.

2. Starkweather Creek Basin

Much of the planning area is in the Starkweather Creek drainage basin. This portion of the planning area will be served by the 24-inch Madison Metropolitan Sewerage District (MMSD) Northeast Interceptor/Lien Extension sanitary sewer interceptor. The interceptor has been extended underneath Interstate 39-90-94 and into the Village at Autumn Lake subdivision by the City of Madison. It will serve development in the Felland neighborhood, Nelson neighborhood and the planning area.

The interceptor will eventually be extended northward through the Village at Autumn Lake subdivision in two branches. One branch will extend northward up to the City of Madison's Nelson's Road Lift Station which is nearing capacity and will be removed. The second branch will extend northeastward along the Wisconsin DOT railway up to the Burke Town Hall property. Future extensions of these sewers will serve the remainder of the Starkweather Creek drainage basin by gravity flow, with the collection mains generally located within public streets and drainageways.

3. **Upper Koshkonong Creek Basin**
   Sanitary sewer service to the portion of the planning area in the Upper Koshkonong drainage basin is not expected for many years and therefore the location of future sewers has not been determined. Service will likely come via extensions of the MMSD Far East Interceptor potentially located along the tributaries of Upper Koshkonong Creek located just east of the planning area. It may also be possible to serve some areas in the Upper Koshkonong basin with sewers from the Starkweather Creek and Door Creek drainage basins.

4. **Sanitary Sewer Charges**
   All developing parcels can expect one or more charges from the Madison Sewer Utility for the privilege of connecting to public sanitary sewer. This charge can be in the form of an impact fee, direct or deferred assessment or a simple connection charge. Certain parcels could reside in multiple fee districts. The City has adopted two Sanitary Sewer Improvement Fee Districts that apply to portions of the planning area. The Felland Road District applies to lands in the northwest of portion of the planning area and the Northeast District applies to lands in the southwest portion of the planning area. Charges that represent a prorated share of the costs for the City to extend sewer service to the respective parcel will be required. In addition, all development parcels will incur sewer area charges from the Madison Metropolitan Sewerage District for downstream facilities and treatment plant connection charges. All charges are adjusted annually for interest or inflation.

K. Public Water Service

1. **Water Distribution System**
   Public water service to the planning area will be provided by the Madison Water Utility through the extension of water mains within Pressure Zone 123, which covers lands on the far east side of Madison. The Water Utility has extended water mains into the planning area. The first water main was extended eastward along CTH T and northward along Felland Road up to the Bridle Downs subdivision. This main was installed in conjunction with infrastructure for the Felland Reservoir. A second water main was extended eastward along Lien Road to Felland Road as part of the recent Lien Road reconstruction project. A third water main was extended northward along Sprecher Road and also westward along CTH T in conjunction with a sanitary sewer interceptor along the same route.

   As development occurs, larger water mains will be extended along the primary roads, with smaller water distribution mains constructed along local streets developed within the neighborhood. The Water Utility will also seek to loop the larger mains to increase service reliability.

2. **Reservoirs and Water Towers**
   Pressure Zone 123 is pressurized by the Cross Hill water tower located near Nelson Road and USH 151 and the Sprecher Road Tower located within the Grandview Commons subdivision. These towers have the ability to provide adequate water pressure to elevations between about 900 and 1,040 feet U.S.G.S, which will be sufficient for almost all parts of the neighborhood. The use of a booster station will be required to serve development areas above 1,040 feet.

   While no water towers or additional reservoirs are planned within the planning area, the Water Utility Master Plan does identify a conceptual water tower location on the higher elevations east of Thorson Road and south of Burke Road. This potential tower would likely provide increased water pressure in the planning area.

3. **Public Wells**
   In the near term, Wells 15, 25 and 29 will provide potable water to the planning area. Continued development on the far east side of Madison will increase the demand for water, and new municipal wells will eventually be required to ensure a reliable supply. The Water Utility Master Plan includes a conceptual location for a future Well 41 near the intersection of Reiner Road and CTH T. This location is very conceptual at this point, as the siting of a new well requires a considerable amount of detailed analysis and review. Development of a well in this general location should consider potential impacts to the water resources in the area, most notably Door Creek.

L. Stormwater Management

1. Land Use and Street Plan

The Land Use and Street Plan illustrates a basic framework of proposed stormwater management facilities within the planning area, including open drainageways and stormwater detention facilities. The map does not illustrate the location of smaller infiltration mechanisms such as rain gardens or segments of underground storm sewer that will be needed at some locations. The facilities shown on the map are preliminary, but their locations and approximate sizes are based on an analysis of drainage patterns and the amount of land and potential future development within the many sub-basins in the planning area. Detailed stormwater management planning and engineering for development projects may result in some modifications to these conceptual facilities, but it is expected that any revisions will be generally consistent with the framework recommended in the Land Use and Street Plan.

2. Open Drainageways

Much of the stormwater conveyance within the planning area is planned within open drainageways, many of which are part of larger open space corridors. Drainageways provide environmental benefits, such as an increased opportunity for water to infiltrate back into the ground and a location for wildlife habitat and movement. To the extent compatible with stormwater management objectives and other intended uses of the corridor, drainageways should be maintained in a relatively natural, undeveloped state. Natural groundcovers are encouraged as an alternative to mowed swales. The natural appearance can provide a visual open space amenity within the neighborhood and serve as a land use buffer.

The open drainageways are recommended to be at least 75 feet in width. Drainageways that contain detention facilities in addition to stormwater conveyance will most likely be wider. While portions of the corridors may be dedicated to the public for stormwater management or other purposes, some of the lands within the illustrated corridors may remain as private property. It is also possible that lands adjacent to streams and wetlands will be subject to special regulations that are applicable to an area larger than the illustrated corridors.

3. Streambank and Wetland Improvements

It is recommended that measures be taken to limit erosion along the existing streams and drainage courses within the planning area. The stream banks could be stabilized through selective tree removal to increase sunlight and installation of appropriate native plants. The limited use of natural boulders or similar materials may also be appropriate. In some cases the existing streams and drainage courses will not be suitable for locations to accept urban stormwater. In these situations, planned detention facilities that are located adjacent to these waterways will gradually release stormwater into the waterway at rates similar to the pre-development rate. Measures should also be taken to enhance and protect wetlands, such as removal of invasive brush and trees, dredging of accumulated past sediments and careful management of land disturbance and runoff in their vicinities to prevent further degradation. Ideally, improvements to the streams and wetlands will occur at the time the adjacent land is developed or earlier.

4. Storm Sewers

The street network and underground storm sewers will accommodate the majority of "upstream" stormwater conveyance, collecting stormwater that will eventually flow into open drainageways and detention facilities. In some situations, larger storm sewers will be necessary to convey stormwater to its ultimate destination. Storm sewers will also be used to connect drainageways where maintaining an open drainageway is not a reasonable approach, given the proposed land uses and urban street pattern.

5. Stormwater Detention Facilities

Preliminary locations for stormwater detention facilities are illustrated on the Land Use and Street Plan. In locating the facilities, it was generally assumed that individual properties will develop separately and that about five percent of each property will be required for storm water detention. If the development of several properties is coordinated, it may be possible to shift the locations of some of the required stormwater facilities among them and perhaps eliminate some. The actual percentage of any property that will be utilized for stormwater management will be determined during detailed development planning, and will vary based on the type of development

proposed, the stormwater management mechanisms used within the development, soil conditions, and applicable stormwater regulations.

6. **Madison Stormwater Utility**
   The Madison Storm Water Utility, established in 2001, handles stormwater management in the City of Madison for both existing conditions and post-development conditions. The Utility charges user fees to all City of Madison parcels for this service.

M. Other City of Madison Services

1. **Police Protection Services**
   The City of Madison Police Department will provide police protection services to lands within the planning area that are in the City of Madison. Lands located in the Towns will continue to receive services from the Dane County Sheriff's Office or through another arrangement that the Towns may make in the future.

   The planning area is part of both the Madison Police Department's East District and North District. The East District Station is located at the intersection of Thompson Drive and Cottage Grove Road just west of Interstate 39-90-94. This station is about two miles from the edge of the planning area. The North District Station is located on Londonderry Drive near the intersection of Packers Avenue and Northport Drive. This station is about four miles from the edge of the planning area.
   The City of Madison continues to grow and expand, and additional police officers and support personnel will be needed in order to maintain the staffing levels required to serve a larger population and more spread-out community. As development continues to occur throughout Madison's northeast side, the Police Department may eventually develop a Northeast District. This new district would probably serve the planning area.

2. **Fire Protection and Emergency Medical Services**
   The City of Madison Fire Department will provide fire protection and emergency medical services to lands within the planning area that are in the City. Lands within the Towns will continue to receive these services through service arrangements that the Towns have established with other municipalities.

   Currently three Madison fire stations are located in relatively close proximity to the planning area: Station No. 11 on Nelson Road near USH 151, Station No. 8 on Lien Road at East Washington Avenue and Station No. 5 on Cottage Grove Road near Stoughton Road. Response time to the planning area from the nearest fire station is about 4 to 6 minutes. While fire and emergency response times are relatively good, a new fire station may be built within or near the planning area to support this growing part of the City. The timing of this new station is somewhat dependent on the pace of development in the area. However, it is possible that it could be built within the next five years.
3. **Streets and Sanitation Services**
   For lands within the City of Madison, the Madison Street and Sanitation Division provides collection of solid waste, large items and recyclable materials on a year round basis; the collection of yard waste and brush on a monthly basis; and leaf collection in the Spring and Fall. Solid waste collection is provided primarily to single-family dwellings and smaller apartment projects because most larger apartments and commercial establishments contract with private firms for this service. The City provides collection service to apartment and commercial properties if certain requirements can be met. The Streets Division also provides street repair, street cleaning and snow and ice control. Currently, these services are provided to the planning area from the East Side Public Works Facility located on Sycamore Road.

N. Development Phasing

The planning area is divided into three development phasing areas. All of the lands within each phasing area share certain characteristics regarding the sequence for urban services extension, connections with the planned neighborhood street network or municipal jurisdiction that make it reasonable to consider them generally ready to begin urban development at about the same time. The boundaries of the three phasing areas should be considered approximate. The actual sequence of development will depend on a variety of factors including property owner interest, the budgeting and scheduling of public infrastructure and urban service extensions, the development plans

for adjacent properties and whether or not the recommended street connections to the area can be implemented at that time. **See Map 12 Utilities and Development Phasing.**

While a general A to C sequence for beginning development within the three defined phasing areas is broadly assumed, it is not intended that the start of development in any phasing area necessarily should be deferred until such time as development within any other phasing area extends to a particular location or reaches a certain percentage of full build-out. Simultaneous development at multiple locations within the planning area can benefit the neighborhood by increasing development opportunities and choices and by facilitating completion of desirable street connections and improving accessibility. The appropriate time to begin development in any phasing area will depend more on the availability of City infrastructure improvements and services than on the pace of development in other phasing areas.

1. **Phasing Area A**
   Phasing Area A comprises the southcentral portion of the planning area and contains approximately 783.8 acres. This area is adjacent to existing and planned development in the City's Sprecher neighborhood. Much of the land in Phasing Area A has been annexed to the City and the property owners have expressed an interest in near-term development. Sanitary sewer interceptors and water mains have been, or soon will be, extended into this area to serve anticipated development. Development within Phasing Area A will encompass the broad range of land uses recommended for the planning area. Phasing Area A includes all four Housing Mix districts, the proposed Community Mixed-use District, a portion of the Employment District and eight parks. The phasing area also includes areas that are recommended for open space preservation including much of the Door Creek corridor. It is recommended that the City request an amendment to the Central Urban Service Area to include all or parts of Phasing Area A as soon as the *Plan* is adopted.

2. **Phasing Area B**
   Phasing Area B generally comprises the central portion of the planning area and covers approximately 705.9 acres. Many of the landowners within Phasing Area B have indicated an interest in near-term development and it is recommended that development could begin here once the necessary street and utility connections are available through intervening lands.
   This phasing area includes each of the four Housing Mix types, both Neighborhood Mixed-Use Districts, both potential school sites, the area park and several neighborhood parks. This phasing area also includes planned open space corridors. In addition to the implementation of key land uses within this phasing area, it is anticipated that much of the Reiner Road reconstruction and expansion would be completed along with development. Additionally, the extension of Lien Road to Reiner Road, another important transportation improvement, will likely be completed during this phase.

3. **Phasing Area C**
   Phasing Area C comprises an eastern portion of the planning area and contains approximately 563.7 acres. This phasing area is split between the Starkweather Creek, Door Creek and Koshkonong Creek watersheds. Development in the Koshkonong Creek watershed may be contingent upon extension of sanitary sewer interceptors into this watershed from the south. The lands within this phasing area include significant open space uses in addition to Housing Mix 1, Housing Mix 2 and employment uses.

IV. PLAN IMPLEMENTATION

This section recommends the actions needed to prepare the planning area for development with the full range of urban services and to ensure that future development is consistent with the recommendations of this *Plan*.

A. Neighborhood Development Plan Adoption

The City of Madison Comprehensive Plan, adopted in January 2006, includes broad growth and land use recommendations for the planning area, which is identified as part of Peripheral Planning Area C and recommended as a potential location for relatively near-term City of Madison expansion and future development. The Comprehensive Plan also requires that a more-detailed plan for future City growth areas be prepared and adopted prior to beginning urban development within them. The Northeast Neighborhoods Development Plan has been prepared to provide detailed land use, transportation, and public service recommendations to guide the future growth and development of the planning area.

It is recommended that the Northeast Neighborhoods Development Plan be adopted as a supplement to the City of Madison Comprehensive Plan. It is also recommended that the Comprehensive Plan Generalized Future Land Use Plan map be amended as appropriate during the next review and evaluation to reflect the land use recommendations in the Northeast Neighborhoods Development Plan.

B. Sustainability Goals

1. Transportation

a) The Goal

Capture 25% of all trips made by persons living in the planning area by walking, bicycling or transit and/or reduce household motor vehicle miles of travel (VMT) by 25% (in comparison to a baseline to be determined by staff).

b) Implementation Entities and Responsibilities

The table below outlines the recommendations and implementation responsibilities. Cooperation will be needed from several different entities. **See Table 6**.

c) Incentives

Employer-based Transportation Demand Management (TDM) measures and other incentives to help enhance the desirability of non single-occupancy vehicle (SOV)-based transportation modes should be considered as part of an overall TDM program or strategy for the planning area.

Individual employers should be organized, possibly through the formation of a Transportation Management Association, in an effort to administer a range of TDM-based incentives. Such incentives could include those that address the financial, time and convenience aspects of individual transportation choices. These can include preferential parking for ride sharers and subsidies for transit riders. Other employer-based support measures may include transit pass programs, on-site sales of transit passes and guaranteed ride home programs.

Further, the City of Madison should require management entities and individual businesses to prepare and implement TDM programs as part of development approvals and also require individual businesses to join a TMA to jointly implement TDM programs. The City should consider the creation of an ongoing assessment district that would assess larger businesses (employing more than 50 people in one location, for example) to help fund these programs. The funds would be based on the number of employees expected at the proposed facility and could be used to pay for measures and incentives to reduce SOV trips and VMT. A potential component of a TDM program is an alternative commute coordinator, employed by the district or larger businesses. These coordinators have proven to be an essential link in actually implementing the programs once established.

"Parking cash-out" programs are another employer-based program that can be utilized. Under a parking cash-out program, an employer gives employees a choice to keep a parking space at work or to accept a cash payment and give up the parking space and utilize another mode of transportation such as rideshare, transit, bicycle or walking.

Table 6: Transportation Goal - Recommendations and Implementation Entities

	City	Developer	Builder	End-User	Utility	Other Govt. (e.g., Dane County, RTA)	Other/ Non-profits
Land Use							
Compact,mixed-usedevelopment	✔	✔					
Transit-oriented development	✔	✔	✔				
Pedestrian and Bicycle Facilities							
Interconnected street network	✔	✔					
Sidewalks	✔	✔	✔				
Pedestrian and bicycle paths	✔	✔	✔				
Bicycle wayfinding	✔	✔	✔				
Bicycle parking	✔	✔	✔				
Traffic calming	✔	✔	✔				
Snow Removal	✔			✔			
Mitigatebarrierstopedestrianand bicycle mobility	✔	✔					
Transit Service							
Madison Metro Service	✔						
Paratransit	✔					✔	
Commuter Rail Service	✔					✔	
Transit Priority Corridors	✔	✔				✔	
Transportation Demand Management (TDM)							
TDM Plan and Program	✔	✔		✔		✔	✔
Transportation Management Associations	✔	✔		✔		✔	✔

Employees are not forced to stop driving or give up free parking, but those who do are rewarded financially.

d) Measuring Success

Household Trip Reduction

It is anticipated that the data will be compiled through a survey that will be sent to a portion of the households within the planning area. The survey is intended to obtain travel data by asking residents to keep track of their trip-making behavior over a specific period of time, usually a week. The National Household Travel Survey (NHTS), a federally-administered travel survey (funded and managed by the Federal Highway Administration), will be used as a model for the planning area travel survey. The NHTS is a source of national data on the travel behavior of the American public. The dataset allows analysis of daily travel by all modes, including characteristics of the people traveling, their household and their vehicles.

Household Vehicle Miles Traveled (VMT) Reduction

It is also desirable to reduce household vehicle miles traveled by 25%. At this time, the data collection and monitoring methods for household VMT (or VMT per capita) are under development. A specific measurement and monitoring program will be developed as VMT data collection technologies and techniques are refined over time. However, household VMT can be monitored in the planning area as part of the planning area travel survey described above. A component of the survey should include the voluntary reporting of vehicle odometer readings of residents in the planning area. In this way, household VMT can be tracked over time, at intervals corresponding with administration of the travel survey.

e) Monitoring Success

Data on progress towards the goal will be compiled and reviewed on annual basis once development commences in the planning area. Data collection will occur over a 30 year period.

2. Energy

a) The Goal

Reduce household consumption of natural gas and fossil fuel-generated electricity by 25% compared recent residential construction.

b) Implementation Entities and Responsibilities

The table below outlines the recommendations and implementation responsibilities. Cooperation will be needed from several different entities. **See Table 7**.

Table 7: Energy Goal - Recommendations and Implementation Entities

	City	Developer	Builder	End-User	Utility	Other Govt. (e.g., Focus on Energy)	Other/ Non-profits
Energy Efficient Site Planning/Design/Certification							
Design lots and orient buildings	✔	✔	✔				
Build at higher densities	✔	✔	✔				
Ensure homeowners' associations allows green building practices		✔					
Agreements to incorporate components of programs such as Wisconsin ENERGY STAR Homes, Green Built Home, Green Globes, LEED		✔	✔				
Education and Outreach							
Education on various topics	✔	✔	✔	✔	✔	✔	✔
Recognition programs	✔				✔	✔	✔
Energy Efficient Appliances and Fixtures							
Use energy efficient appliances and fixtures			✔	✔		✔	
Use programmable thermostats			✔	✔		✔	
Use clotheslines to dry clothes				✔			
Low-energy sources for indoor and outdoor lighting (CFLs or LEDs)			✔	✔		✔	
Use master electrical switches			✔	✔		✔	
Behavior							
Perform energy audits and track energy usage				✔	✔	✔	✔
Reasonably turn down furnace and air conditioner				✔			
Turn off appliances and lights when not in use				✔			
Develop a Smart grid	✔			✔	✔	✔	
Renewable Energy							
Solar thermal	✔	✔	✔	✔	✔	✔	
Solar electric	✔	✔	✔	✔	✔	✔	
Geothermal	✔	✔	✔	✔	✔	✔	
District heating	✔	✔	✔	✔	✔	✔	
Solar thermal storage for heating	✔	✔	✔	✔	✔	✔	
Wind power	✔	✔	✔	✔	✔	✔	
Subscription to Renewable Energy				✔			

c) Incentives

Federal Tax Credits

The federal government currently has the following programs and other programs may be available.

- A $2,000 tax credit to homebuilders for homes that achieve 50% energy savings for heating and cooling over the 2004 International Energy Conservation Code. One third of the energy savings must come from building envelope improvements.
- A tax credit for homeowners that install some forms of renewable energy systems for 30% of the cost.
- A tax credit for homeowners that install energy efficiency features such as windows, doors and insulation. The credit is for 30% of the cost, up to $1,500.

Energy Star

The ENERGY STAR program provides discounts and rebates on products that reduce consumption.

Focus on Energy

Focus on energy provides numerous rebates for products and projects that reduce consumption and systems that produce renewable energy.

City Incentives

The City could explore providing incentives for developers and builders that help achieve the goal. Potential incentives could include rebating back a portion of the permit fees and expedited development review for projects that meet certain standards.

d) Measuring Success

It is anticipated that the data will be compiled in a similar manner to how the baseline for the goal was developed. Information on a portion of the dwelling units that have been constructed in the planning area will be compiled from City of Madison Assessor's Office records Consumption data for these units will then be obtained from the local energy utility Currently Madison Gas and Electric and Alliant Energy serve portions of the planning area.

e) Monitoring Success

Data on progress towards the goal will be compiled and reviewed on an annual basis, as data is available, once development commences in the planning area. Data collection will occur over a 30 year period.

3. Water

a) The Goal

Reduce residential per capita water use by 25% compared to current city-wide per capita levels.

b) Implementation Entities and Responsibilities

The table below outlines the recommendations and implementation responsibilities. Cooperation will be needed from several different entities. **See Table 8**.

Table 8: Water Goal - Recommendations and Implementation Entities

	City	Developer	Builder	End-User	Utility	Other Govt. (e.g., PSC)	Other/ Non-profits
EPA WaterSense Fixtures			✔	✔			
EPA WaterSense Homes			✔	✔			
Low Impact Landscaping			✔	✔			
Rain Barrels and Cisterns			✔	✔			
Greywater Systems			✔				
Automated Meter Reading and Frequent Billing	✔						
Conservation Rate Structure	✔					✔	
Conservation Practices				✔	✔		
Education and Outreach	✔	✔	✔	✔			

c) Incentives
Reduced water consumption will benefit end-users through Water Utility bills. The Water Utility currently has a toilet rebate program which reduces the cost of replacing a less efficient toilet. Other incentives will be pursued in the future.

d) Measuring Success
Water consumption data for a portion of the households within the planning area will be obtained from the Water Utility.

e) Monitoring Success
Data on progress towards the goal will be compiled and reviewed on annual basis once development commences in the planning area. Data collection will occur over a 30 year period.

4. Stormwater

a) The Goal
Infiltrate 25% of the stormwater volume on or adjacent to the points of generation.

b) Implementation Entities and Responsibilities
The table below outlines the recommendations and implementation responsibilities. Cooperation will be needed from several different entities. **See Table 9.**

Table 9: Stormwater Goal - Recommendations and Implementation Entities

	City	Developer	Builder	End-User	Utility	Other Govt.	Other/Non-profits
Rain Gardens		✔	✔	✔			
Porous Pavement		✔	✔				

Developer
Developers will be responsible to submit a stormwater management plan for their proposed development that achieves the goal.

Engineering Division
Engineering Division staff will review the stormwater management plan to determine if the plan will achieve the goal and recommend any necessary revisions if the plan does not achieve the goal. Staff will record a deed restriction on all parcels that will include a device that will be privately maintained if that device is being used towards meeting the development's stormwater requirements. They will also record a maintenance agreement requiring continued maintenance of the device. They will follow up on complaints of improper maintenance and determine the best course of action to gain compliance.

Builders
Builders will be responsible for constructing the device and any associated infrastructure such as an enclosed drainage system to direct roof water to a rain garden. Meeting the goal will likely require some modified construction and design standards. Builders will also be responsible for protection of the device during construction.

Building Inspection
Building inspection staff will inspect the device in the field, to assure proper construction, prior to issuance of an occupancy permit. If winter conditions preclude construction of the device prior to occupancy then construction of the device shall be a condition of the occupancy permit. Inspection of the device will assure that the initial homebuyer is receiving a device in good working order and will not be responsible for any immediate maintenance costs upon taking ownership of the property.
End User
Depending on how a development is established the maintenance of these facilities will be the responsibility of the property owner, homeowner's association or property manager. These parties will be responsible for maintaining the devices in proper working order and, in the long term, possibly replacement of the device. These

responsibilities will be documented in a deed restriction and maintenance agreement that will be recorded against the parcel prior to sale of the parcel. If the end user neglects these responsibilities the City will have the right and responsibility to require maintenance and charge the cost of that maintenance to the property owner.

c) Incentives
To be determined.

d) Measuring Success
During the design phase, progress towards the goal will be determined through stormwater calculations and design documents submitted for a project. During the construction phase, the effectiveness of the devices will be verified prior to sale of a lot or granting building occupancy.

e) Monitoring Success
There will be continual monitoring of this goal since it will be determined as part of the development approval process (design phase and construction phase) for a project. A formal review will be completed with every 1,000 dwelling units that are constructed within the planning area. Data collection will occur over a 30 year period.

5. Energy Efficient Service Delivery

a) The Goal
Deliver City services in the most energy efficient method possible.

b) Implementation Entities/Responsibilities
The table below outlines the recommendations and implementation responsibilities For some of the recommendations, cooperation will be needed from several different entities. **See Table 10**.

Table 10: City Services Goal - Recommendations and Implementation Entities

	City	Developer	Builder	End-User	Utility	Other Govt.	Other/Non-profits
Energy Efficient Design and Materials	✔				✔		
Energy Efficient Fixtures	✔						
Use of Renewable Energy	✔						
Efficient City Vehicles	✔						
Efficient Routing and Tracking	✔						
Automatic Meter Reading	✔				✔	✔	
Zero Waste Projects	✔						

Agencies that have the most direct impact on reducing the energy consumed by City programs and facilities include Building Inspection, Engineering, Facilities Management, Fleet Services, Library, Metro Transit, Parks Division, Streets Division, Traffic Engineering and Water Utility. The City will also seek partnerships with other entities and organizations to further the goal of energy savings for service delivery. This may include local utilities, University of Wisconsin, Madison Area Technical College, Edgewood College, Sustain Dane, Wisconsin Energy Conservation Corporation, 1000 Friends of Wisconsin and Sierra Club.

c) Measuring Success
The City does not typically track expenditures on a geographic basis. However, to the degree possible, the City will attempt to quantify the amount of energy consumed in providing services to the planning area.

For consumption of natural gas and electricity, the City can review the service records for its facilities in the planning area. These numbers would be tracked as part of the City's building inventory used to identify energy wasters and prioritize efficiency improvements.

For vehicle fuel, the total number of gallons consumed by City agencies is reported annually in *Madison Measures*,

which is a compilation of high-level agency performance data. This is a citywide number for all City agencies excluding Metro Transit. Approximating the amount of fuel used by City vehicles in the planning area may be possible using data collected from global positioning systems (GPS) or automated vehicle location (AVL) systems mounted to City vehicles.

d) Monitoring Success
Data on progress towards the goal will be compiled and reviewed with every 1,000 dwelling units that are constructed within the planning area. Data collection will occur over a 30 year period.

C. Central Urban Service Area Amendments

The planning area is not currently within the Central Urban Service Area. In order for the City of Madison to provide public sanitary sewer and the full range of urban services to future development in the neighborhood, the lands proposed for development must first be included within the Urban Service Area.

Following adoption of the *Plan* as a supplement to the Comprehensive Plan, the City should prepare and submit to the Capital Area Regional Planning Commission an application to amend the Dane County Water Quality Plan to include all of the lands within Phasing Area A in the Central Urban Service Area. Future requests to amend the Central Urban Service Area to include all or portions of the lands within Phasing Areas B and C should be submitted at the time it is determined appropriate to begin urban development in those areas, or to extend public sanitary sewer to serve existing developments that currently do not have it.

D. City of Madison Attachments

The lands that are within the Town of Burke and Town of Blooming Grove will eventually be attached to the City of Madison pursuant to the Cooperative Plan for the respective towns. The Cooperative Plans require that lands within the Madison Boundary Adjustment Area (Burke) and the North Phased Annexation Area (Blooming Grove) that are proposed for development (as defined in the Cooperative Plans) must request attachment to the City. The City may decide whether or not to accept the attachment and whether or not to require that the development have the full range of urban services. It is generally recommended that future development on lands within the Madison Boundary Adjustment Area and the North Annexation Area occur only after the lands are attached to the City of Madison. It is also recommended that the City not approve development or subdivisions within these areas unless the full range of urban services can be provided at the time of such approval.

E. Zoning Map Amendments

Most of the lands within the planning area are zoned Agricultural District, and can only be used for agriculture and other limited uses. The majority of the remaining lands are zoned for residential uses and several areas are zoned for commercial use. Under the provisions of the Burke and Blooming Grove Cooperative Plans, subdivision requests and requests to rezone property from an agriculture or residential zoning classification to a non-residential classification constitute "development" and may require attachment to the City and the provision of full urban services. In the City of Madison, the agricultural zoning district is used as an interim classification placed on lands that will eventually be rezoned to permit urban development.

It is recommended that the zoning classification of lands within the planning area conform to the land use recommendations of the adopted *Plan*. It is further recommended that lands be rezoned to another district only in conjunction with consideration of a specific a subdivision and/or a specific development proposal sufficiently detailed to ensure that development within the district will be consistent with the neighborhood plan.

F. Design Standards

The Madison Comprehensive Plan recommends that plans for new development areas incorporate the principles of Traditional Neighborhood Development. Urban design and architectural design are particularly important elements in Traditional Neighborhood Development; but current City of Madison ordinances provide only limited design regulations and standards, and only a few zoning districts include design criteria beyond basic bulk standards. The City of Madison is currently working with a consultant to develop a new Zoning Code,

which will include form-based standards that will provide more effective design controls as an integral part of the zoning regulations. It is anticipated that the new Code will be adopted in 2010. In the meantime, and potentially also to supplement the requirements in the new Zoning Code, there are several ways that design standards can be incorporated into future development approvals to ensure consistency with the neighborhood development plan's design recommendations. The City's draft zoning code is expected to include design standards and guidelines that are not present in the current zoning code. The new zoning code is expected to include mixed-use zoning districts, a transit-oriented development district and a variety of residential districts. Standards for building form and design may be included in the new code. Adoption of these zoning districts and design standards will help implement the recommendations of this plan. Other implementation mechanisms may include:

- Design standards can be included in private deed restrictions and covenants applied to the property. In some cases, it may be appropriate to require that such design standards be established as a condition of zoning or subdivision approvals.
- Design standards can be incorporated in the General Development Plan and Specific Implementation Plan for projects developed with Planned Unit Development district zoning.

It is recommended that zoning and subdivision approvals for development projects in the planning area establish project design standards that address the Traditional Neighborhood Development principles outlined in the neighborhood development plan. The appropriate standards may be contained within the regulations of the zoning districts assigned to the project, particularly once the new Zoning Code is adopted, or could applied as a part of the conditions of development approval.

G. Land Subdivision Regulations

Most lands in the neighborhood will need to be subdivided into smaller parcels before they can be developed with urban uses. As these lands are proposed for development, many of the neighborhood plan recommendations can be implemented through the review and approval of subdivision plats and application of the City of Madison's land subdivision regulations. In Madison, requests for approval of a land subdivision are usually considered in conjunction with a request to rezone undeveloped property to allow urban development.

Subdivision approvals establish the location of public streets, parks and stormwater management facilities. The rights-of-way and other lands required for these purposes will largely be acquired through dedications as provided in the subdivision regulations. The spatial relationships between the proposed streets, proposed parks, and other land uses illustrated in the Land Use and Street Plan reflect important neighborhood planning objectives. These relationships need to be maintained as the land in the neighborhood is developed if these objectives are to be realized.

Subdivision also establishes the sizes and arrangement of individual development parcels. Subdivision applications will be reviewed together with the corresponding rezoning application to ensure that the proposed division will support the land uses recommended for the site in the neighborhood plan, and that plan recommendations regarding provision of a variety of housing types and densities in residential areas are implemented.

Future subdivisions in the planning area should conform to the recommendations in the adopted *Plan*, particularly regarding the locations of streets, off-street 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. For higher-density types of development, proposed subdivisions may also be required to provide information showing how the lots may be developed with building designs that maintain the desired street orientation and pedestrian-friendly street character.

Local streets within proposed subdivisions should either generally conform to the pattern of local streets shown in the neighborhood plan, or similarly reflect the objectives illustrated in the neighborhood development 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 and the streets' function as part of the stormwater management drainage system.

H. 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. Currently, the City's Official Map does not include any planned rights-of-way or other proposed sites for public uses within the planning area.
It is recommended that the City of Madison Official Map be revised to identify the proposed alignment and right-of-way widths of Felland Road, Gaston Road, Lien Road, Reiner Road, Sprecher Road and the planned extension of Milwaukee Street recommended in the *Plan*.

While it is not a specific recommendation that these sites be identified on the Official Map, the proposed locations of the Area Park and neighborhood parks are important elements in the recommended arrangement of land uses and activities in the planning area. It is recommended that the City of Madison Parks Division take appropriate steps to secure the future ability to acquire public park sites at the recommended locations at the time they are needed.

I. Capital Improvement Program and Capital Budget

The *Plan* proposes several types of public improvements and facilities for which public funds may be required. Public improvements and facilities that might require some public funding include proposed public parks and open spaces, arterial, collector and local streets, stormwater management facilities, sanitary sewer facilities and potable water facilities. Implementation of some of the public improvements recommended in the neighborhood development plan will also require participation and cost sharing by other units of government.

It is recommended that the responsible City agencies include within future capital improvement programs and the capital budget those public improvements and facilities for which public funding is required to implement the Northeast Neighborhoods Development Plan. It is further recommended that the City continue to work cooperatively with other agencies and units of government to seek their participation in the development planning and the costs of public improvement projects of mutual benefit recommended in the neighborhood development plan.

J. Dane County Parks & Open Space Plan

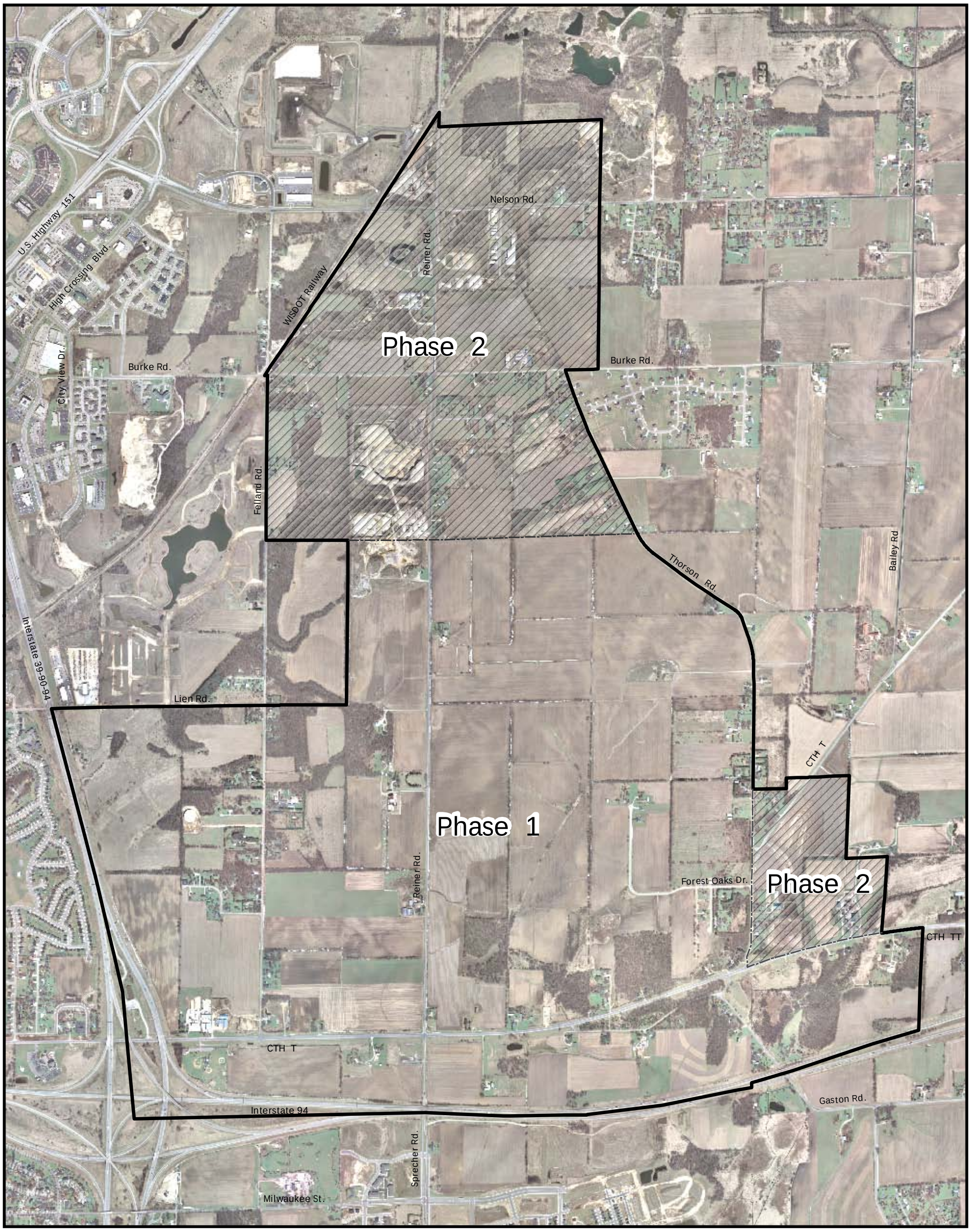
The Plan recommends preservation of open space corridors associated with Door Creek and other natural features in the Seminary Springs area. A portion of this area overlaps the Dane County Parks & Open Space Plan's Koshkonong Creek Natural Resource Area (NRA) and the remaining area will complement the existing NRA. NRA's are highest priority preservation areas and are eligible for funding through the County.

It is recommended that the City of Madison petition the Dane County Parks Division and Park Board to include the recommended Door Creek Corridors in the Dane County Parks & Open Space Plan.

K. Interagency and Intergovernmental Cooperation

The *Plan* provides a framework for coordinating the activities of City of Madison agencies and other units of government in the implementation of the *Plan*. Many important elements of the *Plan* will require continued cooperation and coordination.

It is recommended that the of City of Madison work with the appropriate agencies and other units of government to fully implement the *Plan.*



Map 1: Planning Area

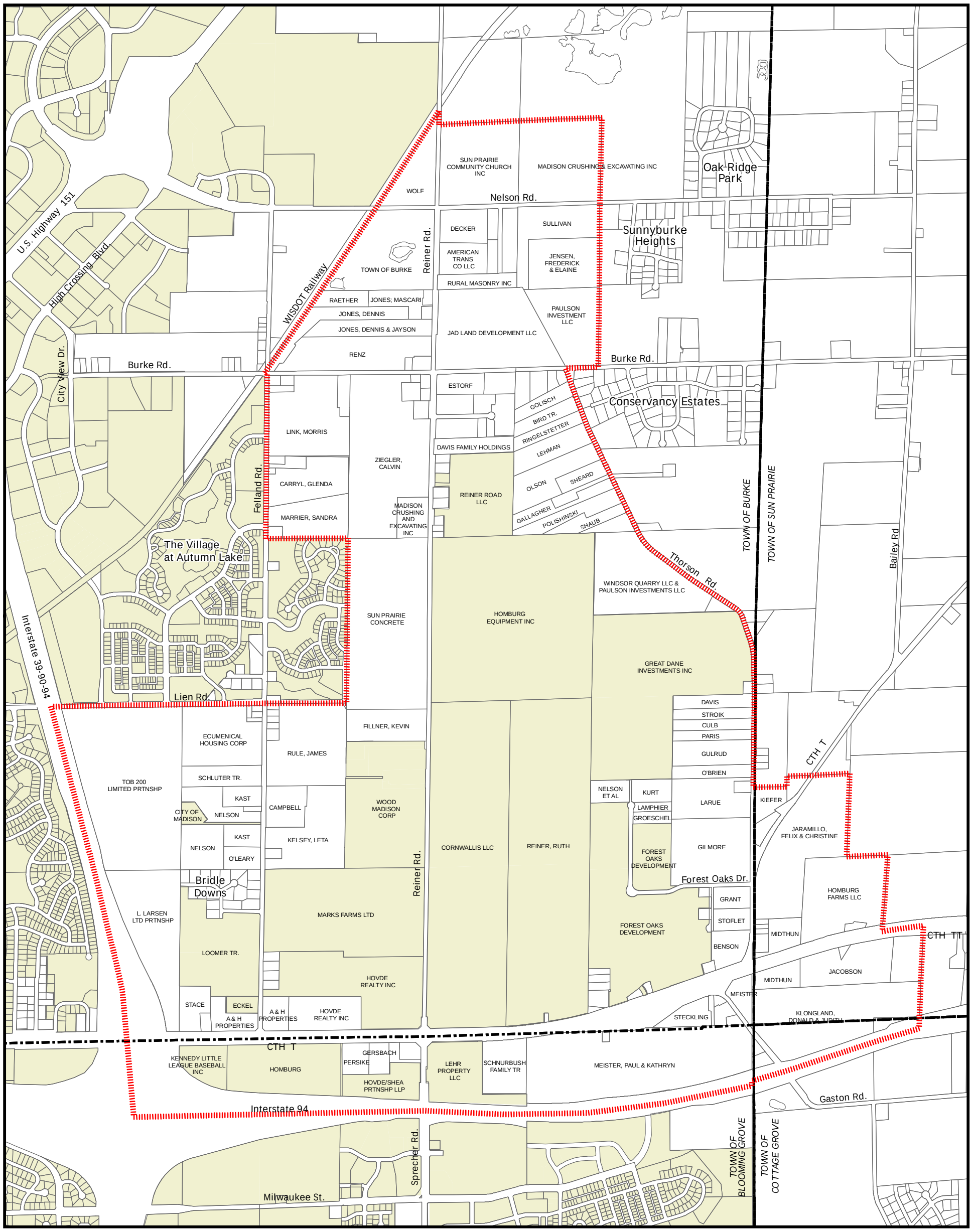
Northeast Neighborhoods Development Plan
October 2009

- Planning Area
- Phase 1 Planning Area
- Phase 2 Planning Area

0 0.25 0.5 Miles

October 20, 2009

City of Madison Planning Division



Map 2: Municipal Jurisdiction / Property Ownership

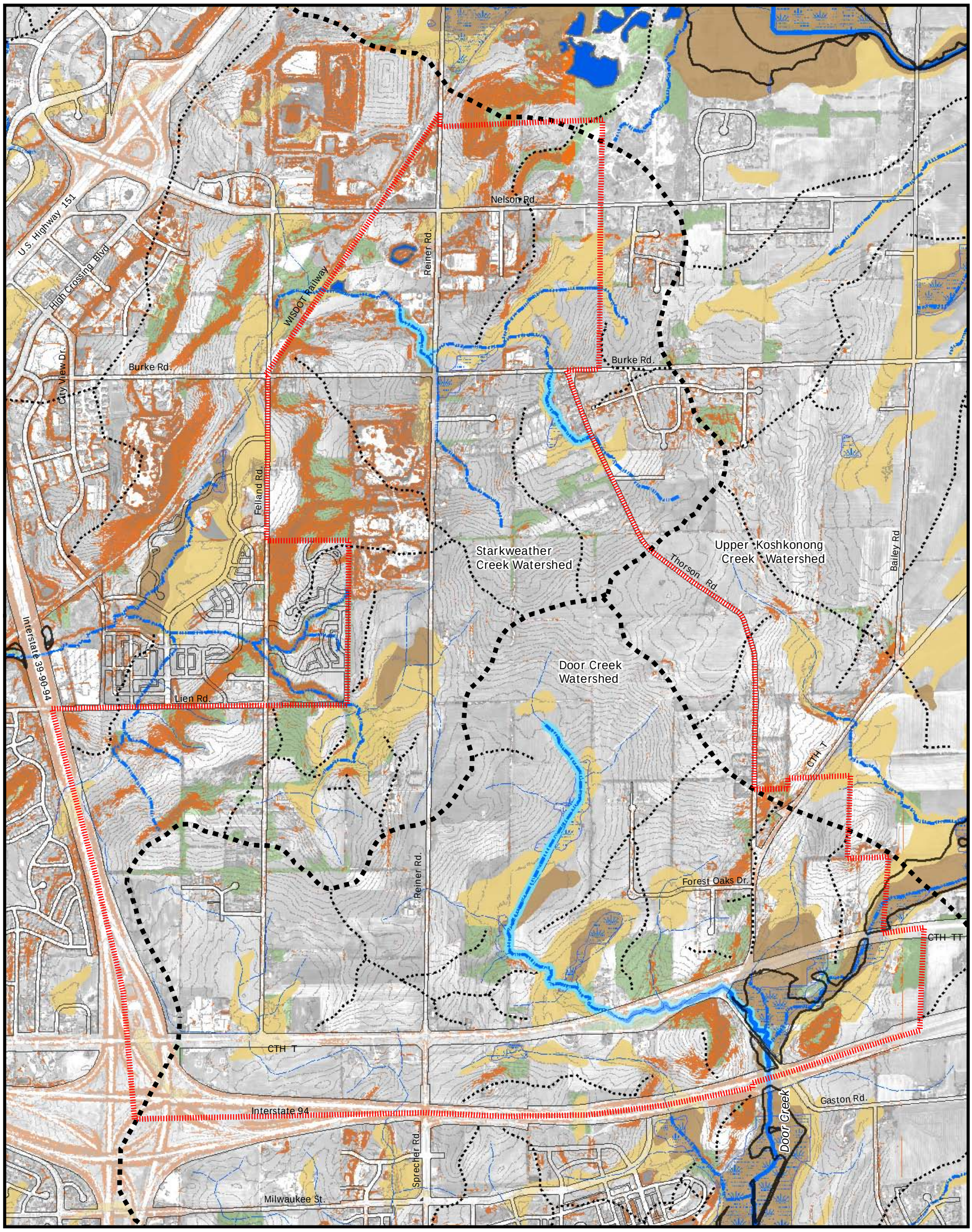
Northeast Neighborhoods Development Plan
October 2009

- Planning Area
- City of Madison
- Unincorporated Jurisdictions
- Township Boundary

0 0.25 0.5 Miles

October 20, 2009

City of Madison Planning Division



Map 3: Natural Features

Northeast Neighborhoods Development Plan
October 2009

- Planning Area
- Major Ridgeline (Watershed Boundary)
- Minor Ridgeline
- 4 Foot Contour
- Surface Water
- Perennial Stream
- Intermittent Stream
- Drainage
- Navigable Waterway within the Planning Area (per DNR)
- Wetland
- Floodplain
- Hydric Soils
- Soils with Hydric Inclusions
- Slope 12% or Greater
- Woodland

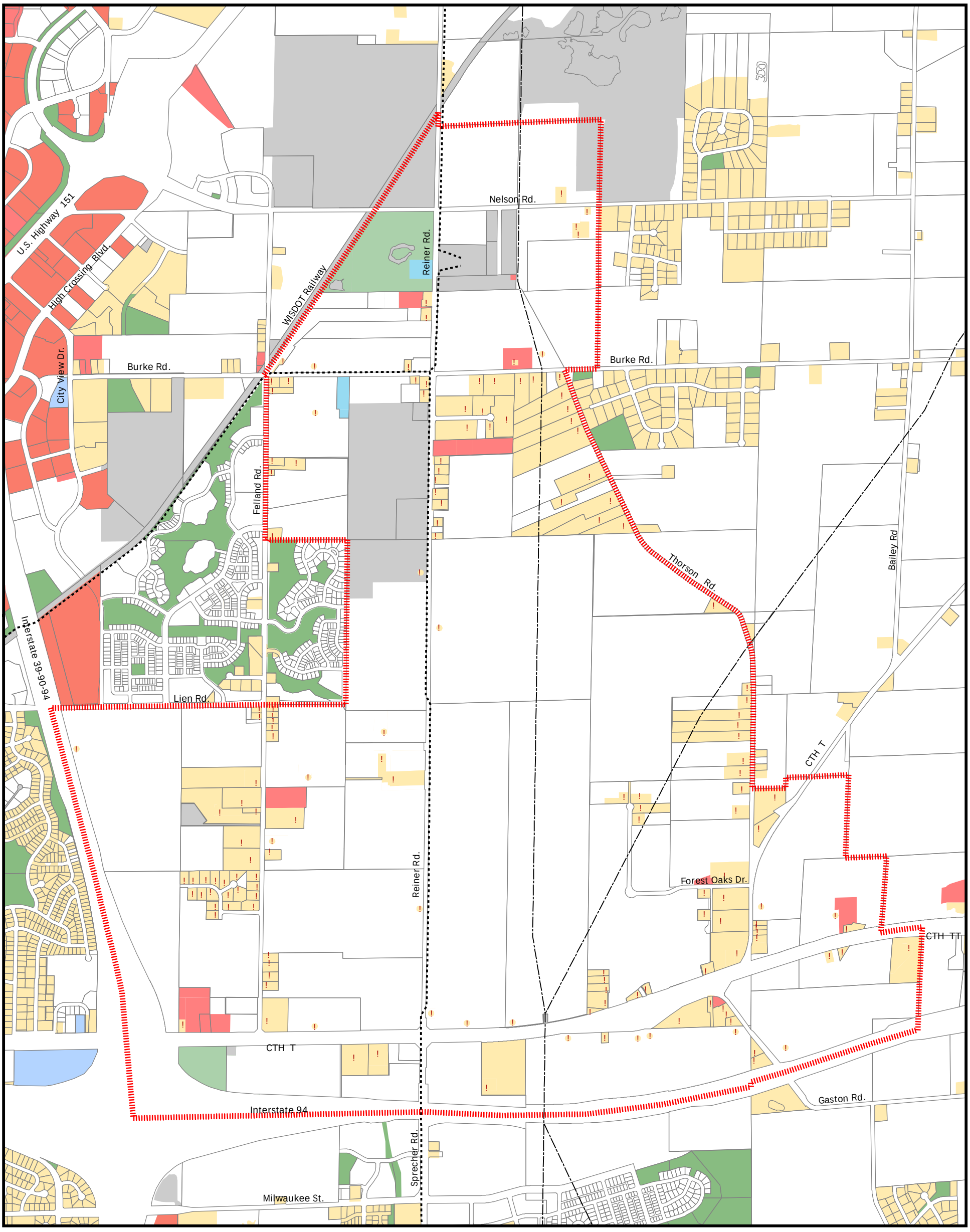
0 0.25 0.5 Miles

October 20, 2009

City of Madison Planning Division

Map 4: Existing Land Use

Northeast Neighborhoods Development Plan
October 2009



Planning Area

Overhead Electric Transmission Line

Natural Gas Transmission Pipeline

Residential

Dwelling Unit

Commercial

Industrial/Utilities

Institutional

Parks and Open Space

Agriculture/Vacant

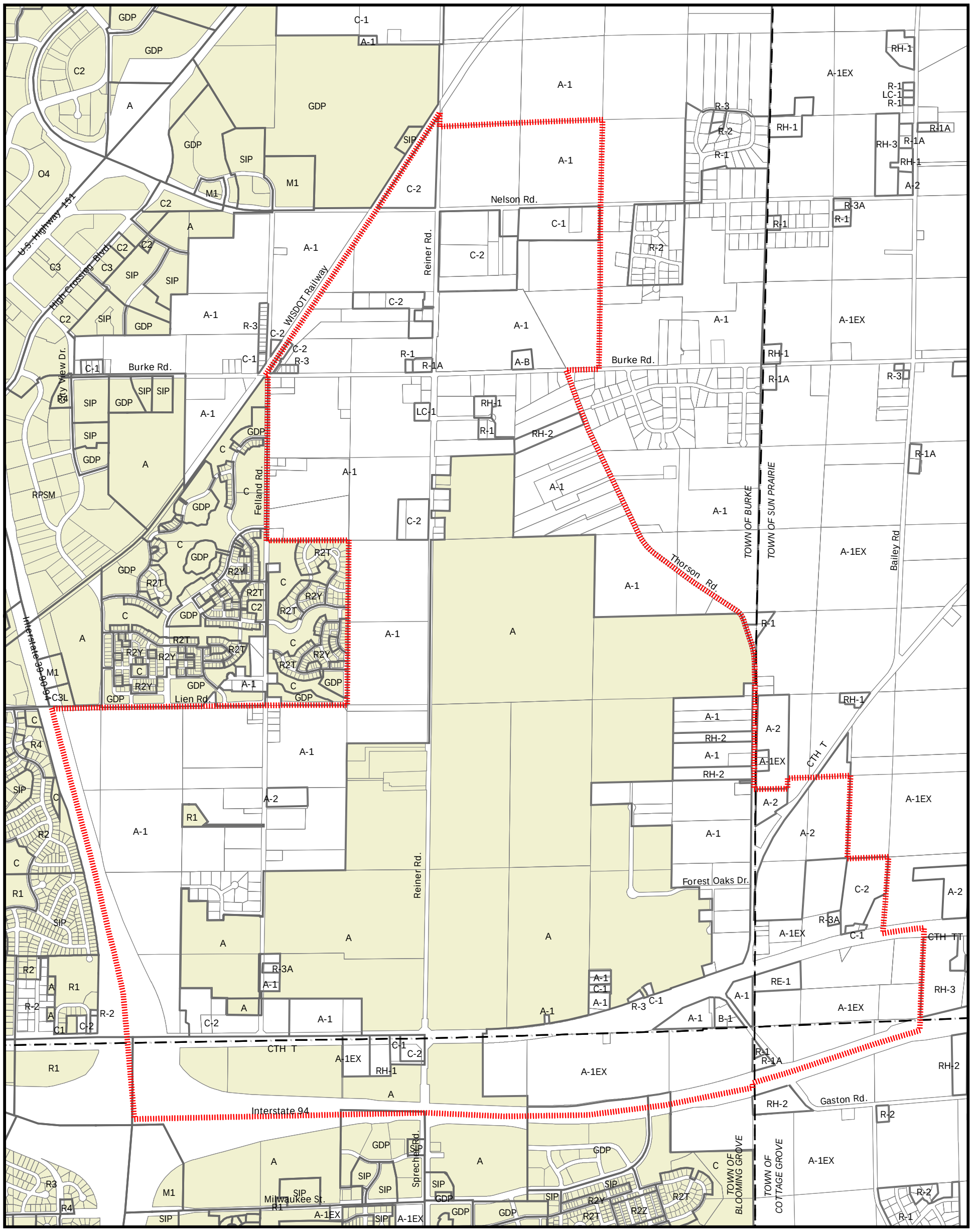
0 0.25 0.5 Miles

October 20, 2009

City of Madison Planning Division

Map 5: Existing Zoning

Northeast Neighborhoods Development Plan
October 2009



Planning Area

City of Madison

Unincorporated Jurisdictions

Township Boundary

City of Madison Districts

Residence Districts
- R1, R2, R2T, R2Y, R2Z, R3, R4

Commercial Districts
- C1, C2, C3, C3L

Office District
- O4

Manufacturing Districts
- M1, RPSM

Special Districts
- A Agriculture
- C Conservancy
- SIP PUD - Specific Implementation Plan
- GDP PUD - General Development Plan

Dane County Districts

Residence Districts
- R-1, R-1A, R-2, R-3, R-3A

Rural Homes District
- RH-1, RH-2, RH-3

Commercial Districts
- C-1, C-2, LC-1

Recreation District
- RE-1

Local Business District
- B-1

Agriculture Districts
- A-1, A-1EX, A-2, A-B

Agriculture Business District
- A-B

October 20, 2009

City of Madison Planning Division

Map 6: Land Use and Street Plan
Phase 1 Planning Area

Northeast Neighborhoods Development Plan
October 2009

- Planning Area
- Phase 2 Planning Area
- Street Right-of-Way
- Overhead Electric Transmission Line
- Natural Gas Transmission Pipeline
- Housing Mix 1
- Housing Mix 2
- Housing Mix 3
- Housing Mix 4
- Community Mixed-Use
- Neighborhood Mixed-Use
- Potential Mixed-Use
- Employment
- Civic/Institutional
- Utilities
- Park
- Other Open Space and Stormwater Management
- Wetland

0 0.25 0.5 Miles

January 3, 2022

City of Madison Planning Division

Map 7: Park and Open Space Plan
Phase 1 Planning Area

Northeast Neighborhoods Development Plan
October 2009

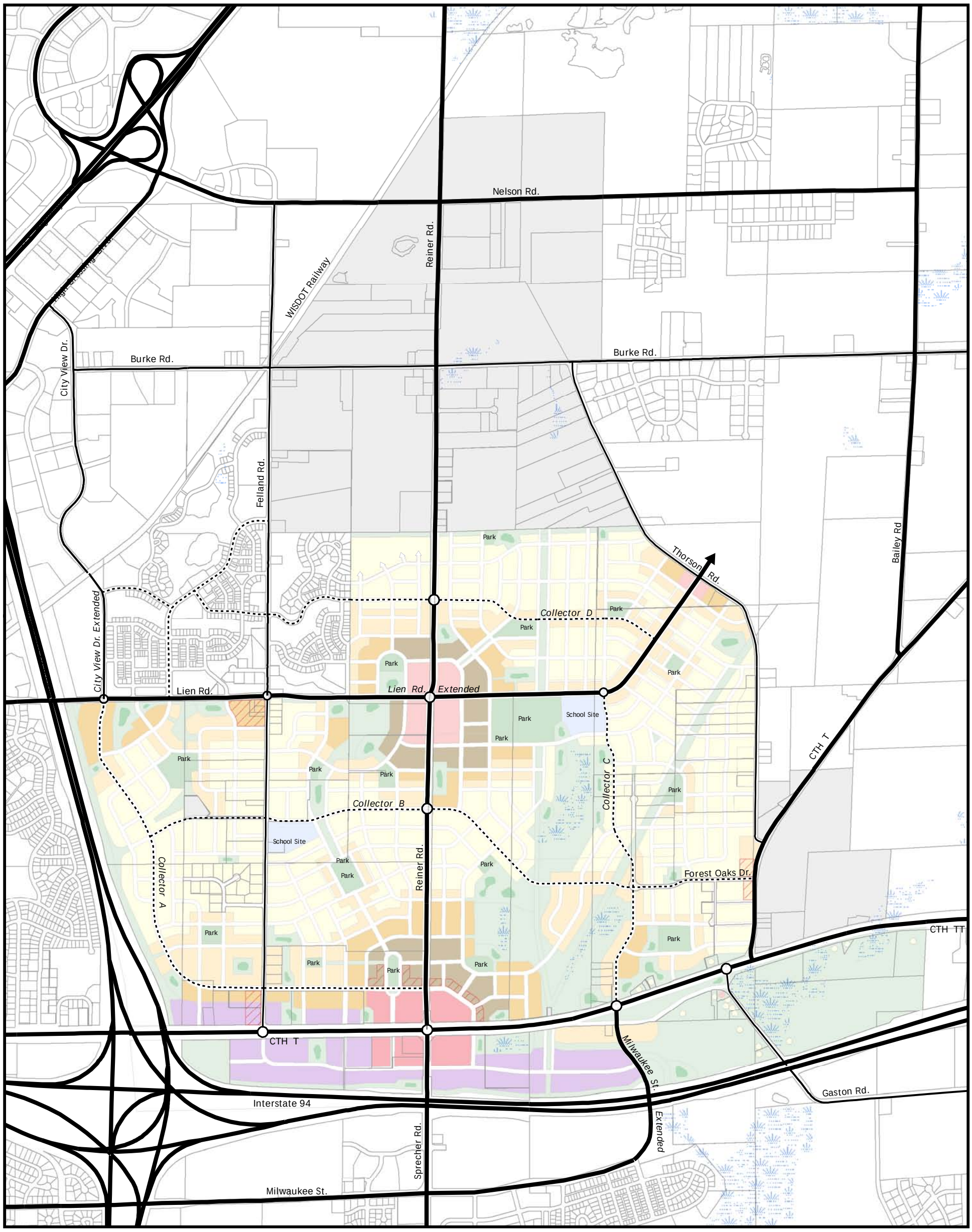
- Planning Area
- Overhead Electric Transmission Line
- Natural Gas Transmission Pipeline
- Wetland
- Park
- Other Open Space and Stormwater Management
- Potential Stormwater Detention Location
- Potential Community Gardens

Note: Some of the parks may increase in size based on required parkland dedication and desired facilities.

0 0.25 0.5 Miles

October 20, 2009

City of Madison Planning Division



Map 8: Transportation Plan - Roadways
Phase 1 Planning Area

Northeast Neighborhoods Development Plan
October 2009

Planned Street Functional Classification

- Arterial
- Major Collector
- Minor Collector

0 0.25 0.5 Miles

October 20, 2009

City of Madison Planning Division

Map 9: Transportation Plan - Pedestrian/Bicycle Facilities
Phase 1 Planning Area

Northeast Neighborhoods Development Plan
October 2009

Pedestrian/Bicycle Facilities

- Off-Street Path
- Bicycle Lane
- On-Street Segment

Primary Bicycle Corridors
- Interstate Path
- Town Center Path
- Northeast Pipeline Path
- North Pipeline Path
- East-West Path
- Seminary Springs Path

0 0.2 0.4 Miles

October 20, 2009

City of Madison Planning Division

Map 10:
Transportation Plan
Initial Transit Service

Northeast Neighborhoods
Development Plan
- Phase 1 Planning Area
October 2009

East Towne
Bus Stop

East
Transfer Point

Hanson Rd
Portage Rd
I-39-90-94
N Stoughton Rd (U.S.H. 51)
U.S. Highway 151
High Crossing Blvd
City View Dr.
Burke Rd.
WISDOT Railway
Reiner Rd.
Nelson Rd.
Felland Rd.
E. Washington Ave
Zeier Rd
Lien Rd
Interstate 39-90-94
N Thompson Dr
Park
School Site
Thorson Rd.
Bailey Rd
CTH T
Forest Oaks Dr.
CTH TT
USH 30
Interstate 94
Gaston Rd.
Swanton Rd
Milwaukee St
Sprecher Rd.
Vilas Rd

Planning Area

Peripheral Loop Option A
(East Towne Bus Stop)

-Provides connections to The American Center, downtown and the North and East Transfer Points
-30 minute loop route operated to correspond with other East Towne route arrivals and departures

Peripheral Loop Option B
(East Transfer Point)

-Provides connections to downtown and North and South Transfer Points
-Provides new service to a portion of the Sprecher Neighborhood
-30 minute loop route operated to correspond with other East Transfer Point arrivals and departures

Transit Priority Corridor

- Frequent, High-Quality Transit Service
- Traffic Signal Priority
- Enhanced Transit Stops
- Real-time Passenger Information

Existing Transit Stop

Rail Corridor

Major Employment / Activity Center

Proposed Activity Center

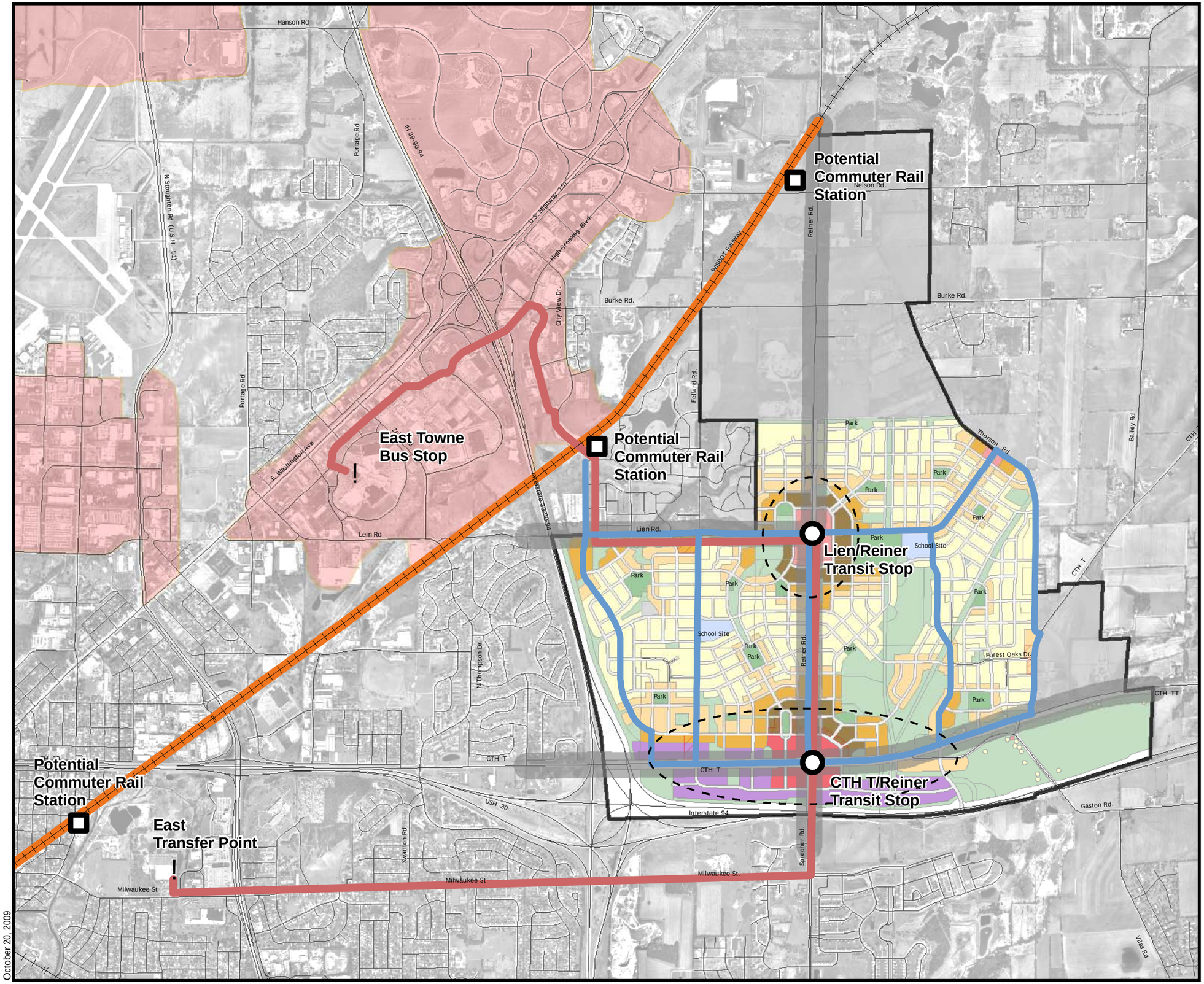
0 0.5 Miles

October 20, 2009

City of Madison Planning Division

Map 11: Transportation Plan Future Transit Service

Northeast Neighborhoods Development Plan
- Phase 1 Planning Area
October 2009



October 20, 2009

Planning Area

Connector Option C
(East Towne to East Transfer Point)
- Provides service through the planning area in both directions, connecting between East Towne and the East Transfer Point
- Could also serve potential Commuter Rail Station
- Service coordinated as much as possible with Transfer Points and Commuter Rail Station

Local Circulator Option D
- Travels within 1/4 mile of most areas within the planning area
- Provides connection to Commuter Rail Station
- Service operated to correspond with Commuter Rail arrivals and departures

Commuter Rail Service
- Provides fast service to Downtown, University and west side activity centers
- Peak headways 20 minutes, off-peak 40 minutes

Transit Priority Corridor
- Frequent, High-Quality Transit Service
- Traffic Signal Priority
- Enhanced Transit Stops
- Real-time Passenger Information

Existing Bus Transfer Point / Stop

Potential Transit Stop

Potential Commuter Rail Station

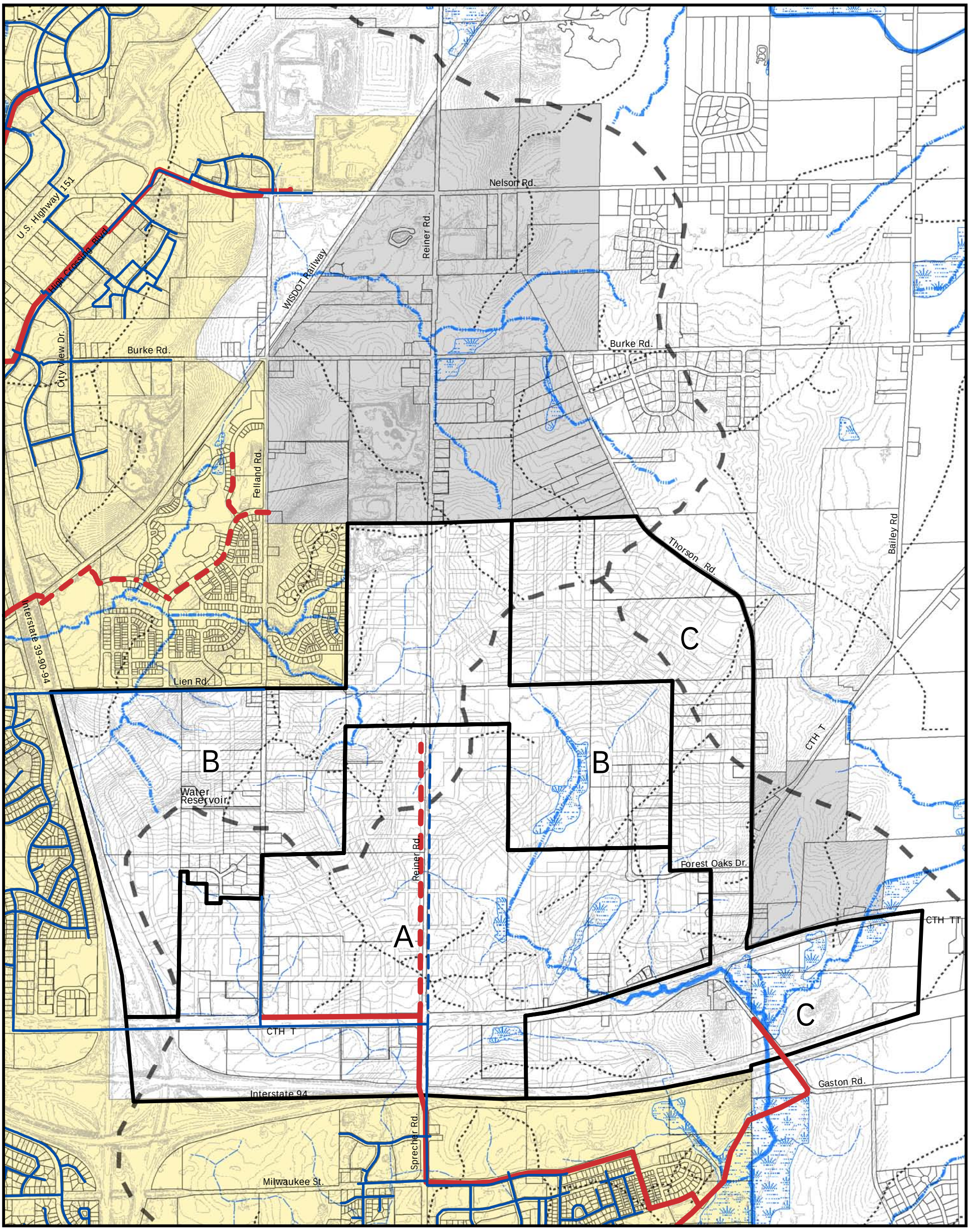
Rail Corridor

Major Employment / Activity Center

Proposed Activity Center

0 0.5 Miles

City of Madison Planning Division



Map 12: Utilities / Development Phasing
Phase 1 Planning Area

Northeast Neighborhoods Development Plan
October 2009

- Development Phasing Area
- Phase 2 Planning Area
- Central Urban Service Area
- Street Right-of-Way

Existing Utility Mains
- Sanitary Sewers (Interceptors and Force Mains)
- Water Mains

Proposed Utility Mains
- Sanitary Sewers (Interceptors)
- Water Mains

- Major Ridgeline (Watershed Boundary)
- Minor Ridgelines
- 4 Foot Topographic Contour
- Perennial Stream
- Intermittent Stream
- Drainage
- Wetland

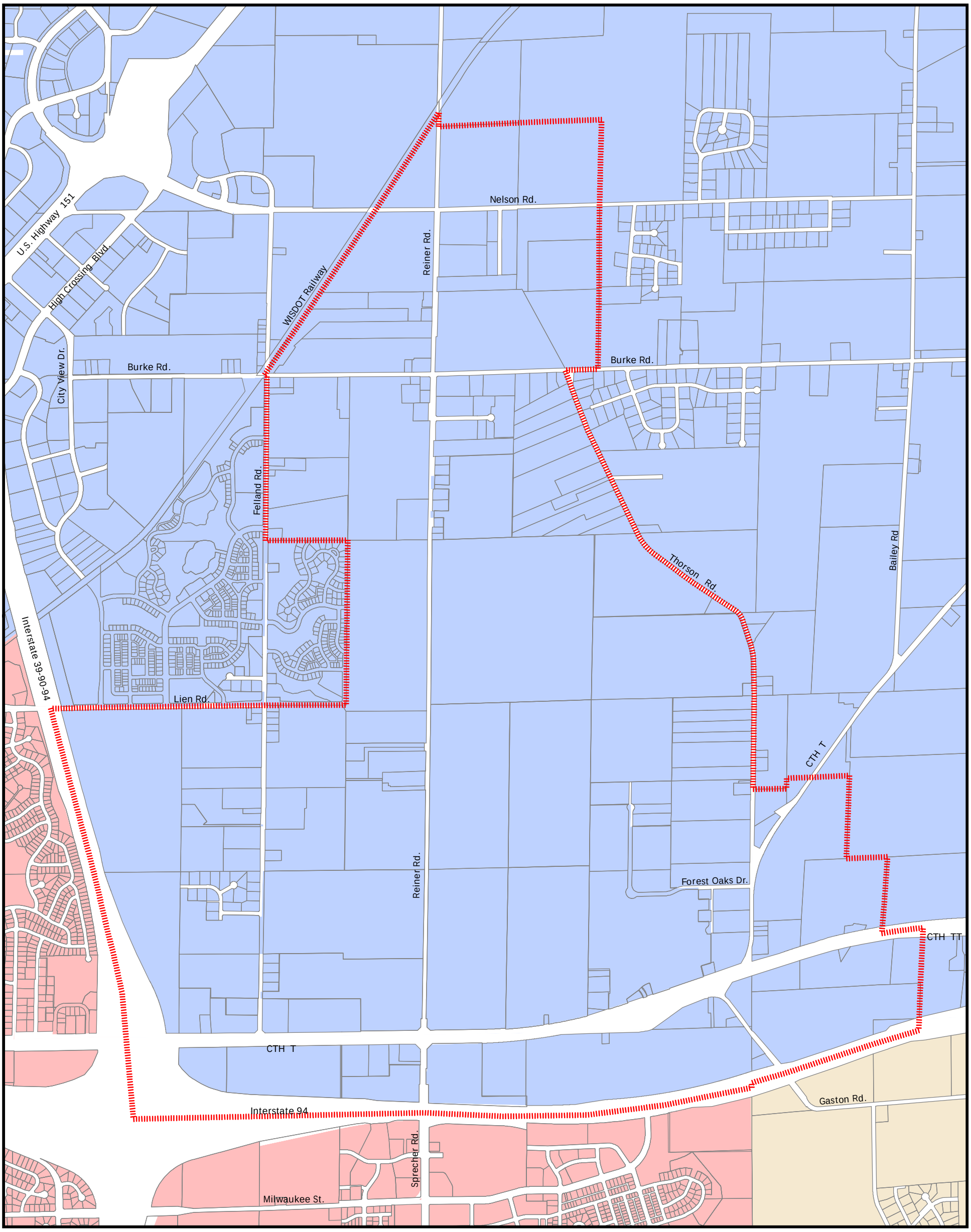
0 0.2 0.4 Miles

October 20, 2009

City of Madison Planning Division

Appendix Map 1: School Districts

Northeast Neighborhoods Development Plan
October 2009



Planning Area

Sun Prairie Area School District

Madison Metropolitan School District

Monona Grove School District

0 0.25 0.5 Miles

October 20, 2009

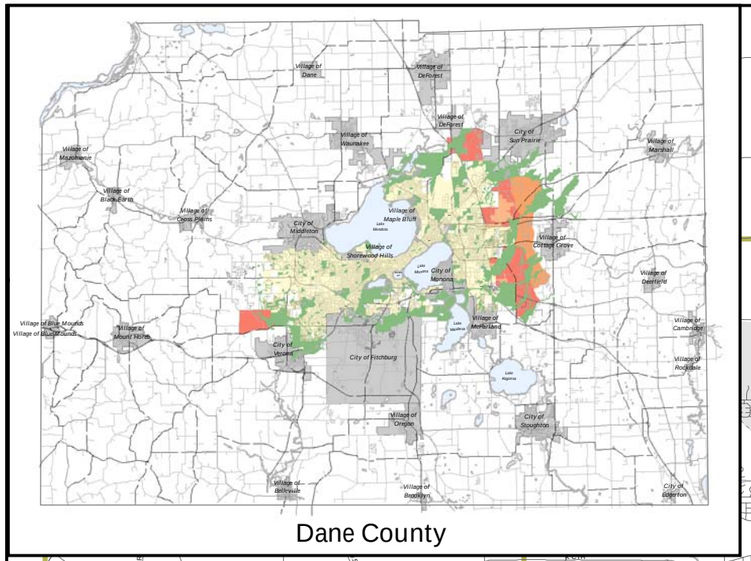
City of Madison Planning Division

Appendix Map 2:
Madison Comprehensive Plan
2006 Peripheral Planning Areas

Northeast Neighborhoods
Development Plan
October 2009

VOLUME II MAP 2-4

Madison Area
January 2006



2006 Peripheral Neighborhood Development Plan Areas

Peripheral Planning Areas
(See Plan text for group descriptions.)

Group 1 (Areas A, B, C, D)

Group 2 (Areas E, F, G)

Portions of this area should be considered for permanent open space and agricultural land preservation as part of a community separation area.

Group 3 (Areas H, I)

Park and Open Space
(2006 Generalized Future Land Use Plan)

City of Madison

Other Cities and Villages

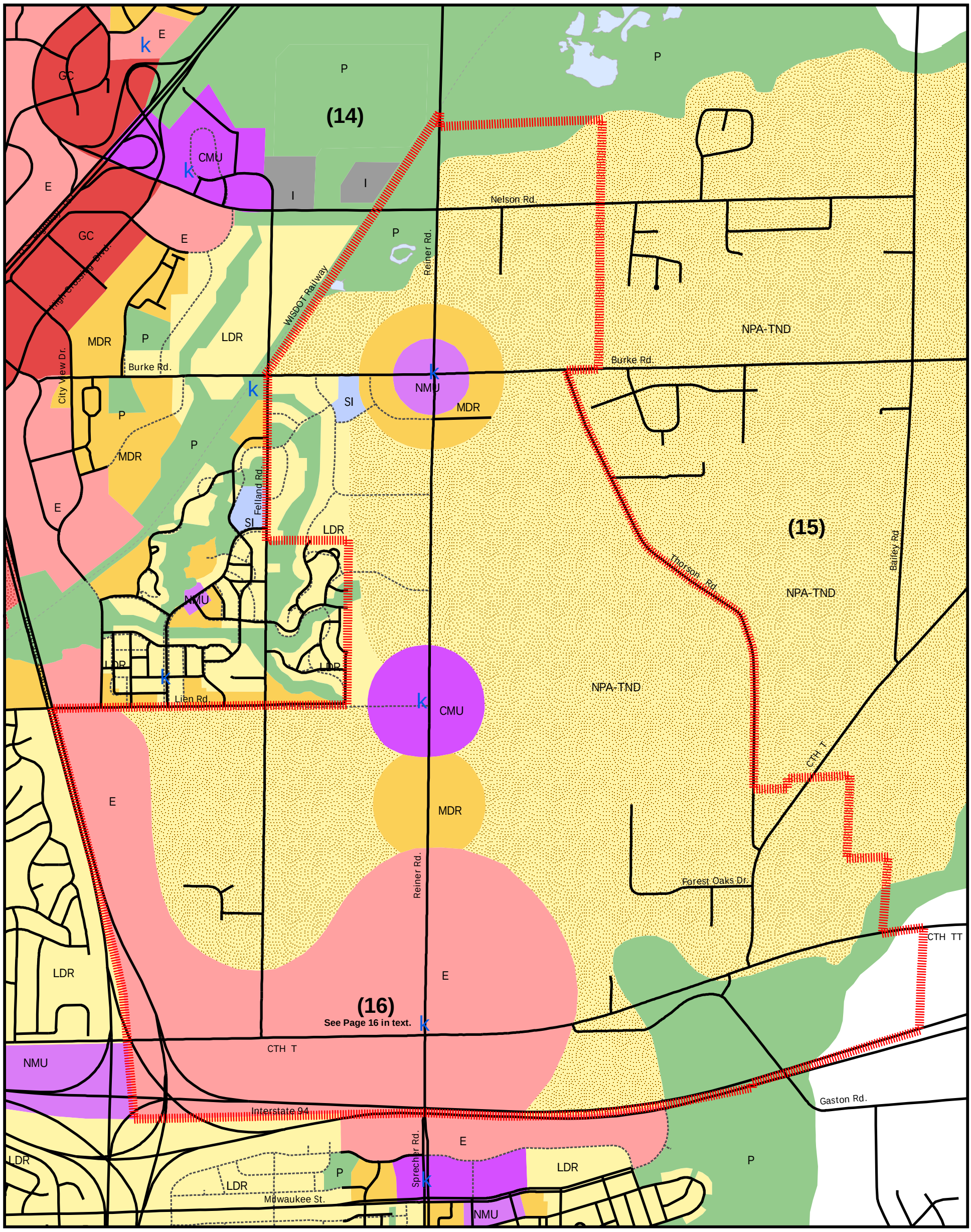
Township Lines

Data Source:
City of Madison Department of Planning and Development, Planning Unit

0 1 2
Miles

City of Madison
COMPREHENSIVE PLAN

October 20, 2009



Appendix Map 3: Madison Comprehensive Plan Generalized Future Land Use

Northeast Neighborhoods Development Plan
October 2009

Planning Area

Residential Districts
- LDR Low Density (0 - 15 units/acre)
- MDR Medium Density (16 - 40 units/acre)

Mixed Use Districts
- NMU Neighborhood Mixed Use
- CMU Community Mixed Use

Commercial/Employment Districts
- GC General Commercial
- E Employment
- I Industrial

Open Space - Agricultural Districts
- P Park and Open Space
- A Agriculture/Rural Uses

Special Districts
- SI Special Institutional

Special Overlay Designations
- NPA Neighborhood Planning Area (Traditional Neighborhood Development Encouraged)
- k TOD Transit Oriented Development (Conceptual Location)
- (0) Land Use Note Reference Number

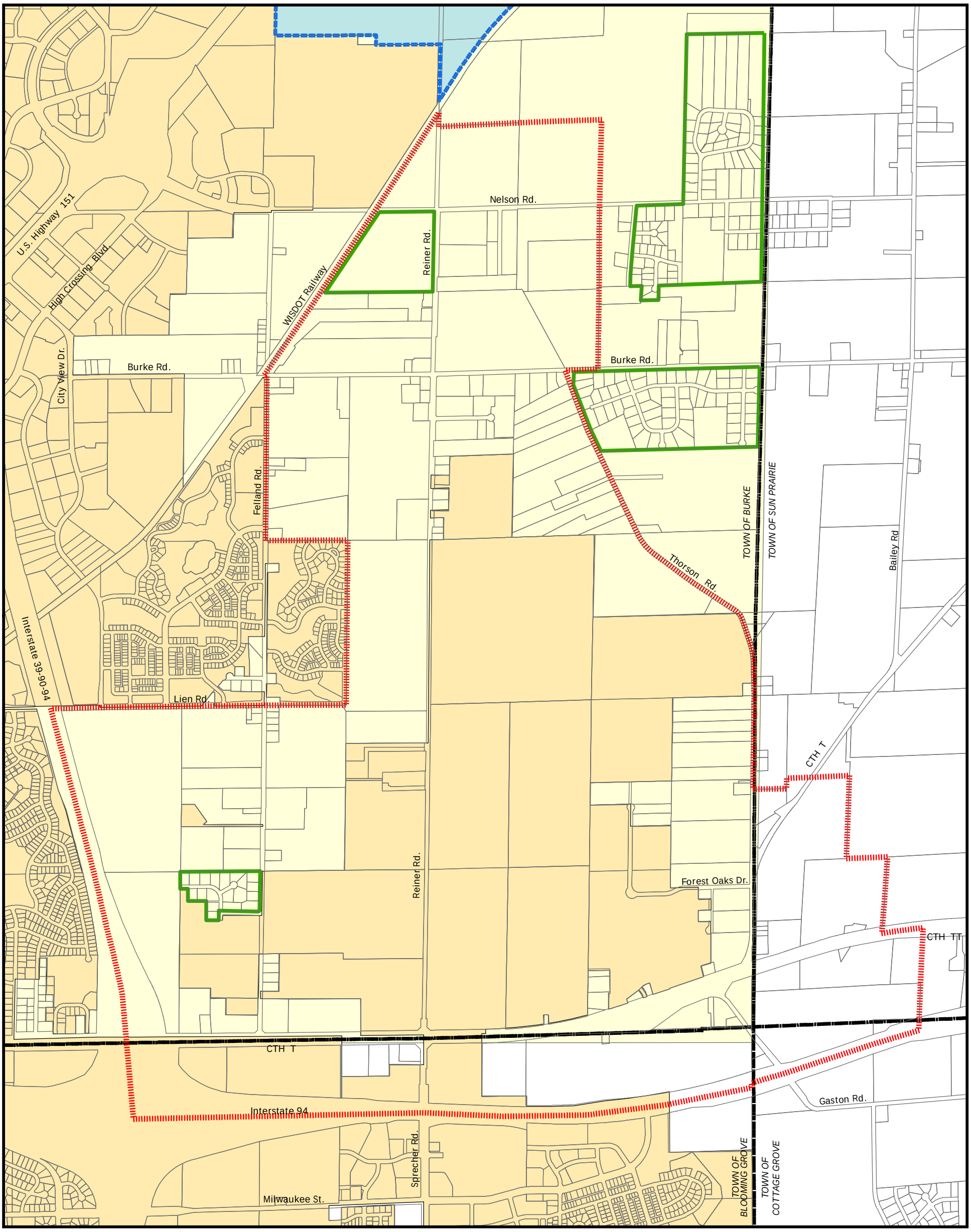
0 0.25 0.5 Miles

October 20, 2009

City of Madison Planning Division

Appendix Map 4: Burke Cooperative Plan

Northeast Neighborhoods Development Plan
October 2009



- Planning Area
- Township Boundary
- Town of Burke Protected Areas
- City of Madison
- Boundary Adjustment Area - Madison
- Boundary Adjustment Area - Sun Prairie
- Final Madison and Sun Prairie Boundary Line

0 0.25 0.5 Miles

October 20, 2009

City of Madison Planning Division