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INTRODUCTION

A city's transportation system has a great influence on its future growth and development, as the network of streets in a community is interconnected with the surrounding land use configuration. It is a challenging task for cities to provide access for shoppers and employees to local businesses and industries, provide efficient through transportation for regional travelers, and provide for recreational transportation opportunities. These challenges are further complicated by the need to balance the needs of non-motorized traffic, including pedestrians and bicycles, with motorized traffic.

Transportation planning is a study of the cyclical relationships between land development and the needs for transportation facilities. The steps that frequently occur during the "development-improvement-development" cycle are:

- Land development generates vehicle trips
- Additional trips increase roadway needs
- Needs dictate roadway improvements
- Improvements modify access
- Modified access changes land values
- Changed land value attracts intensified development
- Intensified development generates more trips
- More trips lead back to the second step of the cycle

Within the development-transportation cycle, the objective of transportation planning is to provide the information necessary for making decisions on when, where, and what type of improvements should be made in the transportation system to satisfy current and anticipated travel demands; and to promote land development patterns that are in keeping with community goals and objectives.

The purpose of this Transportation Plan is to provide guidance to the City of Norwood Young America, as well as existing and future landowners, in preparing for future growth and development. As such, whether an existing roadway is proposed for upgrading or a land use change is proposed on a property, this Plan provides the framework for decisions regarding the nature of roadway infrastructure improvements necessary to achieve safety, adequate access, mobility, and performance of the existing and future roadway system. This Plan includes established local policies, standards, and guidelines to implement the future roadway network vision that is coordinated with respect to county, regional, and state plans in such a way that the transportation system enhances quality economic and residential development within the City of Norwood Young America.

I. TRANSPORTATION SYSTEM PRINCIPLES AND STANDARDS

The transportation system principles and standards included in this Plan create the foundation for improving the transportation system, evaluating its effectiveness, determining future system needs, and implementing strategies to fulfill the goals and policies identified.

A. FUNCTIONAL CLASSIFICATION

It is recognized that individual roads and streets do not operate independently in any major way. Most travel involves movement through a network of roadways. It becomes necessary to determine how this travel can be channelized within the network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of trips through a roadway network. Functional classification is the process by which streets and highways are grouped into classes according to the character of service they are intended to provide. Functional classification involves determining what functions each roadway should perform prior to determining its design features, such as street widths, speed, and intersection control. The functional classification system typically consists of five major classes of roadways: Principal Arterials, Minor Arterials, Major Collectors, Minor Collectors, and Local roadways. The existing roadways are described below and illustrated in Figure 2-1 – Existing Roadway Functional Classification.

PRINCIPAL ARTERIALS

Roadways of this classification typically connect large urban areas to other large urban areas or they connect metro centers to regional business concentrations via a continuous roadway without stub connections. They are designed to accommodate the longest trips. Their emphasis is focused on mobility rather than access, and as such private access should not be allowed. They connect only with other Principal Arterials, interstate freeways, and select Minor Arterials and Collector Streets. Trunk Highway (TH) 212 is designated as a Principal Arterial. It provides connectivity from Interstate (I)–494 west into South Dakota and beyond.

MINOR ARTERIALS

Roadways of this classification typically link urban areas and rural Principal Arterials to larger towns and other major traffic generators capable of attracting trips over similarly long distances. Minor Arterials service medium length trips, and their emphasis is on mobility as opposed to access in urban areas. They connect with Principal Arterials, other Minor Arterials, and Collector Streets. Connections to Local Streets should be avoided if possible, and private access should not be allowed. Minor Arterials are responsible for accommodating thru-trips, as well as trips beginning or ending outside the Norwood Young America area. Minor Arterial roadways are typically spaced approximately 1 – 2 miles apart in developed communities similar to Norwood Young

America. Within the Norwood Young America area, TH 5, TH 25, and County State Aid Highway (CSAH) 33 are identified as Minor Arterials.

In the Twin Cities Metropolitan Area, there is a further breakdown of Minor Arterial roadways to establish federal funding priorities, "A–Minor" and "B–Minor." The A Minor Arterial classifications include Relievers, Expanders, Connectors, and Augmenters. As defined by the Twin Cities Metropolitan Council, Relievers provide 'open up' capacity for traffic on Metropolitan Highway Principal Arterials. Augmenters supplement the Principal Arterials within the beltway. Expanders provide connection between developing areas outside the beltway, and connect Principal Arterials. Connectors provide links between rural town centers in the urban reserve and rural area. B–Minor Arterials have a lower priority than A–Minor Arterials and are not eligible for federal funding.

TH 5 is generally an east-west route, and is functionally classified as an A-Minor Arterial Connector. TH 5 provides connectivity between TH 19 in the City of Gaylord through Norwood Young America and other cities in the southern Twin Cities Metropolitan Area such as Waconia, Eden Prairie, Bloomington, St. Paul, and Lake Elmo. TH 5 terminates at TH 36 in the City of Stillwater.

TH 25 is a north-south route providing connectivity between TH 10 in Big Lake, I-94 in Monticello, and TH 169 in Belle Plaine. It is functionally classified as an A-Minor Arterial Connector.

County State Aid Highway 33 extends north-south through Norwood Young America and western Carver County and connects the City with New Germany. It is functionally classified as an A-Minor Arterial Connector north of TH 212 and south of TH 212 it is classified as a B-Minor Arterial. The route provides connectivity to Sibley County CSAH 5 and Wright County CSAH 8.

MAJOR COLLECTORS

Roadways of this classification typically link neighborhoods together within a city or they link neighborhoods to business concentrations. In highly urban areas, they also provide connectivity between major traffic generators. A trip length of less than 5 miles is most common for Major Collector roadways. A balance between mobility and access is desired. Major Collector street connections are predominately to Minor Arterials, but they can be connected to any of the other four roadway functional classes. Local access to Major Collectors should be provided via public streets and individual property access should be avoided. Major Collector streets are predominantly responsible for providing circulation within a City.

CSAH 34 (1st Street NW, Main Street, and Tacoma Avenue) is a Major Collector roadway and connects western Carver County to the City and TH 212.

CSAH 31 (Elm Street and Vera Avenue) is also identified as a Major Collector and provides continuity between TH 212 west of the City to CSAH 50 east of the City of Hamburg. While not formally designated as a Major Collector, Central Avenue, Faxon Road, Preserve Boulevard, and Railroad Street are City streets and currently function as such.

MINOR COLLECTOR STREETS

Roadways of this classification facilitate the collection of local traffic and convey it to Major Collectors and Minor Arterials. Minor Collector streets serve short trips at relatively low speeds. Their emphasis is focused on access rather than mobility. Minor Collectors are responsible for providing connections between neighborhoods and the Major Collector/Minor Arterial roadways. According to the Metropolitan Council, there are no roadways formally designated as Minor Collector roadways in the City of Norwood Young America. However, City roadways such as Morse Street and 2nd Avenue currently function as Minor Collector streets. West of the City, County Road (CR) 131 is functionally classified as a Minor Collector. The roadway provides connectivity between TH 212 and CSAH 34.

LOCAL STREETS

Roadways of this classification typically include city streets that facilitate the collection of local traffic and convey it to collectors and Minor Arterials. Their emphasis is to provide direct property access.

B. ROADWAY CAPACITY

Capacities of roadway systems vary based on roadway functional classifications, roadway design (number of lanes, divided or undivided), and system connectivity. A two lane divided arterial roadway has a daily capacity of 12,000 to 18,000 vehicles per day, a four-lane divided arterial street has a daily capacity of 28,000 to 40,000 vehicles per day, and a four-lane freeway has a daily capacity of approximately 70,000 vehicles per day. The variability in capacities are directly related to many roadway characteristics including access spacing, traffic control, adjacent land uses, as well as traffic flow characteristics, such as percentage of trucks and number of turning vehicles. Therefore, it is important that the peak hour conditions are reviewed to determine the actual volume-to-capacity on roadway segments with average daily traffic volumes approaching these capacity values.

Major Collector and Minor Collector streets have physical capacities similar to those of a two-lane arterial street; however the acceptable level of traffic on a residential street is typically significantly less than the street's physical capacity. The acceptable level of traffic volumes on Major Collectors and Minor Collector streets vary based on available right-of-way width, housing densities and setbacks, locations of parks and schools, and overall resident perceptions. Typically, traffic levels

on Major Collector streets in residential/educational areas are acceptable when they are at or below 50% of the roadway's physical capacity, resulting in an acceptable capacity of 6,000 to 9,000 vehicles per day. In most communities, acceptable traffic levels on Minor Collector streets are considerably less. Typically, a daily traffic volume of 1,000 to 1,500 vehicles per day is acceptable on Minor Collector streets in residential areas.

The capacity of a gravel road is physically greater than 500 vehicles per day, but based on studies conducted by Minnesota counties, it has been determined that an average daily traffic (ADT) over 500 justifies paving the roadway. This is justified due to the maintenance costs of keeping a gravel road in working condition when ADT is over 500, and balancing this against the pavement costs, pavement life, and maintenance costs of a paved roadway with the same volumes.

Estimated Daily Capacities

Table 2.1 – Roadway Types and Capacities in Norwood Young America, identifies various roadway types and the estimated daily capacities that the given roadway in the City of Norwood Young America can accommodate.

A capacity deficiency exists when traffic volumes approach or exceed the capacity of the roadway.

Table 2.1 – Roadway Types and Capacity

Roadway Type	Daily Capacities
Gravel Roadway	Up to 500
Minor Collector Street	Up to 1,000
Urban 2-Lane	7,500 – 12,000
Urban 3-Lane or 2-Lane Divided	12,000 – 18,000
Urban 4-Lane Undivided	Up to 20,000
Urban 4-Lane Divided	28,000 to 40,000
4-Lane Freeway	Up to 70,000

LEVEL OF SERVICE

Roadway Level of Service (LOS) is used to assign a value to the level of congestion and efficiency of the roadway. The LOS is determined by the ratio of the actual roadway volume to the established capacity. In general, the higher the volume, the lower the LOS. There are six (6) LOS, depending on the extent of congestion and service on the roadway. The LOS are defined in Table 2.2 – Roadway Level of Service as follows.

TABLE 2.2 – HIGHWAY LEVEL OF SERVICE

Level of Service	Multilane v/c Ratio	Two-Lane Average Travel Speed (mph)
A	<0.28	>55
B	>0.28 – 0.45	>50-55
C	>0.45 – 0.65	>45-50
D	>0.65 – 0.86	>40-45
E	>0.86 – 1.00	≤40
F	> 1.00	v/c >1.00

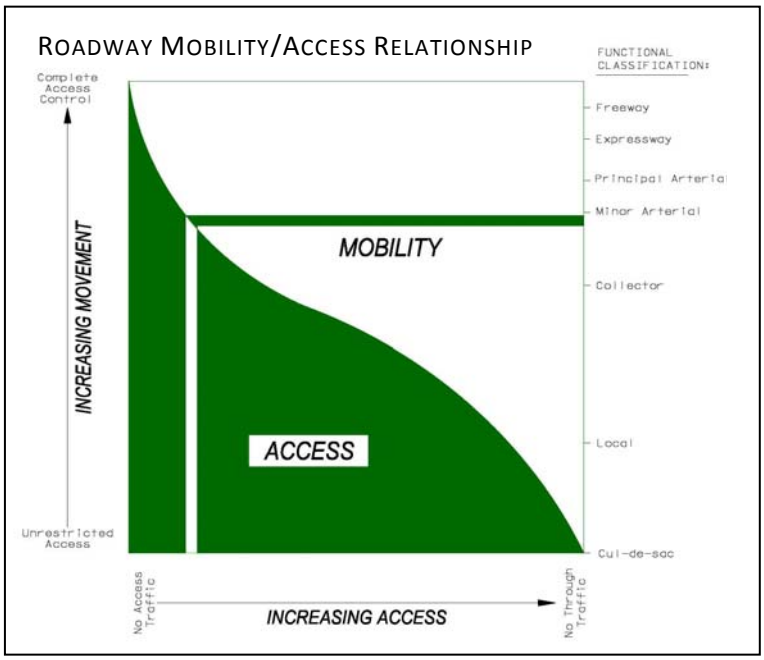
Generally, the City of Norwood Young America should consider capacity improvements on roadways with a LOS D or worse and volume-to-capacity ratios over 0.75 during the peak hours.

C. ACCESS MANAGEMENT GUIDELINES

Access management guidelines are developed to maintain traffic flow on the network so each roadway can provide its functional duties, while providing adequate access for private properties to the transportation network. This harmonization of access and mobility is the keystone to effective access management.

Mobility, as defined for this Transportation Plan, is the ability to move people, goods, and services via a transportation system component from one place to another. The degree of mobility depends on a number of factors, including the ability of the roadway system to perform its functional duty, the capacity of the roadway, and the operational level of service on the roadway system.

Access, as applied to the roadway system in Norwood Young America, is the relationship between local land use and the transportation system. There is an inverse relationship between the amount of access provided and the ability to move through-traffic on a roadway. As higher levels of access are provided, the ability to move traffic is reduced. The graphic below illustrates the relationship between access and mobility.



Each access location (i.e. driveway and/or intersection) creates a potential point of conflict between vehicles moving through an area and vehicles entering and exiting the roadway. These conflicts can result from the slowing effects of merging and weaving that takes place as vehicles accelerate from a stop turning onto the roadway, or deceleration to make a turn to leave the roadway. At signalized intersections, the potential for conflicts between vehicles is increased, because through-vehicles are required to stop at the signals. If the amount of traffic moving through an area on the roadway is high and/or the speed of traffic on the roadway is high, the number and nature of vehicle conflicts are also increased.

Accordingly, the safe speed of a road, the ability to move traffic on that road, and safe access to cross streets and properties adjacent to the roadway all diminish as the number of access point's increase along a specific segment of roadway. Because of these effects, there must be a balance between the level of access provided and the desired function of the roadway.

In Norwood Young America, access standards and spacing guidelines are recommended as a strategy to effectively manage existing ingress/egress onto City streets and to provide access controls for new development and redevelopment. The proposed access standards (driveway dimensions) are based on Minnesota Department of Transportation (Mn/DOT) State-Aid design standards. It should be noted that the City of Norwood Young America has access authority for those roadways under their jurisdiction. Likewise, Carver County has access authority for roadways under their jurisdiction. To further the relationship of access and mobility throughout Norwood Young America, the City supports managing access consistent with the roadway mobility and access relationship graphic above and supports the access spacing guidelines of the County. Tables 2.3 and 2.4 below present the proposed access standards and access spacing for the Norwood Young America roadway network. Please refer to Carver County's minimum access spacing guidelines identified in their current Transportation Plan.

TABLE 2.3 – ROADWAY ACCESS STANDARDS

Driveway Dimensions	Residential	Commercial or Industrial
Driveway Access Width	11' – 22' (16' desired)	16' – 32' (32' desired)
Minimum Distance Between Driveways	20'	20'
Minimum Corner Clearance from a Collector Street	60'	80' [(1)]

[(1)] At the discretion of the City Engineer, 80' minimum

TABLE 2.4 – ACCESS SPACING GUIDELINES FOR COLLECTOR ROADWAYS IN NORWOOD YOUNG AMERICA[(1)]

Type of Access by Land Use Type	Major Collector	Minor Collector
Low & Medium Density Residential		
Private Access	Not Permitted [(2)]	As Needed [(3)]
Minimum Corner Clearance from a Collector Street	660'	300'
Commercial, Industrial or High Density Residential		
Private Access	Not Permitted [(2)]	As Needed [(3)]
Minimum Corner Clearance from a Collector Street	660'	660'

[(1)] These guidelines apply to City streets only. Carver County and Mn/DOT have access authority for roadways under their jurisdiction. Please refer to Carver County's minimum access spacing guidelines identified in their current Transportation Plan.

[(2)] Access to Major Collectors is limited to public street access. Steps should be taken to redirect private accesses on Major Collectors to other local streets. New private access to Major Collectors is not permitted unless deemed necessary.

[(3)] Private access to Minor Collectors is to be evaluated by other factors. Whenever possible, residential access should be directed to non-continuous streets rather than Minor Collector roadways. Commercial/Industrial properties are encouraged to provide common accesses with adjacent properties when access is located on the Minor Collector system. Cross-traffic between adjacent compatible properties is to be accommodated when feasible. A minimum spacing between accesses of 660' in commercial, industrial, or high density residential areas is encouraged for the development of turn lanes and driver decision reaction areas.

D. GEOMETRIC DESIGN STANDARDS

Geometric design standards are directly related to a roadway's functional classification and the amount of traffic that the roadway is designed to carry. For the City of Norwood Young America, geometric design standards were developed based on Mn/DOT State-Aid standards. The proposed geometric design standards for Major and Minor Collector roadways are illustrated in Figures 2-2 and 2-3 respectively. These design standards were developed to achieve adequate capacity within the roadway network, as well as a level of acceptance by adjacent land uses, given the constraints associated with the existing development pattern. Each component identified in the typical sections is essential to a particular roadway's ability to perform its function in the roadway network.

COUNTY AND STATE ROADWAYS

In addition to these standards for City Collector roadways, the State and County Arterial and Collector roadways should include components of the City's transportation system. Along TH 5, CSAH 31, CSAH 33, and CSAH 34 a bituminous trail is recommended on both sides of the roadway. Similar to the type of travel on the adjacent roadway, the trail will accommodate higher volumes and longer pedestrian and bicycle trips. A 10' width is preferable because it would better accommodate two-way travel safely. Through the existing developed portions of the City, 6' wide on–street bikeways are recommended, and when possible a 5' walk on at least one side.

ROADWAY WIDTH

Roadway and travel lane widths are directly associated with a roadway's ability to carry vehicular traffic. On Major Collector roadways and Minor Collector streets, a 12' lane is recommended for each direction of travel. The 24' total travel width is recommended to accommodate anticipated two-way traffic volumes. In addition to the travel width, a minimum 6' shoulder lane width accommodates pedestrian and bicycle traffic, parked or stalled vehicles, and maintenance activity. Roadway widths not meeting the Geometric Design Standards results in decreased performance of the particular roadway and additional travel demand on the adjacent roadway network components. For example, a sub-standard Major Collector roadway may result in additional travel demand on an adjacent Minor Collector or local street, resulting in an overburden for adjacent landowners. Similarly, additional local circulation on an adjacent Minor Arterial results in reduced mobility for regional trips.

DESIGN SPEED

The design speed of a roadway is directly related to the roadway's function in the roadway system. The focus of Minor Arterial roadways is mobility; therefore these roadways should be designed to accommodate higher travel speeds. Likewise, Minor Collector roadways are more focused on accessibility and should be designed to accommodate lower travel speeds. The function of Major Collectors is balanced between

mobility and accessibility; therefore these roadways should be designed accordingly. Table 2.5 below presents the recommended design speed for the Norwood Young America roadway network.

TABLE 2.5 – ROADWAY DESIGN SPEED GUIDELINES

Functional Classification	Design Speed [(1)]
Minor Collector Street	30 mph
Major Collector Roadway	35 – 40 mph
Minor Arterial Roadway	45 – 55 mph

[(1)] At the discretion of the City Engineer for City roadways, with approval by the City Council

RIGHT-OF-WAY WIDTH

Right-of-way width is directly related to the roadway's width and its ability to carry vehicular and pedestrian traffic in a safe and efficient manner. The roadway right-of-way widths identified in Figures 2-2 and 2-3 are the minimum required for Major and Minor Collector streets, respectively. For Minor Collector streets in residential areas, a minimum right-of-way width of 66' is necessary for the added roadway width, as well as to provide added setback distance between the roadway and homes along the roadway. Right-of-way widths greater than 66' may be required on Major Collector roadways within commercial areas to accommodate the potential for higher traffic volumes and the need for additional through or turning lanes. All right-of-way requirements may be increased at the discretion of the City Engineer, with approval by the City Council. Please refer to Carver County's right-of-way requirements for county roads in their current Transportation Plan. The City should obtain identified local and county right-of-way through any proposed redevelopment process to accommodate long-term roadway and sidewalk/trail needs.

BIKEWAYS, SIDEWALKS AND TRAILS

Bikeways, sidewalks, trails, or roadway shoulders are recommended to be on or adjacent to Major Collector and Minor Arterial roadways, and most Minor Collector roadways to accommodate pedestrian, bicycle, and other non-motorized travel in a safe and comfortable manner. These roadways carry a considerable amount of vehicular traffic and non-motorized facilities are recommended. Design and accommodations for non-motorized traffic facilities in Arden Hills follow the Mn/DOT Bikeway Facility Design Manual; Americans' with Disabilities Act (ADA); AASHTO Guide for the Planning,

Design, and Operation of Pedestrian Facilities; FHWA Designing Sidewalks and Trails, Part II, Best Practices Design Guide; and FHWA Design Guidance, Accommodating Bicycle and Pedestrian Travel: A Recommended Approach. The City will continue to work with Carver County and Mn/DOT to plan, evaluate, and design non-motorized facilities and integrate the facilities into reconstruction efforts. At the discretion of the City, the requirements for trails, sidewalks, bikeways, and shoulders may vary. The non-motorized traffic facilities will provide connectivity as shown in the City of Norwood Young America's 2030 Sidewalk, Trails and Thoroughfare Plans.

E. ROADWAY JURISDICTION

Roadway jurisdiction directly relates to functional classification of roadways. Generally, roadways with higher mobility functions (such as arterials) should fall under the jurisdiction of a regional level of government. In recognizing these roadways serve greater areas resulting in longer trips and higher volumes, jurisdiction of Principal Arterial and Minor Arterial roadways should fall under the jurisdiction of the state and county, respectively. Similarly, roadways with more emphasis on local circulation and access (such as collectors) should fall under the jurisdiction of the local government unit. These roadways serve more localized areas and result in shorter trip lengths and lower volumes. Major Collector and Minor Collector roadways should fall under the jurisdiction of the City of Norwood Young America. As roadway segments are considered for turn-back to the City, efforts will be taken to evaluate the roadway features for conformance to current standards, structural integrity, and safety. This effort will help the City develop short and long-range programs to assume the responsibilities of jurisdictional authority. In the City of Norwood Young America, three jurisdictions have responsibility for the overall road network. Mn/DOT is responsible for TH 212, TH 5, and TH 25, while Carver County is responsible for CSAH 31, 33, and 34. The City of Norwood Young America is responsible for all remaining roadways.

F. TRANSIT

It is recognized that various methods of travel impact the economic vitality of a city, county, or broader region. The term transit applies to all forms of sharing rides, regardless of whether the service is provided by a public or private operator, organization, or individual vehicle owner, or whether the ridesharing arrangements are formal or informal. Most transit rides, however, are provided by formal transit systems, at least during the morning and afternoon peak travel periods.

Based on the needs of a community, transit systems may be established to accommodate trips that are internal within the city (internal to internal), trips that begin in the city and end somewhere outside of the city (internal to external), and/or trips that begin outside of the city and end within the city (external to internal). An example of an internal to internal trip may be a trip that begins at a home in Norwood Young America and ends at a place of employment such as the Young America Corporation. An internal to external trip may be a trip that begins at a home in Norwood Young

America and ends at the Carver County License Center in Chaska. A trip that begins at a home in Cologne and ends at Gourmet Taste Bakery is an example of an external to internal trip.

Dial-a-ride, fixed route service by means of bus, bus rapid transit, and/or commuter rail, are just some of the transit system examples that are or could be provided within a city such as Norwood Young America upon the completion of further detailed studies. Transit studies can evaluate current transit service performance and analyze the market to identify any unmet needs and to look for opportunities to enhance transit service. Generally, communities with dial-a-ride as an initial service explore the feasibility of providing a fixed route schedule to connect residents with businesses, schools, places to shop, and employment centers.

II. EXISTING TRANSPORTATION SYSTEM EVALUATION

The existing transportation system within the City of Norwood Young America currently provides sufficient transportation service to the City.

A. EXISTING TRAFFIC VOLUMES AND CAPACITY ISSUES

The existing traffic volumes in the area were collected by Mn/DOT and Carver County and are represented in Figure 3-1 – Existing Average Daily Traffic Volumes. Volume to capacity analysis of the average daily traffic volumes indicates that TH 5 east of CSAH 34 is periodically congested, but no roadway segments within the City of Norwood Young America are currently operating at a near congested or congested level.

Capacity improvements are recommended on any roadway with a future level of service of D, E, or F, as defined in the roadway capacity discussion within the Roadway Capacity section. Roadways identified above as near congested (having a volume to capacity ratio between 0.75 and 1) or congested (having a volume to capacity ratio greater than 1) are recommended to be monitored and programmed for capacity improvements when necessary. Roadways that are periodically congested (having a volume to capacity ratio between 0.5 and 0.75) are generally identified as providing an acceptable level of service.

B. SAFETY AND MOBILITY

A planning-level analysis of the existing transportation system in Norwood Young America was completed and included evaluating crash records for the types of accidents most commonly occurring and where accident trends may exist. In the five year time period from January 1, 2002 through December 31, 2006 there were 144 crashes on the roadways within the Norwood Young America area. Locations with the highest accident frequency are at the intersections of TH 212 at CSAH 34, TH 212 at Faxon Road, TH 212 at Morse Street, TH 212 at CSAH 33, and TH 212 at TH 5/TH 25. Segments with high crash rates within the City limits of Norwood Young America include TH 212, CSAH 31, and CSAH 33. All three of these segments have crash rates 1.5 times higher than the state average for similar roadway types. Of the 144 crashes, 14 included injuries, 33 had possible injuries, and 97 involved property damage only. Rear end crashes represented 25% of the crashes, and 21% were right angle crashes.

C. JURISDICTIONAL ISSUES

There are no known jurisdictional transfers planned for roadways within Norwood Young America, but the City recognizes the County's and State's role in jurisdictional issues and desires active participation in any jurisdictional discussion.

D. Relevant Area Transportation Studies

Two studies have been completed in recent years to provide direction relative to the development of the City of Norwood Young America's transportation system.

Highway 212 Interregional Corridor Management Plan[1]

In April of 2002, Mn/DOT issued the Highway 212 Interregional Corridor Management Plan (CMP). This report covered a 160-mile stretch of TH 212 from I-494 to the South Dakota border. The purpose of the CMP is to create a better understanding of the issues and concerns along the corridor, as well as to develop consensus with corridor partners for a long-term vision and action plan that can be implemented over time. Recommendations relative to the City of Norwood Young America and the surrounding area from the CMP are outlined below.

Short Term

- TH 212 at CSAH 31 – Conduct a detailed traffic analysis/study to explore the construction of a westbound left turn lane
- TH 212 at Morse Street – Conduct a detailed traffic analysis/study to explore the construction of a pedestrian crossing
- TH 212 at CSAH 34 – Conduct a detailed traffic analysis/study to explore geometric improvements

Long Term

- Plan to protect right-of-way for improvements to the TH 5 north intersection with TH 212
- Construct a 4-lane expressway TH 212 from Norwood Young America to the west end of the Cologne Bypass
- Plan to protect right-of-way for improvements to the TH 5 north and Faxon Road intersections with TH 212
- Plan to protect right-of-way for improvements on TH 212 from Salem Avenue to Norwood Young America

The study highlights the need to establish zoning ordinances and update the Carver County and Norwood Young America Comprehensive Plans so that future developments along the TH 212 corridor are set back to accommodate the plan's vision.

As identified in a resolution approved by the City, the City formally endorsed the Vision and Corridor Management Plan for TH 212 and their willingness to participate in applying performance management strategies to maintain corridor performance. This includes endorsement of the concept that an adequate network of supporting roadways to attain the Highway 212 Vision and that the roadway networks identified in the Highway 212 Corridor Management Plan would be considered as interim guides until such time as refinements to these improvements are identified. The City also recognized the regional significance of the corridor in supporting the regional economy and their intent to reflect

[1] SEH, Highway 212 Interregional Corridor Management Plan, April 2002.

the Highway 212 Corridor Management Plan Vision, strategies, and policies through updates to their Comprehensive Plan. The City noted their commitment to working in partnership with Mn/DOT and the other corridor partners to achieve the vision and implement recommendations of the Highway 212 Corridor Management Plan. The City's passage of the Corridor Plan resolution was adopted in 2002 and was conditioned upon its acceptance of the partnership study and discussion with the Highway 212 Corridor Management Team regarding the following

- Extend High Priority to Glencoe
- Backage Road (Partnership Study)
- TH 212/CSAH 34 Intersection (Partnership Study)
- Pedestrian Bridge at Morse Street
- TH 5/212/CSAH 33 Intersection Realignment

NORWOOD YOUNG AMERICA PARTNERSHIP STUDY[2]

The City of Norwood Young America together with Carver County, Mn/DOT, and the Minnesota Department of Natural Resources partnered together to study the need for controlled access and safety improvements to its current TH 212 accesses, as well as improved traffic movements for local and regional trips. Analysis included preparation of traffic forecasts, development of a model traffic impact ordinance, and environmental impact screening. The results of the study were the identification of short and long term solutions consistent with the TH 212 IRC Management Plan.

<u>Short-Term (0-25 years)</u>

- Traffic impact ordinance adoption
- TH 212/ CR 134 (now known as CSAH 34/Tacoma Avenue) interim intersection improvement, including right-of-way acquisition for the northeast (including residential property), southeast, and southwest intersection quadrants
    - In 2006, Railroad Street was realigned and interim intersection improvements were completed, with the exception of acquiring right-of-way in the northeast quadrant. This will occur concurrent with development.
- Construction of local collector streets as development dictates in the growth transition area
- Construction of local collector street between CR 134 (now known as CSAH 34) and Industrial Boulevard
- Capacity and safety improvements for the at- grade intersection of TH 212 and Faxon Road
- Improvement of CR 34 (now known as CSAH 34) alignment and intersection with TH 5

[2] SEH, Norwood Young America Partnership Study, p. 1-3, Mn/DOT, May 2002, http://www.dot.state.mn.us/metro/pdf%27s/norwoodyoungamericapartnershipstudy2002_4.0.pdf .

Long-Term (25 or more years)

TH 212 Mainline and Intersection Improvements

- Four-lane controlled access roadway between Salem Avenue and CR 134 (now known as CSAH 34) with continuous north side frontage road
- Interchanges at Salem Avenue, Faxon Road, and TH 5
- Access closures at CR 134 (now known as CSAH 34)/Tacoma Avenue, Industrial Boulevard, Central Avenue, East Street, Morse Street, and CSAH 33
- Dual frontage roads between Faxon Road and TH 5

CR 134/Tacoma Avenue Improvements

- Grade-separated crossing of the TC & W railroad
- Grade-separated crossing of TH 212 and cul-de-sac of Railroad Street
- Geometric improvements and roadway realignment southeast of Young America Lake to provide continuous travel movement
- Realigned intersection with TH 5 (5th Avenue)

Transition Area Collector Streets - new connection streets within development transition areas east of the current city limits and connection to Industrial Boulevard

New South Side Collector Street - connection between Salem, Stewart, and Tacoma Avenues and diagonal alignment to connect with Elm Street

Faxon Road/Central Avenue/SE 2nd Street Improvements - street intersection alignment improvements

Morse Street Improvements - connection to Industrial Boulevard, SW 4th Avenue (pending school redevelopment) and access closure at 5-way intersection (SW 7th Street, Faxon Road, Central Avenue, and SE 2nd Street intersection)

Pedestrian Crossing Improvements - grade-separated pedestrian crossing over TH 212 between Morse Street and CSAH 33

- The City has begun to purchase used bridge sections for this crossing

CSAH 33 Improvements - realignment of CSAH 33/TH 5 intersection and connection with SW 7th Street

Implementation Strategies

The study identified shared strategies and responsibilities between the study partners to implement the recommendations. These including maintaining communication between study partners and coordinating concept plan reviews to manage access and preserve land for improvements. Also included was official mapping of TH 212 segments to preserve right-of-way from additional encroachments. The first official mapping identified was the interim improvement project planned for TH 212 and CR 134 (now known as CSAH 34). Locating funding for proposed improvements, preliminary design efforts, environmental impact documentation and program, design, and construct to implement the plan elements.

E. MULTIMODAL TRANSPORTATION OPPORTUNITIES

It is recognized that various methods of travel impact the economic vitality of a city, county, or broader region.

TRANSIT SERVICE

There are currently no fixed transit routes or passenger facilities within the City of Norwood Young America. The City is designated by the Metropolitan Council as a Transit Market Area IV. Service options for Market Area IV include dial-a-ride, volunteer driver programs, and ride sharing. As a result, minimal transit service is provided to Norwood Young America through the Carver Area Rural Transit (CART). It is a dial-a-ride transit service that is run out of the Carver County Public Works Department.

AVIATION PLANS/FACILITIES

There are no existing or planned aviation facilities within Norwood Young America. The Minneapolis/St. Paul International Airport is located approximately 35 miles east of Norwood Young America. The closest airport is located in the City of Glencoe, approximately 12 miles west. The paved airstrip is 3,300 feet in length and 75 feet in width, and accommodates twin engine aircraft. Tiger Lake is designated by Mn/DOT for seaplane use. However, the City of Norwood Young America is required to include standards for airspace protection in its Comprehensive Plan and local controls.

RAILWAY

There are two active railroads in Norwood Young America. The Twin Cities and Western Rail (TCWR) line is located just north of the south downtown, and runs east-west between Milbank, SD and St. Paul. There is an average of three trains per day using the line. The speed threshold of the line is 30 mph. The Minnesota Prairie Line (MPL) operates on the rail line that enters into the City from the south and it runs between Hanley Falls and Norwood Young America. There is an average of one train per day using the line. The speed threshold of the line is 10 mph.

BIKEWAYS, SIDEWALKS AND TRAILS

The City of Norwood Young America's 2003 Sidewalk, Trails and Thoroughfare Plan identifies existing facilities within the City. The Plan provides the following information.

- Provides an overview of existing sidewalk policies
- Inventories the existing sidewalk system
- Establishes goals and policies related to sidewalks, trails and thoroughfares within the community
- Establishes criteria for the location of new sidewalks and trails
- Provides a Master Sidewalk and Trails Plan
- Establishes general subdivision design standards
- Establishes a "Thoroughfare" Plan
- Identifies implementation steps

Additionally, the Metropolitan Council's Regional Park System Plan identifies a future Crow River trail search corridor extending from TH 212 northwest through the City to Baylor Park and northeast along the Crow River through the County.

III. FUTURE TRANSPORTATION SYSTEM PLAN

The transportation system is one of the most important elements of a city. The network of streets in a community determines land use configurations and relationships. Many times the street system will play a major role in the particular image of a community. It is important that through its street system, a community balance the conflicting needs of motorized and non-motorized modes of traffic.

The transportation system in the Norwood Young America area is in a rural to urban transition in response to growth experienced since 2000. As growth continues to occur, it will be important for the City to develop a roadway system that is efficient and consistent with the transportation system principles and standards outlined in Section II.

A. FUTURE ROADWAY CORRIDORS

The Future Land Use Plan was prepared for the 2030 growth boundary based on the roadways shown in the Partnership Study. As more precise alignments and specifications for these roadways are developed, the City may need to refine the land uses shown. In particular, the outcome of any sub-area study for the TH 212/5 interchange may impact the future land uses in that vicinity.

Figure 4-1 – Future Roadway Functional Classification provides a proposed concept for future roadways in Norwood Young America. This figure includes roadways identified in the Norwood Young America Partnership Study as described in Section III-D, however it provides distinction between Major and Minor Collector roadways. It also includes the logical extension of other collector roads into new growth areas to accommodate future development. The functional classification designation provides guidance as to how a roadway should be preserved as so it can provide its designated role in the overall roadway network as the city grows and develops. Similarly, it shows new Major and Minor Collector roadways to serve future development. The corridor alignments identified are conceptual to illustrate general connectivity and continuity to serve post 2030 growth. Actual alignments may vary. It does not identify what improvements may need to be made to existing roads, establish the timing of roadway construction, etc.

For each potential new roadway or classification upgrade, the city, county and/or state will need to undergo a complete transportation planning process including studying need, developing design concepts, looking at and comparing alternatives, completing environmental reviews as necessary, coordinating funding, etc.

While Figure 4-1 illustrates roadway alignments, expansions and improvements are expected to occur in many cases several years into the future. However, the City, County, State and any other affected jurisdictions should begin taking steps now to preserve future transportation corridors. There are two primary ways to accomplish this. One is to acquire needed future right-of-way when

feasible. The other is to ensure new development is compatible with future roadway plans. Through its subdivision regulations, the City should require new development be consistent with the roadways identified in Figure 4-1. For example, subdivision design should not place new structures in the path of future roadways, but rather incorporate those roadway alignments and orient lots/development around them when feasible.

The City and affected roadway jurisdictions should "officially map" planned roadway improvements when possible. An official map delineates the right-of-way needed for widening existing roads or for new roads to a level of detail sufficient enough to locate future acquisition boundaries. The City may require that any new development conform to the official map. The official map does not does give the City or other affected jurisdiction ownership of the needed future right-of-way, but it can limit development from occurring within it in the meantime. Where it is not yet feasible to prepare an official map for needed future roadways and roadway improvements, the City should work with property owners to ensure new development is compatible with Figure 4-1 to the extent possible.

New arterial and collector roadways, including those identified in the Norwood Young America Partnership Study (NYAPS), are as follows.

NEW MINOR ARTERIAL ROADWAYS

According to the NYAPS, Highway 5 is proposed to be realigned from approximately Central Avenue to join TH 212 at a future interchange east of Tiger Lake west of the current Railroad Street/TH 212 intersection. South of TH 212 this road is proposed to extend to CSAH 31. Consistent with Carver County's 2030 Roadway Systems Plan, TH 5 would and be functionally classified as an A-Minor Arterial Connector, and south of TH 212 the route would be designated as a B-Minor Arterial roadway.

On the east side of the City, Salem Avenue is designated in Carver County's 2030 Plan as being an A-Minor Arterial Connector providing connectivity through west-central Carver County. This route would provide connectivity to the Cities of Mayer and Watertown by means of TH 25.

On the west side of the City, CR 131 is proposed to extend north of CSAH 34 to connect with CSAH 33. This route is designated as future A-Minor Arterial Connector and would provide connectivity across western Carver County. The route connects to Wright County CSAH 8 which includes an interchange at Interstate 94.

MAJOR COLLECTOR ROADWAYS

CSAH 34 is a Major Collector generally located on the northern boundary of the City's identified 2030 growth boundary. The NYAPS identified this corridor would be realigned on the 118th Street alignment beginning approximately ½ mile west of Urban Avenue. The route would be aligned with Central Avenue at TH 5.

Also in the northwest quadrant of the 2030 growth boundary, a Major Collector roadway is recommended to connect between the new Highway 5 alignment and 7th Street. This route would provide important connectivity to future land uses paralleling TH 212 and schools located along 7th Street.

Two new east-west corridors are identified in the NYAPS for the northeast corner of the City's 2030 growth area. The northerly corridor includes the completion of a continuous route between Faxon Road and 122nd Street by means of Preserve Boulevard. The southerly route parallels TH 212 and provides connectivity for local traffic between CSAH 34 and Salem Avenue.

South of TH 212, two new routes and a realignment of an existing route are included in the NYAPS. Railroad Street East is proposed to be realigned to just north of the Twin Cities Western Railroad tracks. The route currently intersects with Tacoma Avenue very near to the Tacoma Avenue/TH 212 intersection. This intersection is proposed to be converted in the future to an overpass across TH 212. Realigning the road to the south will be necessary to accommodate the future overpass and maintain connectivity to the west.

Elm Street East is identified for extension to the east to approximately the Tacoma Boulevard alignment over to Salem Avenue. The NYAPS identifies this route to serve as a southerly frontage road to TH 212 on the southeast side of the City.

The NYAPS also identifies the easterly extension of 134th Street south of Brand Lake to an alignment along 138th Street. Upon completion, this route would provide connectivity between TH 5/25 and CSAH 51 in central Carver County.

A north-south Major Collector routes is identified in the NYAPS and located between Preserve Boulevard and 118th Street east of Young America Lake. This route will provide important connectivity for local traffic to reach routes connecting to local land uses or to the Minor Arterial corridors of TH 5 and Salem Avenue.

MINOR COLLECTORS

Several new Minor Collector roadways are recommended west of existing TH 5 and north of TH 212. These routes will provide connectivity for local traffic in this developing area to reach new TH 5, as well as existing and future Major Collector corridors. South of TH 212, Emma Street and Stewart Avenue are identified as Minor Collectors. These routes will provide important land access, particularly in the area north of TH 212, as well as preserve mobility on higher functionally classed roadways.

In addition to the Minor Collector roadways noted above, astute land use planning and subdivision plat review are key to ensuring an adequate local roadway network is developed and future local street traffic issues are avoided. Minor Collector streets are designed to carry traffic to higher-level roadways. They typically do not carry trips through an area; rather they connect non-continuous local streets and provide individual property access.

One of the primary issues facing developing communities around the Twin Cities Metropolitan area is a perception of excess traffic on "local" streets. The physical ability of these streets to carry traffic typically far exceeds the acceptable traffic levels for those property owners along the street. Minor Collector streets in residential areas must be identified during the preliminary platting process and design measures taken to provide acceptable conditions for the future owners of the adjacent lots. As a rule of thumb, one Minor Collector street connection to a Major Collector roadway is needed for each 100 housing units. For example, a developing area with a capacity of 400 homes should have at least four Minor Collector connections to the Major Collector network. If evenly distributed, these connections will ensure the Minor Collector streets will not be required to carry an unacceptable level of traffic. These Minor Collector streets should be continuous through multiple developments, but not necessarily continuous between Major Collectors. Direct, continuous Minor Collectors that connect between Major Collectors should be carefully considered, as they are often used as short cuts for travelers and tend to result in traffic volume levels unacceptable to the affected neighborhoods.

B. Forecasted Traffic Volumes & Capacity Needs

The 2030 traffic projections are shown on Figure 4-2 – 2030 Forecasted Average Traffic Volumes. The forecasted average daily travel demands approach or exceed daily capacities on several corridors. Based on 2030 traffic projections, the following roadways are anticipated to be periodically congested, near congested, or congested.

Level of Service C – Periodically Congested

1. TH 25, north of TH 5
2. TH 5/25 from CSAH 33 to TH 212 and south of TH 212
3. TH 212, west of TH 5/25
4. CSAH 33 from CSAH 34 to TH 5/25
5. CSAH 34 from TH 5/25 to CSAH 33
6. Preserve Boulevard from Salem Avenue to Faxon Road
7. Salem Avenue from 118th Street to TH 212

Level of Service D & E – Near Congested

1. TH 5/25 from TH 25 to CSAH 33
2. CSAH 33, north of CSAH 34
3. CSAH 33 from TH 5/25 to TH 212
4. Salem Avenue from TH 5 to 118th Street

Level of Service F – Congested

1. TH 5, east of TH 25

Generally, the recommended Geometric Design Standards and associated right-of-way width requirements illustrated in the Geometric Design Standards should maintain the corridor's capacity to accommodate the forecasted traffic volumes on the City's roadways. Table 2.1 – Roadway Types and Capacities identifies various roadway types and the daily capacities that the given roadway can accommodate.

Capacity improvements are recommended on any roadway with a future level of service of D, E, or F, as defined in the roadway capacity discussion within the Transportation System Principals and Standards section. Roadways identified above as near congested (having a volume to capacity ratio between 0.75 and 1) or congested (having a volume to capacity ratio greater than 1) are recommended to be monitored and programmed for capacity improvements when necessary. Roadways that are periodically congested (having a volume to capacity ratio between 0.5 and 0.75) are generally identified as providing an acceptable level of service.

C. ROADWAY SAFETY & MOBILITY NEEDS

Some of the roadways within and adjacent to the City of Norwood Young America are in need of capacity improvements by 2030 with the anticipated growth throughout the area. This is due not only to growth within the City of Norwood Young America but also growth within adjacent cities and other cities along the highway corridors. With this increase in development and increase in traffic, an increase in congestion is expected for TH 5, TH 25, and CSAH 33. Since the primary roadways providing significant mobility within the City of Norwood Young America are county and state roadways, the City will continue to coordinate with the State and County to develop parallel routes for local traffic and coordinate in roadway improvements.

Collector roadways carrying greater than 1,500 vehicles per day have volumes that tend to create potential conflicts between vehicles, bicycles, and pedestrians. The City, in cooperation with Carver County, will monitor pedestrian and bicycle issues, crashes, near misses, and complaints, and prioritize roadway improvements with pavement rehabilitation needs. Strategies to improve safety and mobility will be considered, including the consideration of adding pedestrian facilities at intersections, non-motorized facilities both along and separate from roadways, additional roadway width for wider lanes or shoulders, or when possible, turn lanes to City collector roadways intersecting with County roadways. To accommodate necessary turn lanes or roadway widening, additional right-of-way may be required at the intersection. As reconstruction of aging infrastructure is pursued on City collector streets the recommended geometric design standards assist in improving safety and mobility.

Additionally, as traffic volumes approaching an intersection increase, an intersection control evaluation may be necessary. Triggers for an evaluation may include an increase in correctable crashes or an unacceptable traffic back up. Higher volume roadways that could show traffic signal benefits are under the jurisdiction of the County. As the jurisdictional authority, the County would make decisions on appropriate traffic control. The intersection control evaluation would identify the traffic control option (e.g. all way stop, roundabout, possible signalization) and capacity improvements (e.g. turn lanes) necessary to accommodate the traffic volumes in a safe and efficient manner. Future reconstruction may require modifications of existing access to include strategies such as access consolidation, right–in, right–out access only, or the development of a frontage road to improve the safety and mobility of the corridor. Additional right-of-way should be acquired as properties in the area develop or redevelop.

The high crash locations along TH 212 may be partially rectified by the long-term improvements, included in the Highway 212 Corridor Plan but further study should be completed in the short term as stated in the TH 212 Corridor Plan. Improvements to the TH 212 intersections will also alleviate much of the anticipated congestion issues along CSAH 33.

Based on the forecasted traffic volumes, TH 5 and TH 25 should be improved with capacity expansion. It will be important that this type of regional improvement be coordinated with Mn/DOT and Carver County. Additionally, if TH 5 is not expanded to the east as it connects through Waconia and Victoria, there is anticipated to be unacceptable congestion levels through

those areas. This bottleneck may be alleviated by the recently reconstructed CSAH 10 through Waconia to Chaska and the currently under construction TH 212 freeway from Chaska to TH 5 and I-494.

D. Future Study Areas

This Plan recommends that a more detailed sub-area study be conducted for the "Future Additional Study Area" located in the northwest part of the City. Mn/DOT, Carver County, and the City of Norwood Young America previously completed a concept study to approximate the interim and ultimate configuration of a westerly interchange along TH 212 and the transportation system of the surrounding area.

Because of the significance of this proposed interchange to the regional roadway system, local roadway continuity, existing businesses and potential future development access, and community character, it is important that a comprehensive study of this alignment and surrounding area be conducted, taking each of these into consideration. To identify the transportation system needs in the area, a corridor preservation study should be conducted by the City, Carver County, and Mn/DOT to provide adequate information to future developers to ensure integration of the future corridor into their plans. Completing this study will assist in making the northwest part of the City ripe for development. Developers will understand the expectations associated with the corridor and long-term access, resulting in less risk related to unknown factors and the time it will take to navigate through the approval process. The corridor preservation study should include the following components

- Right-of-way limits and design details that will establish the road's alignment and lane configurations
- Future intersection locations
- A preliminary road profile
    - To integrate the grade of the road into future development plans so property impacts are minimized and berming or landscaping can be completed as necessary to screen the development from the corridor
    - To accommodate the future corridor's stormwater within the overall stormwater management plan of development occurring along the corridor
- A subcomponent of this study would be to determine the above noted details for the future Major Collector along the 7th Street alignment between the new Minor Arterial corridor (TH 5/25) and CSAH 33

After the land use and corridor preservation study is complete, the Comprehensive Plan should be amended to reflect the results of the study. Because of the interrelationship between transportation and land use, this area has been designated as "Future Additional Study Area" on the Future Land Use Plan as well. Future land uses should be identified through a land use study completed concurrently with the corridor preservation study. Findings of these studies should also be incorporated into the Comprehensive Plan through a Plan amendment. The results of the transportation and land use changes may affect the staging plan and park/trail concept.

Another area that is recommended for further study is located within ¼ mile of the intersection of TH 25/5, CSAH 33, and 7th Street. CSAH 33 and 7th Street provide important east-west mobility through the City. Based on the proximity to TH 212, it is likely that future commercial land uses would be planned for the area south of 7th Street between CSAH 33 and the new TH 25/5 corridor. The Norwood Young America School District is also planning for a new high school to be located in the northeast quadrant of this intersection. It is planned that the current TH 5/25 roadway through this area will be vacated after the new alignment is constructed. This study would identify right-of-way needs of the intersection and 7th Street and provide a vision for long term intersection and roadway configuration for this area that will provide good mobility and safe access through the area. It is recommended that this study be completed prior to approval of a concept plan for development or redevelopment within ¼ mile of this area. Study partners are anticipated to include the City, Carver County, and Mn/DOT.

E. Multimodal Transportation Opportunities

It is important for the community to plan for the ability to accommodate multimodal activities (i.e. transit, pedestrian, and bicycle) on all non-local roadways to provide other opportunities to move about the City and beyond.

Transit Service

Significant changes to the existing transit opportunities are not anticipated, but the City is supportive of transit options, based on the level of growth forecasted by the year 2030. The City is considering the potential of a commuter rail or light rail station with the future City Hall site which is adjacent to the Twin Cities and Western Rail Line

Aviation Plans/Facilities

As noted in the discussion of the existing transportation system, the City of Norwood Young America is required to include standards for airspace protection in its Comprehensive Plan and local controls.

Federal Regulation Title 14, Part 77 establishes standards and notification requirements for objects affecting navigable airspace. This notification serves as the basis for evaluating the effect of the construction or alteration on operating procedures, determining the potential hazardous effect of the proposed construction on air navigation, identifying mitigation measures to enhance safe air navigation, and charting of new objects. Notification allows the Federal Aviation Administration (FAA) to identify potential aeronautical hazards in advance, thus preventing or minimizing the adverse impacts to the safe and efficient use of navigable airspace.

Title 14, Part 77.13 requires any person/organization who intends to sponsor any of the following construction or alterations to notify the Administrator of the FAA when:

- Any construction or alteration exceeding 200 feet above ground level;
- Any construction or alteration:
    - Within 20,000 feet of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with at least one runway more than 3,200 feet
    - Within 10,000 feet of a public use or military airport which exceeds 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 feet
    - Within 5,000 feet of a public use heliport which exceeds a 25:1 surface;
- Any highway, railroad or other traverse way whose prescribed adjusted height would exceed that above noted standards;
- When requested by FAA; and,
- Any construction or alteration located on a public use airport or heliport regardless of height or location.

Persons/organizations intending to sponsor construction/alterations which require notification to the FAA under Title 14, Part 77.13 shall notify the FAA using FAA form 7460–1 as may be amended.

The City's Zoning Ordinance should be amended to require persons/organizations intending to sponsor construction/alterations which require notification to the FAA under Title 14, Part 77.13 to notify the FAA using FAA form 7460–1 as may be amended.

Bikeways, Sidewalks and Trails

The City of Norwood Young America's 2003 Sidewalk, Trails and Thoroughfare Plan discusses future bikeway, sidewalk and trail locations. Future shoulder, bikeway, sidewalk, and trail locations are also discussed in the geometric design standards section of this chapter, to be pursued along or adjacent to most collector roadways. For each of the County highways within Norwood Young America, roadway shoulders, in addition to trails and/or sidewalks, are recommended on both sides of the roadway to accommodate pedestrian, bicycle, and other non-motorized travel.

The City will review pedestrian facilities and school routings to determine their adequacy as traffic conditions change. Shoulders, bikeways, sidewalks and trails will be integrated with the roadway system to provide routes for non-motorized traffic to access existing and future controlled intersections. Non-motorized facilities are to be incorporated into road projects and land redevelopments to safely accommodate pedestrians and bicycles with vehicle traffic in the City, as the City grows.

The City is continuing to pursue a grade separated, pedestrian and bicycle crossing of TH 212 at Morse Street. On a regional basis, the Metropolitan Council Regional Parks Policy Plan has identified the need for a regional trail corridor extending through the City from TH 212 to Baylor Park and beyond along the Crow River. The City will partner with other units of government to identify an alignment for this future regional trail.

IV. GOALS & IMPLEMENTATION

The following goal and policies outline the City of Norwood Young America's plan for ensuring adequate transportation infrastructure is available to support the planned land uses through 2030, as well as identifying potential funding sources for completing necessary improvements.

A. GOALS & POLICIES

The transportation goals and policies identified have been developed to meet the needs of the land uses associated with the build-out of the urban growth boundary.

TRANSPORTATION GOAL #1

Provide a safe, efficient and adequate transportation system that serves and balances both access and mobility needs.

POLICIES

1. Use the functional classification system to define and plan existing and new roadways.

2. Require access spacing that is consistent with the transportation plan

3. Require the provision of safe and adequate access to all properties through the implementation of subdivision regulations.

4. Encourage a more grid-like street pattern.

5. Discourage the use of cul-de-sacs, except where it is impractical to provide through streets, environmental or other important features are best preserved with a cul-de-sac, or other unique circumstances exist.

6. The location of collector streets promotes orderly development. As development plans are presented to the City, future collector streets should be designed to provide continuity and prudent access to other collector streets and arterials and adhere to the recommended access management guidelines and locations identified in Figure 4-1 – Recommended Future Roadway Functional Classification.

7. Review concept plans for plat and development proposals to evaluate the distribution of Minor Collector roadways so as to not overburden local streets.

8. Require right-of-way dedication along state, county, and local roads to meet future capacity needs.

9. Work with developers to construct needed improvements prior to development.

TRANSPORTATION GOAL #2

Maintain a transportation system that is coordinated and cost-effective.

POLICIES

1. Continue to work with surrounding jurisdictions, state, regional, and federal agencies to ensure an integrated regional transportation system and reduce traffic congestion and safety concerns on transportation corridors.

2. Schedule transportation projects in a capital improvement program. The program should contain elements for new construction and reconstruction of the roadway system, with scheduled maintenance included in annual budgets. Street maintenance should include routine patching, crack filling, and storm sewer cleaning. Implement a schedule for roadway maintenance and reconstruction (e.g. complete reconstruction or mill/overlay every 15 to 20 years), street widening/realignment, etc.

3. Continue to implement planned improvements and implementation strategies identified in the 2002 Norwood Young America Partnership Study. Monitor the plan and update when necessary.

4. Adopt by reference the City's 10-year Infrastructure Improvement Plan.

5. Require trails and/or sidewalks along all new or reconstructed collector and arterial roadways as outlined in Section II-D.

6. Adopt by reference the goals and policies relating to sidewalks and trails in the 2003 Sidewalk, Trails and Thoroughfare Plan.

7. Create conceptual master plans of the City's growth areas that identify future transportation corridors.

8. Proactively work to preserve future transportation corridors both by acquiring needed right-of-way in advance when possible and through the use of official mapping.

9. Implement a city-wide, uniform street naming system.

10. Continue to explore all federal, state and other funding opportunities for local and regional transportation projects.

11. The City should continue to work with County elected and appointed officials to include County Road reconstruction projects on the County's Capital Improvement Plan to address needed reconstruction and potential trails along the roadways when improved.

12. Continue to coordinate future road construction and reconstruction projects with all utility service providers and Scott County to ensure efficient repair/replacement and avoid duplicate costs.

13. Develop an assessment policy for Major Collector and Minor Arterial roadways to establish expectations and ensure consistent application.

14. Utilize developer agreements as a tool to ensure improvements are constructed as agreed upon in the platting or development process.

15. When traffic from a proposed urban development may exceed 500 ADT will work with the developer and township to identify a strategy to upgrade and improve the gravel corridor through a joint agreement with the developer, township, and City.

TRANSPORTATION GOAL #3

Coordinate transportation with land use planning and environmental protection.

POLICIES

1. Analyze the traffic generation characteristics of proposed land uses to avoid exceeding the capacity of local, county and regional roadways.

2. Support transportation projects that support the compact, orderly development of the city and region.

3. Establish a policy outlining when a traffic impact study should be conducted, including acceptable information to be contained within the study.

4. Consider the impacts to neighborhoods when planning new or upgrading existing roadways.

5. Consider the environmental impacts of any proposed transportation projects.

6. Create or encourage a transportation system that contributes to the economic vitality of the community by connecting people to work, shopping, and other activity generators/attractions and supports growth of commercial and industrial uses.

TRANSPORTATION GOAL #4

Promote alternative transportation such as bicycling, walking, transit and rail.

POLICIES

1. Incorporate, where feasible, bicycle and pedestrian infrastructure when planning new, changes to, additions to, or maintenance of roads, sidewalks, bridges, paths or other public facilities.

2. Continue to maintain and seek ways to expand the existing network of bicycle and pedestrian trails throughout the city.

3. Adopt by reference the goals and policies relating to sidewalks and trails in the 2003 Sidewalk, Trails and Thoroughfare Plan.

4. Promote the connectivity of alternative transportation systems and have such transportation systems connect efficiently to neighborhoods, commercial centers, natural areas, and community and recreational facilities.

5. Evaluate the need for special transit services in conjunction with surrounding communities.

6. Monitor local transit needs as related to increasing traffic and the growth of the transit dependent.

7. Explore options for improving pedestrian and other non-motorized crossings at the intersection of Central Avenue/Southeast Second Avenue/Morse Street and across Highway 212.

8. Explore potential locations for a future transit/rail station.

9. The City should promote safe pedestrian crossings of arterial roadways.

TRANSPORTATION GOAL #5

Plan and invest in multi-modal transportation choices based on the full range of costs and benefits, to slow the growth of congestion and serve the City and region's economic needs.

POLICIES

1. Plan for an interconnected system of local streets, pedestrian and bicycle facilities.

2. Plan and develop an interconnected local transportation system that is integrated with the regional system.

3. Develop local land uses linked to the local and regional transportation systems.

4. Plan for connections between housing and centers of employment, education, retail and recreation uses.

5. Coordinate with business and other public agencies congestion-reduction measures such as collaboration with employers, provision of information or incentives to minimize or decrease peak-period impacts.

6. Adopt improved design principles to support better access and traffic management.

7. Use Mn/DOT's access management guidelines to prepare local plans and ordinances.

TRANSPORTATION GOAL #6

Ensure airspace is properly protected to support local and regional aviation.

POLICIES

1. Monitor Glencoe Airport for any possible impacts on the community or development area.

2. Notify Mn/DOT 30 days in advance of all requests for structures exceeding a height of 200 feet above ground level.

B. STRATEGIES

Various strategies can be utilized to ensure proper transportation improvements are made to provide and protect the infrastructure investment. Astute land use planning and subdivision plat review are key to ensuring the long-term roadway network vision is developed and future traffic issues are avoided. To accomplish this, each development proposal (e.g. redevelopment of a single parcel, plat review, change of use, expansion of a business or operation, etc.) should be evaluated for consistency with the following policies/standards.

1. Work with property owners and developers to remove and/or relocate existing driveway and field approaches off non-local roads.

2. Provide road and trail connectivity between adjacent parcels.

3. Review/require access spacing that is consistent with the transportation plan.

4. Connect residential and non-residential areas.

5. Review developments for the accommodation of transit opportunities as part of the development review process.

6. Require turn and bypass lanes on non-local roads impacted by new development, including those that are not immediately adjacent.

7. Require off-site improvements, including those in other jurisdictions, where the existing transportation network will be directly impacted by new development, including where the development is not immediately adjacent. This could include but is not limited to paving roads, repairing surfaces, fixing sub-standard drainage, improving sight distances, etc.

8. Require the dedication of rights-of-way for all required future transportation improvements identified in the transportation plan including trails, roads, bridges, transit facilities, drainage, utilities, and any other related improvement requiring use of a corridor/location.

9. Require the equitable participation in the construction of collector and arterial roads.

10. Review probable neighborhood traffic patterns, areas where excessive speed is possible, and the potential for pedestrian conflicts.

11. Require all local roads to be constructed to property lines, or the corresponding amounts of money be escrowed, where stub streets are proposed to adjacent properties, but are not immediately warranted.

12. Require fees, construction participation, and/or cost participation proportionately to future required infrastructure such as overpasses, interchanges, and other local/county responsibilities as afforded by law and justifiable.

13. Require traffic impact studies, including the analysis of intersections to determine the need for and contribution to intersection improvements.

C. IMPROVEMENTS

There are a number of key roadway and other transportation projects that are planned for Norwood Young America in their Infrastructure Rehabilitation Plan and Sidewalk and Trail Plan (Revised September 2007). These projects, listed below, are in varying degrees of planning, design and approval. This is not an exhaustive list, nor is it in order of importance or likelihood of occurrence.

SHORT-TERM IMPROVEMENTS (2008 – 2013 YEARS)

Following are the projects currently planned within the Infrastructure Rehabilitation Plan and Sidewalk and Trail Plan.

Year 1 (2008) Project

- Wilson Street Reconstruction (Progress Street to Merger Street)

Possible Year 2 (2009-2010) Projects

- Faxon Road Reconstruction (Oak Street to Twin Cities & Western Rail Line)
- Sidewalk on Faxon Road (Oak Street to Elm Street)

Possible Year 3 (2010-2011) Projects

- Railroad Street Reconstruction (Morse Street to Faxon Road)
- Sidewalk on Railroad Street (Union Street to Faxon Road)

Possible Year 4 (2011-2012) Projects

- Seventh Street Reconstruction (TH 5/Reform Street to Morse Street/Faxon Road)
- Sidewalk on Seventh Street (TH 5/Reform Street to Morse Street/Faxon Road)

Possible Year 5 (2012-2013) Projects – none identified

In addition to the projects that are identified in the Infrastructure Rehabilitation Plan and Sidewalk and Trail Plan, the following has been identified for capital improvement planning (CIP) purposes as follows.

It is recommended that the City of Norwood Young America, Carver County, and Mn/DOT work together to initiate a corridor preservation study to determine TH 5/25 realignment option and 7th Street Major Collector corridor alignments for further planning, preservation, and environmental analysis for the area north of TH 212 and existing TH 5. Depending on the specific scope of the study, a planning level cost estimate in 2008 dollars for a study of this magnitude may cost in the range of $125,000

to $175,000, with potential funding partnerships between developers, City, County and Mn/DOT.

It is recommended that the City of Norwood Young America, Carver County, and Mn/DOT work together to initiate a corridor and intersection preservation study to determine the long-term corridor and intersection needs at TH 5/25, CSAH 33, and 7th Street. A planning level cost estimate in 2008 dollars for a study of this magnitude may cost in the range of $25,000 to $50,000 with potential funding partnerships between developers, City, County and Mn/DOT.

It is recommended that the City of Norwood Young America conduct a study to estimate funding contributions to complete identified improvements. This information could be used for capital improvement planning or assigning a development's proportionate fair share of roadway infrastructure improvement costs through an annexation agreement and/or development agreement. A planning level cost estimate in 2008 dollars for this study is estimated at $10,000.

Mid to Long-Term Improvements (2014 – 2030)

Following are the projects currently planned within the Infrastructure Rehabilitation Plan and Sidewalk and Trail Plan.

Possible Year 6 (2013-2014) Projects

- Sidewalk on Morse Street (TH 212 to Railroad Street)
- Sidewalk on Hazel Street (Elm Street to Park Place)
- Sidewalk on Park Place (Hazel Street to Oak Street)

Possible Year 7 (2014-2015) Projects

- Second Avenue Reconstruction (North of Main Street)
- Sidewalk on Main Street (Second Avenue to Third Avenue)

Possible Year 8 (2015-2016) Projects

- South Street Reconstruction (Reform Street to Faxon Road)
- Reform Street Reconstruction (Elm Street to South Street)
- Sidewalk on Lake Street (Reform Street to Oak Street)

D. Potential Transportation Funding Sources

There are a number of various funding mechanisms available to support transportation projects these include the following.

Federal Funding

Norwood Young America may apply for federal funds for highways through the Surface Transportation Program of the Federal Highway Trust Fund, through Mn/DOT's Area Transportation Partnership (ATP). Solicitation occurs approximately every two years, with federal funding covering 80% of a project's cost. Types of projects funded include highway reconstruction, safety projects, trails which are part of projects, transit and park-and-ride projects.

MSAS System

The State of Minnesota, through the gas tax and license fees, collects funds to be used to construct and maintain the State's transportation system. Most of the funds collected are distributed for use on the State's Trunk Highway (TH) system, the County State Aid Highway (CSAH) system and the Municipal State Aid Street (MSAS) system. Of the funds available they are distributed 62% TH, 29% CSAH and 9% MSAS. When Norwood Young America achieves a population above 5,000 it will be eligible to receive a portion of the MSAS funding. As the City nears a population of 5,000, it should begin the planning process to identify the route(s) to be designated and evaluate the special assessment policy to determine whether revisions for state aid routes are warranted.

Mn/DOT Cooperative Funds

The State of Minnesota has funds available to assist with cooperative projects that increase safety and mobility. Solicitations are due in September each year for construction the following year.

MN Department of Natural Resources Grants

Various federal and state grants are available for the development or reconstruction of trails. Typically grants require a 50% match and illustration that the trail is not only of local importance but also of regional significance. Grant programs through the DNR for trail projects include the Federal Recreational Trail Grant Program, Regional Trail Grant Program, Outdoor Recreation Grant Program, and Local Trail Connections Program.

Collector and Local Streets

Developers may be required to fund the entire cost of Minor and Major Collector Roadways, as well as local streets as a part of their development fees.

V. TRAFFIC FORECASTS

The traffic forecasts were obtained from the 2030 Carver County Roadway Systems Plan. The forecasts were determined by the County through the use of a travel demand model. This travel demand model forecasts the amount of travel on transportation facilities given assumptions of future development and transportation system improvements. Forecasts that were developed for Carver County were based on the modified Twin Cities regional travel demand model, which was released by the Metropolitan Council in 2004. The models were calibrated to year 2000 due to the prevalence of data for that time period.

The travel demand model uses development activity to estimate travel activity. This development activity includes population, households, and employment (retail and non-retail). The Carver County area is represented by 37 transportation analysis zones (TAZs) in the Metropolitan Council model, which were further divided into 254 zones to better reflect the location of development within Carver County. The Metropolitan Council model TAZ that includes Norwood Young America (TAZ 129) was split into 16 TAZs. Figure 6-1 illustrates the location of the TAZs within the Metropolitan Council TAZ for Norwood Young America. The socioeconomic (development) information within each TAZ is shown in Table 6-1.

TABLE 6.1 – SOCIOECONOMIC INFORMATION BY TRANSPORTATION ANALYSIS ZONE

TAZ	Population	Households	Retail Employment	Non-Retail Employment	Total Employment
129.1.1	20	9	3	2	5
129.1.5	2,674	1,224	32	45	77
129.2.1	1,070	490	40	149	189
129.2.2	970	444	102	476	578
129.2.3	1,171	535	143	659	802
129.3.1	3,623	1,658	103	270	373
129.3.2	174	80	53	30	83
129.3.3	1,119	512	27	242	269
129.4.2	47	21	13	12	25
129.4.3	1,003	459	30	239	269
Total Norwood Young America	**11,871**	**5,432**	**546**	**2,124**	**2,670**
129.1.2	190	71	1	16	17
129.1.3	107	40	1	7	8
129.1.4	87	33	1	6	7
129.4.1	546	205	4	41	45
129.4.4	269	101	2	21	23
Total Young America Twp.	**1,199**	**450**	**9**	**91**	**100**
129.5 Hamburg	**1,000**	**400**	**53**	**117**	**170**
129 Total	**14,070**	**6,282**	**608**	**2,332**	**2,940**

The traffic projections assume the following improvements in Table 6-1 were made to the regional roadway system.

TABLE 6.2 – ASSUMED 2030 REGIONAL ROADWAY SYSTEM IMPROVEMENTS

Roadway	From	To	Improvement
TH 41	South Carver County Border	TH 5	Expand to 4 Lanes
TH 101	South Carver County Border	North of new TH 212	Expand to 4 Lanes
New TH 212	West of CSAH 11/CR 47	East Carver County Border	Expand to 4 Lanes

The improvements noted below were not included in the travel demand model, because Mn/DOT's Transportation System Plan does not identify them for funding by 2030.

- No new TH 41 river crossing
- No capacity improvements on TH 212 west of CSAH 11/CR 147 interchange
- No capacity improvements on TH 47 in Carver County
- No capacity improvements on TH 5 west of TH 41/Arboretum Drive

The only new or improved corridors in the Norwood Young America area included in the County's 2030 travel demand model were the extension of Preserve Boulevard to Salem Avenue, the extension of Elm Street East to Salem Avenue, and the extension of 134th Street to Salem Avenue along the 138th Street alignment.