Central Corridor Transit Service Study Concept Plan Report

Metro Transit

June 2012

EXECUTIVE SUMMARY

The Central Corridor light-rail transit (LRT) project will open in 2014 and operate between downtown Minneapolis and downtown St. Paul, serving the University of Minnesota and University Avenue corridor. The new line – known as the METRO Green Line – is expected to provide an estimated 13.2 million annual rides by 2030 and models project that about 40 percent of Green Line customers will ride bus service to LRT stations.

Prior to implementation of Green Line LRT service, Metro Transit is conducting a study of bus service in the Central Corridor. This report provides a concept plan for expansion and integration of the current bus service network with Green Line service to maximize the overall effectiveness and efficiency of transit service in the area and ensure that overall transit service is maintained or improved for neighborhoods along the line.

DEMOGRAPHICS AND EXISTING SERVICE

Central Corridor Transit Service Study area is bounded by the Mississippi River on the south, I-35E on the east, Larpenteur/East Hennepin avenues on the north and by Hiawatha Avenue, East Lake Street and the Mississippi River on the west. The Study Area is almost completely urban, including downtown Minneapolis, downtown St. Paul and the University of Minnesota, and covering many neighborhoods of St. Paul, Minneapolis and the suburbs of Lauderdale, Falcon Heights and Roseville. The population of the Study Area is about 246,000 and as of 2008, there were about 357,600 jobs in the Study Area. This represents about 8.6 percent of the population and 22 percent of the employment in the entire metropolitan area.

The Study Area is particularly known for its concentration of post-secondary educational campuses and the concentrations of student populations. There are about 91,000 students at the colleges and universities in the Study Area. Significant educational institutions include the University of Minnesota (Minneapolis and St. Paul campuses), Augsburg College, Concordia University, Hamline University, Macalester College, St. Paul College, St. Catherine's University, the University of St. Thomas and William Mitchell College of Law.

The routes included in the study include all those that operate a significant portion of their total service in the study area and also provide a connection to the Green Line. This includes routes 2, 3, 6, 8, 16, 21, 50, 53, 62, 63, 65, 67, 84, 87, 94, 134, 144 and 262. Express routes 353, 355, 365, 375 and 452 are also included because they serve Huron Station. Several other routes provide service in the study area but do not provide a connection to the Green Line. These routes are not included in the study, but are included on maps and other materials for reference. Public transit service provided by the University of Minnesota, including the Campus Connector and circulator routes, are not included in this study.

The Central Corridor Transit Service Study Existing Conditions Report examined the markets and unmet opportunities that exist for current transit service in the Study Area. It documented the development patterns, major attractions and destinations in the Study

Area as well as current and future travel patterns. The service assessment identified that routes in the study area are characterized by:

- Good overall existing route network design and coverage
- Some gaps in the crosstown grid network
- Good ridership during all times of the day and day of week, and
- A lack of adequate frequency and span of service on some routes

PUBLIC INVOLVEMENT IN CONCEPT PLAN DEVELOPMENT

As part of evaluating existing service and gathering community input for the concept plan, Metro Transit worked with stakeholders, including transit customers and community/neighborhood groups, to share the Central Corridor Transit Service Study objectives, gather feedback on how transit is currently performing and identify opportunities for improvements to transit service. This included gathering data regarding existing travel behaviors in the study area.

The four primary ways used to gather public input for the study were:

1. A series of meetings with neighborhoods and community groups, residents and businesses
2. Three public open houses
3. A public input form on the Metro Transit website
4. Trusted Advocates hired by the District Councils Collaborative of the Saint Paul and Minneapolis (DCC)

Major travel patterns and service improvement themes voiced by stakeholders included:

- Frequency improvements such as on Raymond Avenue and Dale Street
- Easier neighborhood-to-neighborhood travel without having to transfer in downtown
- Better timed connections in general
- New crosstown routes, such as on Lexington Parkway in St. Paul

KEY PLAN OBJECTIVES AND STRATEGIES

Evaluation of existing conditions in the Study Area and consideration of the most common topics from the public input process suggest five primary opportunities to improve the productivity and effectiveness of transit service in the Study Area:

- Strengthen the bus route network grid. Connect bus routes with trains at key Green Line stations.
- Improve service frequency. Given a choice, most people will choose more frequent service within reasonable walk distances.
- Enhance off-peak service. Increasingly, people need to travel outside the traditional rush-hour commute periods.
- Improve bus-to-bus connectivity. Improve connections to other Study Area bus routes.
- Improve bus service to major destinations. Major destinations were identified by public input forms.

These basic observations led to the following service design principles in the concept plan:

- Provide convenient and reliable bus and train connections at key Green Line stations.
- Generally improve the frequency of connecting bus service to every 20 minutes seven days a week, which is compatible with the Green Line's 10-minute frequency.
- Expand the hours of service for all bus routes that connect with the Green Line seven days a week.
- Reduce transit service redundancy between bus and LRT in the Central Corridor and shift resources from reduced bus service on University and I-94 to improve connecting bus service.
- Improve the transit connectivity among the many colleges and universities in the Study Area.
- Provide faster, more direct service to major destinations in the Study Area.
- Fill in the north-south cross-town bus route network.

PROPOSED SERVICE CHANGES

The primary emphasis of the Concept Plan is to reduce service on bus routes whose trips will be operated by Green Line trains and to shift those resources into improved coverage, frequency and hours of service on bus routes connecting with rail. Improving the frequency of service will improve the reliability of the routes and connections between routes. Ideally, frequencies should be compatible with those of the Green Line to provide reliable and consistent connections.

The Concept Plan includes the following service proposals:

University Avenue Corridor (Routes 16, 50, 94)

The Green Line will be the primary east-west service in the corridor and will replace existing Route 50 limited-stop bus service. A scaled-back local Route 16 will continue to operate parallel to the Green Line between downtown St. Paul and Oak Street on the east end of the University of Minnesota campus. Between approximately 1:00 a.m. and 5:00 a.m., when rail service will not operate, Route 16 will be extended to downtown Minneapolis.

Route 94 currently provides express service on I-94 between downtown Minneapolis and downtown St. Paul. Select trips also serve Snelling Avenue and/or Marion Street and the State Capitol area. After the Green Line begins operations, Route 94 will operate only during weekday rush hours, operating non-stop between the two downtowns.

East-West Connections (Routes 8, 63, 67)

East-west routes that parallel the University Avenue corridor will be adjusted to improve connections with the Green Line. Route 63 will be extended from the University of St. Thomas area to Raymond Avenue Station via Cretin Avenue. Route 8 will be combined

with Route 67. The new Route 67 will serve Franklin Avenue between Hiawatha Avenue (METRO Blue Line LRT) and University Avenue, University Avenue between Raymond Avenue Station and Fairview Avenue Station, then follow the existing route on Fairview and Minnehaha avenues to downtown St. Paul, ending there. Existing Route 67 service south of downtown St. Paul will become part of Route 62 and will maintain current levels of frequency and span of service.

North-South Connections (Routes 65, 83, 84, 87)

The north-south routes that currently intersect the University Avenue corridor at Dale Street, Snelling Avenue and Raymond Avenue will be improved to make more frequent connections with the Green Line, and a route on Lexington Parkway will be reintroduced.

Route 65 will continue to operate from Rosedale Transit Center via County Road B and Dale Street to Selby Avenue. Route 65 will no longer directly serve downtown St. Paul via Selby Avenue and instead will continue on Dale Street to Grand Avenue.

New Route 83 will operate on Lexington Parkway between West 7th Street and Energy Park Drive, and on Energy Park and Snelling Avenue to Como Avenue. The new service on Lexington Parkway enhances the grid network, filling a two-mile gap between Snelling and Dale.

Route 84 on Snelling Avenue will be improved to operate every 10 minutes between Rosedale and Ford Parkway. South of Ford Parkway, two local routings (D and H branches) will be combined into one branch serving both Montreal Avenue and the West 7th and Davern Street area using current routings. Service to 46th Street Station (METRO Blue Line) on Ford Parkway will continue to operate.

Route 87, which serves Rosedale, Raymond and Cleveland avenues and the U of M's St. Paul campus, will also provide more frequent service. New evening and weekend service will be added. Route 87 will be rerouted to more directly serve Raymond Avenue Station.

Limited Stop Commuter Routes (Routes 134, 144)

In addition to all-day local service, Metro Transit currently operates rush-hour only commuter-oriented service on both Snelling and Cleveland/Cretin avenues. The span of service on Route 134 on Cleveland/Cretin avenues will be reduced on the fringe of rush hours but will remain unchanged for the most popular work start and ends times. Route 144 will be eliminated, with alternative service available via Route 84 and the Green Line.

No Significant Changes (Routes 2, 3, 6, 21, 53)

Based on the results of the study, no route structure or major change in frequency or span of service is planned on routes 2, 3, 21 and 53. There will be a minor route extension on Route 6 from Oak Street and Washington Avenue to Stadium Village Station.

Huron Station (Routes 50, 94, 134, 353, 355, 365, 452)

Currently, select westbound express routes serve Huron Station at I-94 and Huron Boulevard between 7:30 a.m. and 9:20 a.m., offering a connection with Route 50 to the U of M campus. Since the Green Line will replace Route 50, Metro Transit will no longer provide a local bus connection between Huron Station and campus. The U of M is considering having a campus circulator route serve the station and provide this link.

PLAN IMPACTS

The Metro Transit team worked extensively to refine the proposal to minimize negative impacts on current customers. While retaining good coverage, this Concept Plan reinforces the simplified route structure implemented in earlier Sector plans and reinvests resources into areas and at times of the day where additional service is warranted.

There are several segments of routes where service is eliminated or reduced. In almost all cases, alternate transit service is within a quarter-mile of residents and businesses along these routes.

Metro Mobility service hours within the study area may be increased slightly in the cities of Falcon Heights and Roseville due to the span of service increases to regular routes found in the plan. This door-through-door service for the disabled is mandated by the Americans with Disabilities Act and is provided by the Metropolitan Council. Since Metro Mobility's service hours and areas are determined by the fixed route transit network, changes to the fixed route service hours or routings impact Metro Mobility's complementary paratransit services as well.

This concept service plan has also been evaluated in accordance with Federal Transit Administration (FTA) Title VI and Metropolitan Council guidelines to understand its impacts on low-income and minority populations. This evaluation finds that the recommended changes are non-discriminatory and do not have a disparate impact on these populations in the Study Area.

TRANSIT SERVICE RESOURCES

The bus service proposed in the Central Corridor Transit Service Study Concept Plan is generally equivalent to existing bus service levels in the Study Area. Resources saved by reducing or eliminating bus routes whose trips will be served by the new rail service will be shifted to improve the coverage, frequency and hours of service on bus routes connecting with rail. Some additional service improvement priorities are included in the "Future Considerations" section of the plan and may be implemented when funding is available.

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The Central Corridor light-rail transit (LRT) project will open in 2014 and operate between downtown Minneapolis and downtown St. Paul, serving the University of Minnesota and University Avenue corridor. The new line – known as the METRO Green Line – is expected to provide an estimated 13.2 million annual rides by 2030 and models project that about 40 percent of the Green Line customers will ride bus service to stations.

Prior to implementation of Green Line LRT service, Metro Transit is conducting a study of bus service in the Central Corridor. The study will recommend changes to existing transit service in the Central Corridor to be implemented at the same time as the start of rail service. These recommended service changes will include expansion and integration of the current bus service network with Green Line LRT service to maximize the overall effectiveness and efficiency of transit service in the area and ensure that overall transit service is maintained or improved for neighborhoods along the line.

This report provides a concept plan for the Central Corridor Transit Service Study. The concept plan has been developed based on review of existing and future demographics, development and overall transit demand in the Central Corridor. Planners solicited public comments through multiple channels and incorporated that input into the concept plan. This concept plan will now be presented to the public and public reaction will be sought through a formal public hearing process. This input will be reviewed and considered as planners develop the final recommended service changes. Those changes will be adopted by the Metropolitan Council and will be implemented by the start of Green Line operations in 2014.

CHAPTER ONE: STUDY AREA TRANSIT SERVICE AND DEMOGRAPHICS

The first step in preparing a concept plan for a major service change is to review existing conditions, including existing population and employment demographics, major development patterns, transit service and ridership, and other relevant elements.

CURRENT NETWORK STRUCTURE

As of February 2012, transit service in the Study Area consisted of:

- 14 local and nine express or limited-stop bus routes
- 1,600 weekday in-service hours
- 86,000 rides or one-third of Metro Transit's system-wide weekday ridership

Among these routes, as in most of the Metro Transit network, there are two distinct route structures. "Base" service operates all day and "peak" service operates only during weekday rush-hour periods. See Figure 1.

Base Route Structure

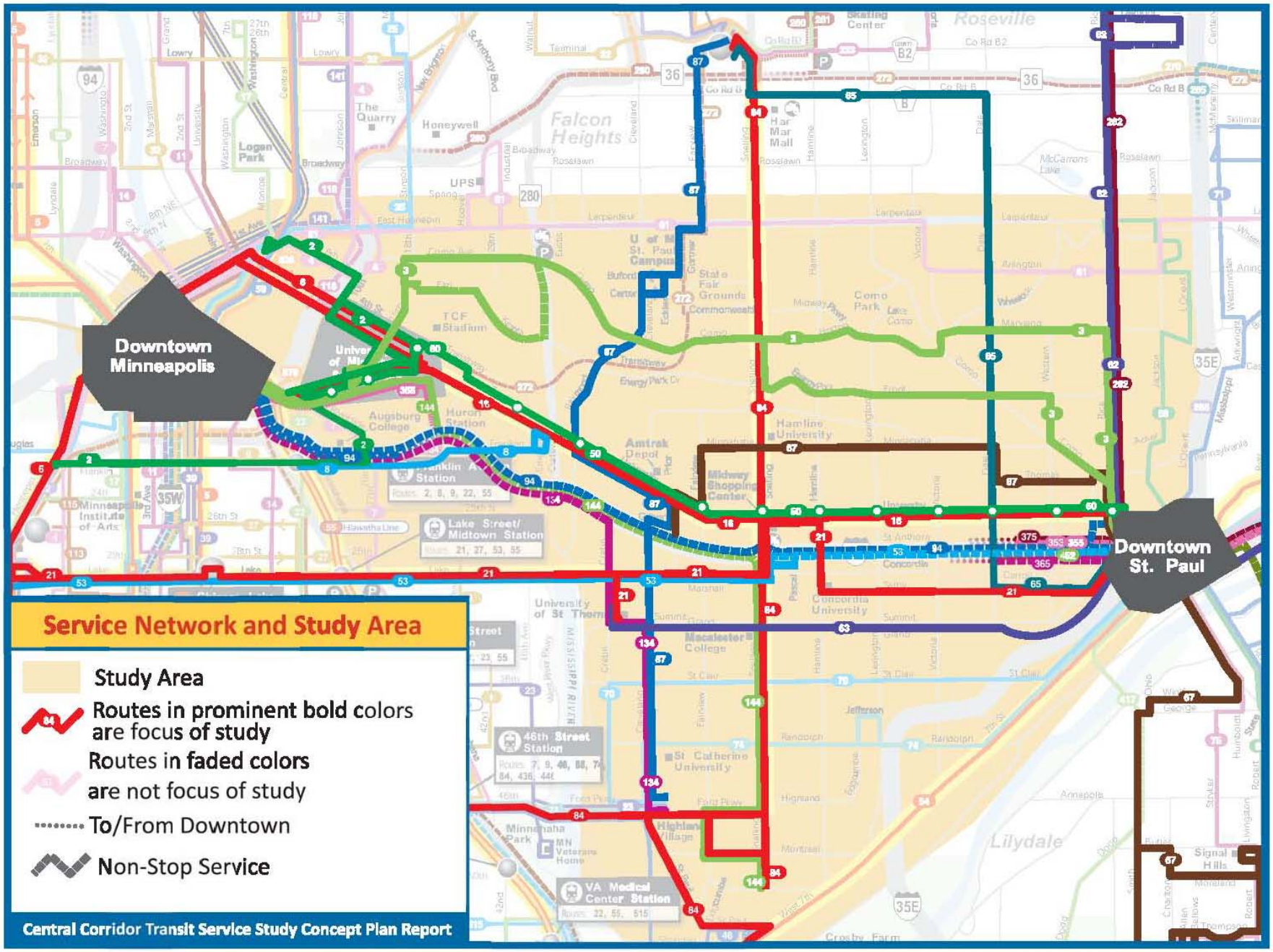
The base route structure in the Study Area is designed to meet a variety of transportation needs. The overall structure is both radial, that is, oriented east-west to downtown St. Paul and/or Minneapolis, and a grid of north-south cross-town routes perpendicular to the radial routes. Radial routes are usually one-half to one mile apart and cross-town routes are spaced about one to two miles apart. North of University Avenue, most of these routes extend to Roseville and terminate at Rosedale Transit Center. Rosedale Transit Center is a timed-transfer point where eight local routes make timed connections.

Most services operating during off-peak periods are local routes that serve six to eight bus stops per mile. There is one all-day express route in the Study Area, linking downtown Minneapolis and downtown St. Paul seven days a week.

Peak Route Structure

During peak hours, the base network remains, generally with improved service levels, and is overlaid by additional peak-only commuter routes. Peak-only routes from the Highland and Merriam Park areas of St. Paul offer local pick-up from these neighborhoods then operate non-stop to the University of Minnesota and downtown Minneapolis or St. Paul. These routes operate in addition to base local routes, either on the same street or on close parallel streets. For example, on Snelling Avenue, Route 84 provides base local service and Route 144 provides peak limited-stop commuter service to Minneapolis. On Cleveland Avenue, Route 87 provides base local service and on Cretin Avenue, a close parallel street, Route 134 provides the peak limited-stop service to Minneapolis. On Lake Street/Marshall Avenue, Route 21 provides base local service and Route 53 provides peak limited-stop service to downtown St. Paul.

Figure 1 Existing Service and Study Area



CURRENT SERVICE FREQUENCIES AND HOURS OF SERVICE

Transit route coverage and hours of service in the Study Area on weekdays generally meet service standards defined in the 2030 Transportation Policy Plan, with a few significant exceptions.

Along University Avenue, Route 16 operates every 12 minutes at peak times and every 10 minutes midday and early evening. Route 50 operates every 12 minutes at peak times and very limited service at other times. Route 16 service operates 24 hours a day. In the remainder of the Study Area, coverage and frequency varies by time of day and day of the week. During weekday peak periods, coverage is good. During off-peak times, however, many routes do not operate or operate only limited hours, with several significant corridors or streets that do not have service at certain off-peak times. Some areas have relatively low populations or population densities that do not generate enough ridership to need more service, but other areas in this category do have sufficient densities to warrant additional service.

RIDERSHIP AND ROUTE PERFORMANCE

A comprehensive bus stop-level data collection effort was undertaken to inventory existing transit use and to develop a better understanding of the current travel patterns in the Study Area. The numbers of passengers getting on and off the bus at each stop was surveyed on weekday, Saturday, and Sunday service periods for each route. All of the scheduled bus trips - 1,998 weekday, 751 Saturday, and 455 Sunday – were sampled multiple times. Data collection was completed during the winter and spring of 2010. Details about existing service and ridership can be found in the Central Corridor Transit Service Study Existing Conditions Report.

On weekdays 1,568 in-service hours are provided in the Study Area. Approximately 45 percent of in-service hours are provided during the rush hours (6 to 9 a.m. and 3 to 6:30 p.m.), with the remaining 55 percent of revenue hours provided during the off-peak hours. An average of about **90,000** weekday boardings were counted, with 19 percent occurring during a.m. rush hours, 38 percent during the midday period and 25 percent during p.m. rush hours. The average number of boarding passengers per in-service hour throughout the day is fairly constant which demonstrates that the level of transit service in the Study Area throughout the day is reasonably well matched with the distribution of demand throughout the day.

On weekends, 897 in-service hours are operated each Saturday and 609 in-service hours each Sunday in the Study Area. Approximately 60 percent of these revenue hours are provided between 9 a.m. and 6 p.m. An average of about 45,600 boarding passengers was observed on Saturday, with 65 percent occurring between 9 a.m. and 6 p.m. On Sunday, an average of about 29,400 boarding passengers was observed with 70 percent occurring between 9 a.m. and 6 p.m. Like weekdays, the average number of boarding passengers per in-service hour throughout the day on weekend days is also reasonably well matched with the distribution of demand throughout the day.

Ridership by stop and residential/employment densities in the Study Area are mapped on Figure 2 –Weekday, Figure 3 – Saturday, and Figure 4 – Sunday.

DEMOGRAPHICS AND LAND USE

The study area for the Central Corridor Transit Service Study is bounded by the Mississippi River on the south, I-35E on the east, Larpenteur/East Hennepin avenues on the north and by Hiawatha Avenue, East Lake Street and the Mississippi River on the west. The Study Area is almost completely urban, including downtown Minneapolis, downtown St, Paul and the University of Minnesota, and covering many neighborhoods of St. Paul, Minneapolis and the suburbs of Lauderdale, Falcon Heights and Roseville. In the neighborhoods immediately adjacent to the Green Line, the population is around 164,000. The 2010 population of the Study Area is about 245,000 residents and as of 2008 there were about 357,600 jobs. This represents 8.6% of the population and 22.4% of the employment in the seven county metropolitan area.

Staff analyzed the various forms of demographics and land use in the Study Area that would be expected to influence transit use, including:

- Population density
- Employment density
- Retail centers
- Youth population
- Seniors population
- Households in poverty
- Minority population
- Major trip generators

In general, the analysis showed that the Study Area is densely developed and has demographic characteristics that are consistent with high transit usage. In addition there are many high traffic activity centers within the study area, most of which are located along University Avenue.

While several factors influence the propensity to use transit, the primary predictors of transit productivity are density of development at the origin and destination of trips. Transit markets in the seven-county Twin Cities region are identified using the Transit Market Index, which is calculated using three factors: 1) population density 2) employment density and 3) automobile availability. The Transit Market Index measures the potential market for transit services in a given area. Different types and levels of transit services are appropriate for each transit market area. Figure 5 illustrates the transit market areas found in the Study Area.

Transit Market Area I has the highest density of population, employment and people without access to automobiles. Therefore, Market Area I is able to support the most intensive level of transit service. Transit Market Area II has high to moderately high population and employment densities yielding an area that is conducive to fixed-route transit operations, but not as intensive as in Market Area I. Most of the Study Area

within one mile north and south of University Avenue between the University of Minnesota and the State Capitol and including Downtown St. Paul and Downtown Minneapolis lies in Transit Market Area I, and opportunities exist in those areas to add significantly more population. The City of St. Paul is pursuing policies that are supportive of intensification of the corridor's population density, especially between Fairview Avenue and Rice Street. The City of Minneapolis is planning for more jobs to be concentrated in the southeast area of the city, mainly to the north of University Avenue.

The Study Area is particularly known for its concentration of post-secondary educational campuses and the concentrations of student populations, persons aged 20 – 24 years. These are the post-secondary schools are in the Study Area, with full time students, both under-graduate and graduate level: The University of Minnesota – Minneapolis, University of Minnesota – St. Paul, the Associated Colleges of the Twin Cities (ACTC): Augsburg College, Hamline University, Macalester College, St. Catherine's University - St. Paul, St. Catherine's University – Minneapolis, University of St. Thomas – Minneapolis and St. Thomas – St. Paul. Other significant educational institutions include the College of Visual Arts, Concordia University, William Mitchell College of Law and St. Paul College. There are a total of about 91,550 students at all the post-secondary schools in the Study Area. Students are more likely to use and to benefit from improved transit service. Figure 6 includes a map of these institutions along with population ages 20 to 24 years old.

Figure 2 Weekday Ridership and Density

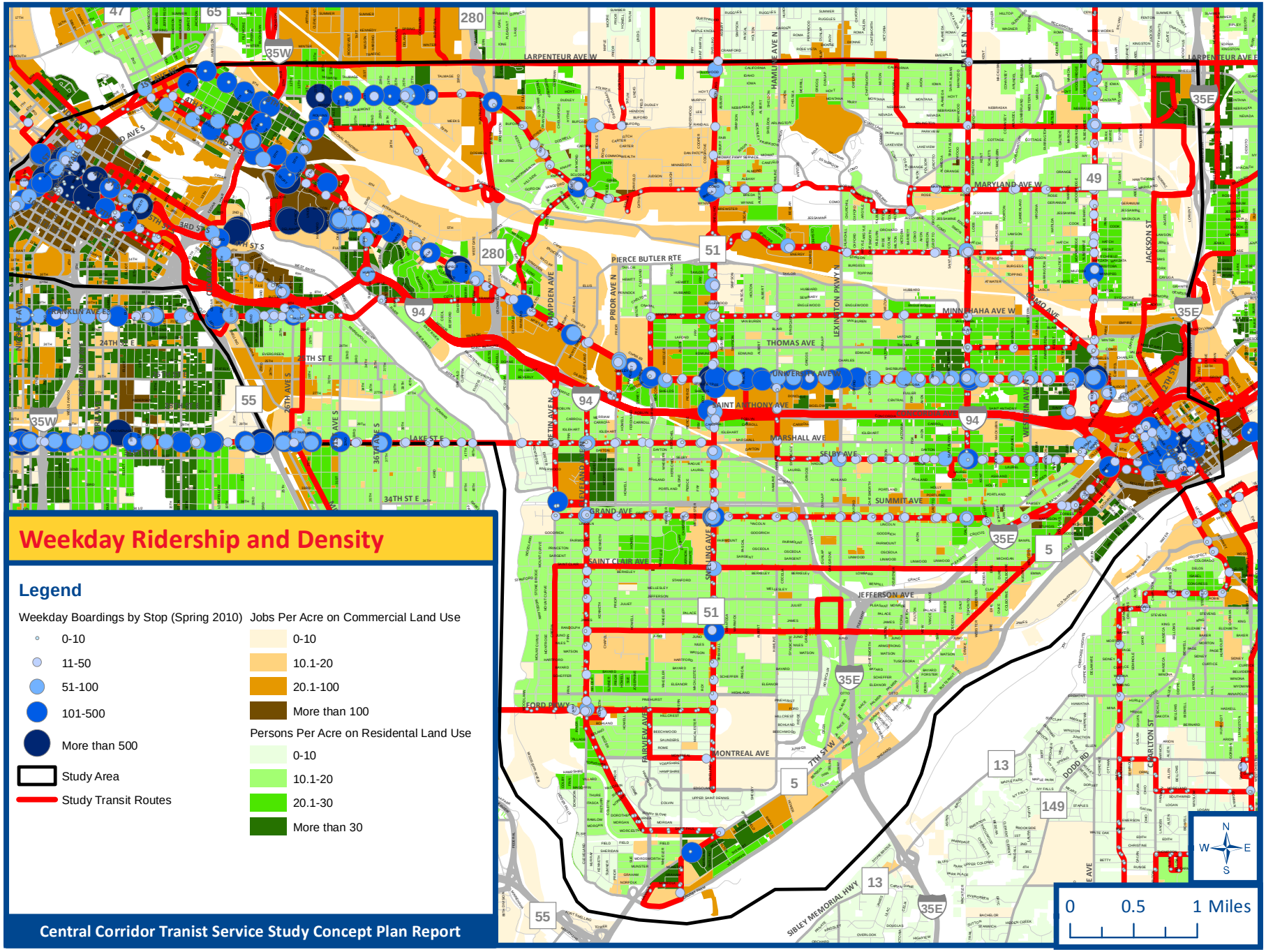


Figure 3 Saturday Ridership and Density

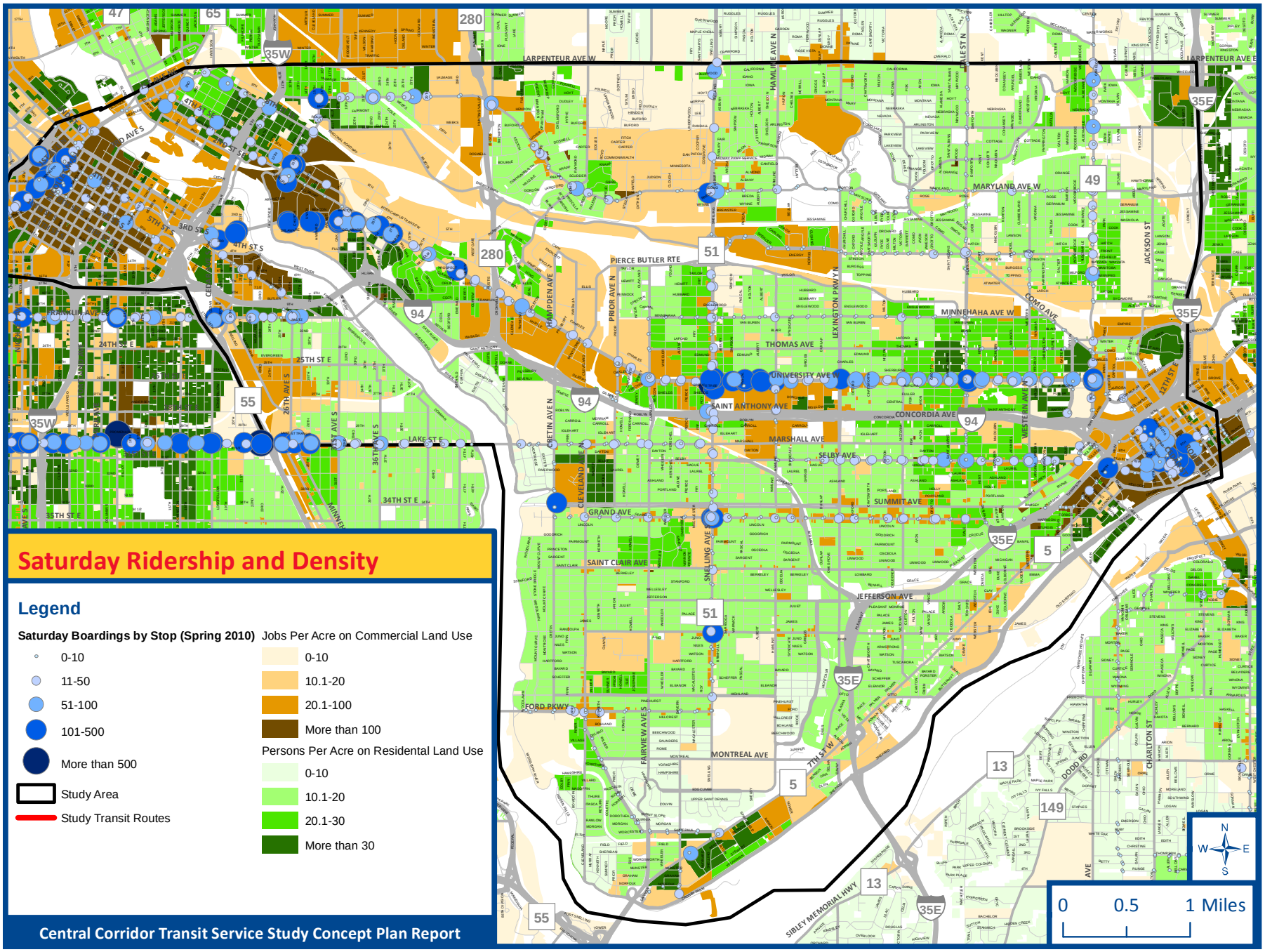


Figure 4 Sunday Ridership and Density

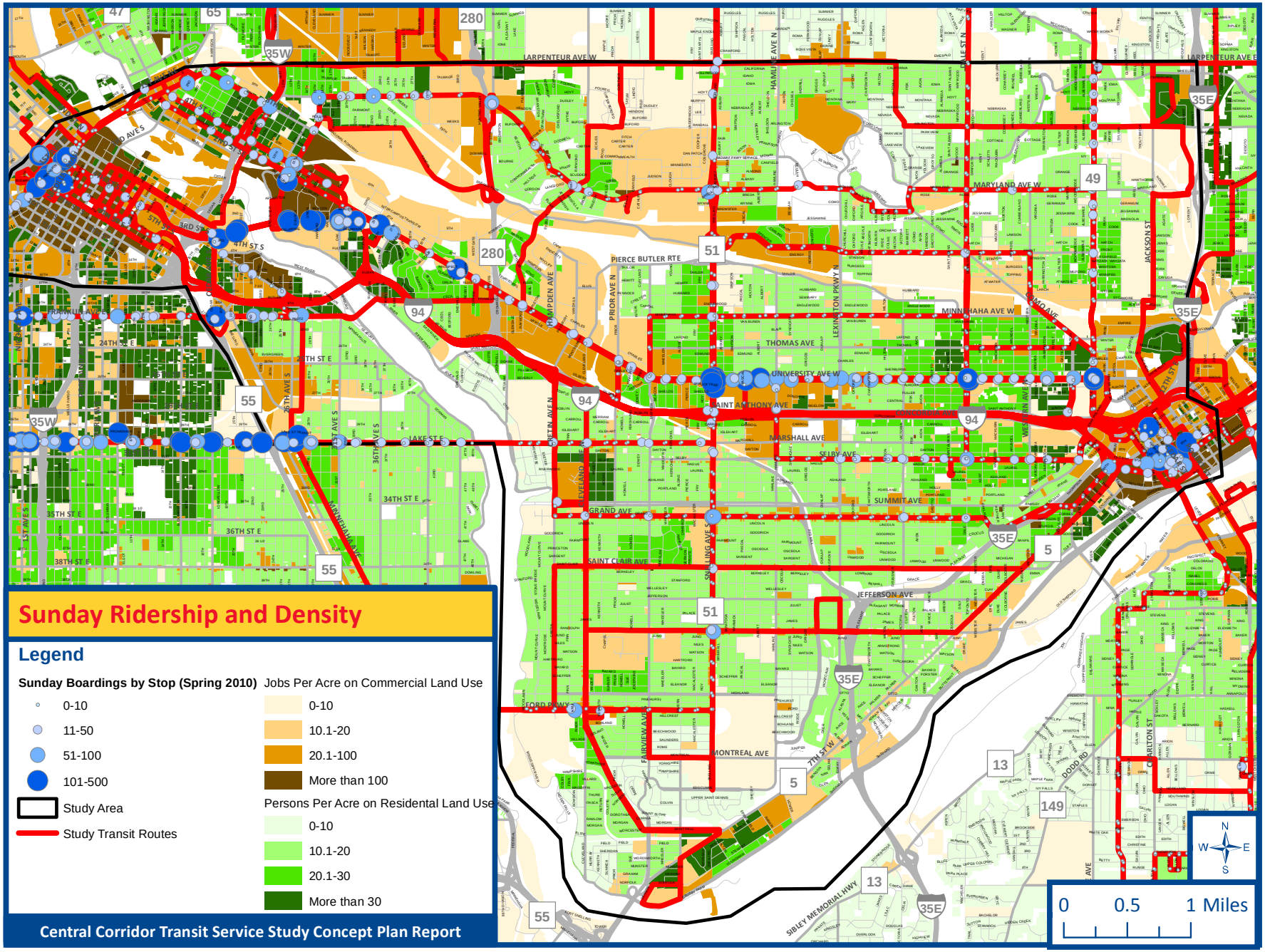


Figure 5 Transit Market Areas

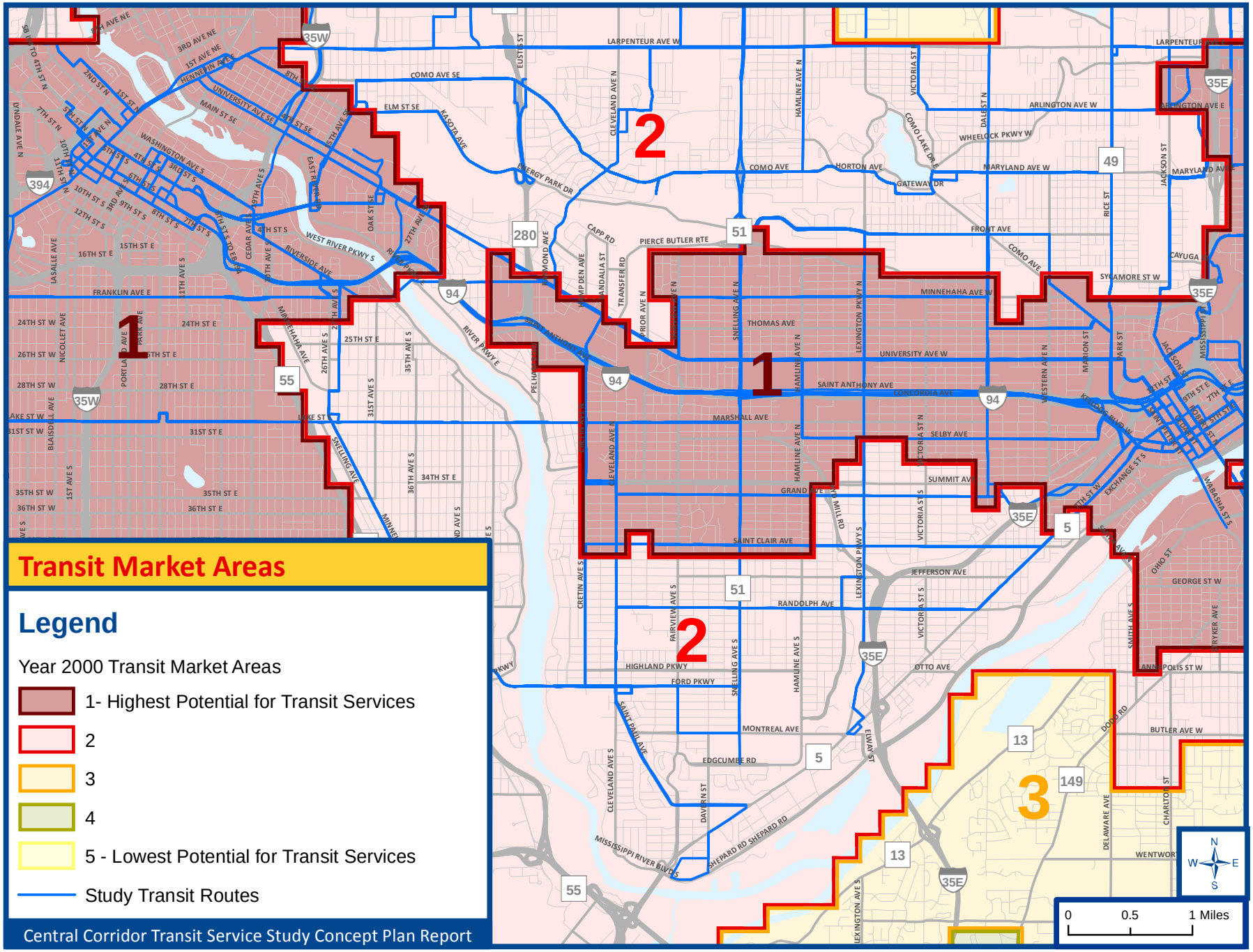
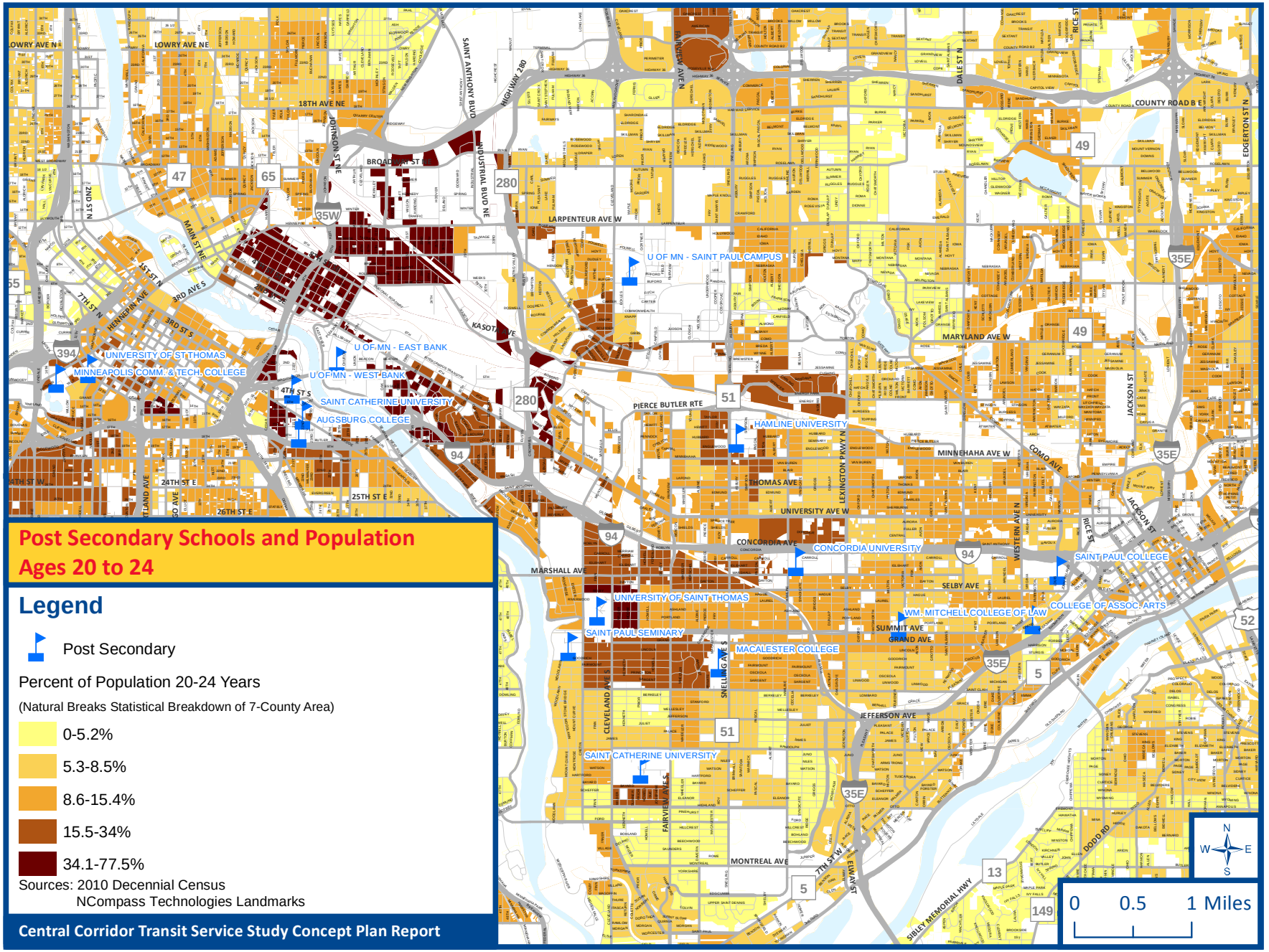


Figure 6 Post Secondary Schools and Population Ages 20 to 24



CHAPTER TWO: PUBLIC INVOLVEMENT IN CONCEPT PLAN DEVELOPMENT

A commitment to community engagement is a guiding principle at Metro Transit and public involvement is at the core of the Central Corridor Transit Service Study. Metro Transit spent significant effort identifying key stakeholders and connecting with the communities of the Central Corridor transit study area to inform development of the concept plan.

In order to ensure board public engagement, Metro Transit used several different outreach strategies to reach different stakeholders. The four primary ways used to gather public input were:

1. A series of meetings with neighborhoods and community groups, residents and businesses
2. Three public open houses
3. A public input form on the Metro Transit website
4. Trusted advocates hired by the District Councils Collaborative of the Saint Paul and Minneapolis (DCC)

STAKEHOLDER OUTREACH MEETINGS

Key stakeholders in the Central Corridor Transit Service Study Area include the Minneapolis neighborhood associations and St. Paul District Councils. The study area includes nine Minneapolis neighborhoods (Marcy Holmes, Downtown East, Downtown West, Loring Park, Elliot Park, Cedar-Riverside, Seward, University, Prospect Park) and twelve St. Paul District Councils (St. Anthony Park, Como, North End, Hamline-Midway, Thomas-Dale, Union Park, Summit-University, Capital River, Macalester-Groveland, Summit Hill, West Seventh and, Highland Park). All of these key stakeholder groups were offered an opportunity to get involved in the Central Corridor Transit Service Study.

In all, Metro Transit met with nearly 40 community/neighborhood groups and 700 individuals to review previous transit service restructuring efforts, share the study objectives and gather feedback on how transit is currently performing. This effort brought stakeholders into the planning process at the earliest possible time. In addition, an important piece of the pre-concept plan work included gathering data regarding existing travel behaviors in the study area. A complete list of the specific community stakeholder groups, as well as attendance at each meeting, is available in a separate public involvement report available on-line.

This concept plan reflects travel behavior information and comments about current bus service received from customers and other stakeholders, sought by Metro Transit staff to inform this plan.

OPEN HOUSES

The three open houses presented information on the important aspects of existing demographic data and current transit service within the Central Corridor Transit Study Area. A dot map exercise in which open house attendees placed dots on over sized maps indicating their home, work, and two other commonly-traveled destinations, helped to start conversations and engage the public in the planning process. Metro Transit staff came away with a few key themes repeated by many open house attendees. First, that there was general satisfaction with existing transit service for major destinations such as the University of Minnesota, the two downtowns, and the Midway shopping area. Also mentioned by open house attendees was the need to improve evening and weekend service span and frequency in more peripheral corridors in the study area, as well existing gaps in north-south transit service in St. Paul. The geographic focus of open house attendees varied by open house location, but these themes where common at each open house.

Open House Location	Open House Date	# of Attendees
Coffman Memorial Union (University of Minnesota)	March 3, 2012	28
Rondo Community Outreach Library (461 N. Dale)	March 8, 2012	28
J.J. Hill Magnet School (998 Selby Ave.)	March 20, 2012	23

PUBLIC INPUT FORM

Paper and on-line versions of the Central Corridor Transit Service Input Form were created to collect data regarding where people travel within the study area. The input form asked questions regarding transit utilization, transfers, origin and destination, start and end times, trip purpose, and suggested locations for new transit service. More than 3,300 on-line and paper public input forms were received through early May 2012.

Over half of the respondents or about 67 percent rode transit to destinations in the study area at least five days a week while 11 percent used transit six days a week and 14 percent used transit seven days a week. Only 3 percent of respondents indicated that they did not use transit. Around 90 percent of respondents indicated that their trip in the study area occurs on a weekday, while only 16 percent indicated trips on Saturdays and 10 percent indicated trips on Sundays. The seemingly contradictory responses to these two questions indicate a degree of non-traditional working schedules by some respondents. The most commonly referenced bus routes by respondents were the Routes 3, 16/50, 2, 144, 87 and 21. About 44 percent of respondents indicated that they transfer at least once and 16 percent transfer at least twice on their transit trip. The top trip purposes for trips in the study area were school (49 percent), work (39 percent), appointments and shopping (5 percent), and other (7 percent).

The results from the two open-ended questions are discussed below. A sample of the public input form and more specific detail on the survey responses is available in a separate public involvement report available on the study website.

Question: Is there a location in the area currently not served by buses where service should be added?

Responses varied from general ideas to specific corridor and bus stop suggestions for improving transit access. Many respondents called for better north-south transit service in St. Paul in general, without naming specific corridors, while some listed many corridors or singled out specific corridors or areas.

The most common location-specific response was to add transit service on Lexington Parkway to connect destinations south of University Avenue or near Como Park with the Green Line. The second most common location-specific comment was for a new bus stop on the U of M's East Bank along Pleasant Street SE between Pillsbury Street SE and the Washington Avenue Bridge.

Other major north-south streets were also noted, ranging from requests to improve existing transit service on Snelling, Dale Street, and Raymond/ Cleveland avenues to requests for new service on streets such as Fairview Avenue, Hamline Avenue, Western Avenue, and Victoria Street. Some respondents specified locations on the U of M campus for new bus stops, including Appleby Hall, the Science Teaching and Student Services building, Smith Hall, Walter Library, and the Scholar's Walk. A smaller number of respondents commented on general areas to improve transit service connectivity, with the most common being the Macalester- Groveland neighborhood in St. Paul.

Question: Please provide any suggestions you have that would help improve bus service in the Central Corridor. For example, is your service frequent enough, go where you wish, go early enough, late enough? Are transfers easy to make?

The most common service improvements were related to frequency of service, more hours of service (including weekends), faster service, better transfer connections, new service, safety, and improved waiting facilities.

> Frequency: Frequency was the most common comment type in the on-line public input form. Many respondents specifically mentioned improving the frequency of weekend and evening services. Ninety respondents requested more frequency on routes 2, 3, 6 and 87.
>
> Hours of Service / Weekend Service: Respondents called for increased hours of service and new or improved weekend frequency levels for almost every route in the study area, as well as future light rail service. Common requests include improving weekend service frequency on the Route 3, adding evening and weekend service on routes 87 and 144, and better weekend and late night service on Route 63.
>
> On Time Performance: Another common comment was buses running late, particularly on routes 2, 3 and 16. Many respondents noted the frustration of overcrowded or late buses followed by empty buses or "bus bunching."

Transfers**:** Respondents commenting on transfers either noted a difficult existing transfer or emphasized the need for good connections with the Green Line. A significant number of respondents stated that transfers between the Route 87 and most east-west routes in the study area were badly timed, and several respondents said they would not use transit if forced to transfer between Route 84 and the Green Line rather than use the Route 144.

New Service: Better service at the Huron Station was a common request, as was the desire for a direct, one-seat service between Highland Park, Fort Snelling and the airport. Corridor-specific comments are included in the results for question nine.

Facilities / Safety: Many of the safety comments related to conditions on buses, but some noted feeling unsafe at bus stops at Snelling and near the Sky Line Towers in St. Paul. Other facilities comments related to winter conditions at bus stops without heated shelters.

A large number of respondents noted satisfaction with existing transit service and coverage, some noting a reluctance to change service, particularly with Route 16. Many respondents in this category commented on looking forward to the end of Light Rail construction and the start of Green Line Service.

TRUSTED ADVOCATES

The District Councils Collaborative of Saint Paul and Minneapolis (DCC) adapted the Trusted Advocate community engagement model used in Seattle, WA to support the Central Corridor Transit Service Study and increase the capacity to gather community input and create opportunities for long-term, sustainable engagement and interaction between Metro Transit and the diverse community in the study area. Trusted Advocates are “members of a specific ethnic, racial, cultural and/or other underrepresented group who are recognized by other members as trustworthy, approachable and effective, particularly navigating distance between the group and the majority community. “ -- *Innovative Public Tools in Transportation Planning: Application and Outcomes*

Trusted Advocates have strong connections to their communities, a background in community engagement, and the ability to advocate and educate within their communities. Nine individuals were contracted by the DCC to connect with individuals who lived, worked, attended school or participated in other activities within the study area. During engagement sessions to document travel behavior, some advocates chose to use the same tools as Metro Transit (public input forms, interactive activity) while others tailored their work to their own individual style of outreach and the individuals of their community.

Methods of engagement include one-on-one interviews, door knocking, tabling (staffing a table at a heavily trafficked location or event), kitchen table meetings/home visits, small-group meetings and community gatherings. The total number of individuals reached by each advocate ranged from 60 to 200. The trusted advocates held

engagement sessions throughout the study area but were concentrated along the corridor. Engagement sessions were held in over 40 locations throughout the corridor including Cedar-Riverside, Prospect Park, Summit-University, Frogtown, Union Park, Como area and Macalester-Groveland.

In addition to gathering travel behavior data, trusted advocates documented other feedback during each engagement session. Some of these comments or concerns that were frequently shared by participants were related to overcrowded buses, operator behavior, safety concerns, travel time, the lack of availability of transit information due to language barriers or lack of internet access, waiting conditions, and a desire for more frequent service all days of the week.

A more detailed report of the Trusted Advocate Project is available in a separate public involvement report available on the study website.

CHAPTER THREE: KEY PLAN OBJECTIVES AND STRATEGIES

Evaluation of existing conditions in the Study Area and consideration of the issues identified through the public input process suggest five primary opportunities to improve the productivity and effectiveness of transit service in the Study area:

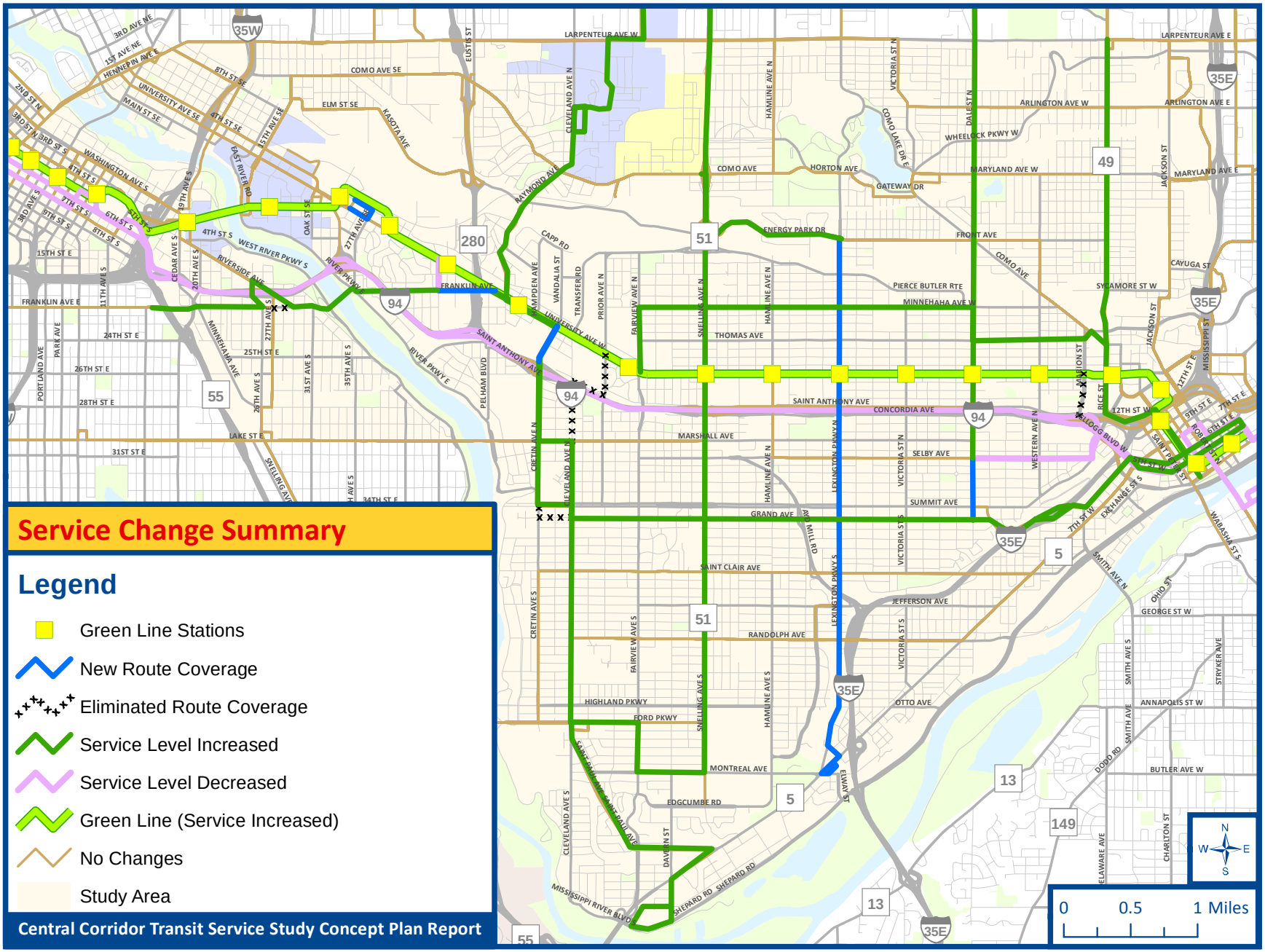
- Strengthen the bus route network grid. Connect bus routes with trains at key Green Line stations.
- Improve service frequency. Given a choice, most people will choose more frequent service within reasonable walk distances.
- Enhance off-peak service. Increasingly, people need to travel outside the traditional rush-hour commute periods.
- Improve bus-to-bus connectivity. Improve connections to other Study Area bus routes.
- Improve bus service to major destinations. Major destinations were identified by public input forms.

These basic observations led to the following service design principles in the concept plan:

- Provide convenient and reliable bus and train connections at key Green Line stations.
- Generally improve the frequency of connecting bus service to every 20 minutes seven days a week, which is compatible with the Green Line's 10-minute frequency.
- Expand the hours of service for all bus routes that connect with the Green Line seven days a week.
- Reduce transit service redundancy between bus and LRT in the Central Corridor and shift resources from reduced bus service on University and I-94 to improve connecting bus service.
- Improve the transit connectivity among the many colleges and universities in the Study Area.
- Provide faster, more direct service to major destinations in the Study Area.
- Fill in the north-south cross-town bus route network.

Figure 7 illustrates how the Concept Plan is designed to satisfy these principles.

Figure 7 Service Change Summary



CHAPTER FOUR: PROPOSED SERVICE CHANGES

CONCEPT PLAN TRANSIT SERVICE NETWORK

The primary emphasis of the Concept Plan is to reduce service on those bus routes whose trips will now be served by the new rail service and to shift those resources into improved coverage, frequency, and hours of service on bus routes connecting with rail. Improving the frequency of service will improve the reliability of the routes and the transfer connections between routes.

Under this plan, Route 50 is eliminated and service on Route 16 and 94 is reduced. At the same time, frequency is improved on four core local routes on weekdays (Routes 65, 67, 84 and 87), five on Saturdays (Routes 63, 65, 67, 84 and 87) and six routes on Sundays (Routes 62, 63, 65, 67, 84 and 87). Frequencies will be compatible with those of the Green Line during every hour of service to provide reliable and consistent connections to the greatest extent possible. Figure 8 presents a map of the Concept Plan and Figure 9 is a summary of existing and proposed service frequencies by route.

The Central Corridor Transit Service Study Concept Plan includes the following proposed service changes:

University Avenue Corridor (Routes 16, 50, 94)

The Green Line will be the primary east-west service in the corridor, running every ten minutes most of the day, seven days a week. This service will replace the existing Route 50 limited stop bus service.

Local Route 16 will continue to operate parallel to the Green Line, at a reduced frequency, providing local access for those who have difficulty traveling longer distances to a rail station. Route 16 will operate every twenty minutes at most times of the day. For most of the day, Route 16 will only operate between downtown St. Paul and Oak Street on the east end of the University of Minnesota campus. Between approximately 1:00 a.m. and 5:00 a.m., when rail service is not operating, Route 16 will be extended to downtown Minneapolis.

Route 94 currently provides express service on I-94 between downtown Minneapolis and downtown St. Paul. Select trips also serve Snelling Avenue and/or Marion Street and the State Capitol area. After the Green Line begins operations, Route 94 will operate only during weekday peak periods (5:00 a.m.-9:00 a.m. and 3:00 p.m.-7:00 p.m.). The route will operate non-stop between the two downtowns and will no longer stop at Snelling Avenue or serve Marion Street and the Capitol area. Route 94 will continue to serve River Park Plaza across the river from downtown St. Paul.

East-West Connections (Routes 8, 63, 67)

East-west routes that parallel the University Avenue corridor will be adjusted to improve connections with the Green Line.

Route 63 will continue to operate on East 3rd Street east of downtown St. Paul and on Grand Avenue west of downtown St. Paul. The route will be extended from the University of St. Thomas area to Raymond Avenue station via Cretin Avenue. Service will be improved on the entire route to operate every 20 minutes at most times, including weekends.

Route 8 will be combined with **Route 67**. New Route 67 will serve Franklin Avenue between Hiawatha Avenue (Blue Line LRT) and University Avenue, University Avenue between Raymond Avenue Station and Fairview Avenue Station, and then the existing route on Fairview and Minnehaha avenues to downtown St. Paul. Since the segment of University Avenue between Raymond and Fairview Avenue stations is the longest non-stop Green Line segment, extending Route 67 to Raymond Avenue station via University Avenue will help supplement Route 16 local service in this segment of University Avenue. Route 67 will end in downtown St. Paul. The existing Route 67 service south of downtown St. Paul will become part of Route 62 and will maintain current levels of frequency and span of service. Route 67 will no longer operate on Gilbert and Prior avenues south of University. On Franklin Avenue, service will operate via Riverside Avenue and 25th/26th Avenue to better serve Augsburg College and the Fairview University Medical Center. Between downtown St. Paul and Raymond Avenue Station, Route 67 will operate every twenty minutes at most times. On Franklin Avenue, service will operate every 20 minutes on weekdays and Saturdays and every hour on Sundays. On Sundays, most Route 67 trips will end at Fairview Avenue and only the hourly service to Franklin Avenue will serve Raymond Avenue station.

North-South Connections (Routes 62, 65, 83, 84, 87)

The north-south routes that currently intersect the University Avenue corridor at Dale Street, Snelling Avenue and Raymond Avenue will be improved to make more frequent connections with the Green Line, and a new route on Lexington Parkway will be reintroduced.

Route 62, which serves Rice Street, will operate an improved frequency of service on Sundays.

Route 65 will continue to operate from Rosedale Transit Center via County Road B and Dale Street to Selby Avenue. Route 65 will no longer serve downtown St. Paul via Selby Avenue and instead will continue on Dale Street, terminating at Grand Avenue. Route 65 will operate every 20 minutes at most times, including weekends. This new routing will restore a desired connection to Grand Avenue. Alternative service to downtown St. Paul will be available via the Green Line, and along Selby Avenue via Route 21.

New **Route 83** will operate on Lexington Parkway between West 7th Street and Energy Park Drive, and on Energy Park and Snelling Avenue to Como Avenue. The new service on Lexington Parkway enhances the grid network, filling in a two-mile gap between Snelling and Dale. Route 83 will operate every 30 minutes at most times including weekends.

Route 84 on Snelling Avenue will be improved to operate every 10 minutes between Rosedale and Ford Parkway. South of Ford Parkway, the two local routings (D and H branches) will be combined into one branch serving both Montreal Avenue and the West 7th and Davern Street area every 30 minutes using current routings. Service to 46th Street Station (Blue Line) on Ford Parkway will continue to operate every 30 minutes.

Future Rapid Bus service on Snelling Avenue may operate a limited stop service every 10 minutes with stations every ¼ to ½ mile on Snelling Avenue and Ford Parkway between Rosedale and the 46th Street station (Blue Line). If Rapid Bus service exists by the time Green Line operations begin, this service would replace much of Route 84 service on Snelling.

Route 87, which serves Rosedale, Raymond and Cleveland avenues and the U of M's St. Paul campus, will also operate an improved frequency of service. Trips will operate every 20 minutes at most times, including new evening and weekend service. Route 87 will be rerouted across I-94 to allow it to more directly serve the Raymond Avenue Station. Service will operate via Cleveland, Marshall and Cretin avenues to University Avenue instead of Gilbert and Prior avenues.

Limited Stop Commuter Routes (Routes 134, 144)

In addition to all-day local service, Metro Transit currently operates rush-hour only commuter-oriented service on both Snelling and Cleveland/Cretin avenues.

Route 134 provides nearly 650 daily rides between Highland Park and downtown Minneapolis via Cleveland and Cretin avenues and I-94. The span of service on this route will be reduced on the fringe of the rush hours but will remain unchanged for the most popular work start and ends times. A minor reroute using Cleveland and Marshall avenues to Cretin Avenue is proposed to match Route 87 service and serve a more residential area. Reverse commute service on Route 134 will be eliminated. Alternative service will be available via Route 87 and the Green Line.

Route 144 provides about 160 rides a day between Highland Park, the U of M and downtown Minneapolis via Snelling Avenue and I-94. This route will be eliminated, with alternate service available via Route 84 and the Green Line.

No Significant Changes (Routes 2, 3, 6, 21, 53)

No significant changes are proposed for routes 2, 3, 6, 21 or 53. These routes were included in the study because they make connections with Green Line LRT stations outside of downtown Minneapolis or downtown St. Paul. Based on the results of the study, no route structure or major change in frequency or span of service is planned on Routes 2, 3, 21 and 53. There will be a minor route extension on **Route 6** from Oak Street and Washington Avenue to Stadium Village Station, which will provide a more direct connection between the Marcy Holmes neighborhood and the Green Line.

Huron Station (Routes 94, 134, 353, 355, 365, 375, 452)

Currently, select westbound express routes serve Huron Station at I-94 and Huron Boulevard between 7:30 and 9:20 a.m., offering a connection with Route 50 to the U of M campus. Since the Green Line will replace Route 50, Metro Transit will no longer provide a local bus connection between Huron Station and campus. The U of M is considering having a campus circulator route serve the station and provide this link. If there is no bus service between Huron Station and campus, the express routes that currently serve the station will no longer stop there. Alternate service is available via the Green Line from the Downtown East/Metrodome Station.

FUTURE CONSIDERATIONS

In addition to the baseline bus service improvements proposed here, the Concept Plan includes a list of additional service improvements that merit consideration for implementation if funding allows. The list has not been prioritized at this time.

- Route 21: Improve frequency from downtown Saint Paul on Selby Avenue, Hamline Avenue and University Avenue
- Route 30: Establish a new cross-town route on Broadway Avenue serving north and northeast Minneapolis and the U of M area, connecting to the Green Line at the U of M.
- Route 62: Improve frequency on Rice Street
- Route 67: Extend Sunday service from Fairview Avenue to Raymond Avenue Station on all trips
- Route 83: Improve frequency, hours of service to match other routes in the Study Area. Extend service to to Rosedale via Como, Hamline, Larpenteur, Lexington avenues, County Road B and Snelling Avenue.

Figure 8 Concept Plan

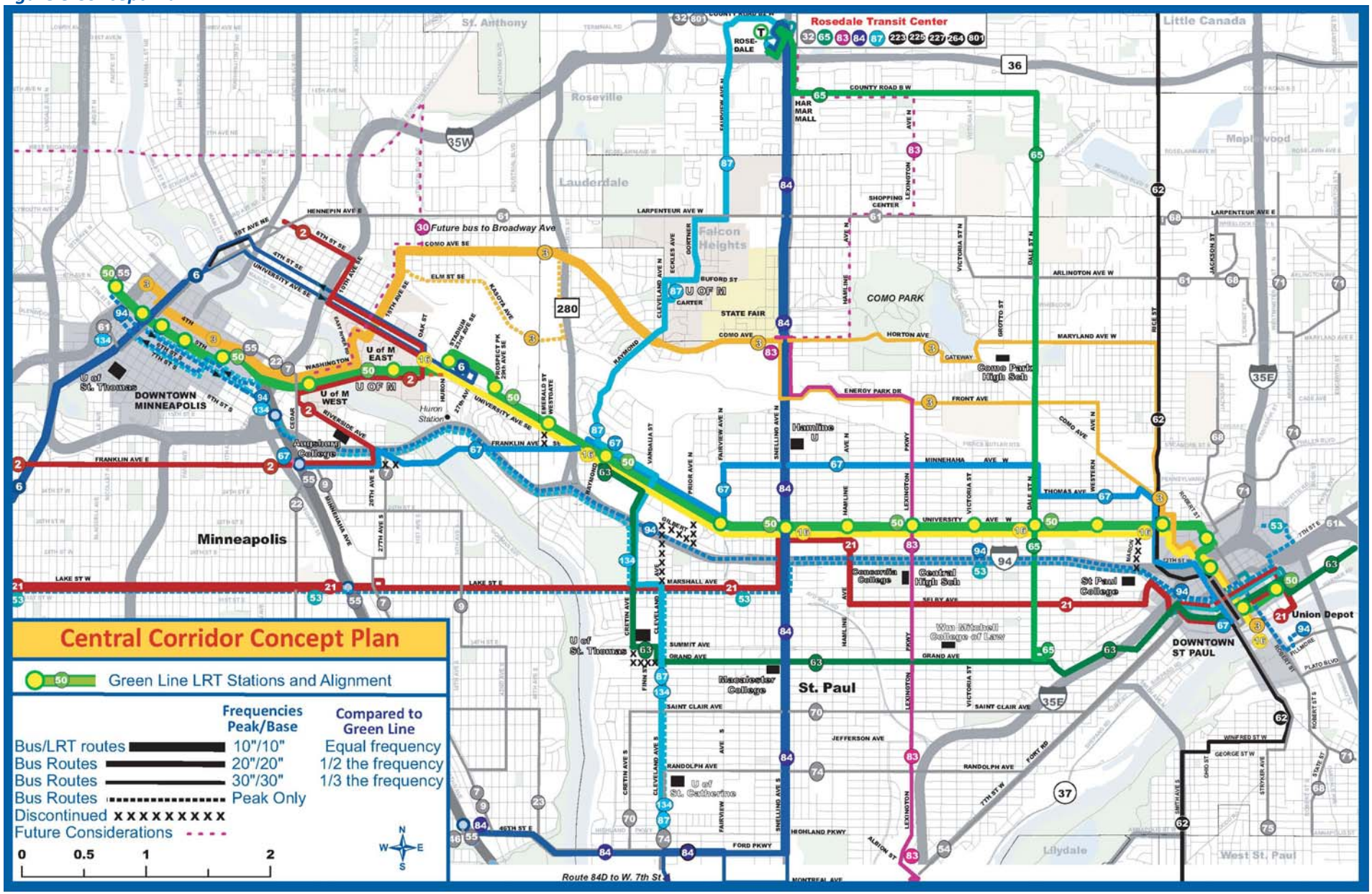


Figure 9 Existing and Concept Plan Frequency Comparison Table

Existing and Proposed Routes	Weekday Off-peak		Weekday Peak		Saturday		Sunday	
	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed
2 - Franklin/Riverside/U of M/4th/8th St	5 to 15	**5 to 15**	5 to 15	**5 to 15**	20 to 30	**20**	20 to 30	**20**
3 - Mpls/U of M/Como/Front/Maryland/St. Paul	10 to 15	**10 to 15**	5 to 15	**5 to 15**	30	**30**	30	**30**
6 - Mpls/U of M/4th St/Univ. Av/Stadium Village	30	**30**	20	**20**	30	**30**	30	**30**
8 - Mpls/Franklin Av/Univ. Av (See Route 67)	30 to 40	**0**	30	**0**	0	**0**	0	**0**
16 - Mpls/U of M/University Av/St. Paul	10	**20**	8 to 12	**20**	10 to 15	**20**	15 to 30	**20**
21 -Marshall Av/Selby Av/St. Paul end only	20 to 30	**20**	15	**15**	20	**20**	20	**20**
50 - Mpls/U of M/University Av/St. Paul (See Green Line)	0	**0**	6 to 12	**0**	0	**0**	0	**0**
50 –Green Line -Mpls/U of M/University Av/ St. Paul *LRT*	0	**10**	0	**10**	0	**10**	0	**10**
53 - Mpls/Lake St/Marshall Av/I-94/St. Paul	0	**0**	20 to 30	**20 to 30**	0	**0**	0	**0**
62 - Shoreview/Rice St /St. Paul	30	**30**	30	**30**	30	**30**	60	**30**
62 - St. Paul/ Smith Av/Signal Hills/W. St Paul	0	**30**	0	**30**	0	**60**	0	**60**
63 - Maplewood/E. 3rd St /St. Paul/Grand Av	20 to 30	**20**	13 to 30	**10 to 20**	30	**20**	60	**20**
63 – Raymond Av/University/Cretin Av	0	**20**	0	**20**	0	**20**	0	**20**
65 - Roseville/Dale St /St. Paul	30	**20**	30	**20**	75	**20**	75	**20**
67 – Smith /Signal Hills/W. St Paul (See Rt 62)	30	**0**	30	**0**	60	**0**	60	**0**
67 – Fairview/Minnehaha/Thomas Av**/**St Paul	30	**20**	20 to 30	**20**	60	**20**	60	**20**
67 – Mpls/Franklin Av/University Av**/**St Paul	0	**20**	0	**20**	0	**20**	0	**60**
83 – Como Av/Energy Park/Lexington/W 7th St	0	**30**	0	**30**	0	**30**	0	**30**
84 - Roseville/Snelling Av/St. Paul/46th St/Mpls	15	**10**	15	**10**	15 to 30	**10**	30 to 60	**10**
87 - Roseville/Raymond Av/Cleveland/St Paul	30	**20**	30	**20**	0	**20**	0	**20**
94 - Mpls/ I-94 Express/St. Paul (See Green Line)	15	**0**	5 to 10	**10 to 15**	30	**0**	30	**0**
134 - St. Paul/Cleveland/Cretin Av/I-94/Mpls	0	**0**	10 to 20	**10 to 20**	0	**0**	0	**0**
144 - St. Paul /Snelling Av/I-94/ U of M/Mpls (See Green Line)	0	**0**	15 to 30	**0**	0	**0**	0	**0**
Routes via Huron Blvd Station:								
353 – Woodbury/St Paul/ I-94 Express /Mpls	0	**0**	1 trip	**1 trip**	0	**0**	0	**0**
355 – Woodbury/ I-94 Express**/** Mpls	0	**0**	10 to 15	**10 to 15**	0	**0**	0	**0**
365 – Cottage Grove/ I-94 Express**/** Mpls	0	**0**	15 to 30	**15 to 30**	0	**0**	0	**0**
375 – Oakdale/ I-94 Express**/** Mpls	0	**0**	10 to 20	**10 to 20**	0	**0**	0	**0**
452 – Mendota/ I-94 Express**/** Mpls	0	**0**	30	**30**	0	**0**	0	**0**

CHAPTER FIVE: IMPACTS OF CENTRAL CORRIDOR TRANSIT CONCEPT PLAN

As part of the overall process of planning bus service changes, Metro Transit considers the impacts of the proposed changes on a variety of areas including the operating budget, overall service efficiency and productivity, service coverage, and coordination with Metro Mobility paratransit and Transit Link dial-a-ride services.

OPERATING BUDGET

The cost of bus service proposed in this Concept Plan, not including Future Considerations, is generally equivalent to existing bus costs in the Study Area. Resources saved from reduced service on bus routes whose trips will be operated by Green Line trains are shifted to improve coverage, frequency and hours of service on bus routes connecting with rail. Operating funds for the Green Line LRT are not being redirected from the bus service.

EFFICIENCY AND EFFECTIVENESS MEASURES

A principal goal in developing the Concept Plan is to improve the efficiency and effectiveness of transit service to enable the mobility of transit riders. The Concept Plan route network is more efficient, operating more in-service hours within the same number of total platform hours as operated today.

Bus routes in the Central Corridor Transit Service Study Area currently operate effectively, with an average productivity on weekdays ranging between 18.5 to 78.2 passengers per in-service hour and ranging between 19.7 to 73.5 passengers per in-service hours on weekends. The Concept Plan seeks to maintain this high productivity through service frequency improvements and reliable connections between bus and Green Line service and improved bus-to-bus connections. The improved Central Corridor Transit Service Concept Plan routes are estimated to have an average productivity equivalent to the current ranges.

ROUTE COVERAGE

Analysis of existing service identifies some route segments and network elements that are unproductive and ineffective. While maintaining good coverage within the Study Area, selected route segments were restructured or abandoned. The abandoned segments include:

- Marion Street between Concordia Avenue and University Avenue
- Franklin Avenue between Riverside Avenue and 27th Avenue South
- Emerald Street between Franklin Avenue and University Avenue/Eustis Street
- Grand Avenue between Cleveland Avenue and Cretin Avenue
- Cleveland Avenue between Marshall Avenue and Gilbert Avenue
- Gilbert Avenue between Cleveland Avenue and Prior Avenue
- Prior Avenue between Gilbert Avenue and University Avenue
- The bus stop on St Anthony Avenue west of Snelling

Planners worked extensively to refine the proposed plan to minimize significant negative rider impacts while maintaining proposed effectiveness and efficiency improvements. In the end, very few customers in the Study Area will not have service within a quarter-mile of the final network.

METRO MOBILITY AND TRANSIT LINK

Metro Mobility is a shared public transportation service for certified riders who are unable to use regular fixed-route buses due to a disability or health condition. Metro Mobility services within the study area may be impacted by changes outlined in the Central Corridor Transit Service Study Concept Plan. This door-to-door service is mandated by the Americans with Disabilities Act and is provided by the Metropolitan Council. Since Metro Mobility service hours and areas are determined by the fixed-route transit network, changes to fixed-route service hours or routing will affect Metro Mobility's complementary paratransit services as well.

Transit Link is the Twin Cities dial-a-ride service for the general public, where regular route transit service is not available. Transit Link service is provided for those trips that are beyond a specific distance from fixed route service. As the coverage or hours of service of the fixed route network change, the coverage of the Transit Link service may change.

The majority of fixed routes in the Central Corridor Transit Service Study Area operate in areas that already have full coverage with Metro Mobility service and no coverage by Transit Link service. Review of the proposed fixed-route service changes indicates that no changes will be required for either Metro Mobility or Transit Link services.

CHAPTER SIX: TITLE VI ANALYSIS OF POTENTIAL DISPARATE IMPACT

The Federal Transit Administration (FTA) issued Circular 4702.1A in 2007, which defines Title VI and Environmental Justice compliance procedures for recipients of FTA-administered transit program funds. Specifically, the FTA requires recipients, including Metro Transit, to "evaluate significant system-wide service changes and proposed improvements at the planning and programming stages to determine whether those changes have a discriminatory impact."

Definitions

Minority: The FTA defines a minority person as one who self-identifies as American Indian/Alaska Native, Asian, Black or African American, Hispanic or Latino, and/or Native Hawaiian/Pacific Islander. In other words, minority population is defined as non-white persons, or those of Hispanic origin. Minority and non-minority persons in the Green Line Service Study Area are mapped in Figure 10.

Low Income: The FTA defines a low-income individual as one whose household income is at or below the poverty guidelines set by the Department of Health and Human Services (DHHS). DHHS poverty thresholds are based on household size and income,

and are nearly identical to the guidelines used to define poverty in the 2010 U.S. Census and American Community Survey (ACS), which form the basis of this review. Low-income and non-low-income persons in the Green Line Service Study Area are mapped in Figure 11.

Disparate Impact: The Federal Transit Administration defines “disparate impacts” as neutral policies or practices that have the effect of disproportionately excluding or adversely affecting members of a group protected under Title VI, and the recipient’s policy or practice lacks a substantial legitimate justification. If the results of the analysis indicate a potential for disparate impacts, further investigation is performed. This investigation uses qualitative assessments and/or the “four-fifths rule” to determine whether disparate impacts exist. In this analysis, if the quantitative results indicate that the Concept Plan service changes provide benefits to minority/low-income groups at a rate less than 80 percent of the benefits provided to non-minority/non-low-income groups, there could be evidence of disparate impacts. If disparate impacts are found using this threshold, mitigation measures should be identified.

Figure 10 Minority Population in Study Area

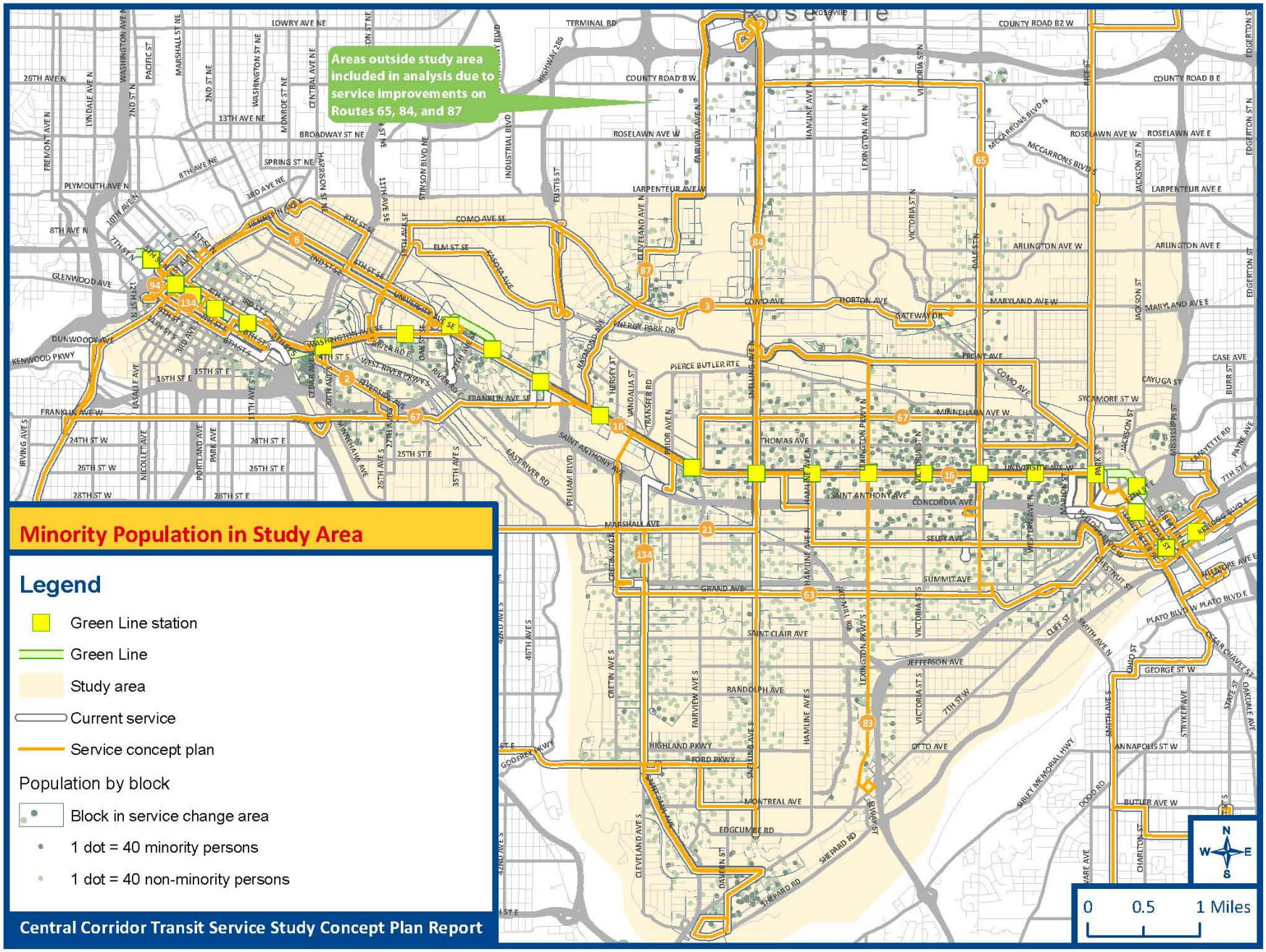
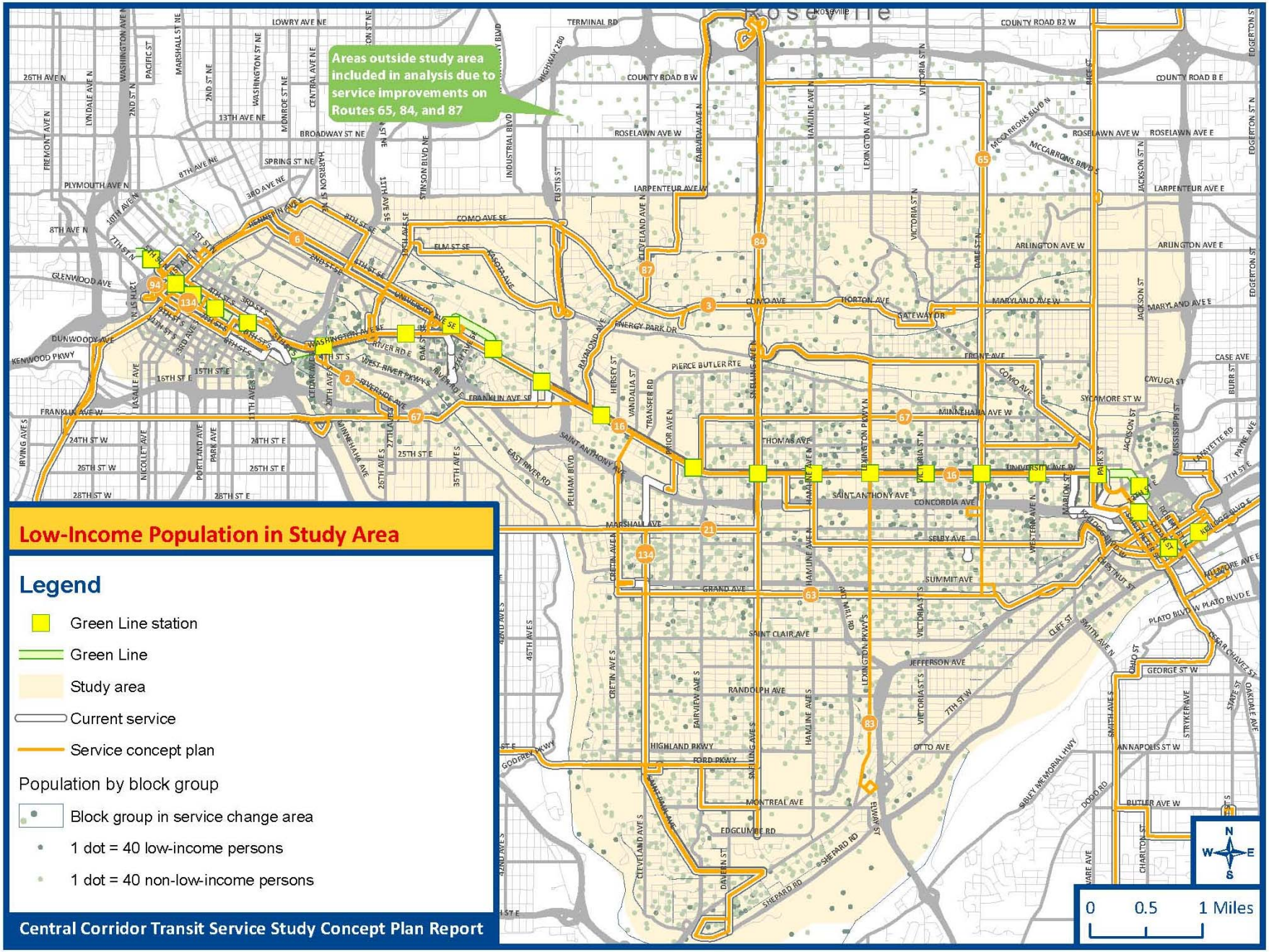


Figure 11 Low-Income Population in Study Area



Evaluation Methodology

Impacts of the proposed service changes on residents of the study area are determined based on the change in access to transit. Access to transit is measured as the number of bus trips that serve a given population. Since Census data is used for this analysis, service change impacts are determined by Census division. For Minority populations, the Census "block" divisions are used. For Low-Income populations, the Census "block group" divisions are used. In the analysis, the number of transit trips serving each Census division is calculated for both the existing service and the proposed Concept Plan. The change in service level is calculated for each census division by subtracting current total trips from future total trips, as shown:

Future trips available within census division (*modified/planned bus routes*)	**-**	**Current trips available within census division (*existing bus routes*)**	**=**	**Change in service by census division**

Under the population method, the average percent change in service is calculated by assigning weights to each division's individual percent change according to its population makeup. This is achieved by multiplying each division's population by the percent change in that division, summing the results for all analyzed areas, and dividing the sum by the total population of the analyzed census divisions, as shown:

$$\text{Avg } \%\Delta = \frac{\sum \text{Population}_i \times \text{Percent Change}_i}{\sum \text{Population}_i}$$

Evaluation of Impacts: Minority Population

The table below summarizes the percent change in trip count using the population-weighted method for the total population, minority population, and non-minority population.

Change in Service Levels – Minority Analysis

	Total	Minority	Non-Minority
Population	160,604	56,913	103,691
Average Percent Change in Service	49.8%	49.4%	50.0%
Four-Fifths Threshold (4/5 x Non-Minority Rate of Change)			*40.0%*

On the whole, the minority population within the service change area experiences 99 percent of the benefits experienced by the non-minority population. While the percent change in service is very slightly lower for the minority population than the non-minority population, the minority rate of service increase is well within the four-fifths threshold of 40 percent. Therefore, no potential for disparate impact is identified.

Evaluation of Impacts: Low-Income Population

The table below summarizes the percent change in trip count using the population-weighted method for the total population, low-income population, and non-low-income population.

Change in Service Levels – Low-Income Analysis

	Total	Low-Income	Non-Low-Income
Population	216,761	41,647	175,114
Average Percent Change in Service	39.7%	35.0%	40.9%
Four-Fifths Threshold (4/5 x Non-Low-Income Rate of Change)			*32.7%*

On the whole, low-income residents within the Study Area experience 86 percent of the benefits experienced by non-low-income people. While the percent change in service is lower for the low-income population than the non-low-income population, the low-income rate of service increase is well within the four-fifths threshold of 32.7 percent. Therefore, no potential for disparate impact is identified.

Under the guidance of FTA Circular 4702.1A, any service change whose benefits are distributed inequitably to Title VI-protected populations can be identified as having a disparate impact on that population and should be further reviewed for mitigating or alternative measures.

For the service changes proposed in this Concept Plan, minority and low-income populations experience an average increase in service that is greater than 80 percent of the increase in service experienced by non-minority and non-low-income populations, respectively. Therefore, this review finds that the proposed Green Line service changes do not disproportionately and adversely affect minority or low-income populations.

Potential Adverse Effects

Notwithstanding the above finding of no disparate or discriminatory impact, there are a few areas that experience a decrease in service as a result of the Concept Plan. These areas are represented in yellow on Figure 12 and 13. Specific cases and the reasons for the net loss in service are described below.

- **Downtown St. Paul/Capitol Complex/Marion Street.** The area just north of downtown St. Paul near the State Capitol experiences a loss in service due to discontinuation of Route 94B trips that serve the Capitol area and Marion Street directly today. Under the Concept Plan, these trips can be made with direct LRT service from the Green Line.

- **Downtown Minneapolis.** Areas in downtown Minneapolis experience a reduction in the number of transit trips due to:
    - Discontinuation of Route 16 service to downtown

- Discontinuation of Route 144 service to downtown
- Reduction in Route 94 service
- Reduction in Route 134 service

In the Concept Plan, each of these services is replaced with Green Line LRT service.

- **University of Minnesota.** Areas surrounding the University of Minnesota campus experience a reduction in transit trips due to the replacement of Route 16 and Route 50 service with Green Line LRT west of Oak Street/Washington Avenue.

- **Selby Avenue.** Areas surrounding Selby Avenue just west of downtown St. Paul see a reduction in transit trips due to the restructuring of Route 65 in this area. Route 65 frequency is increased and service along Selby Avenue to downtown St. Paul is discontinued. Route 21 service remains in the corridor.

- **Highland Park near St. Paul Avenue/Montreal Avenue.** A small area of the Highland Park neighborhood in St. Paul experiences a reduction in transit trips due to:
  - Restructuring of Route 84 branches. Currently, the “D” and “H” branches of Route 84 are served on two different route patterns. In the Concept Plan, these branches are combined so that they are served by the same pattern. While this results in a net decrease in number of trips, the effective service level remains the same.
  - Discontinuation of Route 144.

While these changes are a reduction in the number of transit trips available, since there is alternative service available for most current riders within ¼ mile, these are not considered adverse impacts.

Figure 12 Service Change by Block for Minority Population Analysis

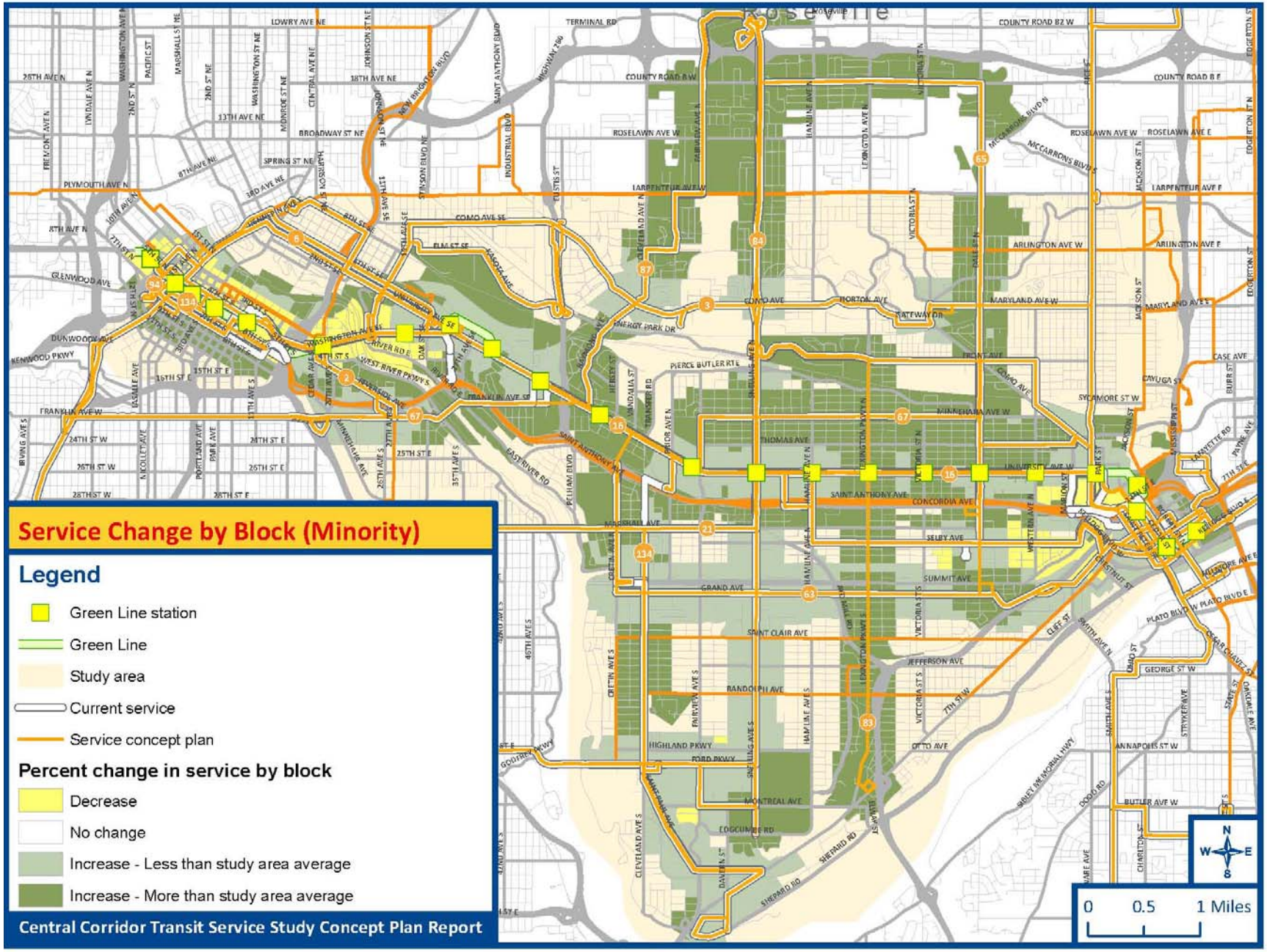
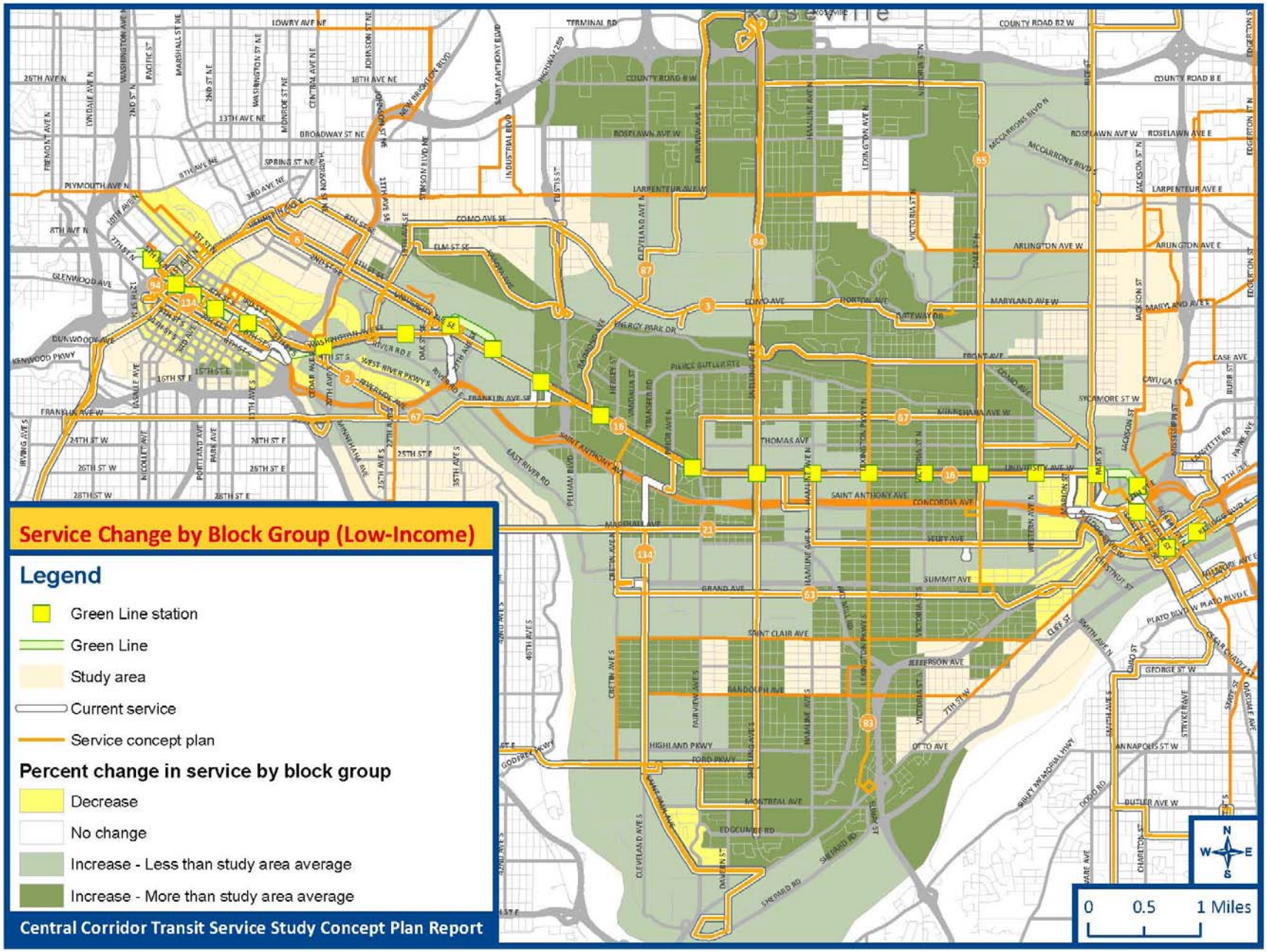


Figure 13 Service Change by Block Group for Low-Income Population Analysis



CHAPTER SEVEN: FACILITY IMPROVEMENTS

Metro Transit intends to conduct a comprehensive assessment of existing and potential transit related facilities in the Central Corridor Transit Service Study Area. From this assessment, a facility improvement plan will be developed that builds on the existing facilities and supports the improved bus service plan. Several of the potential improvements are listed below:

DOWNTOWN ST. PAUL BUS STOP IMPROVEMENT PLAN

In 2009, the City of Saint Paul developed the 6th + 5th Street Capital Improvement Plan, which defines a vision for improving the physical environment of 6th and 5th streets between Rice Park and Mears Park. One of the recommendations of this plan was to improve the physical environment of the four highest-volume downtown bus stops on 5th Street, Minnesota Street, 6th Street and Cedar Street.

In response to this need, Metro Transit applied for and was awarded a $2.6 million Federal Transit Administration grant to upgrade these four bus stops. The upgrades will improve the safety, function, amenities and aesthetics of the facilities and will maximize the benefits of other transit investments currently underway in downtown St. Paul, including the introduction of the Green Line service in 2014.

Improvements to all four bus stop facilities will include the following:

- Transit shelters/waiting area improvements
- Safety and security upgrades
- Signage (real-time departure, transit and way finding information)
- Sidewalk and street modifications
- Integration of benches, plantings, waste receptacles, public art, lighting, bicycle amenities and other streetscape elements
- Vertical connection to Green Line (partial funding)

Metro Transit and the City of Saint Paul are committed to pursuing implementation of these bus stop improvements in late 2012 through 2014 so they will be in place when the Green Line is operational in 2014.

ROSEDALE TRANSIT CENTER

Rosedale Transit Center is located at the Rosedale Center shopping mall in Roseville. Currently the facility can accommodate up to eight buses at a time. Since the Concept Plan improves the frequency of many routes that terminate at Rosedale Transit Center, the peak bus space requirement could increase to nine buses in the future.

To accommodate the increase in bus service, the existing transit center bus parking area may need to be expanded. If this expansion is necessary, staff is will work with the City of Roseville and the Rosedale Center property owner.

RAYMOND AVENUE STATION BUS LAYOVER FACILITY

A total of four bus routes will meet near Raymond Avenue Station. Two of the planned routes will terminate at this location, requiring a dedicated bus layover area and access to a restroom for bus operators.

WEST 7TH STREET BUS LAYOVER FACILITY

The Lexington Parkway cross-town bus route will meet Route 54 on West 7th St. A new dedicated bus layover area and access to a restroom for bus operators is required near Albion Street and West 7th Street.

FUTURE SNELLING ARTERIAL TRANSITWAY "RAPID BUS" TRANSIT SERVICE AND FACILITIES

The Metropolitan Council's 2030 Transportation Policy Plan identifies 11 high-demand local bus corridors to develop a facility and service plan that would enhance efficiency, speed, reliability, customer amenities and transit market competitiveness. These Rapid Bus corridors include stations with heat, improved lighting, security cameras, ticket vending machines and NexTrip electronic signs that announce the actual departure times for the next bus.

A recent study ranks the Snelling Avenue corridor as one of the best corridors in which to implement this type of service. At this time, Metro Transit has established a goal of implementing Rapid Bus service on Snelling Avenue in 2014. Achieving this goal will require close coordination with many and the same stakeholders that are involved in the Central Corridor Transit Service Study.

CHAPTER EIGHT: STUDY TIMELINE AND IMPLEMENTATION SCHEDULE

This report outlines a Concept Plan for improved bus service plan in Central Corridor Study Area. On May 23, 2012, the Metropolitan Council adopted this Concept Plan for public review. Once public review is completed, service change proposals will be revised and a final plan adopted by the Council in late 2012 for implementation in 2014.

TIMELINE

June 2012 – Public meetings and public hearings

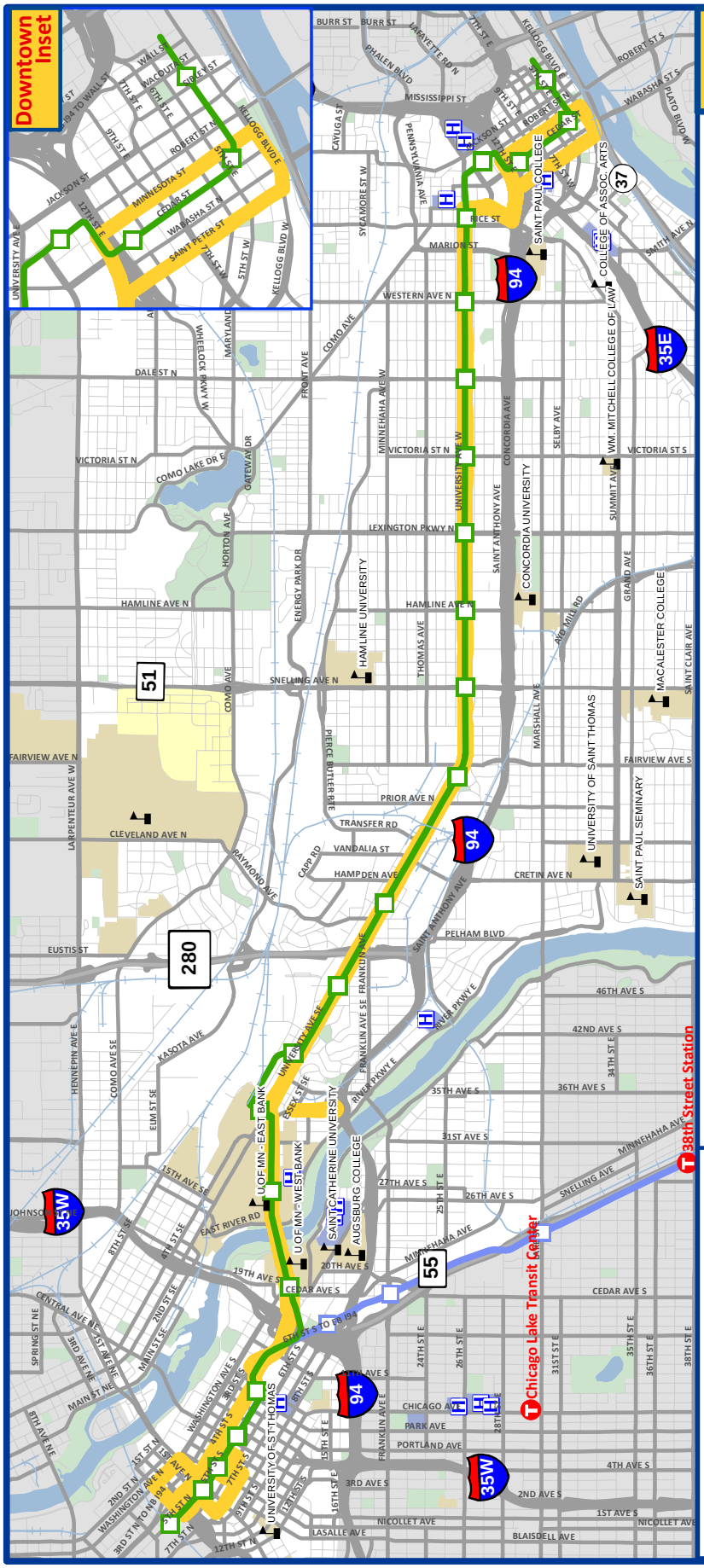
July 9, 2012- Public comment period closes

Summer/Fall 2012 – Revise Concept Plan

Late 2012 – Final Plan approval

2014 – Implementation with the opening of the Green Line

APPENDIX



Green Line

Route Information:

Route 50 - Green Line light rail transit will provide limited stop service along University Ave. between downtown St. Paul and downtown Minneapolis via University Avenue and the University of Minnesota. The Green Line will be the primary east-west transit line in the corridor and willl replace the existing Route 16 west of Oak St., the Route 50 Limited Stop bus, Route 94 Express during all off-peak hours, and Route 144 between Snelling Ave. and downtown Minneapolis.

During the Owl hours, 1:00 a.m. to 5:00 a.m., Route 16 bus service will operate in place of the Green Line between the two downtowns.

Comparable Existing Routes:

Route 16, Route 50

Frequency:

Rush Hours: 10 minutes
Midday: 10 minutes
Evening: 10 to 15 minutes
Owl: no service
Saturday: 10 minutes
Sunday: 10 minutes

Approximate First to Last Departure:

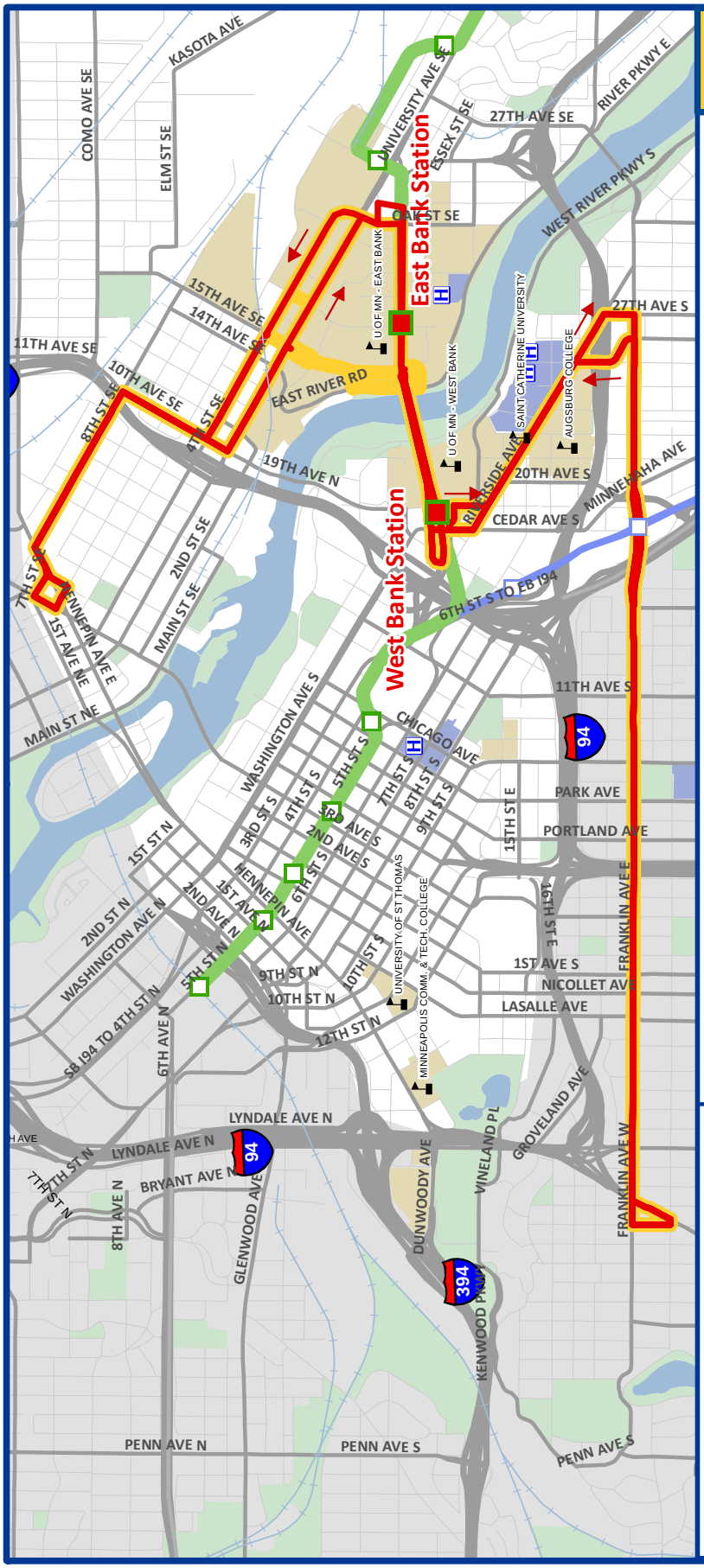
Weekday: 5:00 am to 1:00 am
Saturday: 5:00 am to 1:00 am
Sunday: 5:00 am to 1:00 am

Legend

- Hospital
- Green Line Stations
- Blue Line Station
- Planned Green Line
- Current Route 16 & 50
- Blue Line LRT

0 0.5 1 Miles

N E S W



Route 2

Route Information:

Route 2 serves Franklin Ave., Riverside Ave., 4th St. and University Ave SE and remains a significant route serving the University of Minnesota. Most of the trips continue on to serve 10th Ave. and 8th St. SE in the Marcy Holmes neighborhood. During very early and late hours, the route will end at Oak St. & Washington Ave.

Route 2 will have a secondary function as a feeder route to the Green Line, connecting with trains at either the East Bank or West Bank Stations on Washington Ave.

The frequency and span of service will not change significantly.

Comparable Existing Routes:

Route 2

Frequency:

Rush Hours: 5 to 15 minutes
Midday: 15 minutes
Evening: 20 minutes
Owl: no service
Saturday: 20 minutes
Sunday: 20 minutes

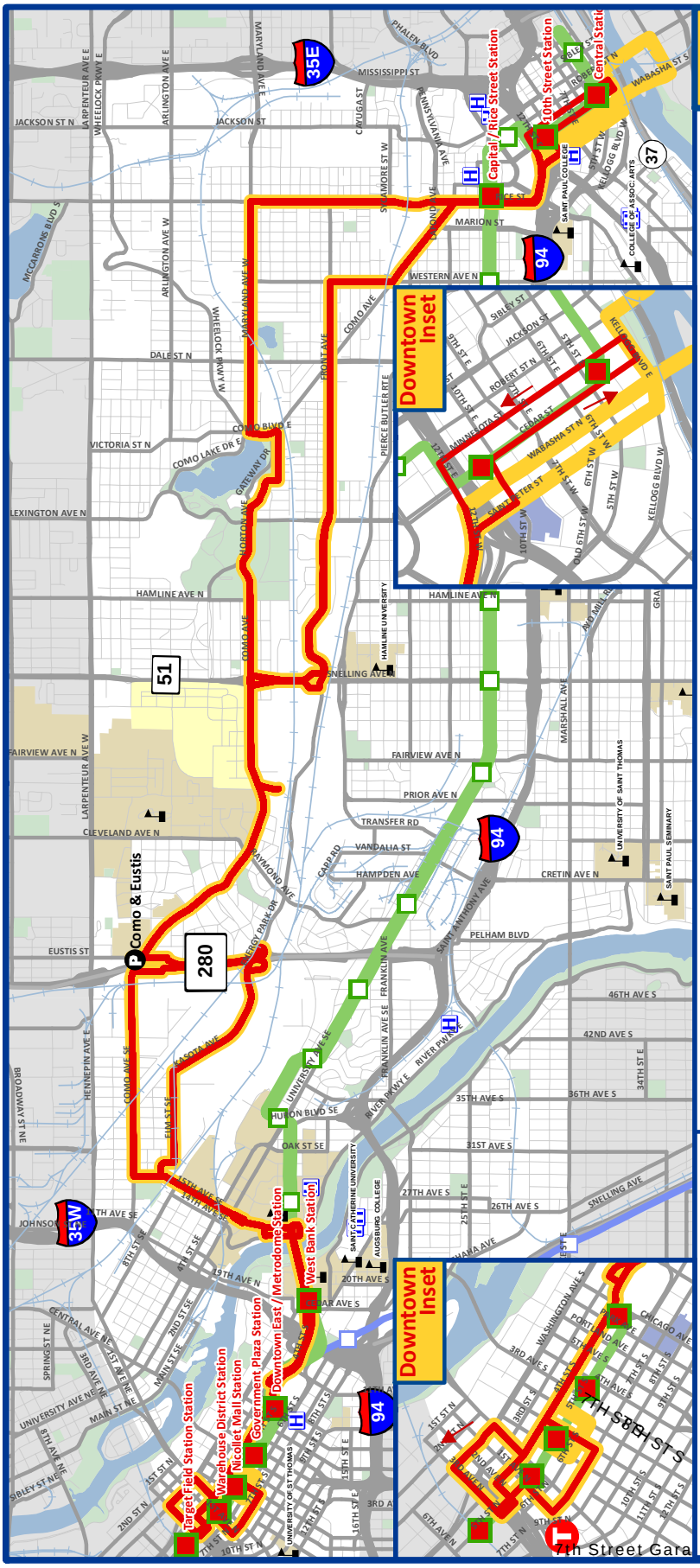
Approximate First to Last Departure:

Weekday: 5:00 am to 1:00 am
Saturday: 5:00 am to 12:30 am
Sunday: 5:00 am to 12:00 am

Legend

- Current Route 2
- Proposed Route 2
- Green Line LRT
- Green Line Station Connection
- Green Line Station
- Blue Line LRT
- Blue Line Station
- Hospital

0 0.5 1 Miles



Route 3

Route Information:

Route 3 operates between downtown Minneapolis and downtown St. Paul, serving the University of Minnesota, Como Ave. and Rice St. There are two branches on the route- one via Maryland Ave. (3A) and one via Front St. (3B). Select trips also serve Elm St. and Kasota Ave. The downtown St. Paul routing will be realigned to follow Cedar and Minnesota streets between Kellogg Blvd. and 12th St. It remains a significant route serving the University of Minnesota.

Route 3 will have a secondary function as a feeder route to the Green Line, connecting with trains at the West Bank Station and Capitol/Rice Street Station.

The frequency and span of service will not change significantly.

Comparable Existing Routes:

Route 3

Frequency:

Rush Hours: 5 to 15 minutes
Midday: 10 to 15 minutes
Evening: 15 minutes
Owl: no service
Saturday: 30 minutes
Sunday: 30 minutes

Approximate First to Last Departure:

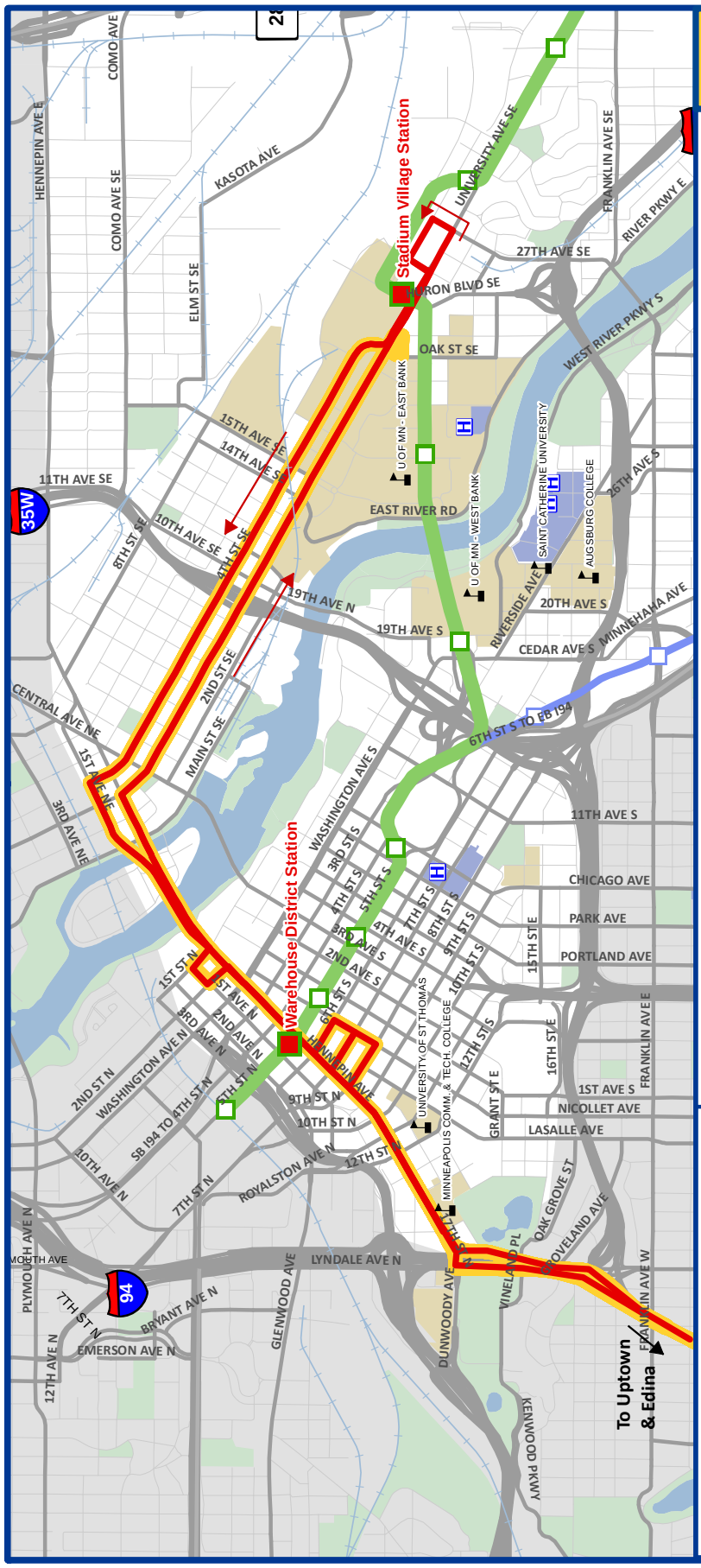
Weekday: 4:30 am to 1:00 am
Saturday: 5:00 am to 1:00 am
Sunday: 6:00 am to 12:00 am

Legend

- Current Route 3
- Proposed Route 3
- Green Line Station Connection
- Green Line LRT
- Green Line Station
- Blue Line LRT
- Blue Line Station
- Hospital

0 0.5 1 Miles

N E S W



Route 6

Route Information:

The Route 6U branch serves 4th St. and University Ave. SE and remains a significant route serving the University of Minnesota. The 6U branch will be extended to serve the Stadium Village Station, creating a direct connection for the Marcy Holmes neighborhood with the Green Line. The terminal will move to 27th Ave. SE.

Route 6 will have a secondary function as a feeder route to the Green Line, connecting with trains at Warehouse District/Hennepin Ave and at Stadium Village Station.

The frequency and span of service will not change significantly.

Comparable Existing Routes:

Route 6U

Frequency:

Rush Hours: 20 minutes
Midday: 30 minutes
Evening: 30 minutes
Owl: no service
Saturday: 30 minutes
Sunday: 30 minutes

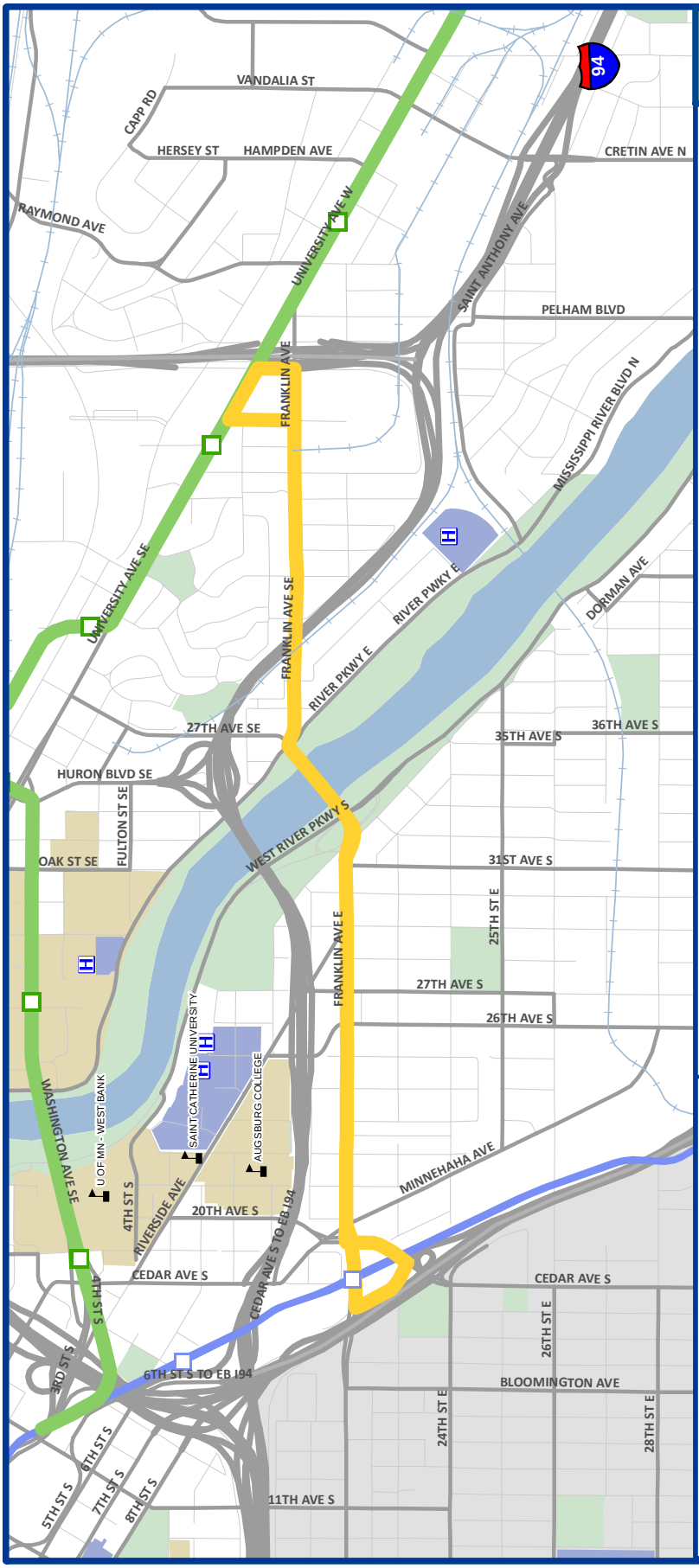
Approximate First to Last Departure:

Weekday: 4:30 am to 1:30 am
Saturday: 4:30 am to 1:30 am
Sunday: 5:30 am to 12:30 am

Legend

- Current Route 6
- Proposed Route 6
- Green Line LRT
- Green Line Station Connection
- Green Line Station
- Blue Line LRT
- Blue Line Station
- Hospital

0 0.5 1 Miles



Route 8

Route Information:

Route 8 is replaced by Route 67 between Franklin Ave. Station on the Blue Line LRT and University Avenue/Emerald Avenue. Service on Franklin Avenue between 29th and 26th avenues will be rerouted via Riverside and 25th/26th avenues to better serve Augsburg College and the Fairview University Medical Center.

The frequency of service on Route 67 on Franklin Avenue will be every 20 minutes on weekdays and Saturdays and every 60 minutes on Sundays.

Comparable Existing Routes:

Route 8 and 67

Frequency:

Rush Hours: 20 minutes
Midday: 20 minutes
Evening: 20 minutes
Owl: no service
Saturday: 20 minutes
Sunday: 20 minutes Minnehaha, 60 min.

Approximate First to Last Departure:

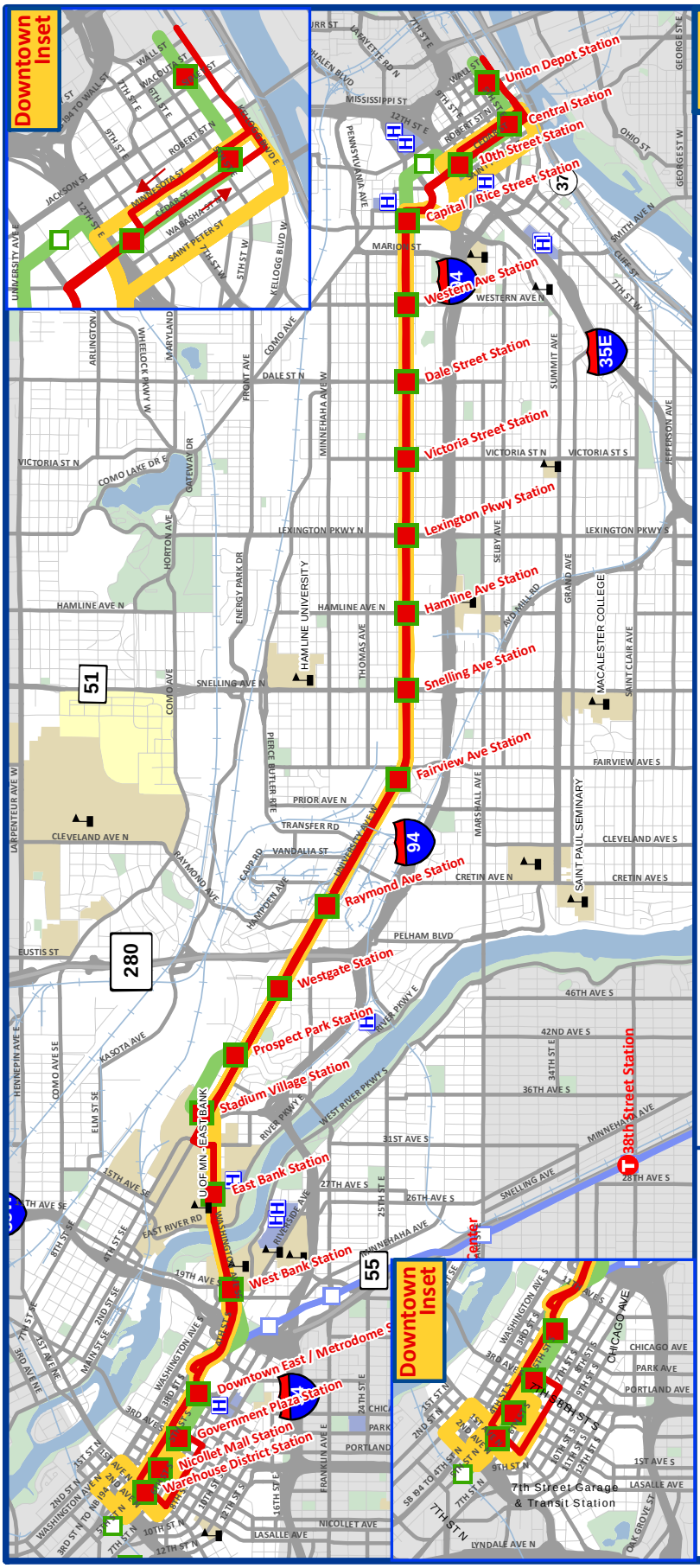
Weekday: 5:00 am to 1:00 am
Saturday: 5:00 am to 1:00 am
Sunday: 5:00 am to 1:00 am

Legend

- Current Route 8
- Green Line LRT
- Green Line Station
- Blue Line LRT
- Blue Line Station
- Hospital

0 0.25 0.5 Miles

N E S W



Route 16

Route Information:

Route 16 will provide local service along University Ave. between Oak St. (near the University of Minnesota East Bank), the State Capitol and downtown St. Paul. During the Owl hours, 1:00 a.m. to 5:00 a.m., service will be extended from Oak St./Washington Ave. to downtown Minneapolis. Owl trips will also be extended to serve the Union Depot in downtown St Paul.

Route 16 will have a primary function as a feeder route to the Green Line, connecting with trains at Stadium Village Station and along University Ave. in St. Paul. It provides local access to those unable to travel longer distances to rail stations.

The frequency of service will be reduced to every 20 minutes at most times. The span of service will not change.

Comparable Existing Routes:

Route 16

Frequency:

Rush Hours: 20 minutes
Midday: 20 minutes
Evening: 20 minutes
Owl: once/hour
Saturday: 20 minutes
Sunday: 20 minutes

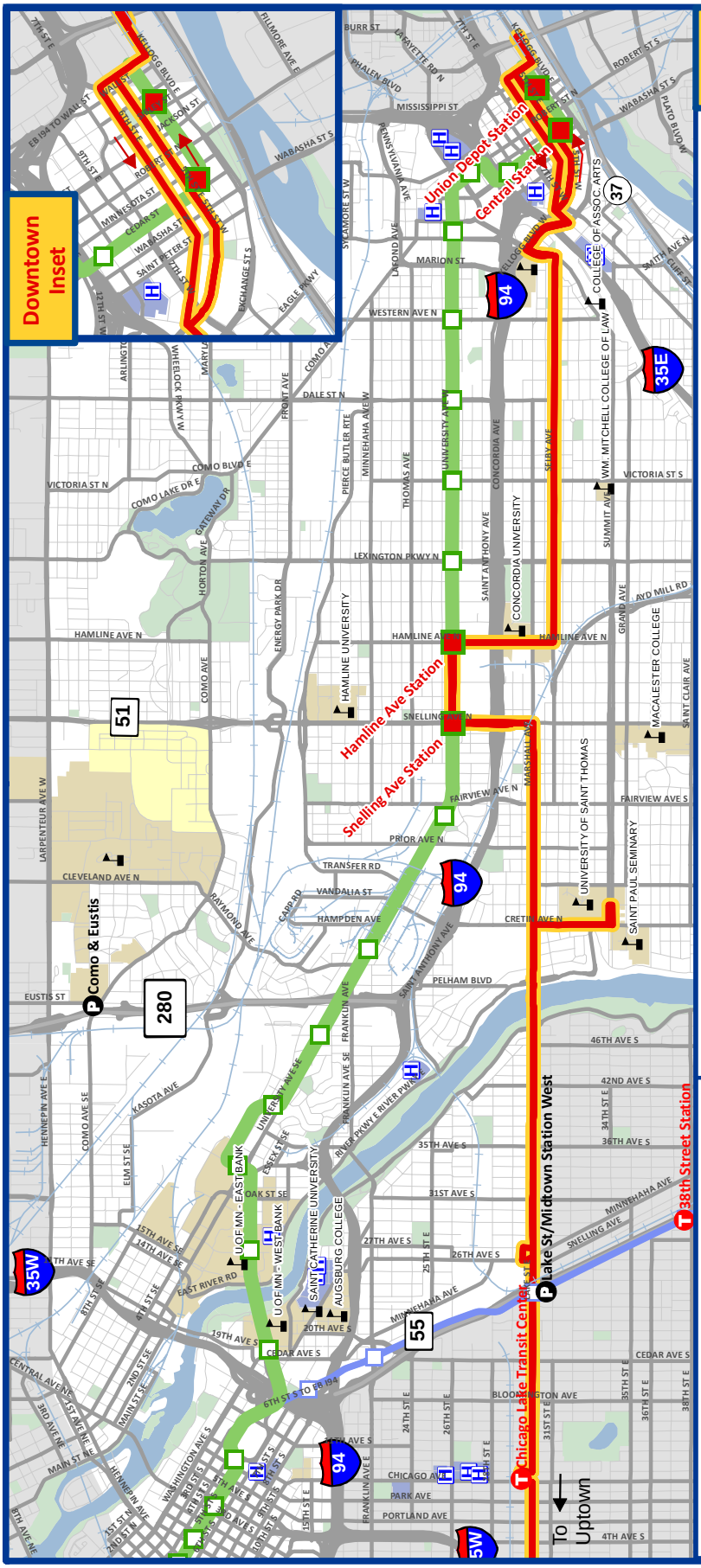
Approximate First to Last Departure:

Weekday: 24-hour continuous
Saturday: 24-hour continuous
Sunday: 24-hour continuous

Legend

- Current Route 16
- Proposed Route 16
- Green Line LRT
- Green Line Station Connection
- Green Line Stations
- Blue Line Station
- Blue Line LRT
- Hospital

0 0.5 1 Miles



Route 21

Route Information:

Route 21 serves downtown St. Paul, Selby Ave., Midway area, and Marshall Ave. in St. Paul and Lake St. in Minneapolis. Select trips serve the University of St. Thomas (Summit Ave./Finn St.)

Route 21 will have a key function as a feeder route to the Green Line, connecting with trains in downtown St. Paul and the Hamline Ave. and Snelling Ave. Stations on University Ave.

Weekday evening service will be improved to every 20 minutes. Otherwise, the route, frequency and span of service will not change significantly.

Comparable Existing Routes:

Route 21 - Selby Ave

Frequency:

Rush Hours: 15 to 20 minutes
Midday: 20 minutes
Evening: 10-15 minutes
Owl: no service
Saturday: 20 minutes
Sunday: 20 minutes

Approximate First to Last Departure:

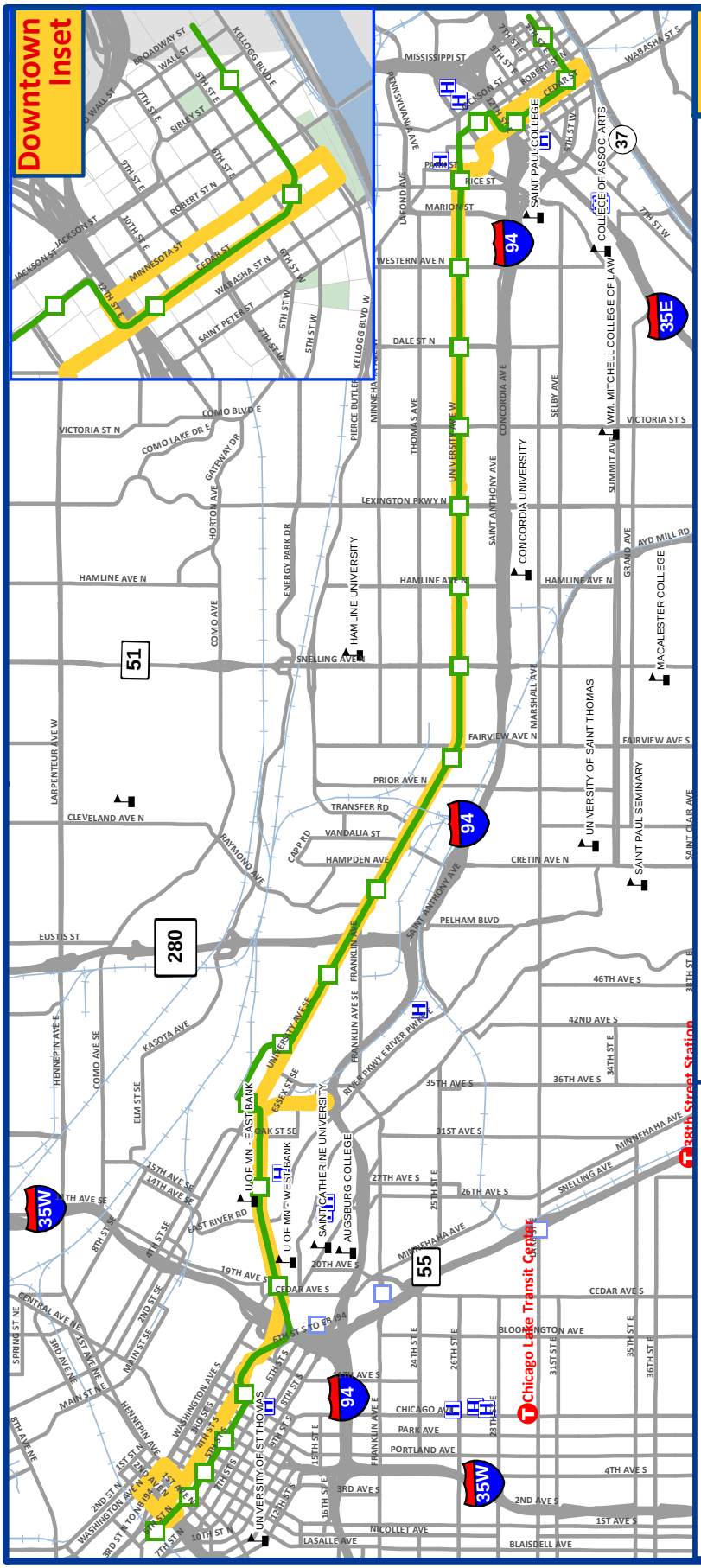
Weekday: 4:00 am to 1:00 am
Saturday: 4:00 am to 1:00 am
Sunday: 4:00 am to 12:00 am

Legend

- Current Route 21
- Proposed Route 21
- Green Line LRT
- Green Line Station Connection
- Green Line Station
- Blue Line LRT
- Blue Line Station
- Hospital

0 0.5 1 Miles

N E S W



Route 50

Route Information:

Route 50 is replaced by the Green Line LRT. The Green Line will be the primary east-west service in the University Avenue corridor, running every 10 minutes most of the day, seven days a week.

Route 16 will continue to operate local service in the corridor, between downtown St. Paul and University Ave./Oak St. every 20 minutes most of the day.

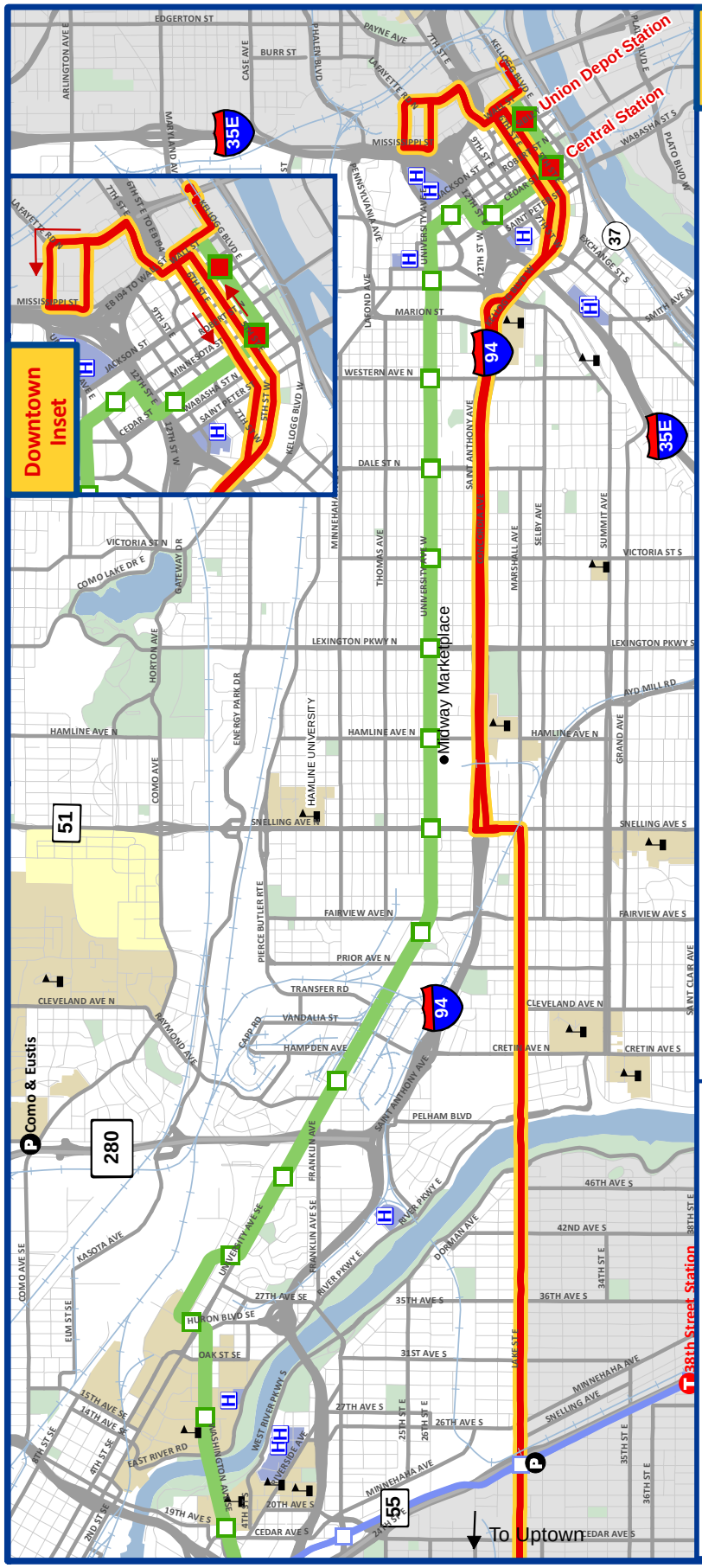
Route 50 will no longer provide a connection between Huron Station and the U of M campus. The U of M is considering having a campus circulator route serve the station and provide this link. If there is no bus service between Huron Station and campus, the

Legend

- Current Route 50
- Hospital
- Green Line Stations
- Blue Line Station
- Planned Green Line

0 0.5 1 Miles

N W E S



Route 53

Route Information:

Route 53 is a limited-stop route serving Lake St. in Minneapolis and Marshall Ave. and Snelling Ave. in St Paul, traveling non-stop via I-94 between Snelling Ave. and downtown St. Paul. The route travels eastbound in the morning and westbound in the afternoon.

Route 53 will not have a significant function as a feeder route to the Green Line, with the limited exception of connections with the Lafayette Rd. employment area.

The route, frequency and span of service will not change significantly.

Comparable Existing Routes:

Route 53

Frequency:

Rush Hours: 20 to 30 minutes
Midday: no service
Evening: no service
Owl: no service
Saturday: no service
Sunday: no service

Approximate First to Last Departure:

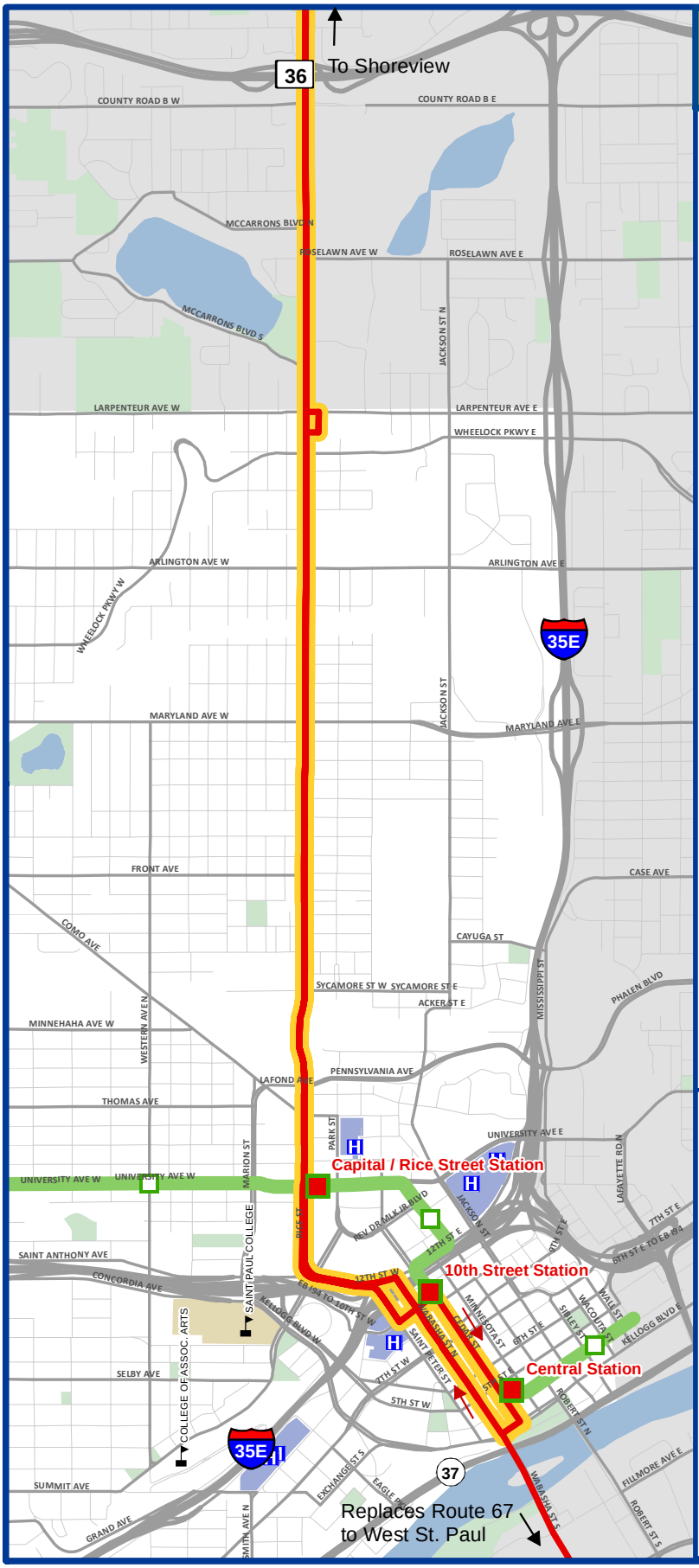
Weekday: 6:00 to 8:30 am, 3:00 to 6:00 pm
Saturday: none
Sunday: none

Legend

- Current Route 53
- Proposed Route 53
- Green Line LRT
- Green Line Station Connection
- Green Line Station
- Blue Line LRT
- Blue Line Station
- Hospital

0 0.5 1 Miles

N E S W



Route 62

Route Information:

Route 62 will continue to operate on Rice St. between Shoreview, Little Canada and downtown St. Paul on Cedar/Wabasha streets. Most trips will be extended via Smith Ave. to Signal Hills shopping center in West St. Paul. Route 62 will replace Route 67 in West St. Paul.

Route 62 will have a secondary function as a feeder route to the Green Line, connecting with trains at the Capitol/Rice Street Station and in downtown St. Paul.

The frequency will be improved on Rice St. on Sundays.

Comparable Existing Routes:

Route 62, 67, 262

Frequency:

Rush Hours: 30 minutes
Midday: 30 minutes
Evening: 30 minutes
Owl: no service
Saturday: 30 minutes
Sunday: 30 minutes Rice St., 60 minutes Smith

Approximate First to Last Departure:

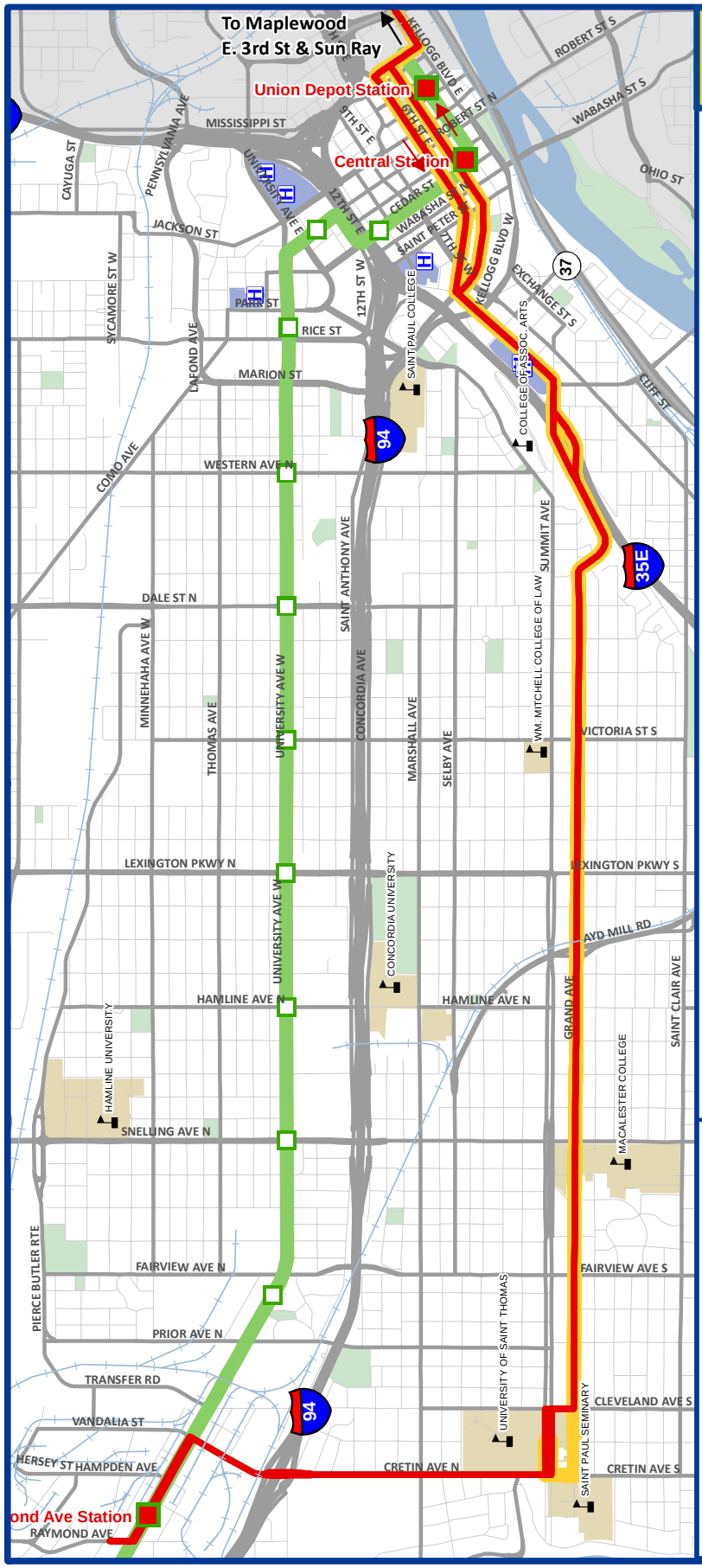
Weekday: 4:30 am to 1:00 am on Rice St.,
5:00 am to 11:00pm on Smith Ave.
Saturday: 5:30 am to 1:00 am on Rice St.,
8:00 am to 8:00pm on Smith Ave.
Sunday: 6:30 am to 1:00 am on Rice St.,
9:30 am to 6:00pm on Smith Ave.

Legend

- Current Route 62
- Proposed Route 62
- Green Line LRT
- Green Line Station Connection
- Green Line Stations
- Blue Line LRT
- Blue Line Station
- Hospital

N W E S

0 0.5 1 Miles



Route 63

Route Information:

Route 63 will be extended from Grand Ave. and the University of St. Thomas to the Raymond Ave. Station via Cretin/Vandalia Ave. and University Ave. The route will continue to serve Maplewood, Sun Ray, and the east side of St. Paul via E. 3rd St. The routing in diwntown St. Paul remains unchanged.

Route 63 will have a key function as a parallell feeder route to the Green Line, connecting with trains at the Raymond Ave. Station and in downtown St. Paul. Timed connections will also be planned with routes 16, 67 and 87 at the Raymond Ave. Station for local travel needs, such as between college campuses.

The frequency and span of service will be improved, especially Sunday service on Grand Ave.

Comparable Existing Routes:

Route 63

Frequency:

Rush Hours: 10 to 20 minutes
Midday: 20 minutes
Evening: 20 minutes
Owl: no service
Saturday: 20 minutes
Sunday: 20 minutes

Approximate First to Last Departure:

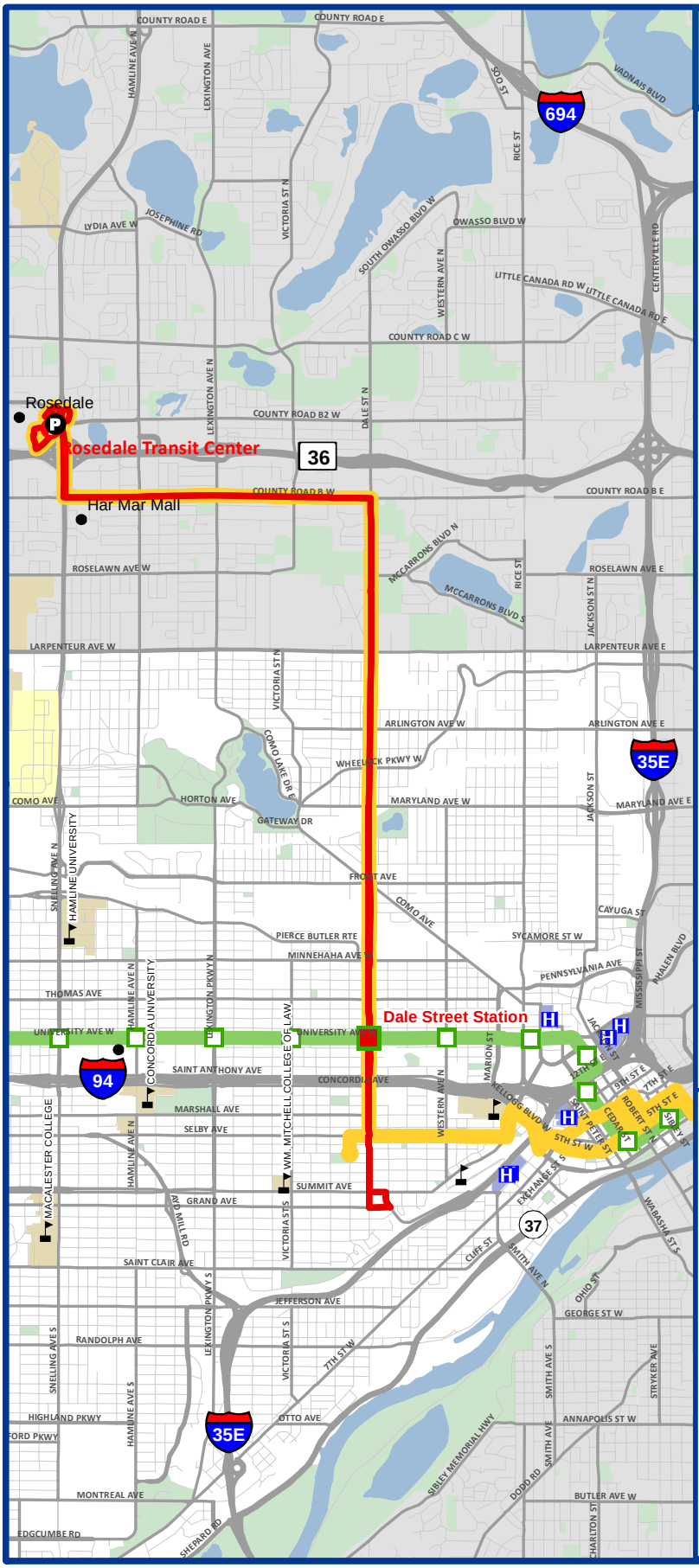
Weekday: 5:00 am to 1:00 am
Saturday: 5:00 am to 1:00 am
Sunday: 5:00 am to 1:00 am

Legend

- Current Route 63
- Proposed Route 63
- Green Line LRT
- Green Line Station Connection
- Green Line Station
- Hospital

0 0.5 1 Miles

N E S W



Route 65

Route Information:

Route 65 will provide cross-town service via Dale St. and County Road B between Rosedale Transit Center and Grand Ave. The route will no longer serve downtown St. Paul. Route 21 will continue to serve Selby Ave., and the Green Line will connect Dale St. and downtown St. Paul. Early morning and late evening trips will only travel between Maryland Ave. and Selby Ave.

Route 65 will have a primary function as a feeder route to the Green Line, connecting with trains at the Dale St. Station.

The frequency and span of service will be improved significantly.

Comparable Existing Routes:

Route 21, 65

Frequency:

Rush Hours: 20 minutes
Midday: 20 minutes
Evening: 20 minutes
Owl: no service
Saturday: 20 minutes
Sunday: 20 minutes

Approximate First to Last Departure:

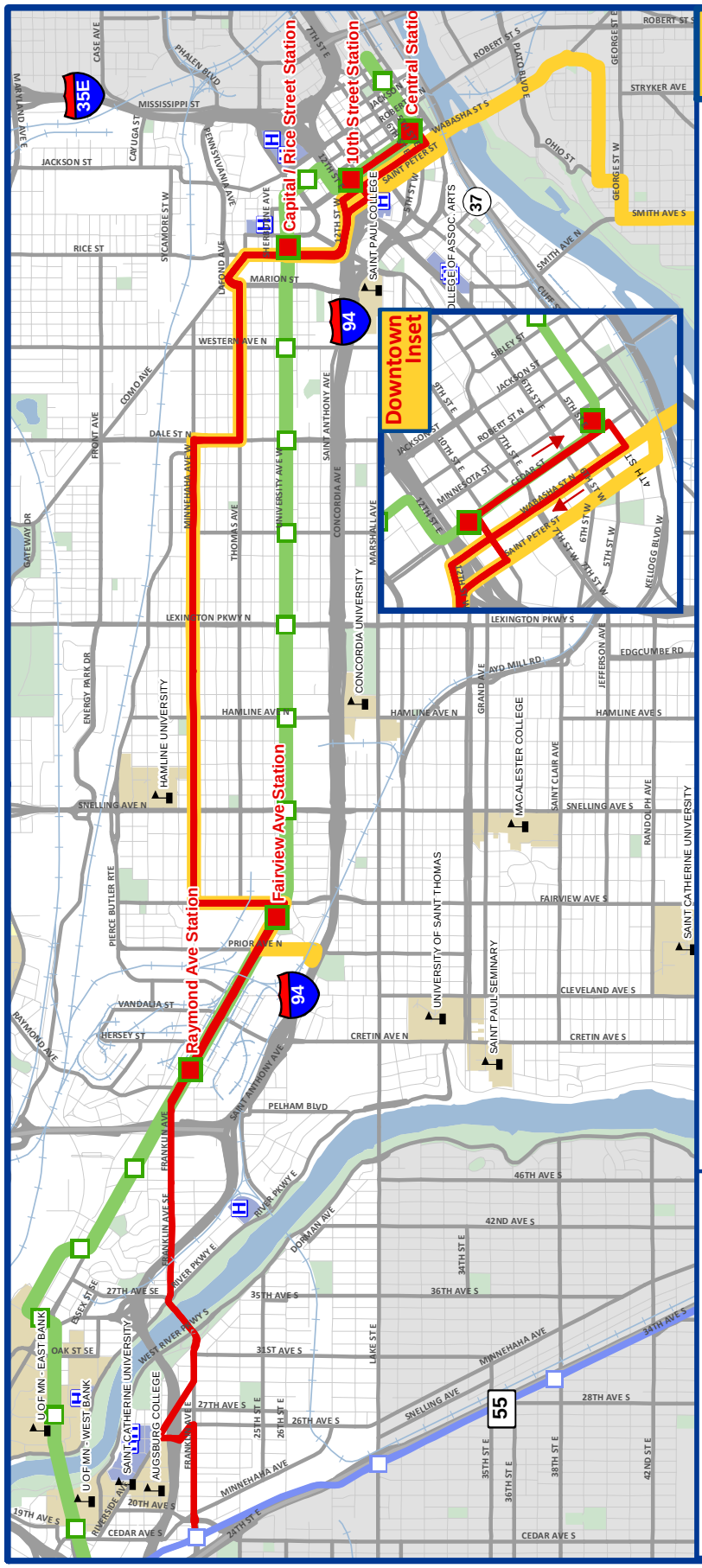
Weekday: 5:00 am to 12:00 am
Saturday: 5:00 am to 12:00 am
Sunday: 6:00 am to 12:00 am

Legend

- Current Route 65
- Proposed Route 65
- Green Line LRT
- Green Line Station Connection
- Green Line Station
- Blue Line LRT
- Blue Line Station
- Hospital

0 0.5 1 Miles

N W E S



Route 67

Route Information:

Route 67 will operate between downtown St. Paul and the Franklin Ave. Station on the Blue Line. The route will continue serving Rice St., Thomas Ave., and Minnehaha Ave. and will be extended from Fairview Ave. to the Raymond Ave. Station. Route 67 will replace Route 8 on Franklin Ave. between University Ave. and Hiawatha Ave. Early morning and late hour service from downtown St. Paul will terminate at Fairview and University Ave.

Route 67 will no longer operate south of downtown St. Paul. Route 62 will replace Route 67 on Smith Ave. and to Signal Hills in West St. Paul.

Route 67 is a key parallel feeder route to the Green Line, connecting with trains in downtown St. Paul and at Capitol/Rice St. Station, Fairview Ave. Station and Raymond Ave. Station. Timed connections will also be planned with routes 16, 63 and 87 at Raymond Ave. Station for local travel needs, such as between college campuses. Route 67 will deviate from Franklin Ave to Riverside and 25th avenues to better serve the hospital and colleges.

Comparable Existing Routes:

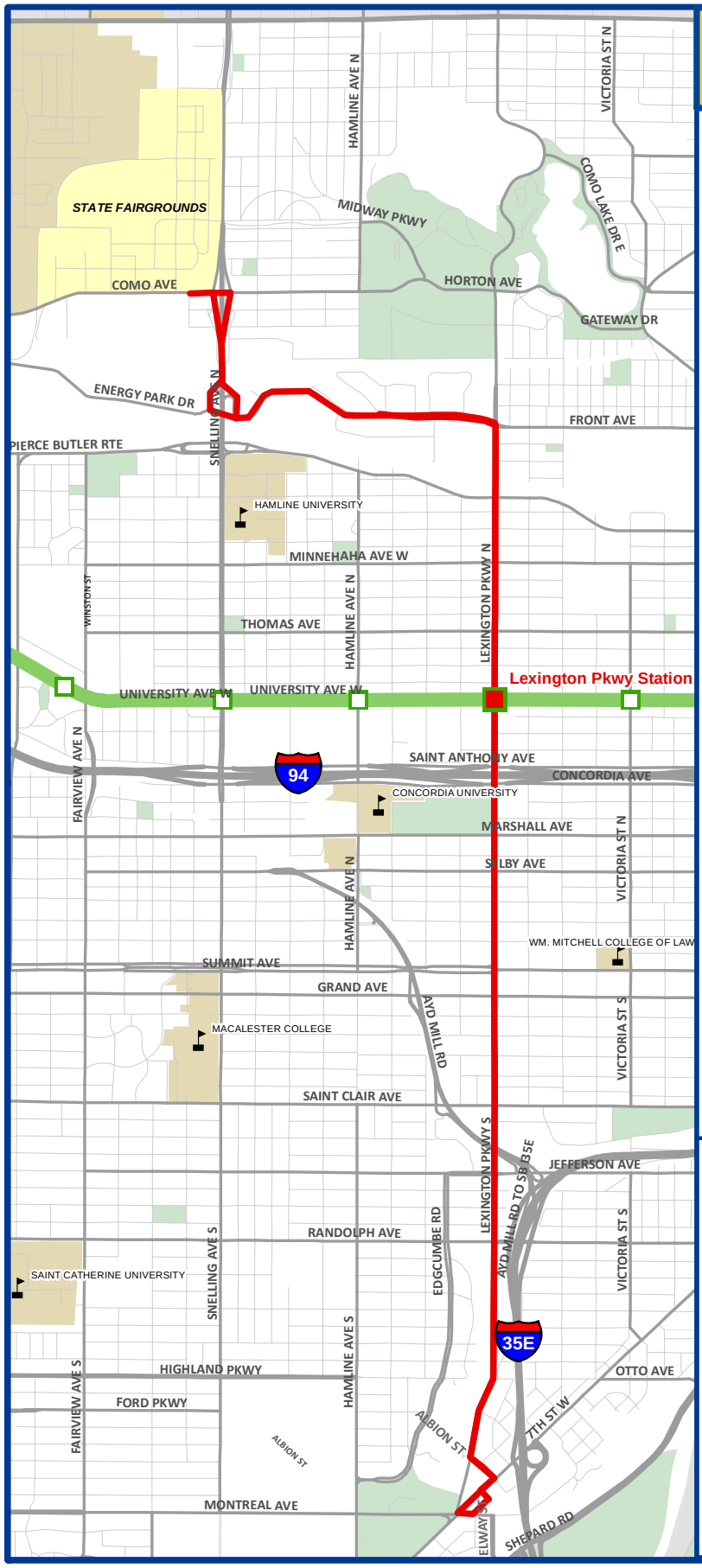
Route 8 and 67

Frequency:

Rush Hours: 20 minutes
Midday: 20 minutes
Evening: 20 minutes
Owl: no service
Saturday: 20 minutes
Sunday: 20 minutes Minnehaha, 60 min. Franklin

Approximate First to Last Departure:

Weekday: 5:00 am to 1:00 am
Saturday: 5:00 am to 1:00 am
Sunday: 5:00 am to 1:00 am



Route 83

Route Information:

Route 83 is a new route that will provide connecting crosstown service to the Green Line at Lexington Pkwy. It will be a key feeder route, filling the 2-mile gap in crosstown bus service in St. Paul between Dale St. and Snelling Ave. Route 83 will operate along Lexington Pkwy. between W. 7th St and Como Ave. and will also serve Energy Park Dr. and Como Ave./Snelling Ave.

Comparable Existing Routes:

None

Frequency:

Rush Hours: 30 minutes
Midday: 30 minutes
Evening: 30 minutes
Owl: no service
Saturday: 30 minutes
Sunday: 30 minutes

Approximate First to Last Departure:

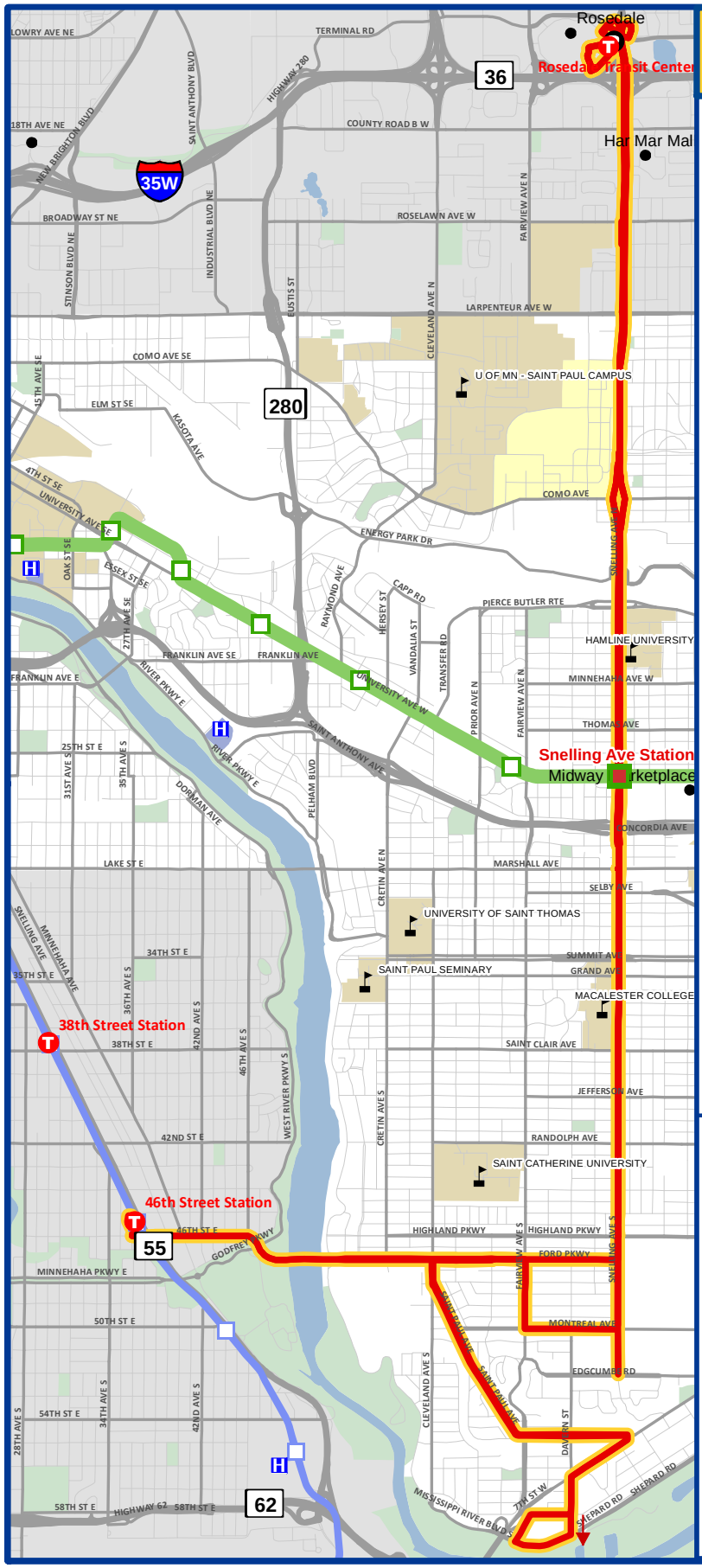
Weekday: 5:30 am to 10:00 pm
Saturday: 5:30 am to 10:00 pm
Sunday: 6:00 am to 10:00 pm

Legend

- Proposed Route 83
- Green Line LRT
- Green Line Station Connection
- Green Line Station
- Hospital

0 0.5 1 Miles

N W E S



Route 84

Route Information:

Route 84 Snelling Ave will provide connecting crosstown service to the Green Line. The improved service will be compatible with the planned Snelling Ave Rapid Bus.

Route 84 will have a primary function as a feeder route to the Green Line at the Snelling Ave. Station. Route 84 will continue to serve many important crosstown destinations, including Rosedale Transit Center. Route 84 and the Green Line will provide a frequent alternative for former Route 144 riders. Route 84 will replace Route 144 on Snelling Ave.

The 46th St. branch will no longer deviate via Montreal Ave. Instead, the Davern St./St. Paul Ave branch will be realigned via Ford Pkwy., Fairview Ave., Montreal Ave., and Snelling Ave.

The frequency and span of service on Snelling will be improved significantly, matching that of the Green Line. The south end branches will operate

Comparable Existing Routes:

Route 84, 144

Frequency:

Rush Hours: 10 minutes
Midday: 10 minutes
Evening: 10 minutes
Owl: no service
Saturday: 10 minutes
Sunday: 10 minutes

Approximate First to Last Departure:

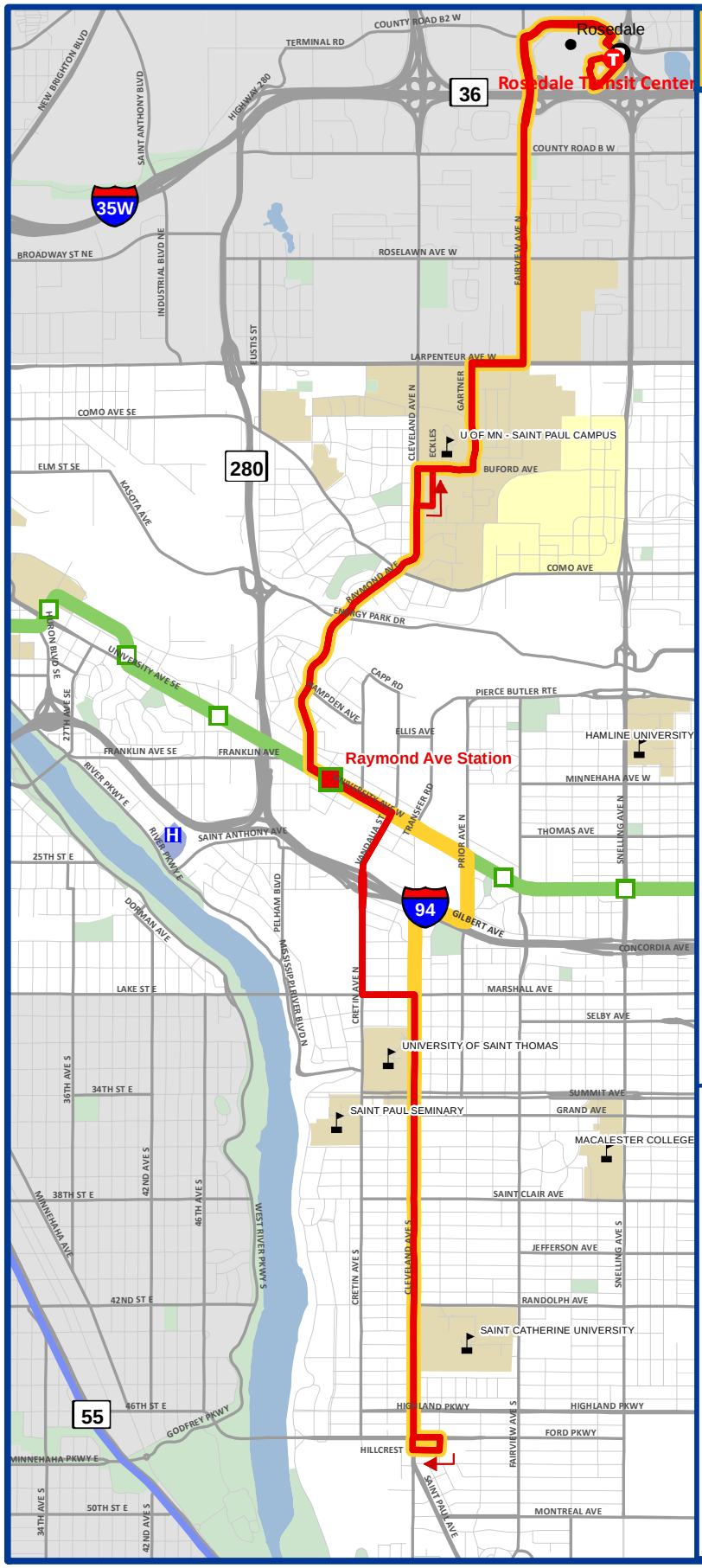
Weekday: 5:00 am to 1:00 am
Saturday: 5:00 am to 1:00 am
Sunday: 5:00 am to 1:00 am

Legend

- Current Route 84
- Proposed Route 84
- Green Line LRT
- Green Line Station Connection
- Green Line Station
- Blue Line LRT
- Blue Line Station
- Hospital

0 0.5 1 Miles

N W E S



Route 87

Route Information:

Route 87 will provide crosstown feeder service to the Green Line via Cleveland Ave. and Raymond Ave. The route serves the U of M St. Paul Campus, Fairview Ave. and operates between Highland Park and Rosedale Transit Center.

Route 87 will have a key function as a feeder route to the Green Line, connecting with trains at the Raymond Ave. Station. Timed connections will also be planned with routes 16, 63 and 67 at Raymond Ave. for local travel needs, such as between college campuses. The route will no longer travel via Gilbert St. or Prior Ave. and will instead operate a more direct routing to the Green Line via Marshall and Cretin avenues.

The frequency and span of service will be improved significantly.

Comparable Existing Routes:

Route 87

Frequency:

Rush Hours: 20 minutes
Midday: 20 minutes
Evening: 20 minutes
Owl: no service
Saturday: 20 minutes
Sunday: 20 minutes

Approximate First to Last Departure:

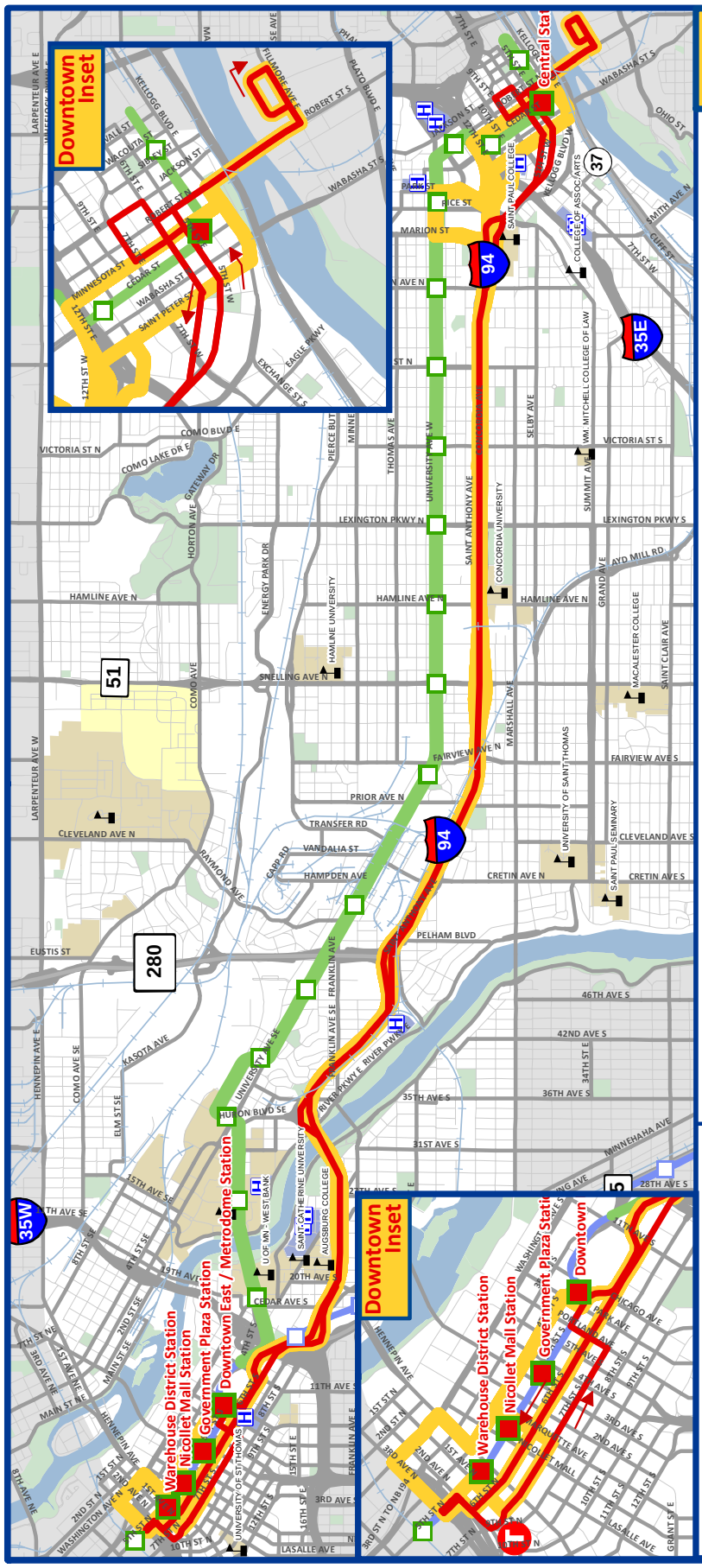
Weekday: 5:00 am to 12:00 am
Saturday: 5:00 am to 12:00 am
Sunday: 5:00 am to 12:00 am

Legend

- Current Route 87
- Proposed Route 87
- Green Line LRT
- Green Line Station Connection
- Green Line Station
- Blue Line LRT
- Blue Line Station
- Hospital

0 0.5 1 Miles

N W E S



Route 94

Route Information:

Route 94 will provide non-stop express service between the two downtowns via I-94 during weekday peak periods only. The routing via the State Capitol and Marion St. (94B). will be eliminated, as will the stop at I-94 and Snelling Ave. (94C). All off-peak service and peak period service outside the two downtowns will be replaced by the Green Line LRT.

Service to River Park Plaza south of downtown St Paul will remain.

The downtown routes will be changed to follow 5th and 6th streets in St Paul and 6th and 7th streets in Minneapolis.

The frequency during peak periods will not change.

Comparable Existing Routes:

Route 94

Frequency:

Rush Hours: 10 to 15 minutes
Midday: no service
Evening: no service
Owl: no service
Saturday: no service
Sunday: no service

Approximate First to Last Departure:

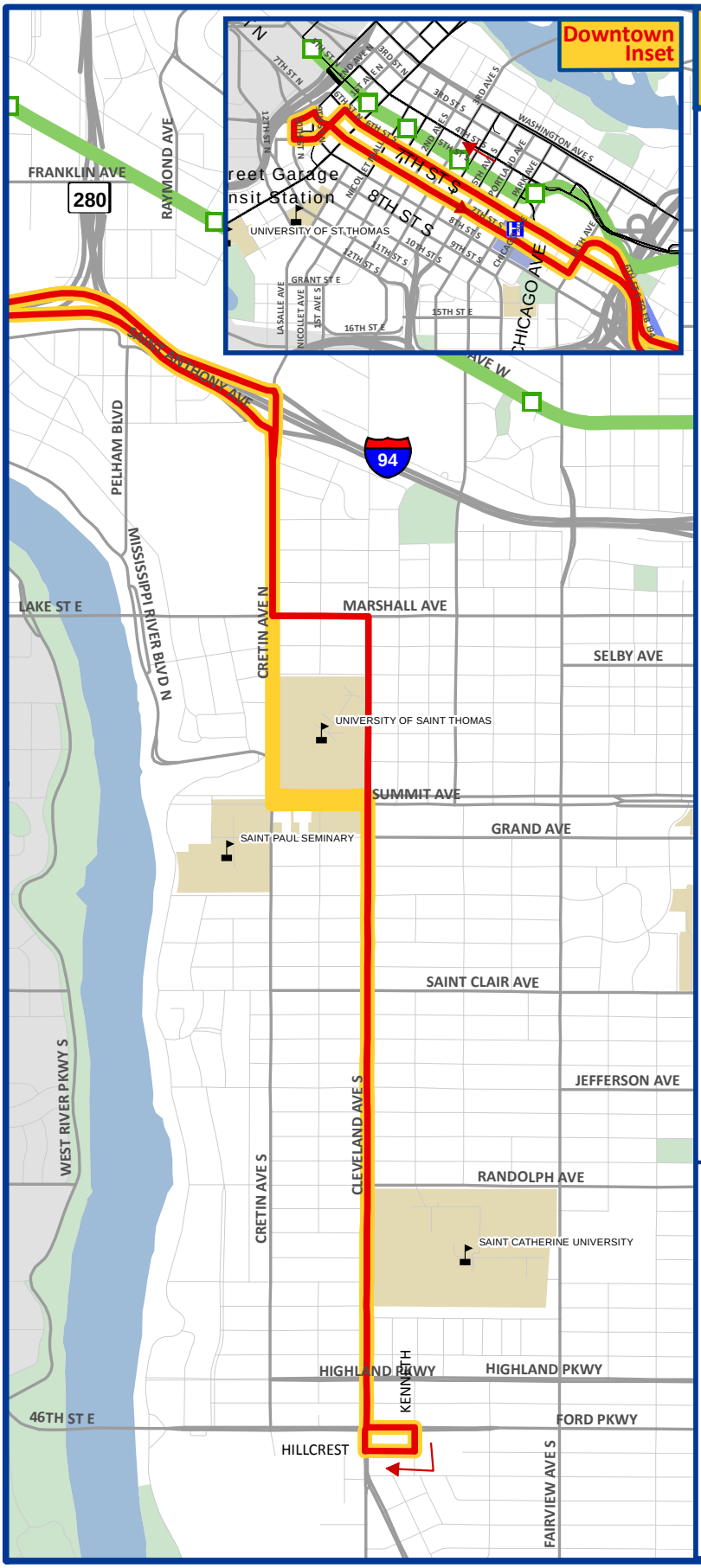
Weekday: 5:00 to 9:00 am, 3:00 to 7:00 pm
Saturday: none
Sunday: none

Legend

- Current Route 94
- Proposed Route 94
- Green Line LRT
- Green Line Station Connection
- Green Line Station
- Blue Line LRT
- Blue Line Station
- Hospital

0 0.5 1 Miles

N E S W



Route 134

Route Information:

Route 134 will provide non-stop service between Cleveland and Cretin avenues and downtown Minneapolis via I-94 during the weekday peak periods. Fringe of peak service and reverse-commute trips will be replaced by Route 87 connections with the Green Line LRT.

The route will be rerouted via Cleveland Ave. instead of Cretin Ave. between Summit and Marshall Ave to serve a more residential area.

Westbound trips will not stop at the Huron Blvd. Station. Route 87 and the Green Line provide a frequent alternative to the U of M.

The frequency during the peak hours will not change. The span of service will be reduced to be 6:30 to 8:30 am, 4:00 to 6:00 pm weekdays.

Comparable Existing Routes:

Route 87, 134

Frequency:

Rush Hours: 10 to 20 minutes
Midday: no service
Evening: no service
Owl: no service
Saturday: no service
Sunday: no service

Approximate First to Last Departure:

Weekday: 6:30 to 8:30 am, 4:00 to 6:00 pm
Saturday: none
Sunday: none

Legend

- Current Route 134
- Proposed Route 134
- Green Line LRT
- Green Line Station Connection
- Green Line Station
- Hospital

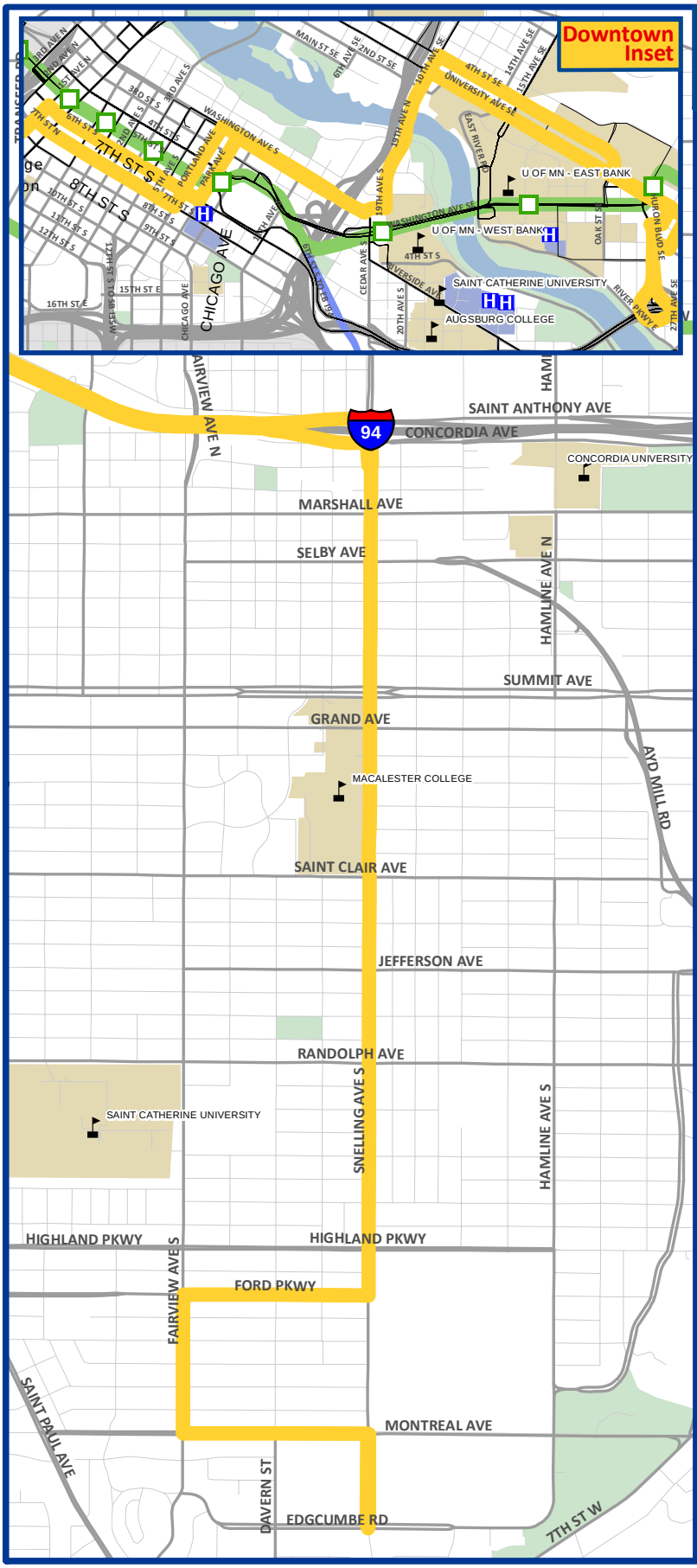
0 0.25 0.5 Miles

N W E S

Route 144

Route Information:

Route 144 is replaced by Route 84 on Snelling Avenue and the Green Line LRT. Both Route 84 and the Green Line will operate every 10 minutes. The travel time difference between the current Route 144 and the proposed Routes 84 and Green Line for customers traveling to downtown Minneapolis is 4 minutes and to the U of M is 8 minutes.

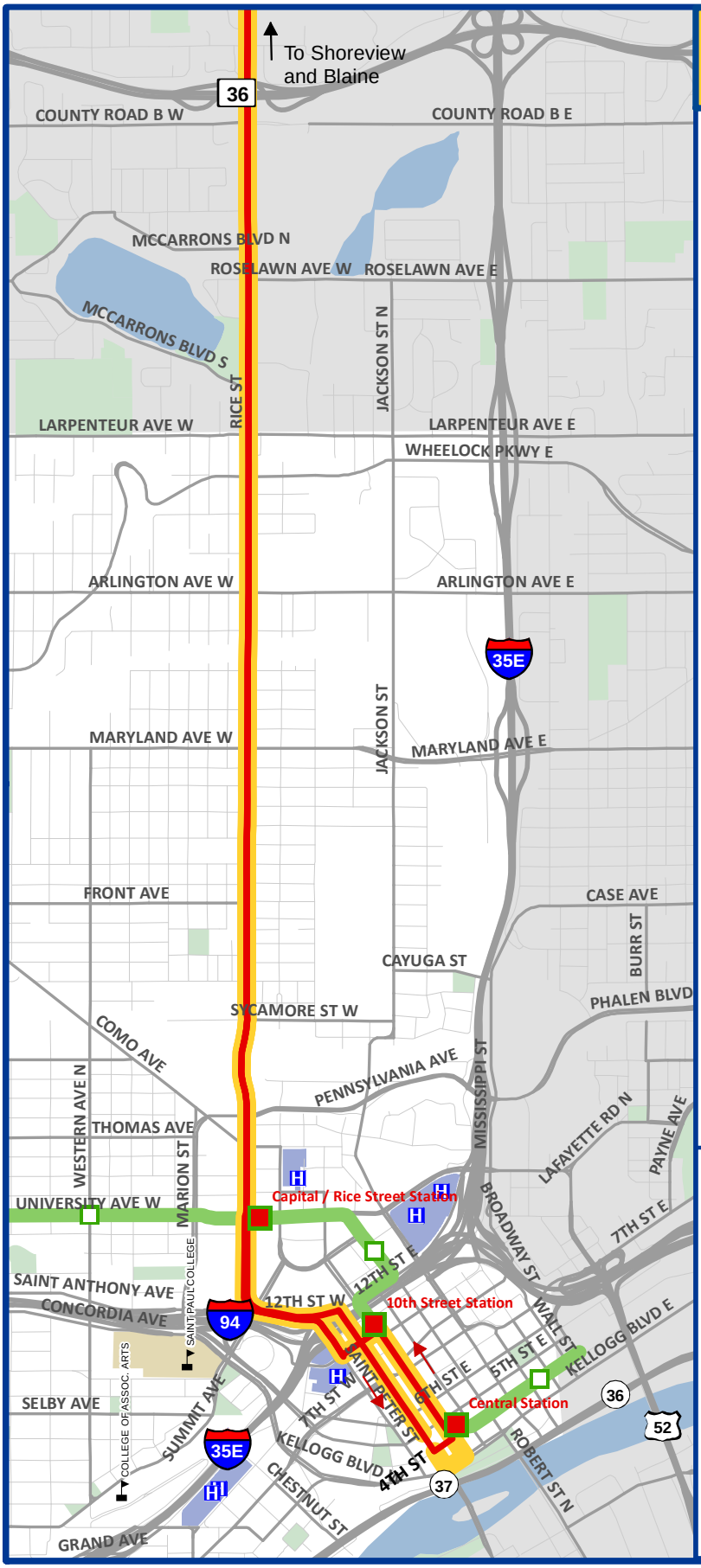


Legend

- Current Route 144
- Green Line LRT
- Green Line Station
- Hospital

0 0.25 0.5 Miles

N W E S



Route 262

Route Information:

Route 262 will continue provide limited-stop service along Rice St. between Blaine, Shoreview and Little Canada and downtown St. Paul via Cedar and Wabasha streets during the weekday peak periods.

Route 62 will have a secondary function as a feeder route to the Green Line, connecting with trains at the Capitol/Rice Street Station.

The frequency and span of service will not change significantly.

Comparable Existing Routes:

Route 62, 262

Frequency:

Rush Hours: 30 minutes
Midday: no service
Evening: no service
Owl: no service
Saturday: no service
Sunday: no service

Approximate First to Last Departure:

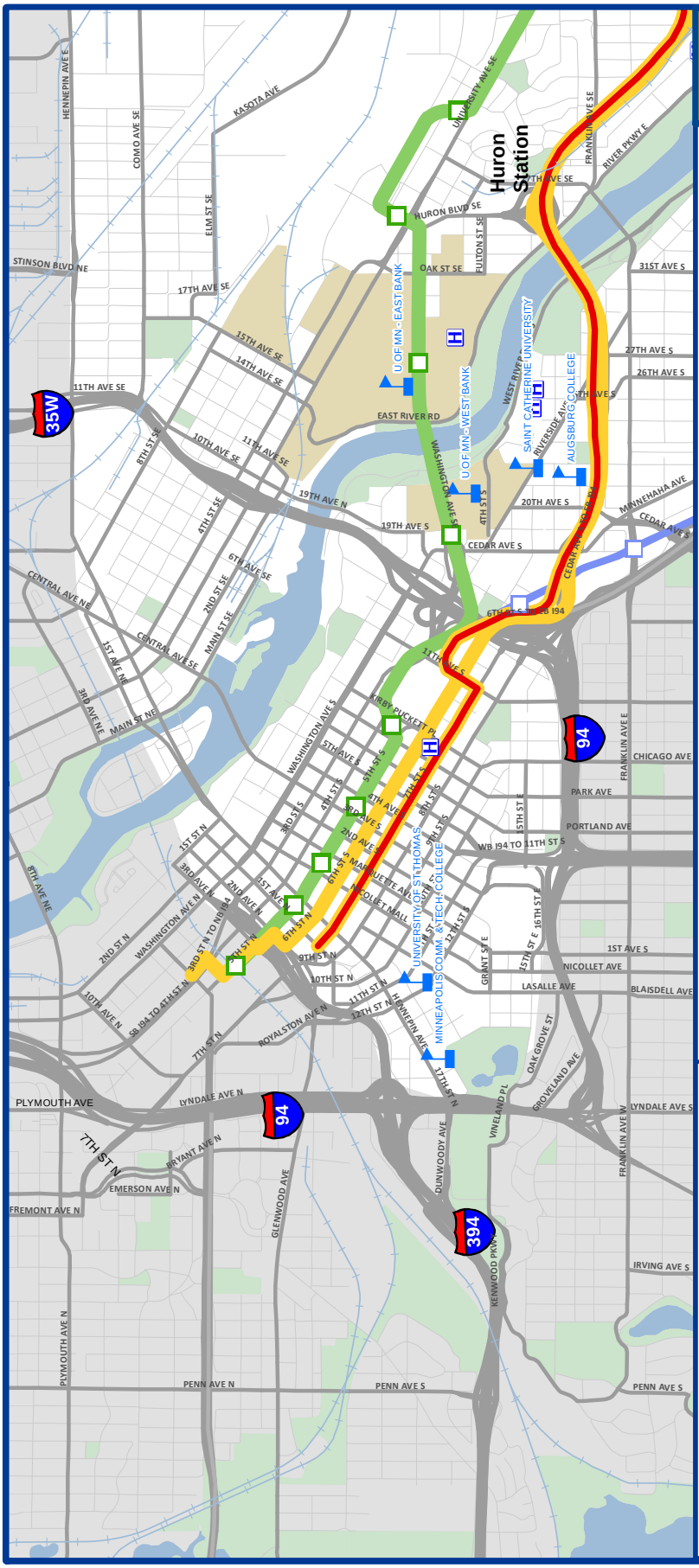
Weekday: 6:30 to 7:30 am, 4:00 to 5:00 pm
Saturday: none
Sunday: none

Legend

- Current Route 262
- Proposed Route 262
- Green Line LRT
- Green Line Station Connection
- Green Line Station
- Hospital

N W E S

0 0.5 1 Miles



Routes 94, 134, 353, 355, 365, 375, 452

Route Information:

Currently, select westbound express routes serve Huron Station at I-94 and Huron Boulevard between 7:30 and 9:20 a.m., offering a connection with Route 50 to the U of M campus. Since the Green Line will replace Route 50, Metro Transit will no longer provide a local bus connection between Huron Station and campus. The U of M is considering having a campus circulator route serve the station and provide this link. If there is no bus service between Huron Station and campus, the express routes that currently serve the station will no longer stop there. Alternate service is available via the Green Line from the Downtown East/Metrodome Station.

Comparable Existing Routes:

Route 94, 134, 353, 355, 365, 375, 452

Frequency:

Rush Hours: 5 to 15 minutes AM during peak hours only.
Midday: no service
Evening: no service
Owl: no service
Saturday: no service
Sunday: no service

Approximate First to Last Arrival:

Weekday: 7:00 to 9:00 am
Saturday: none
Sunday: none

Legend

- Current Routes from I-94
- Proposed Routes from I-94
- Green Line LRT
- Green Line Station Connection
- Green Line Station
- Blue Line LRT
- Blue Line Station
- Hospital

0 0.5 1 Miles

N E S W