



Gateway Gold Line Bus Rapid Transit: A Closer Look at Health and Land Use

Project Summary

May 2016

Introduction

Overview

This document summarizes the Gateway Gold Line Bus Rapid Transit (Gold Line BRT) health impact assessment (HIA) process and recommendations. The HIA process provides a framework for reviewing health benefits and impacts of land use decisions. The review results in a set of recommendations on how to incorporate health into decision-making processes before a policy is adopted. Find more details in the *Gateway Gold Line Bus Rapid Transit: A Closer Look at Health and Land Use Technical Report* at TheGatewayCorridor.com.

Background

Our Environment Shapes Our Health

The places in which we live, work, and play affect our health. Man-made (or “built”) environments can support or limit healthy behaviors and the ability to get to basic needs and services. Our health begins with decisions on where to place resources such as grocery stores, schools, parks, and health care facilities within our cities and what methods of travel we are able to use. Communities should consider health as early as possible in these decisions to ensure all residents can lead healthy lives. Cities play an essential role in the design of our environments and as a result, yield great power in creating healthy communities.

A Local Vision for Health

Cities regularly develop plans for their vision of the future and map how to reach that vision. These plans (called “comprehensive plans”) help guide how cities will develop, where resources like jobs, housing, and trails will be located, and how we will travel throughout our communities. Individual and community health is certainly affected by these planning processes as cities aim to create livable communities. However, health is often missing from comprehensive plans and cities’ mission and vision.

Certain comprehensive plan elements required by the Metropolitan Council—the metropolitan planning organization for the Twin Cities Metropolitan Area—provide opportunities to incorporate health. This study focuses on including health in land use decisions around the Gold Line BRT project. The project team conducted outreach as part of this study and many community members provided feedback about the connection between health and where they live, work, and play. As a result, as cities work to update their comprehensive plans, they should consider health early and often, and engage community members to further define what health means to each community.

The Gold Line BRT is an Opportunity

The Gold Line BRT is a proposed transitway in the East Metro that will connect urban and suburban communities, jobs, retail, education, and recreation destinations. All-day transit service will be provided at the stations and will tie into the growing regional transit system. The route could open for service by 2023 and will provide new economic development opportunities as the region grows. This health impact assessment is part of broad planning efforts for the Gold Line BRT, and focuses

on how to integrate health into the comprehensive plans for the five cities along the corridor: Saint Paul, Maplewood, Oakdale, Landfall, and Woodbury. As part of each city's comprehensive plan, they will need to include the Gold Line BRT station areas and consider improvements around these stations that will work with the new transit line. These station areas present a unique opportunity for each city to implement their vision for a livable and healthy community.

Community Driven Process

The Gold Line BRT project has an extensive technical, policy, and community committee structure. These committees, along with other community groups, determined the factors considered most important to health when it comes to the built environment. Community representatives selected four elements important to health and influenced by land use decisions. These four elements are:

- Connectivity
- Housing
- Jobs
- Safety

Criteria for selecting the elements included:

- Availability of data,
- Interest from a wide range of stakeholders, and
- Ability to influence land use decisions.

Given these criteria, some items - such as air quality and childcare access - discussed by community representatives at outreach meetings were not included in the assessment.

What We Found Out

Community Health Profile

The project team collected information on health outcomes for the Gold Line BRT communities. As land use changes over time, we may see a change in health outcomes. The information collected serves as a baseline for the two counties and five cities along the corridor. For the purpose of this study, the best available data about health conditions are reported at a county level.

The overall health of people in the corridor is generally good by comparison to state and national benchmarks. Health conditions across the corridor demonstrate the impacts to health that income and education can have on our communities. The western portion of the corridor, which is located in Saint Paul and Ramsey County, is characterized by lower median household income and lower high school graduation rates than the state average. Ramsey County also has higher portions of the population experiencing poverty (25% of children) and lacking health insurance compared to statewide numbers. By contrast, in the eastern portion of the corridor, median household income is 40% higher than the state average, but the average wage is well below what would be needed to afford most homes in the area. Outcomes such as high school graduation and low birth weight are also noticeably better than the statewide average.

Social and financial stress for households limits the ability to be healthy. The portion of households that are over-burdened by housing and transportation costs illustrates this struggle. For Ramsey

County communities, the portion of income paid toward housing costs is relatively high; in more suburban communities, the combined cost of transportation and housing is significantly high. Additionally, racial and ethnic disparities exist when it comes to homeownership and other factors that influence the ability to be healthy. These disparities place populations of color at a notable disadvantage in achieving healthy outcomes as individuals and families.

How the Elements Influence Health

The following summaries for each health element - connectivity, housing, jobs, and safety - include a vision statement, what we heard from the community, highlights from the *Gateway Gold Line Bus Rapid Transit: A Closer Look at Health and Land Use Technical Report*, and opportunities for action.

Find more details about the overall HIA process, along with each element in the technical report, at TheGatewayCorridor.com.

Connectivity

“My neighborhood is a patchwork quilt of sidewalks; some blocks have sidewalks that stop halfway down the block. More sidewalks would make people feel safer about walking.”
-Community Representative



There are 33,426 people without a vehicle living along the Gold Line BRT, over 1/5 of the seven-county metro area's zero-vehicle households.

Source: Gold Line BRT
Purpose and Need

Vision Statement

Provide convenient and reliable ways to walk or bicycle to basic needs and services.

Why Connectivity Matters to Health

A 2005 Article in the *American Journal of Preventative Medicine* reported that 29% of people using transit to get to work met their daily requirements for physical activity by walking to work.

What the Community is Saying

Community members want safe places to walk and bicycle between the station areas, businesses, and neighborhoods. Many respondents selected the presence of sidewalks as being crucial to a healthy community. Providing better pedestrian and bicycle connections will help people get to basic needs and services, while also providing opportunities to be physically active.

Better Connections Improve Health

The ability to easily get to basic needs and services influence a person's social, economic, physical, and mental well-being. How we design connections (e.g. roads, sidewalks, paths, and transit) to basic needs and services determines how easily people can benefit from the availability of these resources. Safe walking and bicycling routes help more people get to public transportation and are crucial connections to healthy foods, schools, jobs, and health services. In addition, safe connections encourage people to be physically active. Improving connections help community members live healthy and productive lives.

Not all people want to or can travel by car. Over 1/5 of the seven-county area's zero vehicle households live in Gold Line BRT communities. Public transportation cannot connect all riders with door-to-door service, and taking transit typically involves walking or bicycling at the beginning and end of the trip. Development patterns in the Gold Line BRT communities vary from one city to another. For example, it is challenging to walk or bicycle near the

When calculating Walk Scores, maximum points are given for amenities within a five-minute walk. No points are awarded for amenities beyond a 30-minute walk. Gold Line BRT cities' Walk Scores range from car dependent to somewhat walkable.
Source: WalkScores.com



See the Connectivity section in the technical report for more information.

proposed White Bear Avenue and Sun Ray station locations because the areas include large parking lots and buildings that are located far away from streets and sidewalks. This type of design encourages people to drive to these locations and creates a demand for parking. These areas also discourage walking and bicycling.

What You Can Do

Community representatives want cities to ensure that community members have the **choice to walk or bicycle** to basic needs and services including public transportation. Streets are important for better connections and a grid network provides the best opportunity for travel between destinations. As new businesses and homes are built along the Gold Line BRT, cities can consider opportunities to provide a street network that includes sidewalks and bicycle routes. Developers and property owners are important partners in designing these connections.

In the more developed sections of the Gold Line BRT, pedestrian and bicycle connections are missing and need to be completed. **Bicycle lanes** on streets leading to station areas can help people travel safely to these areas. If a station area is missing **sidewalks**, cities need to seek ways to include new sidewalks and trails to support walking and bicycling.

Cities need to consider the **safety of pedestrians and bicyclists** when completing a network of roads, sidewalks, and bicycle routes. Cities will have the opportunity to determine the safest routes to the station areas and the appropriate design measures (e.g. intersection crossings and lighting) that promote safe environments.

Building placement and design play an important role in creating areas where people can walk and bicycle. Cities can help decrease the demand for parking by developing a **mix of land uses** (e.g. housing, retail, and offices) near the station areas that support transit, while also building better pedestrian and bicycle networks. These actions provide convenient and reliable ways to walk or bicycle to basic needs and services and allow residents to live active and healthy lives.

“Housing affordability allows families to have money needed to afford other basic needs and avoid highly concentrated areas of poverty and the related negative health outcomes associated with economically disadvantaged neighborhoods.”
-Community Representative



According to the American Public Transportation Association (2010), transit riders in the Twin Cities save on average \$824 a month, for an annual savings of \$9,884.

Vision Statement
Increase housing options for all ages, incomes, and lifestyles.

Why Housing Matters to Health

Between now and 2040, the region will add 374,000 households. Roughly, 40% of these households will earn less than 80% of area median income (\$65,800 for a family of four).

Source: Metropolitan Council Housing Policy Plan

What the Community is Saying

Community members noted that affordable housing for all ages and income levels is important to have in the Gold Line BRT station areas. Individuals who selected “access to affordable housing” as an important issue in their community noted a strong relationship between housing and health. One respondent said simply “Access to affordable housing is a top social determinant of health.”

Social determinants of health are the physical and economic environments in which we live, work, and play. Housing, as an example, is the foundation for our daily lives. Where we live is where we sleep, store valuables, recover from illness, and raise our families. Our home and neighborhood conditions influence our ability to make healthy choices.

Affordable Housing is Important for Physical and Mental Health

People unable to afford housing costs are likely to struggle to pay for other basic needs and services. As a result, these individuals may drop medical insurance, skip meals, or go without proper health care. In addition, fewer affordable housing options may lead to unstable housing conditions including frequent moves, eviction, foreclosure, and even homelessness. Unstable housing can result in a poor quality of life and high levels of stress and depression. When housing is affordable, people keep more resources to spend on other basic needs and services, which help support their overall health and well-being.

Housing

“It is difficult to remain healthy if basic needs for food and shelter are not met. Struggling financially to pay rent leads to fewer funds for healthy foods, less time to exercise and leads to significant emotional stress which, in turn, leads to higher levels of morbidity and mortality.”

- Community Representative



See the Housing section in the technical report for more information.

Transportation costs are the second-largest budget item for most families. When households spend more than 45% of their income on housing and transportation combined, they live in an area that is not affordable. There is a wide range of household spending on housing and transportation along the Gold Line BRT. For example, residents in Saint Paul, an area typically better served by transit, spend 39% of their household income on housing and transportation, while residents in Woodbury spend 53% of their income on housing and transportation. Living near a transit station can help reduce transportation costs for residents or at a minimum provide travel options for those who need them.

What You Can Do

Cities will **evaluate affordable housing needs** as part of the comprehensive planning process. An important first step to ensure affordable housing is to **plan for a range of housing options**. Cities should consider modifying land use plans and other planning tools to ensure support for and to promote a range of housing options at Gold Line BRT stations. Cities can also explore innovative ways to attract developers to build housing options that fit the needs of their community based on a housing assessment.

Incorporating housing with other uses like grocery stores, jobs, and health care services provides opportunities to get to basic needs and services without having to drive or take transit long distances. These services help support overall health and well-being, and having a variety of businesses and land uses near transit stations can help minimize transportation costs and improve the affordability of the area. See the “Connectivity” section for more information on land use at Gold Line BRT station areas.

“It’s really important to situate entry level and/or living wage jobs around transit lines, because it allows people who don’t own a vehicle to access employment.”

-Community Representative



Nearly 20% of all Gold Line BRT HIA worksheet respondents selected Office Jobs and Commercial and Retail Services as two of the five most important elements perceived as having the greatest influence on creating healthier environments at the station areas.

Vision Statement

Increase the number and variety of jobs available along the Gold Line BRT.

Why Jobs Matter to Health

Unemployment and low-paying jobs have been linked with stress and depression.

Source: Robert Wood Johnson Foundation, 2013.

According to research conducted for the Washington County Community Health Assessment, obesity rates among people living in poverty are double the rate of their higher-income peers. This indicated that the ability to get to jobs that provide a living wage is an important factor of health.

Source: Washington County, 2014.

What the Community is Saying

Community representatives said that having jobs available at the Gold Line BRT stations would encourage people to use transit services. They also stated that it is important to have jobs for a variety of people and skills located near stations because it allows people who do not own a vehicle to get to work.

Stable, Well-Paying Jobs Support Health

Financial challenges for individuals without a job have serious impacts on individual and family health. A job can mean the difference between struggling to pay for basic needs and services (e.g., healthy food and health services) and having the choice to lead a healthy, thriving life. People with stable, well-paying jobs tend to live longer and have better physical and mental health.

While cities typically cannot offer a job for every individual living in their community, transit helps connect individuals with employment opportunities. In addition, the ability to get to a job via transit increases the number of potential applicants for positions connected by the regional transit system. In other words, companies can hire from a larger labor pool.

“The closer people work to transit lines, the less traffic on the roads. This can lead to less pollution, less stress, and safer roads.”

-Community Representative



See the Jobs section in the technical report for more information.

A living wage is the amount needed for a worker to afford the cost of living in their community. This amount varies by location. Living wage jobs increase a person’s ability to participate in the economy and to share in its benefits, according to Minnesota Compass. Transit connections improve a person’s ability to get to stable, well-paying jobs.

What You Can Do

Jobs are spread throughout the region, making it difficult, expensive, and time consuming for workers without a car to reach potential places of employment. Increasing transit connections to jobs is important, as it provides workers with an affordable and reliable way to get to work. It also allows employers to attract and retain employees, regardless of whether the employees have a car. Currently, there are limited transit options in Gold Line BRT communities.

Cities could seek opportunities to **support new jobs and businesses at the Gold Line BRT station areas**. For example, cities can evaluate their economic development plans, land use plans, and planning tools to ensure they support and promote job creation at the Gold Line BRT station areas. Cities can also explore innovative ways to attract new businesses to the station area. Cities should **connect jobs to station areas with safe sidewalks and bicycle routes**. These elements allow transit riders to travel safely from the station to their place of employment. Please see the “Safety” and “Connectivity” sections for more information on safely connecting communities.

“If people don’t feel personally safe, they won’t use the space. Mixed land use can lead to greater personal safety by making sure there is adequate pedestrian traffic in the area to be observant.”

-Community Representative



Recent studies in the United States have demonstrated that people walk on average 70 minutes longer per week in locations where it is easy and safe to walk.

Source: Saelens, et al., 2003

Vision Statement

Create safe places for walking and bicycling, while reducing crime.

Why Safety Matters to Health

The likelihood of fatalities in crashes involving a vehicle and a pedestrian or person on a bicycle decreases substantially as vehicle speed decreases.

Source: *Transportation Research Board, 1998.*

What the Community is Saying

In addition to personal safety, community representatives commented on the importance of being able to travel without fear of getting hit by a car to and from stations and other local destinations. For example, these stakeholders highlighted the need for complete and well-maintained sidewalks and well-lit streets. They also overwhelmingly selected the presence of sidewalks as being fundamental to a healthy community.

Safe Spaces Contribute to Healthy Communities

Crash rates and accident levels have shown that the design of our built environment has not done enough to protect pedestrians and bicyclists. Historically we built our streets (including sidewalks) and intersections to help cars travel quickly between destinations with little focus on walkers and bicyclists. As a result, walking and bicycling have become less safe over time. Often the most frequent users of sidewalks and bicycle routes are individuals with no other transportation options.

Providing an environment with pedestrian- and bicycle-friendly design is important to safety. The same elements (e.g., street lighting and landscaping) that create welcoming spaces help promote safety both from accidents and from crime. Research has also shown that having more people present in an area helps to deter crime. In addition, these spaces, when designed for both people and cars, can help create a sense of belonging and promote

“Everyone wants to feel safe in all environments. Better lighting, shoveled, salted and sanded sidewalks are all a plus.”
- Community Representative



See the Safety section in the technical report for more information.

healthy behaviors like physical activity. When designed well, spaces can help meet diverse needs of the population.

In Gold Line BRT communities, personal safety and crime prevention were among the elements perceived as having the greatest influence on creating healthier environments. Community members commented that if they do not feel safe, they are far less likely to use transit. Community members also listed the importance of having good lighting and a variety of services available at the station areas to create more activity on the street.

What You Can Do

Cities can create safer places for pedestrians by implementing **good design**. Good design takes into consideration the built environment including buildings, roads, and sidewalks and how it influences safety. For example, people feel safer when there are many people walking on the street and business entrances are visible from the street. A good design policy that incorporates safety is called “Crime Prevention through Environmental Design (CPTED),” which focuses on building design, landscaping, and street design to invite more people to public areas and reduce spaces where crime could occur.

Another example of good design is the use of **lighting** along sidewalks. Sidewalk and street lighting creates a more inviting space and encourages people to be out after dark. Lighting also enables people to observe what is going on around them. The **ability to observe surroundings** is referred to as natural surveillance. Natural surveillance allows people to easily see their surroundings without any obstructions (e.g. tall fences and hidden alleys) and increases perception of safety in an area. Using low or see-through fencing and placing doors and windows along street fronts increases natural surveillance. Cities can work with stakeholders and developers to use good design to achieve safer places.

A safe pedestrian place also includes a connected **sidewalk network and safe crossings**. Sidewalks on both sides of the street allow pedestrians to get to destinations without walking in traffic. Pedestrian and bicycle connections are more thoroughly discussed in the “Connectivity” section.

Suggested Recommendations

Similar to the way the elements were selected, suggested recommendations were included if positive health outcomes could result from land use decisions. Suggested recommendations were determined through a review of available research and an analysis of current practices in each city.

Since health results from complex interactions between people and their communities, cities have the opportunity to implement solutions they feel best serve their residents. The suggested recommendations listed below can be implemented in any combination to help build healthy, livable communities.

Summary of Suggested Recommendations

Equity

Because equity regularly came up in conversations with community representatives, is included as part of community health assessments conducted in both Ramsey and Washington Counties, and is one of five outcomes included in ThriveMSP 2040—the regional vision for the Twin Cities Metropolitan Area—it is important for cities to consider this topic as part of the comprehensive planning process.

- Link equity to all health elements. Each city should go through their own process to define what equity means to them, while considering the Metropolitan Council’s definition.

Suggested Actions for City Governments

- Determine what health means to your city and provide health specific questions as you collect input from community representatives for the comprehensive plan.
- Invite diverse individuals to participate in decision-making discussions, including the comprehensive plan.
- Ensure that residents have the choice to walk or bicycle to basic needs and services, not just for recreation. A pedestrian and bicycle assessment could be done to determine gaps and areas of opportunity in the existing network.
- Provide a range of housing options for all incomes, ages, and lifestyles based on the assessment of needs for your own community.
- Plan a mix of land uses at station areas that meet market demand, input from stakeholders, and densities that support transit.
- Assess your plan review policies to ensure that development supports safe communities.

Suggested Actions for Other Stakeholders

- Use the results of this study to talk with city staff and elected officials about the importance of health in your community and in comprehensive plans.
- Participate in local planning and zoning commissions. These committees have an ongoing role in planning. Look for opportunities to attend meetings, provide feedback, and join the committees.
- Educate others on the connections between the built environment, land use, and health.
- Build partnerships between public health advocates and city planners to advance health in city planning processes.

Conclusion

Visions for Health

Each city has an opportunity to create a vision for health as part of the comprehensive planning process. The Gold Line BRT cities—Saint Paul, Maplewood, Oakdale, Landfall, and Woodbury—should strive to understand the power of the built environment in creating healthy spaces and their role in creating more livable communities. The Gold Line BRT station areas can become models for healthy design in each community as cities work to support health through land use changes. More information on the results of this assessment are available in a technical document at TheGatewayCorridor.com.

Acknowledgements

Project Partners

A number of community partners contributed expertise and time to this study. The project team is grateful to our partners for their generous and honest feedback throughout the process.

- African American Leadership Forum-Health & Wellness Work Group
- Gateway Corridor Commission
- Gateway Corridor Community Advisory Committee
- Gateway Corridor Policy Advisory Committee
- Gateway Corridor Technical Advisory Committee
- Living Healthy in Washington County
- Metropolitan Council
- Minnesota HIA Coalition and Multimodal Transportation Committee
- Oregon Public Health Institute
- Ramsey County Housing and Redevelopment Authority
- Saint Paul—Ramsey County Community Health Services Advisory Committee
- Washington County Housing and Redevelopment Authority

Financial Support

The health impact assessment was supported by a grant from the Health Impact Project, a collaboration of the Robert Wood Johnson Foundation and The Pew Charitable Trusts, with funding from the Blue Cross and Blue Shield of Minnesota Foundation. The views expressed are those of the author(s) and do not necessarily reflect the views of the Health Impact Project, The Pew Charitable Trusts, the Robert Wood Johnson Foundation, or the Blue Cross Blue Shield of Minnesota Foundation.

Project Team

The Gateway Gold Line Bus Rapid Transit Health Impact Assessment was completed by a project team, comprising staff from Washington County Public Works, Washington County Public Health and Environment, and Saint Paul—Ramsey County Public Health.