

Lincoln Park/Duluth Small Area Plan Health Impact Assessment

September, 2015



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This project is supported by a grant from the Health Impact Project, a collaboration of the Robert Wood Johnson Foundation and The Pew Charitable Trusts. The views expressed are those of the author(s) and do not necessarily reflect the views of The Pew Charitable Trusts or the Robert Wood Johnson Foundation.

EXECUTIVE SUMMARY

Starting in early 2014, a team of staff from the City of Duluth and Minnesota Department of Health met to screen a proposed small area plan (SAP) for the neighborhood of Lincoln Park for a Health Impact Assessment (HIA). The purpose of the HIA was to explore how implementation of the SAP might impact the community's health, positively and negatively, and make recommendations for how the SAP could promote positive health impacts and reduce negative impacts.

Based on community input and local data, the HIA Technical Advisory Committee selected four areas of focus for the HIA: land use/zoning, housing, transportation, and economic development

FINDINGS

The HIA used literature review, geographic information systems (GIS) analysis of local data, summaries of data and analysis from existing local studies, and input from community members and topic area experts from local agencies and organizations to inform the findings.

The rezoning and future land use designations recommended by the SAP could have a moderate to significant positive impacts on access to healthy foods, small, though positive impacts on the potential for new housing units, and small, though positive impacts on the potential for business and related activities that promote social cohesion.

Overall, the SAP Housing recommendations will likely have positive impacts on meeting the housing goals and health outcomes related to homeownership and housing quality, improve conditions that promote social cohesion in the study area, such as physical environment, homeownership, and housing quality. However, there is the possibility that improvements could lead to higher housing costs and potentially displacement of residents, negatively impacting social connections.

For economic factors, brownfield cleanup and redevelopment and dedicated City and NGO resources will likely promote expansion of existing businesses and/or new businesses locating in the neighborhood, foster social networks and reduce crime, lower crime rates, and promote development that improves the aesthetics of the community could foster a sense of place and community.

The proposed motorized transportation recommendations will likely have unknown, neutral or positive impacts on traffic safety for motorists and non-motorized users. While there does not appear to be any known significant negative impacts on traffic safety, communities that are more walkable, accessible and safe, tend to have higher levels of activity which increases potential for interaction and social cohesion. The active transportation recommendations will have direct, positive impacts on traffic safety. Well documented safety improvements that are proposed include reducing the potential for conflicts between motorists and pedestrians and bicyclists through buffered and segregated/dedicated infrastructure, increased visibility and reduced conflict points (e.g., driveways and intersections).

RECOMMENDATIONS

In order to promote the positive impacts and reduce the negative effects, the HIA proposes a number of recommendations. The recommendations were developed by the HIA Technical Advisory Committee and HIA

project team, with input from community members. A complete list of recommendations is available in the body of the report. A summary is provided here.

Future Land Use/Zoning Recommendations

Recommendations related to future land use/zoning were developed based on an examination of three factors that can impact public health: housing availability, quality and affordability, community building/social cohesion, and access to healthy food. Final recommendations were to:

- Consider a model foods ordinance similar to the City of Minneapolis Staple Food Ordinance to ensure that all small corner stores stock a variety of healthy foods.
- Consider zoning regulations or necessary ordinances for mobile food markets that could travel the neighborhoods designated as food deserts to increase access to healthy food. See regulations for mobile retail (e.g., Fig Leaf).

Housing Recommendations

Recommendations related to housing were developed based on an examination of three factors that can impact public health: housing quality/affordability, social cohesion, and food access. Final recommendations were to:

- Enforce existing rental and building codes
- Screen eyesores, such as vehicle parking, storage, etc., especially along W 1st St
- Use zoning to encourage second-floor apartments on Superior St
- Increase utilization of housing assistance products to improve housing stock
- Demolish condemned/blighted properties and sell to adjacent owners
- Create a six-block 'Lincoln Park Housing Revitalization Area'

Economic Development Recommendations

Recommendations related to economic development were developed based on an examination of three factors that can impact public health: employment opportunities, social cohesion, and access to affordable, healthy food. Final recommendations were to:

- Redevelop and revitalize the retail core
- Redevelop brownfields
- Build out Clyde Park Complex
- Promote adaptive reuse of existing multistory buildings
- Reduce crime rate and improve perception of Lincoln Park

Transportation Development Recommendations

Recommendations related to transportation were developed based on an examination of three factors that can impact public health: safety, social cohesion, and access to healthy foods. Two primary transportation areas assessed were active transportation and transit.

Transit recommendations were to:

- Conduct a coordinated transit network plan for the City of Duluth aimed at better matching land use ordinances with goals for the transit network
- Enhance the vicinity of Superior St & Cross City Trail spur as a bus stop serving the Heritage Center. Create a dedicated waiting area for bus riders.
- Convert parking lane on south side of Grand Ave (from Carlton St to Central Ave.) to a dedicated in-bound lane.
- Prioritize key bus stops and transfer points, determine space requirements, and install bus shelters

Active transportation recommendations were to:

- Develop an access management policy
- Reduce width of travel lanes on Skyline Parkway to increase shoulders
- Improve/extend/create dedicated and separated bicycle and pedestrian infrastructure
- Repair or replace sidewalk segments in poor condition
- Increase bike parking opportunities

EVALUATION AND MONITORING

The final steps of HIA include impact and process evaluation and monitoring. The HIA Advisory Committee evaluated the impact of the HIA, evaluated the process of conducting the HIA, and developed a formal monitoring plan for on-going monitoring of long-term health outcomes.

TABLE OF CONTENTS

Executive Summary	i
Findings.....	i
Recommendations.....	i
Evaluation and Monitoring.....	iii
Introduction	1
Health Impact Assessment, overview of process.....	1
Connection between built environment and health.....	1
Lincoln Park Small Area Plan	2
Screening summary	3
Lincoln Park	3
Lincoln Park Small Area Plan	4
Connections to Health.....	4
Stakeholder engagement	5
Scoping summary	8
Baseline Assessment	22
Impact Assessment	28
Future Land Use and Zoning.....	31
Housing.....	63
Economic Development	79
Transportation.....	96
Recommendations	114
Communication & Dissemination Plan	118
Monitoring/Evaluation Plan	125
Monitoring.....	125
Evaluation.....	128
References	133
Appendix A: Impact of Zoning Changes on Permitted Uses	140
Appendix B: Building Area Per Employee by Business Type	152
Appendix C: Mobile Markets, Food Hubs, and Farmers’ Markets	153

INTRODUCTION

This section will provide an overview of the health impact assessment (HIA) process, address the connection between health and our physical environment, and introduce the Lincoln Park community and Small Area Plan process.

HEALTH IMPACT ASSESSMENT, OVERVIEW OF PROCESS

HIA is a tool to address health in decision making where there may be externalities that affect human health but these potential impacts are not being considered. According to the International Association of Impact Assessment, HIA is “a systematic process that uses an array of data sources and analytic methods and considers input from stakeholders to determine the potential effects of a proposed policy, plan, program or project on the health of a population and the distribution of the effects within the population. HIA provides recommendations on monitoring and managing those effects” (Quigley et al 2006).

HIA follows six prescribed steps: Screening, Scoping, Assessment, Recommendations, Reporting, and Evaluation and Monitoring. Screening determines whether a project will go forward with an HIA based on the value the HIA would add to the decision-making process, whether resources are available to conduct the HIA, and whether there is enough time and information to conduct the HIA prior to the decision being made. Scoping defines the geographic boundaries of the study area, determines the populations who will be affected, and selects the health determinants with which the project, plan or policy will be assessed. Assessment draws from a combination of qualitative and quantitative data to determine how the proposed project, plan or policy will affect health, specifically related to the health determinants identified in Scoping. The Recommendations step develops methods for mitigating the negative health impacts of the proposed project, plan or policy and promoting the potential positive impacts. Reporting is where the findings and recommendations are disseminated to the public, stakeholders, and decision-makers through various media. Evaluation and Monitoring attempts to evaluate the process of conducting the HIA, evaluate the impact the HIA had on the decision, and monitor the effects the HIA and project/plan/policy had on health outcomes.

HIA is a valuable tool for identifying the potential harms and benefits of a proposal before the decision is made. Taking a proactive approach allows for modification of a proposal prior to implementation, rather than dealing with the potential consequences of a decision down the road, which can often be more costly and difficult. Additionally, HIA has a strong stakeholder engagement component which can support inclusive and democratic decision-making, as well as increase transparency in the political process. Bringing stakeholders into the decision-making process often has positive outcomes beyond the specific project at hand, such as empowering community members to unite and organize to make their communities better.

CONNECTION BETWEEN BUILT ENVIRONMENT AND HEALTH

Society has understood the connection between health and the built environment for many years. In the United States, efforts to plan and organize the built environment came out of concerns for public health and welfare as a result of poor urban living conditions. The 1960s saw an awakening in the understanding that if we do not protect our environment it can have detrimental impacts on our health. Despite long understanding these issues, our society still has a tendency to believe that the medical profession generally, and doctors and health

care specifically, are responsible for making sure we are healthy. However, studies from the late 1960s and 1970s concluded that health care is not as large of an influence on our health outcome as we thought (McGinnis et al, 2002). Health care only accounts for about 10% of the contributing factors to premature death, while behavioral patterns, environmental conditions and social circumstances contribute 60% of the contributing factors to premature death (Braunstein and Lavizzo-Mourey, 2011).

Today the planning field is as active as ever in deciding how the built environment will look, and how communities will develop. To ensure that plans are developed that have a positive impact on our health, planners must be intentional about addressing the potential health impacts of planning and policy recommendations. Regular concerns include everything from siting residential uses too close to industrial or agricultural uses, to the provision of sidewalks and green space for recreation. Every decision can be connected to a health outcome, and the first step is to recognize the connections and decide that health will be one of the many parameters that are addressed when planning the built environment.

LINCOLN PARK SMALL AREA PLAN

The City of Duluth Long-Range Planning staff is in the process of developing a Small Area Plan (SAP) for the Lincoln Park neighborhood. A small area plan is a plan that is developed for a clearly defined area and gives more detailed recommendations than would be provided in a comprehensive plan. The comprehensive plan is a common vision or framework on development and protection policies for an entire city. It sets forth the vision, principles, policies, and recommended strategies that have been embraced by the City to shape its future. A small area plan does not replace the comprehensive plan but rather serves to augment it. The small area plan builds on the goals, policies, and implementation strategies in the comprehensive plan to provide a finer level of detail.

The Lincoln Park SAP includes two main components: the assessment and recommendations. The assessment section defines the project area; reviews past planning efforts and current land use, zoning, transportation, and environmental characteristics; and analyzes current demographic trends. The recommendations section includes a vision statement, goals, and objectives for four main topics: land use, housing, economic development, and transportation. Small area plans are ultimately incorporated into the City's Comprehensive Plan and used to guide resources and development in the community.

The process of developing the small area plan is the primary way that community input is integrated with the planning process. Small area plans generally have a Steering Committee made up of community members and other stakeholders, conduct two public meetings or open houses, and hold a public hearing before the Planning Commission when the plan is ready to be approved. It is critical for community members to have a say in the formation of the plan because implementation of the plan can result in substantial impacts to a community with lasting or even permanent effects.

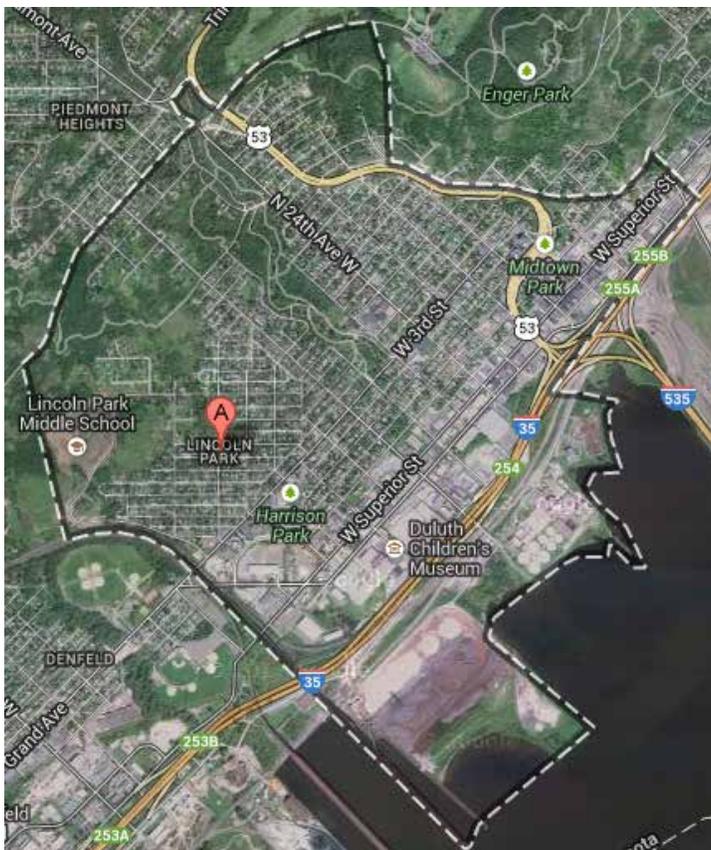
SCREENING SUMMARY

The first step of a health impact assessment (HIA) is Screening, which determines whether an HIA is practical, feasible, and would add value to a proposed plan, project or policy. To determine the practicality of an HIA, the HIA Screening team will consider whether there is a proposed decision to assess and if the HIA can fit within the decision-making timeframe. The feasibility of an HIA depends on the availability of information about the proposed policy, plan or project, and available expertise, staff and resources to conduct the HIA. An HIA adds value to a project if it brings health into a decision-making process that would not otherwise consider its impacts, if it brings new stakeholders to a decision-making process, and if it affects the decision or decision-making process in a way that promotes health.

On January 9, 2014, a team of staff from the City of Duluth and Minnesota Department of Health met to screen a proposed small area plan (SAP) for the neighborhood of Lincoln Park for an HIA.

LINCOLN PARK

The Lincoln Park neighborhood is located southwest of downtown Duluth. It is a very dense, urban neighborhood with some of the highest racial and ethnic diversity in the City. The area is a poverty pocket and a food desert; has a poor walking environment; is adjacent to past industry and current brownfields; has a neglected housing stock due to Duluth's 1% rental vacancy and high percentage of rental housing; has higher crime levels; and has limited transit access.



On the positive side, there are a lot of organizations and resources in the community that are already doing great work in the community. Organizations and resources include: Local Initiatives Support Corporation (LISC), Ecolibrium 3 (EQ3), Community Action Duluth, Lincoln Park Business Association, Move Lincoln Park, Healthy Duluth, Safe Routes to School, Boys and Girls Club, Duluth Transit Authority, Parks and Recreation, Councilor Howie Hanson, Harrison Community Club, Citizen Patrol, and Comm Stat. These organizations are anticipated to have the capacity and interest to engage in the SAP and HIA.

Additionally, the community contains or is adjacent to a number of amenities and resources, including the Wheeler Athletic Complex, Western Middle School, the Boys & Girls Club, Heritage Park, Lincoln Park, Duluth Children's Museum, and some old neighborhood commercial.

LINCOLN PARK SMALL AREA PLAN

The Lincoln Park SAP timeframe is April 2014 through January 2015. This schedule will fit the timeframe for MDH's HIA resources through the Health Impact Project. The HIA will have the ability to influence the plan while it is being developed because the lead planning staff on the SAP will be integrally involved in the HIA. The SAP and HIA will ultimately be approved by the City's Planning Commission and City Council.

The SAP and HIA will have the ability to address and synthesize a number of activities going on in the neighborhood. Duluth's Department of Business and Economic Development will be conducting a Brownfield/Blighted Property Inventory concurrent with SAP. The Planning Dept. is working on some land use/zoning matters which might be included in the SAP as a land use component or be an independent study. The Lincoln Park stretch of Duluth's Cross City Trail (a bicycle and pedestrian path connecting the Lake Walk to the Munger Trail) will be constructed in 2014, potentially spurring development of additional bicycle and pedestrian infrastructure. A possible project within a couple blocks of Carlton St is long range planning for the Oneota area. The City is considering acquiring a 200 foot swath of former Burlington Northern/Santa Fe (BNSF) railroad line which is intersected by the future Cross City trail and adjacent to an existing recreational activity (Wade complex ball fields). This project area would be a possible commercial opportunity. The whole area is part of the Mayor's broader "sports corridor" concept.

CONNECTIONS TO HEALTH

The links between the SAP and health are intuitive but existing projects and active groups and agencies may not be considering them. The HIA process will forward that by affecting some of the existing social and environmental conditions of the community. Lincoln Park is a densely population, pocket of poverty in the City. It has received Community Development Block Grant (CDBG) funding for a part of the community, including the northeastern side of Blatnik Bridge to the Oar Docks, and from Lake to 3rd/4th St (up the hill). CDBG funding works to ensure decent affordable housing, to provide services to the most vulnerable in our communities, and to create jobs through the expansion and retention of businesses. This community has high need, but also a lot of grassroots organizations and capacity. The area used to have a lot of heavy industrial activity and there are likely legacy issues related to those uses. In recent years there have been major land use changes and more are proposed. Additionally, the community lost their neighborhood elementary school, but now has one of the City's two middle schools.

Based on an understanding of some of the social and environmental characteristics of the community, some of the health determinants that could be affected by the SAP and other activities include: employment, access to healthy food, access to services, physical activity (as a result of the new Cross City Trail, as well as transit access), and more. This HIA will have a strong health equity component. The HIA could also inform decisions for City's Blighted Housing Demolition Program which may not currently consider impacts related to displacement or have requirements for replacing any lost affordable housing.

It was noted that this neighborhood is always on the radar but little is ever accomplished. The HIA will build off of a lot of existing relationships in the area. The HIA will help demonstrate how health can be used in decision making and potentially increase the empowerment of the community and stakeholders. The HIA will promote sustaining discussion of health in policy making; encouraging the City to be constantly intentional about the conversation of health.

Screening Summary

The HIA Screening team concluded that the Lincoln Park SAP would benefit from an HIA because the timeframe and resources make it feasible, it is politically practical and it will add value to the SAP, improve the health of the neighborhood, and encourage health to be part of the City's decision making framework.

STAKEHOLDER ENGAGEMENT

Stakeholder participation is a critical part of the HIA process and supports the core values of HIA, including: democracy, equity, sustainable development, and ethical use of evidence (Stakeholder Participation Working Group of the 2010 HIA in the Americas Workshop, 2011). The HIA assessed the potential positive or negative health impacts of the SAP recommendations, specifically related to quality, affordable housing, living wage jobs, community building/social cohesion, safety (both transportation and crime related), and access to healthy food. The SAP and HIA relied heavily on stakeholder input, which included the oversight of an Advisory Committee, Open House meetings, project websites, and one-on-one interviews with community members. The Lincoln Park SAP and HIA process also was supposed to include a survey, but there was no systematic distribution of the survey and the limited responses were never distributed to participants and stakeholders.

Advisory Committee

The Advisory Committee was comprised of stakeholders from a broad set of interest groups including area agency staff (Housing Redevelopment Authority, Lincoln Park School, Duluth Transit Authority, the Metropolitan Interstate Council (MIC), St. Louis County Public Health, and City of Duluth Planning, Community Development, Business & Economic Development and Parks), local business owners, residents, elected officials and community-based organizations (Community Action Duluth, Duluth LISC, Ecolibrium3, Fair Food Access, etc.). The hope was that the Advisory Committee would be representative of the community at large, particularly the most vulnerable stakeholders, such as renters, the un/under-employed, low-income families, and older adults.

The Advisory Committee was responsible for reviewing the previous plans, examining current issues, and providing input in the development of a Lincoln Park SAP. The Advisory Committee came together for approximately one meeting per month from May 2014 through April 2015, and attended the two public open house meetings. Additionally, the Advisory Committee had the final decision on the health determinants/outcomes addressed in the HIA, guided additional stakeholder engagement, and approved the final recommendations before they went to the Planning Commission and City Council.

The Advisory Committee met on the following dates:

- May 1, 2014: Included an overview of the standard components of a small area plan, the SAP's kick-off at the [Our Lincoln Park neighborhood celebration](#), a tentative timeline for the project, and an introduction to HIA. The Advisory Committee spent some time identifying additional stakeholders to be brought to the table.
- May 3, 2014: The Our Lincoln Park community event served as a "kick-off" for the public engagement process of the Lincoln Park SAP/HIA. Project staff had maps, surveys and comment forms available for collecting feedback on issues/concerns in the neighborhood.
- June 25, 2014: Project staff presented the Advisory Committee with existing surveys, studies and plans in the neighborhood (e.g., OneRoof survey, Neighborhood Revitalization Plan (NRP), etc.). Participants

shared other past, current and future projects that would be relevant to the SAP/HIA (St. Louis River Corridor Coalition/project, Duluth Consolidated Plan – housing focused, bike/pedestrian counts through Parks and Rec, etc.). HIA staff presented baseline demographic, socioeconomic and health data for discussion.

- July 23, 2014: Participants discussed the 2012 NRP priorities, highlighting those that could be incorporated into the SAP or have already been completed. MIC staff presented on the Lincoln Park transportation study that would be conducted concurrent to the SAP/HIA process and supply the recommendations for the Transportation component of the SAP.
- August 27, 2014: HIA staff introduced a Brownfield & HIA survey tool in development and received feedback from participants on its functionality. Project staff discussed the first public Open House for September, including outreach methods, content and layout. Project staff started the discussion of future land use and zoning with what was proposed in the City's existing Comprehensive Plan and how that supported or inhibited future development.
- September 24, 2014: Attendees discussed updates/modifications to the Brownfield & HIA survey tool and results/input from the first public Open House held on September 17, as well as how the community input will influence/be incorporated into the SAP and HIA.
- October 29, 2014: The HIA staff led a visioning exercise. One Advisory Committee member presented on some one-on-one conversations with stakeholder he had held. City staff proposed land use/zoning recommendations and presented initial results from a neighborhood Retail study, which highlighted some opportunities and barriers (e.g., crime) to retail opportunities in the neighborhood. MIC staff presented an update on the Transportation study and Safe Routes to School study for Lincoln Park Middle School.
- November 19, 2014: The draft vision, compiled from the previous meeting, was presented, as well as a Word Cloud that artistically highlighted reoccurring themes. There was more discussion of the proposed land use/zoning recommendations, especially around the appropriate use of Mixed Use-Commercial versus a Form-based zoning along the main commercial corridor of the study area.
- December 15, 2014: HIA staff presented the final community vision, as well as pathway diagrams for each of the proposed sections of the Small Area Plan with a specific focus on the health determinants that surfaced in the Open House comments, one-on-one interviews and visioning exercise. City staff reported back on the land use/zoning discussion and presented initial data for the housing section. MIC staff presented draft transportation recommendations.
- January 26, 2015: City staff presented draft housing recommendations for discussion and MIC staff presented updated transportation recommendations. Ecolibrium3 presented on an opportunity to apply for National Disaster Resilience Design Competition funding, looking at how to reinvest in areas that were devastated by the June 2012 storm/flood.
- March 3, 2015: HIA staff presented draft HIA Goals for discussion and findings from the Assessment on the draft Land Use/Zoning, Transportation and Housing recommendations. City staff presented draft economic development recommendations and final land use/zoning recommendations. Participants discussed the upcoming public Open House.
- April 29, 2015: The final Advisory Committee meeting was spent reviewing and making final edits to all the final SAP and HIA recommendations for Land Use/Zoning, Housing, Economic Development and Transportation. City staff noted that the recommendations will go to the Planning Commission on May 12, 2015 and the draft SAP and HIA will go to City Council on June 1 or 15, 2015.

Public Open House Meetings

The Lincoln Park SAP stakeholders, many of whom were identified in the stakeholder analysis above, include all residents and local business owners, persons who are employed in the neighborhoods, visitors, students,

elected officials, community leaders, and broader community organizations that represent underserved communities. All stakeholders will be invited to participate in public meetings hosted by the City planners and provide comments throughout the development of the Lincoln Park SAP/HIA.

On May 3, 2014, City staff and MDH HIA Coordinator participated in the Our Lincoln Park community meeting by having a table with information and input opportunities with residents. This project “kick-off” fostered a lot of good conversations, returned twenty-three surveys, and allowed attendees to identify problem areas by placing sticky-notes on large scale maps of the study area.

The official first public meeting on the SAP/HIA was held on September 17, 2014. It provided community members with information on preliminary baseline assessment data and analysis and an opportunity to give feedback on initial information. Approximately 22 people attended. Major concerns included sidewalk conditions, access to healthy food, crime & safety, and housing (affordability, quality, maintenance, blight, etc.). The biggest gap is identifying the needs of specific populations, including people of color, American Indians, and possibly renters.

The second public meeting on the SAP/HIA was held on March 25, 2015. At this meeting the City presented the draft SAP recommendations and provided an opportunity for public input. The HIA staff presented findings from the HIA Assessment and encouraged attendees to comment on the findings and suggest preliminary recommendations. The Advisory Committee and SAP/HIA project staff collected feedback from all public meetings to incorporate into the SAP and used the information to inform the HIA scoping, assessment and recommendations steps.

Project Websites

Project materials, including meeting announcements, agendas and notes and documents for public review, were posted on the [Our Lincoln Park Portal](#) hosted by Ecolibrium3 and the City of Duluth’s [Lincoln Park Small Area Plan website](#).

One-on-One Interviews

One of the Advisory Committee members is a public health educator for St. Louis County Public Health. One of his focus areas is Active Transportation in the Lincoln Park area. He took it upon himself to conduct one-on-one interviews with residents and community members in Lincoln Park to ask what they liked, didn’t like, and envisioned for the Lincoln Park community. He held approximately a half-dozen conversations in late fall 2014. The themes that came up in those interviews included: more businesses and retail, less drugs and crime, more opportunities (classes, theaters, outlet for people to get involved), and overall revitalization. Specifically related to health, people mentioned the importance of physical, mental and social wellbeing, and specifically having opportunities to engage and interact with the community through activities.

SCOPING SUMMARY

The second step of HIA is Scoping, which establishes the goals of the HIA; the geographic and temporal boundaries of the HIA; the populations that are likely to be affected by the decision and HIA; the health issues that might be affected by the decision; and the research questions, data sources and research plan for the HIA. Scoping is also a place for significant stakeholder engagement, particularly when it comes to selecting the health issues that might be affected by the decision. Scoping is an involved process that can take a lot of resources in the form of time, people and energy; but a thorough scoping process can lead to a more effective and efficient HIA process in the long term.

Lincoln Park Small Area Plan HIA Goals

The Lincoln Park SAP and HIA project staff developed a set of five goals for the HIA that were approved by the Advisory Committee. The goals are as follows:

1. Complete HIA Scope of Work

Scope of Work/Deliverables:

- Conduct screening
- Develop scope (health impacts, impacted populations, assessment methods etc.)
- Assess SAP recommendations for potential positive or negative health impacts
- Incorporate HIA findings into final SAP
- Develop monitoring plan and conduct evaluation of HiAP/HIA process

2. Explicitly address health in the development of the SAP

Deliverables:

- Address health implications of SAP recommendations throughout process
- Incorporate HIA findings into final SAP

3. Engage and involve constituents/community members in the HIA

Deliverables:

- Hold SAP meetings with affected stakeholders, interested parties, and decision makers
- Empower affected stakeholders by addressing their issues, concerns and priorities in the SAP, particularly those related to promoting positive health outcomes

4. Seek consensus around the proposal and its health impacts

Deliverables:

- Effectively communicate HIA findings and recommendations, engage in dialogue about health impacts (including trade-offs) of the proposal, and be available to answer questions from decision-makers and stakeholders
- Promote project alternatives and recommendations that will maximize health benefits and mitigate negative health impacts
- Promote the continued use of this HIA and HiAP

5. Build capacity for Health in All Policies and Health Impact Assessment

Outcomes/deliverables:

- Make HiAP and HIA methodology accessible to planners and community members so that they may recreate the process
- Identify barriers to addressing health in future planning projects and strategies to overcome barriers

Geographic and Temporal Boundaries

The original Lincoln Park SAP timeframe was April 2014 through January 2015. The project officially kicked-off on May 1, 2014 and will likely go through April 2015. The SAP is a long-range plan meant to guide planning efforts through the next 10 to 20 years. The SAP is expected to take approximately one year to complete and be adopted by the City Council in mid-2015. Below is the general timeline for the SAP and decisions:

- May 2014 – SAP launch with steering committee
- September 2014 – SAP public meeting #1
- February 2015 – SAP public meeting #2
- April 2015 – final draft of SAP
- May 2015 – SAP presented to the Planning Commission
- May 2015 – SAP presented to the City Council for adoption

The focus of the SAP is on the southern half of the Lincoln Park neighborhood (south of 3rd Street), including the Wade Stadium-Wheeler Athletic Complex area to the immediate west of the neighborhood. This area was selected by the 2006 Comprehensive Plan as an area of the city that needed additional attention and planning. The SAP will augment the comprehensive plan by building on the goals, policies and implementation strategies in the comprehensive plan and providing a finer level of detail. Areas the SAP will touch on include:

- Land Use and Zoning
- Housing
- Multimodal Transportation
- Economic Development
- Sustainability

The HIA will follow the timeline and geographic scope of the SAP, and assess each section of the SAP for its potential health impacts. The HIA will influence the SAP while it is being developed because the health implications of the SAP recommendations will be raised and addressed at each SAP committee meeting as they are developed and the final SAP will include information how each recommendation affects health. This is an

opportunity for the city of Duluth to undertake a health in all policies (HiAP) approach that can be replicated on future projects and plans.

Impacted Populations

The residents and business owners within the Lincoln Park SAP study area and the broader neighborhood are the populations most likely to be affected by the SAP. Within this larger population are subpopulations that may be impacted by implementation of the SAP more than others. These subpopulations include vulnerable populations, such as children, older adults, low-income people, people with lower educational attainment, disabled people and people with pre-existing health conditions.

From initial data investigation, the Lincoln Park SAP study area is more racially diverse than Duluth and Minnesota (78% white versus 90% and 85%, respectively). The study area has slightly higher percentages of children and lower percentages of older adults as the City and the state; median age is almost four years younger than the City and seven years younger than the state (30 years versus 34 and 37, respectively). Educational attainment is lower, with more adults 25 and older that do not have a high school diploma or equivalent, and fewer adults 25 and older with a Bachelor's degree or higher. Median household income in the study area is less than half that of the City and around one-third that of the state (\$20,000 versus \$41,000 and \$58,000, respectively). Similarly, the study area poverty level is almost twice that of the City (39% versus 21%) and childhood poverty is more than twice that of the City and four times higher than that of Minnesota (61% versus 25% and 14%, respectively). Older adults have a poverty rate two times higher than the City and the state (19% versus 9% and 8%, respectively) but a smaller percentage of households receiving SNAP (Supplemental Nutritional Assistance Program) benefits are households with at least one person 60 years or older. The unemployment rate is more than two times higher in the Lincoln Park SAP study area than the City and the state. The Lincoln Park study area has a significantly higher portion of renters than the Lincoln Park neighborhood or City overall, and almost three-times that of the state (73% versus 40% and 27%, respectively).

Life expectancy for the zip code area that encompasses the Lincoln Park SAP study area is 73.44 years, the lowest out of nine zip code areas in the City. The majority of health data available is not provided below a sub-county or sub-city level. Asthma emergency department visits are one exception. Age-adjusted asthma emergency department visit rate for the zip code encompassing Lincoln Park was 80.5 per 10,000 residents for 2007-2011, the third highest out of ten zip codes in the Duluth area.

Lincoln Park is home to the new Lincoln Park Middle School (technically outside of the study area). Any recommendations in the SAP may affect the students who attend the school which include children from many surrounding neighborhoods, as there are only two middle schools in the city of Duluth.

For analysis purposes, the demographic focus of the HIA will be the residents of Lincoln Park, particularly those who live within the SAP study area. Depending on data availability, this could include the boundaries of the SAP study area, Duluth Census Tract 156, Duluth zip code 55806, the City of Duluth, or St. Louis County

Stakeholder Input

Stakeholder input was a key component in determining the scope of issues that would be included in the SAP and addressed by the HIA. Stakeholder input to develop the scope included the following activities:

1. the formation of an SAP advisory committee (“Plan Committee”) to oversee the development of the SAP and create recommendations
2. participation in the Our Lincoln Park community event
3. community survey
4. pilot test of the Brownfield & HIA tool developed by MN Brownfields and MDH
5. public meeting
6. one-on-one conversations
7. visioning process

Plan Committee

The Lincoln Park SAP kicked off on May 1, 2014 with a meeting of City staff and more than 30 community stakeholders, including local residents and business owners, non-profit organizations, local agencies, and more. This group, referred to by staff as the Plan Committee, will review information on land use, housing, transportation, market analyses, etc., and work with the City staff to develop the SAP recommendations.

Our Lincoln Park Event

On Saturday, May 3, 2014, City staff and the HIA Coordinator hosted an information table at the Our Lincoln Park event – a one-day community gathering to provide residents with family-friendly activities and resources on a variety of topics including public health, gardening, child care, community policing, neighborhood businesses, and everything in between. It was a community celebration in a way and drew a large crowd. The information table for the Lincoln Park SAP included a map of the study area where residents could write what liked or didn't like in the neighborhood, and a community survey and comment form for them to provide more detailed input on their concerns or priorities for the SAP. Staff took notes of one-on-one conversations with residents and community members. Concerns ranged from lack of access to healthy foods in the neighborhood to safety issues related to the release of sex offenders in the neighborhood.

Community Survey

The Lincoln Park Community Survey for the SAP asked respondents how long they have lived in the neighborhood, the respondent's age, and whether they are renters or owners. It asked respondents to rate key priorities for the community, the accessibility of goods and services, personal health concerns and community health issues, and included three open-ended questions that asked about the respondents' favorite part of the neighborhood, what they would most like to see changed, and if there is any other information they would like to provide. Twenty-three surveys were filled out and returned from the Our Lincoln Park event.

Brownfield & HIA Tool

At the August 27, 2014 Lincoln Park SAP meeting, MDH staff introduced the Brownfield and HIA Tool to the Plan Committee, including a brief overview of the development of the Tool and how it would be pilot tested. The Tool was developed in partnership between MDH and Minnesota Brownfields through the support of a Master of Public Health graduate student. The tool consists of 117 questions about how a Brownfield clean-up and redevelopment may impact the health determinants and outcomes for the surrounding community. The questions are organized into categories and can be viewed by “health topic” categories or “built environment” categories, depending on the audience using the list. The Advisory Committee was asked to review all 117 questions and mark which ones were a priority to address in the Lincoln Park SAP HIA. The results were analyzed in two ways. First, they were summarized by averaging the score of all questions within each built environment category. The built environment categories with the five highest average scores were 1) mixed-use development and density, 2) sustainability, 3) workforce and employment, 4) crime and safety, and 5) food system. Second, the results were simply scored by the number of votes each question received as “very high priority.” The top six “very high priority” questions were:

1. Strengthening or diversifying the neighborhood economy
2. Promoting access to healthy food through community gardens/agriculture
3. Promoting, supporting or incentivizing locally-owned businesses
4. Creating policies that help long-time residents stay in their homes, help qualified homeowners with financial needs make repairs to their homes, and execute programs that help cleanup neighborhoods
5. Providing adequate and pedestrian scaled lighting for all public areas, residential streets, and public streets to reduce real and perceived crime
6. Increasing equality in income and wealth

Public Meeting

The city of Duluth typically hosts two to three public meetings during the development of an SAP to solicit input from residents on community concerns and draft recommendations. The first public meeting on the Lincoln Park SAP took place on September 17, 2014. The event was held at the Harrison Community Center in the heart of the Lincoln Park neighborhood and included free food and children’s activities to encourage families to attend. Representatives from long-range planning, housing and community development, transportation, community safety, and public health hosted information tables to provide attendees with resources and discuss concerns residents have in the neighborhood. At the table on health, residents were asked to place a dot next to the health determinants or outcomes that were highest priority to them. The two areas of highest priority included access to healthy food and affordable housing. The next highest priority areas included access to health care, drug/alcohol use, blighted properties, social cohesion, and exercise/physical activity.

One-on-One Conversations

One of the stakeholders on the Plan Committee, Josh Gorham, is a public health nurse for St. Louis County who oversees the Statewide Health Improvement Program (SHIP) activities related to active living and Safe Routes to School process in Lincoln Park. Mr. Gorham has developed relationships with many community members and

volunteered to have one-on-one conversations with residents and service providers in the community to learn about what they liked about living in Lincoln Park, what they would change, and what was important to their health. Concerns included housing quality and affordability, crime and drugs, safe activities for children and older adults, access to healthy food, and more.

Visioning Process

At the Plan Committee meeting on October 29, 2014, participants were asked to help update a vision for the neighborhood from the 1983 West End Urban Design Plan. Participants also were given examples of vision statements from other communities across the country. After nearly an hour of brainstorming, the Committee came to agreement on a list of keywords that were incorporated into an updated vision for Lincoln Park. The draft vision was presented to the Plan Committee at the meeting on November 19, 2014. Final edits were accepted and incorporated. The final vision for the Lincoln Park SAP is as follows:

The Vision for Lincoln Park is a vibrant and engaged community that provides living wage jobs at local and craft businesses, quality affordable housing, safe streets and accessible transportation options, excelling public education, and an abundance of parks, trails and connections to the St. Louis River and waterfront.

We envision Lincoln Park as a community that promotes the health of its residents, environment and economy. A community . . .

- where a broad mix of local and craft businesses provide high quality, **living wage jobs**, and draw neighbors and visitors to neighborhood-serving and destination retail, family-friendly eating and drinking establishments, and services*
- where neighbors and visitors walk, bike and roll through an abundant system of trails, sidewalks, community parks and natural sanctuaries, including Lincoln Park and the St. Louis River, which rejuvenate our bodies and minds*
- where neighbors are diverse, welcoming and **engaged in community life***
- where streets are pleasant public places where people feel **safe and comfortable** walking, biking, busing or driving*
- where all have access to **quality, affordable housing** choices that meet their needs and children obtain excellent education in superior school environments*
- where people have many, **accessible transportation options** to get to work, school, the local market, or a community event*

Lincoln Park is a “neighborhood that works:” the nexus between downtown Duluth and the other St. Louis River Corridor communities, where you choose to raise your kids, start a business, and meet up with friends.

Summary

The primary focus of scoping is to create a plan for conducting HIA and prioritize health issues to be analyzed. Prioritization of health issues was informed by a review of baseline health data and trends affecting the community, particularly disparate health impacts; results of the community survey; results from the Brownfield & HIA tool pilot testing; one-on-one conversations with stakeholders, and input from the first SAP public meeting.

Ultimately, the Plan Committee visioning process helped highlight the key areas of concern related to health. These areas include the following:

- Quality, affordable housing
- Accessible transportation options
- Living wage jobs
- Safe, crime and drug-free community
- Social cohesion and community engagement
- Access to healthy food

The scoping process in many HIAs offers the opportunity to narrow the selection of health determinants and outcomes that are most important to the community in an effort to focus limited resources on the most important concerns. The Lincoln Park SAP HIA is taking a slightly different approach. Instead of limiting the list of health determinants that will be assessed overall, the health determinants will be focused for each section of the SAP. For example, the SAP Housing recommendations will focus on the health determinants of quality, affordable housing and social cohesion and community engagement, and to a limited extent how affordable housing may increase the ability to afford healthy food. The SAP Transportation recommendations will focus on accessible transportation options, access to healthy food, social cohesion, and safety. And so on and so forth. The next section will discuss in more detail how each section of the SAP may impact individual health determinants and highlight which health determinants will be assessed within each section of the SAP.

Connecting SAP Recommendations to Health

The SAP will include five main sections, including the following:

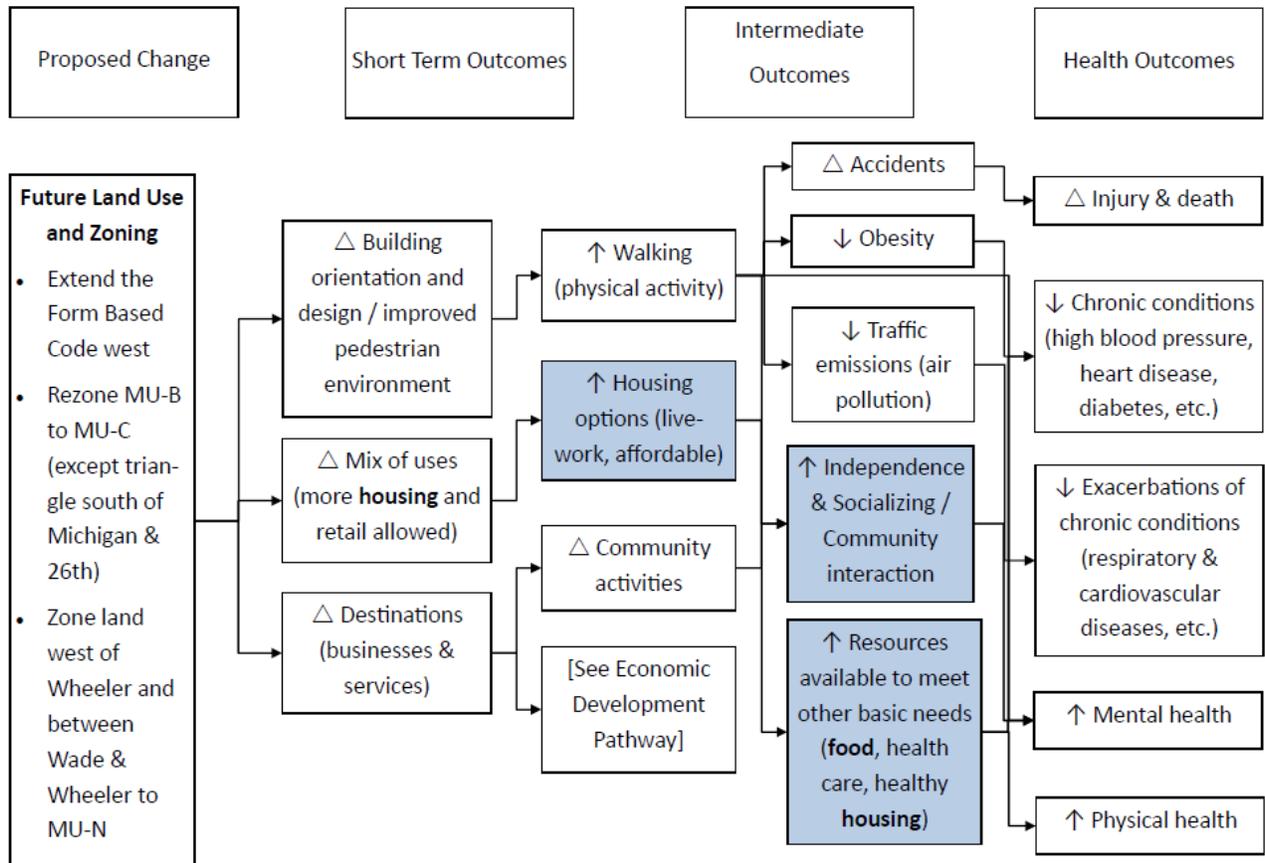
- Future Land Use and Zoning
- Multimodal Transportation
- Housing
- Economic Development
- Sustainability

Recommendations for these topics will impact health determinants and result in health outcomes, potentially positive or negative. Based on an understanding of some of the social and environmental characteristics of the community, some of the health determinants that could be affected by the SAP include: employment, access to

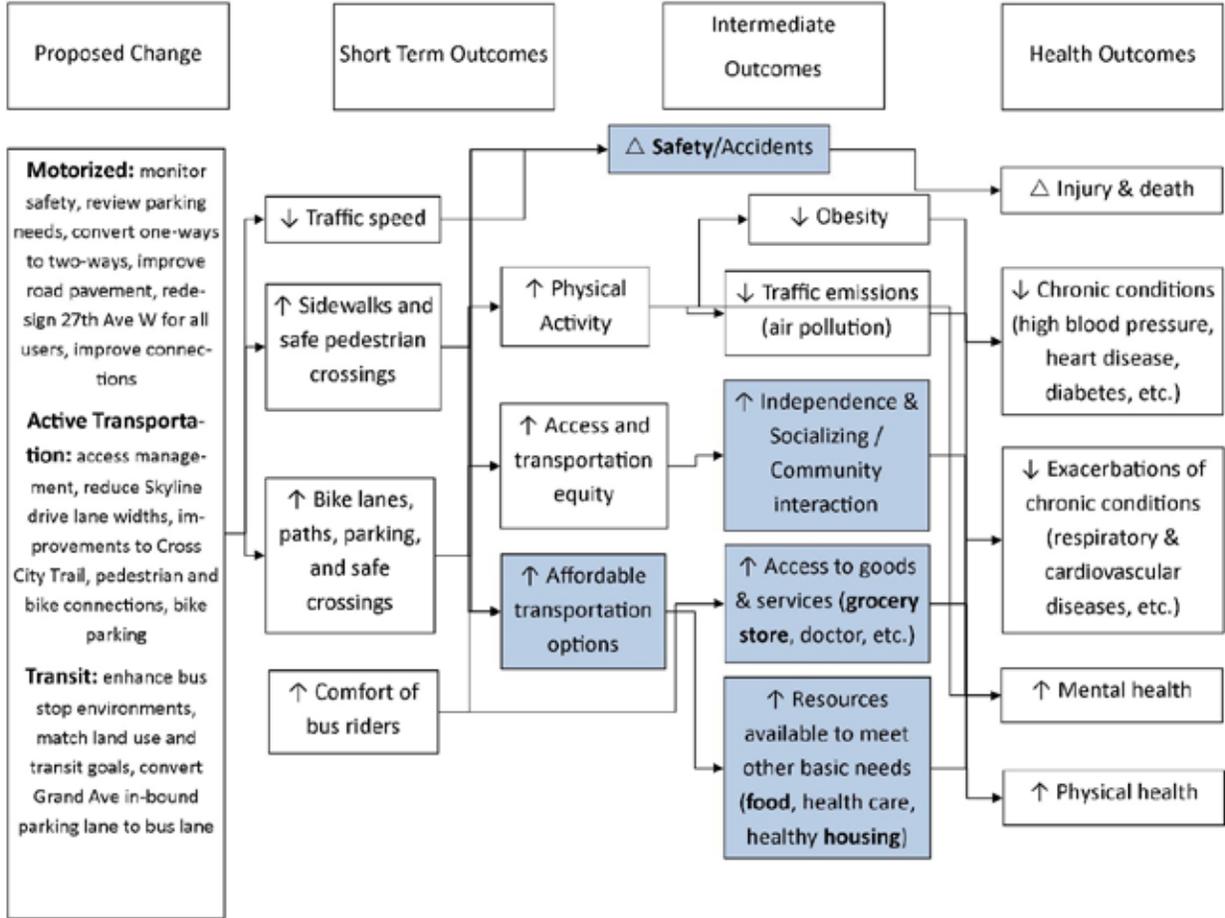
healthy food, access to services, housing opportunities, job opportunities, physical activity (through bicycle, pedestrian and transit recommendations), and more.

The following pathway diagrams outline the connections between SAP recommendations and health determinants and health outcomes. The boxes that are highlighted in blue are areas of particular interest for the community and will be the focus of the Assessment.

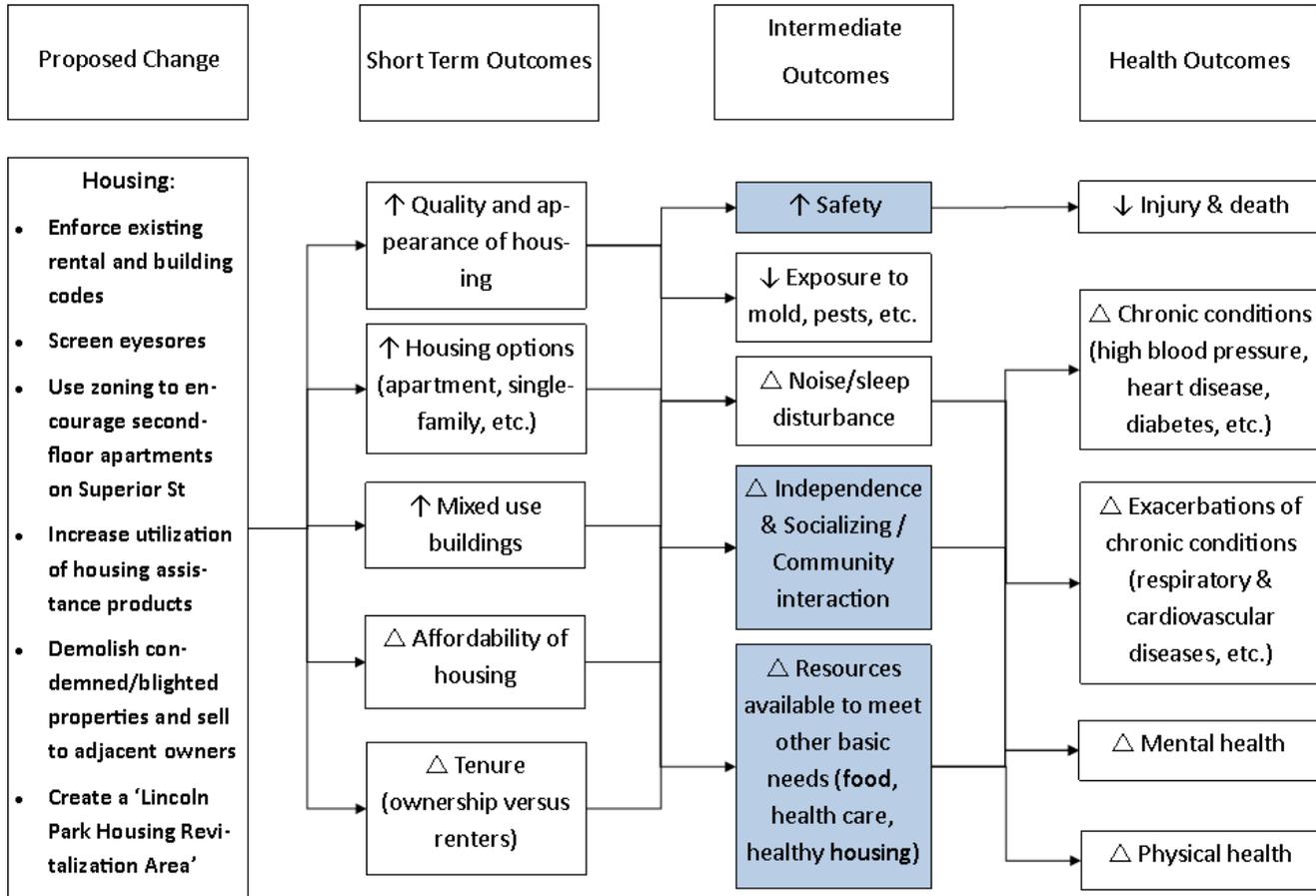
Pathway #1: Future Land Use and Zoning



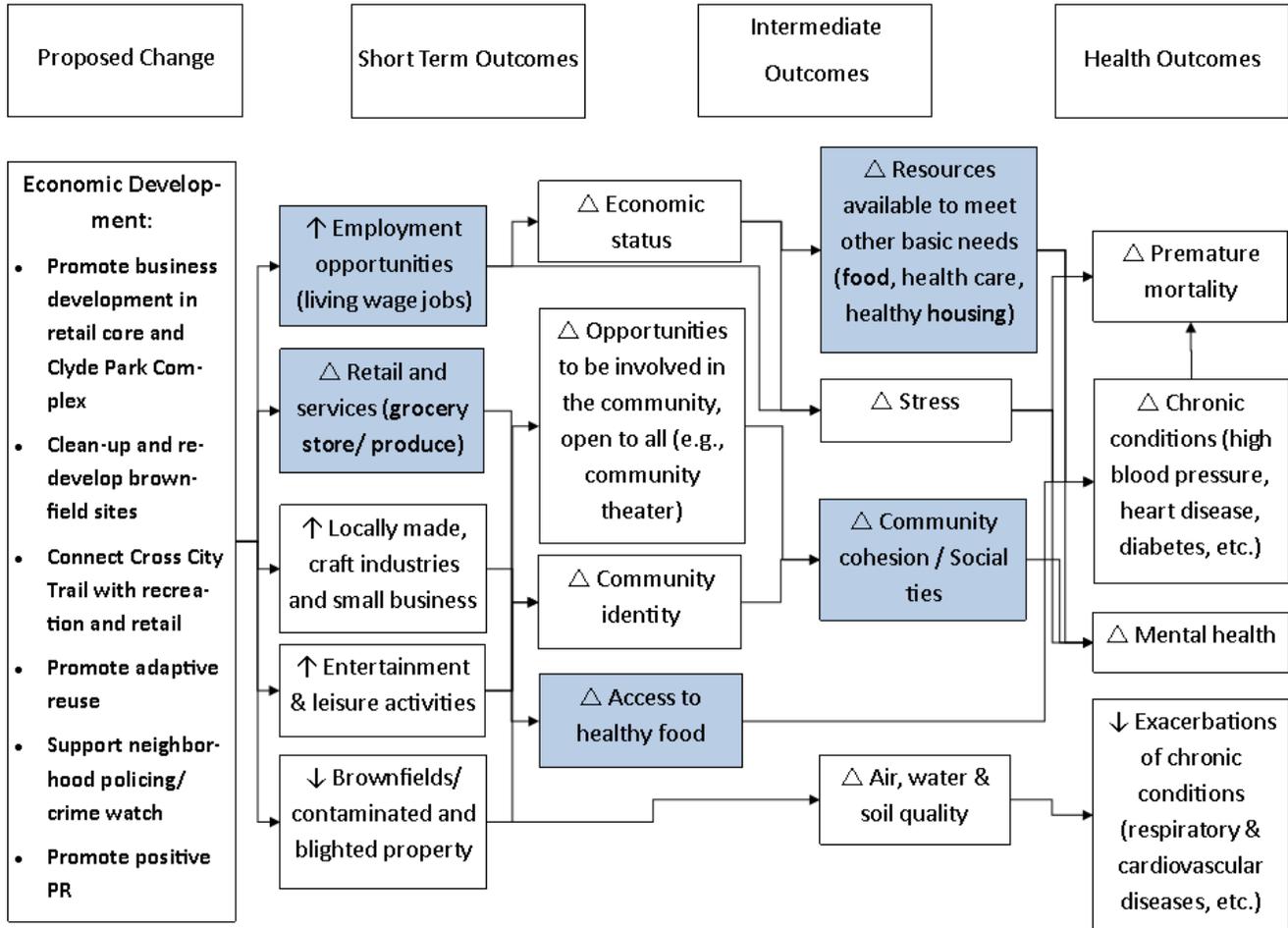
Pathway #2: Transportation



Pathway #3: Housing



Pathway #4: Economic Development



Research Questions

This section provides a list of specific research questions to assess the potential health impacts of the Lincoln Park SAP recommendations. The research questions guide both the existing conditions analysis and impact assessment. These research questions feed into the research plan. The following table describes the research plan for the assessment step of the Gary/New Duluth SAP HIA. The research plan includes research questions, indicators, data sources, analytic methods, and priority level of the question.

Existing Conditions Research Questions	Impact Research Questions	Indicators	Data Sources	Methods	Priority
How does land use meet current housing needs (units versus income or family size) in the neighborhood?	How will future land use and zoning meet housing needs?	<ul style="list-style-type: none"> Number of current residential properties Number of future residential properties based on rezoning and vacant lots 	<ul style="list-style-type: none"> Parcel data ACS (income and family size) 	GIS/table	High
What current businesses exist that promote community engagement/ social cohesion and safety?	How will future land use and zoning impact the number of businesses or activities?	<ul style="list-style-type: none"> Inventory of existing businesses Possible future businesses based on rezoning and vacant lots 	<ul style="list-style-type: none"> Parcel data Business licenses Types of businesses that promote community engagement and safety 	GIS/table Lit review	Medium
What current businesses or land uses exist that provide access to healthy food?	How will future land use and zoning impact the number of businesses or activities?	<ul style="list-style-type: none"> Inventory of existing businesses Possible future businesses based on rezoning and vacant lots 	<ul style="list-style-type: none"> Parcel data Business licenses Types of businesses or activities that provide access to healthy food 	GIS/table Lit review	High
How safe are neighborhood streets today? How does safety affect community interactions on the street and social cohesion?	How will the multimodal transportation recommendations impact safety?	<ul style="list-style-type: none"> Number of motor vehicle, pedestrian and bicycle crashes Number of violent and property crimes Impact of safety on social cohesion 	<ul style="list-style-type: none"> Traffic accidents – MIC/ARDC or MnDOT Duluth Police Department, crime mapper 	GIS/table Lit review	High

Existing Conditions Research Questions	Impact Research Questions	Indicators	Data Sources	Methods	Priority
Does the existing transportation infrastructure provide access to goods and services, including healthy food?	How will the multimodal transportation recommendations impact access to goods and services?	<ul style="list-style-type: none"> • Sidewalk inventory, bicycle routes and bus routes related to origins and destinations • Goods and services provided at destinations 	<ul style="list-style-type: none"> • ARDC/MIC sidewalk inventory • DTA – transit routes • City trails • Parcels/ Google search for businesses 	GIS/table Lit review	High
How do existing housing policies meet current housing needs (units versus income or family size) in the neighborhood?	How will proposed housing policies meet housing needs?	<ul style="list-style-type: none"> • Review of existing housing policies and effectiveness • Needs of current and future residents 	<ul style="list-style-type: none"> • HRA, LISC, City of Duluth • Residents, housing service providers 	Lit review Focus groups/ interviews	High
How do existing housing conditions and options impact socializing and community interaction?	How will proposed housing policies impact socializing and community interaction?	<ul style="list-style-type: none"> • How housing conditions impact social connections 	<ul style="list-style-type: none"> • HRA, LISC, City of Duluth • Residents, housing service providers 	Lit review Focus groups/ interviews	Medium
How do existing housing costs impact ability to afford healthy food, health care, and other basic needs?	How will proposed housing policies impact ability to afford healthy food, health care, and other basic needs?	<ul style="list-style-type: none"> • Housing costs • Cost of living/ income to meet basic needs 	<ul style="list-style-type: none"> • HRA, LISC, City of Duluth • Fair Food Access UMD study on food costs 	GIS/table Lit review	High
What are current employment opportunities in the study area? Are they living wage jobs?	How will proposed economic development policies impact employment opportunities?	<ul style="list-style-type: none"> • Current number of jobs and salaries • Potential future jobs and salaries 	<ul style="list-style-type: none"> • LEHD Census data - OnTheMap • City of Duluth business & economic development 	Tables Topic expert interviews Lit Review	High

Existing Conditions Research Questions	Impact Research Questions	Indicators	Data Sources	Methods	Priority
<p>How many businesses are locally owned and/or craft goods?</p> <p>How does this impact community identity?</p>	<p>How will proposed economic development policies impact the number or type of locally owned and/or craft good businesses?</p> <p>How will this impact community identity?</p>	<ul style="list-style-type: none"> • Inventory of existing businesses • Possible future businesses based on proposed economic development policies 	<ul style="list-style-type: none"> • Lincoln Park Business Association • City of Duluth business & economic development 	<p>GIS/table Topic expert interviews</p>	<p>Medium/Low</p>
<p>What current businesses that provide access to healthy food?</p>	<p>How will proposed economic development policies impact the number of businesses or activities?</p>	<ul style="list-style-type: none"> • Inventory of existing businesses • Possible future businesses based on proposed economic development policies 	<ul style="list-style-type: none"> • Parcel data • Business licenses • Types of businesses or activities that provide access to healthy food 	<p>GIS/table Topic expert interviews Lit review</p>	<p>High</p>
<p>Impact of current sustainability policies on community identity and social cohesion</p>	<p>How will proposed sustainability policies impact community identity and social cohesion?</p>	<ul style="list-style-type: none"> • # parks or recreation, or greenery, and connection to social cohesion before and after sustainability proposals 	<ul style="list-style-type: none"> • Parcels - parks • Tree survey 	<p>Lit review Focus groups/ interviews</p>	<p>Medium</p>
<p>Access to healthy foods related to current sustainability policies/ initiatives</p>	<p>How will proposed sustainability policies impact access to healthy foods?</p>	<ul style="list-style-type: none"> • Pounds or acres of local produce currently, and change as a result of sustainability policies 	<ul style="list-style-type: none"> • Fair Food Access or local survey 	<p>Lit review Focus groups/ interviews</p>	<p>High</p>

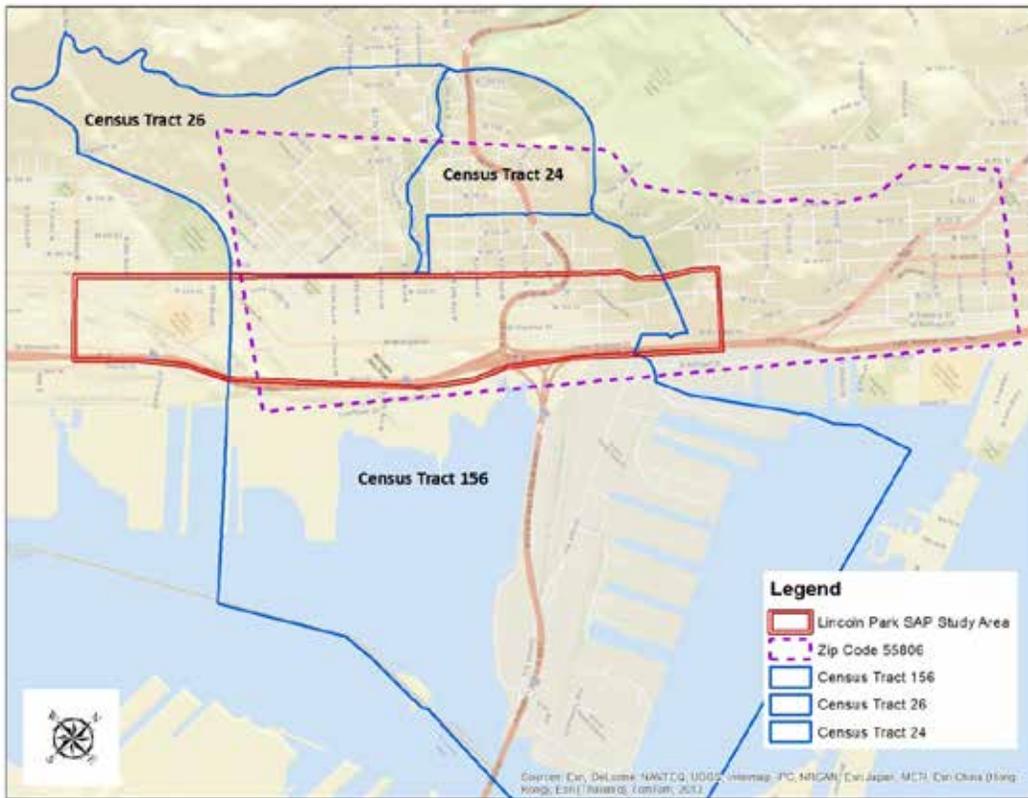
Existing Conditions Research Questions	Impact Research Questions	Indicators	Data Sources	Methods	Priority
Employment related to current sustainability policies/ initiatives	How will proposed sustainability policies impact living wage job opportunities?	<ul style="list-style-type: none"> # jobs in sustainability-related areas 	<ul style="list-style-type: none"> Lincoln Park Business Association City of Duluth business & economic development 	Lit review	High
Safety related to current sustainability policies/ initiatives	How will proposed sustainability policies impact safety?	<ul style="list-style-type: none"> Traffic safety connections to sustainability policies Crime safety connections to sustainability policies 	<ul style="list-style-type: none"> Traffic accidents – MIC/ARDC or MnDOT Duluth Police Department, crime mapper 	GIS/table Lit review	High

BASELINE ASSESSMENT

The baseline assessment provides a description of the existing conditions of the community that will likely be affected by the proposed plan, project, or policy. The baseline assessment provides the base for the development of projections of potential health impacts on the population, and provides a comparison before and after the implementation of the proposed plan, project, or policy. The baseline assessment includes information on the demographics and socioeconomic status of the affected populations, the existing health conditions, and any other relevant data that might be available to describe the existing conditions of the community.

The Lincoln Park neighborhood is located just west of downtown Duluth. Figure 1 identifies the location of the Lincoln Park SAP study area (red) and shows the overlapping geographic characteristics of Census Tracts 156, 24 and 26 (blue), and Zip Code 55806 (purple) in which the community is located.

Figure 1: Lincoln Park SAP Study Area



Demographics and Socioeconomics

Data for demographics and socioeconomic comes from the U.S. Census Bureau's 2010 Decennial Census and American Community Survey (ACS) 2012 5-year estimates. All ACS data was downloaded at the Census Tract level. Summaries of demographic and socioeconomic data are provided in Figures 2 and 3.

Lincoln Park's population is younger and more racially diverse than Duluth and Minnesota. The African American/Black and American Indian community make up over 13% of the study area and neighborhood population. English language proficiency is similar to the City and state, although more people speak a second language in Lincoln Park.

Lincoln Park's median household income is significantly lower than the City and state, particularly in the study area, where it is approximately one-third of the state's median income. Poverty also is higher in Lincoln Park than the City or state, with significantly more children living in poverty. Lincoln Park residents are less likely to have more than a high school diploma, and those without a high school degree (or equivalent) are more likely to be in poverty, compared to Duluth and Minnesota. The unemployment rate in Lincoln Park is higher, especially for African American/Black and American Indian community.

More than 50% of Lincoln Park households are renter-occupied. Additionally, there are higher proportions of single-parent households, lower rates of health insurance and higher rates of disability in the Lincoln Park study area and neighborhood.

Figure 2: Demographic Characteristics

Characteristic	Study Area	Neighborhood	Duluth	Minnesota
Total Population¹	2,555	6,141	86,265	5,303,925
Age¹				
Percent Less than 18	22%	25%	19%	24%
Percent 65 and over	8%	8%	14%	13%
Median Age (years)	29.9 (Census Tract 156)	30.3 (CTs 156, 24, 26)	33.6	37.4
Race & Ethnicity¹				
White/Caucasian	78%	83%	90%	85%
Black/African American	7%	5%	2%	5%
American Indian	6%	5%	3%	1%
Asian	1%	1%	2%	4%
Hawaiian/Pacific Islander	0%	0%	0%	0%
Other race or two or more races	7%	6%	3%	4%
Ethnicity: Hispanic/Latino	2%	2%	2%	5%
Language²				
Limited English proficiency ³	4%	3%	2%	4%
Speak second language	14%	10%	5%	11%

Figure 3: Socioeconomic Characteristics

Characteristic	Study Area	Neighborhood	Duluth	Minnesota
Income & Poverty				
Median Income	\$19,825	\$30,447	\$41,116	\$58,476
Poverty	39%	33%	21%	11%
Children in poverty	61%	46%	25%	14%
Older adults in poverty	19%	17%	9%	8%
Households receiving SNAP	29%	24%	11%	7%

¹ 2010 Decennial Census, Blocks

² American Community Survey 2012 5-year estimates, Census Tracts

³ Population 5 years and older that speak English less than “very well”

Education & Employment				
High school diploma (or equivalent)	82%	88%	93%	92%
Less than high school diploma, in poverty	44%	43%	29%	25%
Unemployment: U.S. Census	20%	19%	9% [MN DEED ⁴ : 5.0%]	7% [MN DEED ⁴ : 4.2%]
Unemployment: 16 to 19 years	42%	65%	29%	20%
Unemployment: Black/African American	50%	48%	31%	18%
Unemployment: American Indian	39%	41%	21%	18%
Households				
Total Households ¹	1,283	2,691	35,705	2,087,227
Tenure: Renters ¹	73%	52%	40%	27%
Older Adults (65+) Living Alone ¹	9%	7%	12%	10%
Single parents	16%	22%	10%	8%
Other				
Health Insurance Coverage	82%	83%	92%	91%
Disability Status	17%	16%	12%	10%

Health Conditions

The majority of available health data is not provided below a sub-county or sub-city level. Exceptions include zip-code level life expectancy and age-adjusted mortality data provided by St. Louis County Public Health Department from the St. Louis County Health Status Report *“Health Is Much More Than Health Care”*. The projected life expectancy and age-adjusted mortality rate for the combined area of Lincoln Park zip code (55806) and its similar adjacent zip code (55803) were the lowest for all 18 zip code geographies in the St. Louis County-Duluth area:

- Projected life expectancy: 73.44 years
- Age-adjusted mortality rate: 18.9 per 1,000 deaths

Self-Reported Health Status

A significant amount of data about medical conditions and health behaviors are collected through the Bridge to Health Survey which is conducted by a partnership of eight northeastern Minnesota counties, including Aitkin,

⁴ Minnesota Department of Employment and Economic Development, July 2014

Cook, Carlton, Itasca, Koochiching, Lake, Pine, and St. Louis, as well as Douglas County, Wisconsin. All results are based on self-reported survey. Data is broken down by gender, age, educational attainment, and whether the respondent is above or below 200% of the poverty level. For full limitations of survey results, see the [Bridge to Health Survey website](#).

The City of Duluth is the only city included in the survey summaries, and the smallest geographic unit. Due to this limitation, the study assumes that Lincoln Park is similar in health characteristics to Duluth. However, this is a gross assumption based on the demographic, socioeconomic and life expectancy disparities between Lincoln Park and the City listed in previous sections. It is more likely that Lincoln Park health characteristics are more similar to those provided for the population under 200% of poverty in Duluth.

In general, Duluth had self-reported health outcomes that were better than or not significantly different than the region. Reported medical conditions included allergies, asthma, cancer, diabetes, heart trouble or angina, high blood pressure, high cholesterol, stroke-related problems, anxiety, panic attacks, and sexually transmitted diseases. See Figure 4.

Allergies were twice as high in females (24%) than males (11%). Asthma was also higher in females (11%) than males (2%) and was even higher for respondents with educational attainment below High School diploma (14%). Reported cancer was higher in females (13%) than males (6%); and higher in the population 65 and older (22% for ages 65 to 74, and 44% for ages 75 and older); but was not significantly correlated with educational attainment or poverty status. Diabetes was significantly higher in the population 65 to 74 (25%) and 75 and older (31%), but not significantly correlated with gender, educational attainment or poverty status.

The Bridge to Health survey indicated that heart trouble or angina, high blood pressure, high cholesterol, and stroke all became significantly higher as age increased. None of these conditions were significantly related to educational attainment or poverty status.

Depression and anxiety responses were similar for subpopulations. Specifically, depression and anxiety may be higher in the population 45 to 64 years old, and higher in the population below 200% of poverty. Also, depression may be lower in the population with some college or college degrees, compared with the population with less than high school degree, high school degree, or vocational/associates degree.

Figure 4: Medical Conditions (Bridge to Health Survey, 2010)

Indicator	Duluth		Duluth – below 200% of poverty		Region	
Allergies	18%	(12-23%)	17%	(6-28%)	20%	(18-22%)
Asthma	7%	(3-11%)	4%	(0-9%)	7%	(5-8%)
Cancer	10%	(7-13%)	7%	(1-13%)	10%	(8-11%)
Diabetes	7%	(4-9%)	6%	(2-11%)	8%	(7-9%)
Heart Trouble or Angina	7%	(4-9%)	6%	(2-10%)	9%	(8-11%)
High Blood Pressure	21%	(16-27%)	19%	(8-29%)	27%	(24-29%)
High Cholesterol	18%	(13-22%)	15%	(6-25%)	23%	(20-25%)
Stroke Related Problems	3%	(2-5%)	5%	(1-10%)	3%	(2-3%)
Anxiety or panic attacks	9%	(6-12%)	14%	(5-22%)	8%	(7-10%)

Indicator	Duluth		Duluth – below 200% of poverty		Region	
Depression	11%	(7-14%)	18%	(7-29%)	13%	(11-15%)
Sexually Transmitted Diseases	1%	(0-2%)	0%	(0-0%)	2%	(0-3%)

The Bridge to Health Survey also asked for the self-reported behaviors of adult respondents in the areas of weight status and physical activity and nutrition. Specific indicators included: overweight, obesity, food insecurity, consumption of fruits and vegetables, and moderate and vigorous activity. See Figure 5.

Figure 5: Preventative Health Practices (Bridge to Health Survey, 2010)

Indicator	Duluth		Duluth – below 200% of poverty		Region	
Overweight but not obese ⁵	32%	(24-40%)	29%	(9-49%)	34%	(31-36%)
Obese ⁶	11%	(8-14%)	11%	(4-19%)	18%	(15-20%)
Food Insecure (sometimes or often)	22%	(12-31%)	54%	(29-79%)	14%	(12-17%)
Five or more servings of fruits & vegetables	21%	(13-29%)	5%	(0-10%)	16%	(14-19%)
Moderate activity 5 or more days per week	37%	(27-47%)	34%	(8-60%)	34%	(22-45%)
Vigorous activity three or more days per week	43%	(40-46%)	39%	(10-68%)	30%	(27-34%)

Obesity was lowest in the population 18 to 34 years (2%), and may increase with age until 65 to 74 when it appears to decrease again. Obesity did not appear to be correlated with educational attainment or poverty in Duluth.

Food insecurity may be higher in the population 18 to 34 (34%) and the population with less than high school degree (64%), and was significantly worse in the population at or below 200% of poverty (54%) than the population above 200% of poverty (11%). Consumption of fruits and vegetables was also significantly higher in population more than 200% of poverty (29%) than the population at or below 200% of poverty (5%).

Moderate activity may be lowest in the population 35 to 44 (25%) and population with less than high school degree (18%), but did not appear to be correlated with age, educational attainment, gender or poverty. Vigorous activity was higher in males (49%) than females (20%), and highest in the population age 18 to 34 (53%). It did not appear to be correlated to educational attainment or poverty status.

⁵ Overweight was determined by calculating body mass index (BMI) using self-reported height and weight of survey respondent.

⁶ Obese was determined by calculating body mass index (BMI) using self-reported height and weight of survey respondent.

Environmental Health and Vital Statistics

Environmental health data is available through the MDH Environmental Public Health Tracking Program and the Minnesota Public Health Data Access Portal on the MDH website. Vital statistics data is available from the MDH Center for Health Statistics. At the time of this HIA, the data available at a sub-state level (counties) through these programs included: air quality (particle pollution and ozone), asthma hospitalizations and emergency department visits, cancer incidence for a number of cancer types⁷, carbon monoxide poisonings and deaths, child immunizations, child lead poisoning, chronic obstructive pulmonary disease (COPD) hospitalizations, heart attack hospitalizations, and reproductive and birth outcomes. The only data available at a sub-county level was asthma hospitalizations, which were obtained by special request from the MDH Asthma Program.

Air quality in St. Louis County is very good. Average annual concentrations of pollutants were well below the national ambient air quality standards (NAAQS). From 2001 to 2006 only two days exceeded the NAAQS for ozone.

The MDH Asthma Program provided age-adjusted asthma emergency department visit rates for the Duluth zip codes. The age-adjusted asthma emergency department visit rate for zip code 55806 encompassing Lincoln Park was 80.5 per 10,000 residents for 2007-2011, the third highest out of ten zip codes in the Duluth area.

The asthma hospitalization rate, cancer incidence (overall), carbon monoxide emergency department visits, COPD hospitalizations, heart attack hospitalizations, percent of pre-term babies (less than 37 weeks) were at least slightly higher in St. Louis County than in Minnesota for all of the time periods of data provided.

Childhood immunization rates for St. Louis County were close to Minnesota's, with the exception of Hepatitis A, which was substantially lower in St. Louis County. More children in St. Louis County have been tested for elevated blood lead levels between 2000 and 2008 than Minnesota, and most years the percent of tests that come back with elevated levels (greater than 10 micrograms per deciliter) are similar for the county and state.

IMPACT ASSESSMENT

The Impact Assessment is broken into four subtopic areas based on the sections of the Lincoln Park SAP: Land Use/Zoning, Housing, Economic Development, and Transportation. Each subtopic area describes the specific health determinants that are the focus of the assessment and outlines the current conditions and future impacts on health.

One issue that came up in the middle of the HIA Assessment was the City's consideration of zoning regulations for medical cannabis. In 2014, Minnesota legalized medical cannabis under Chapter 311 S.F. No. 2470⁸ "An act

⁷ There are 18 total cancer types on the portal, including: acute lymphocytic leukemia (childhood only)*, acute myeloid leukemia, bladder cancer, brain and other nervous system cancer, breast cancer (female only), chronic lymphocytic leukemia, esophageal cancer, kidney cancer, laryngeal cancer, leukemia, liver cancer, lung and bronchus cancer, melanoma, mesothelioma, non-Hodgkin lymphoma, oral and pharyngeal cancer, pancreatic cancer, and thyroid cancer. (*Not available at county level.)

⁸ <https://www.revisor.mn.gov/laws/?id=311&year=2014&type=0>

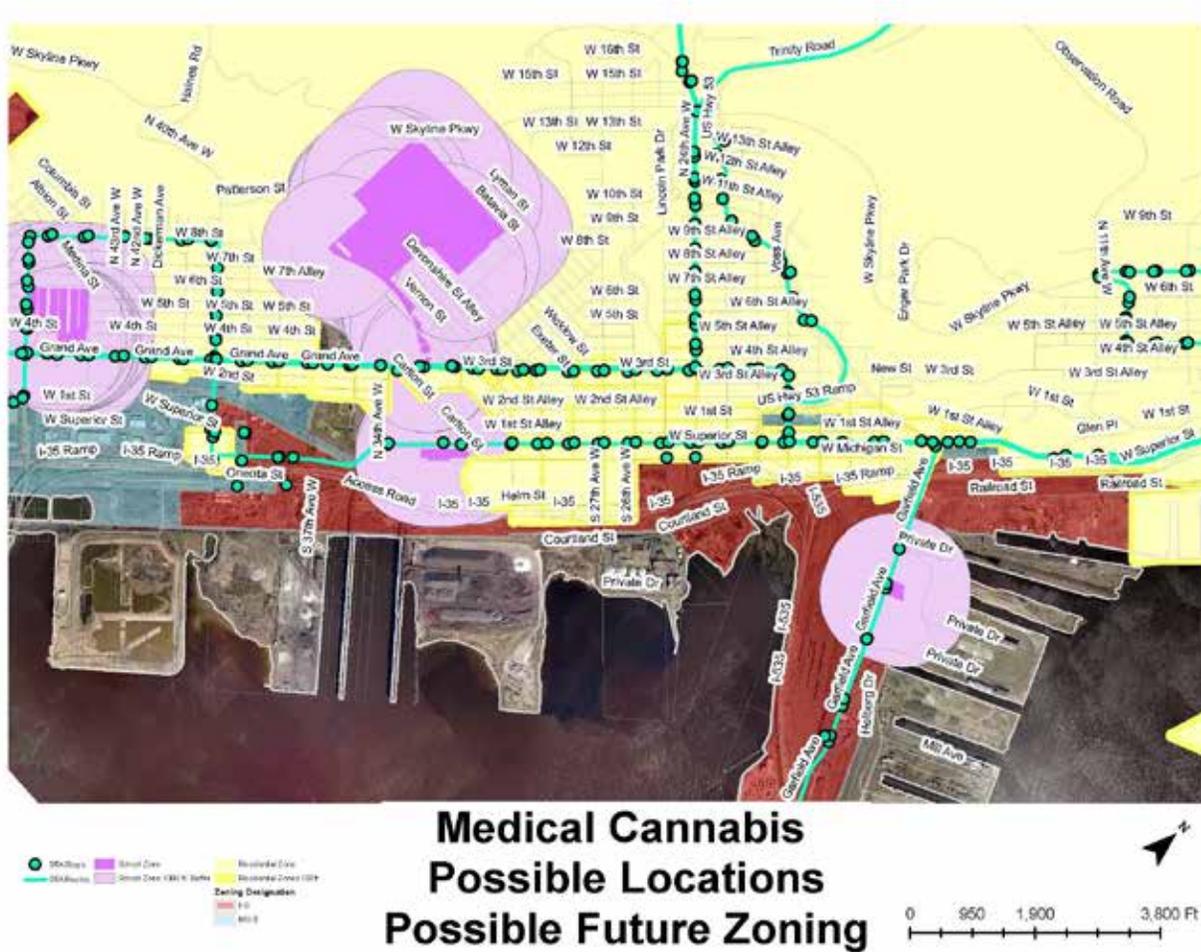
relating to health; providing for medical cannabis registry program; authorizing rulemaking; establishing duties of patients, health care practitioners, and manufacturer of medical cannabis; establishing patient protections; imposing penalties; establishing fees; requiring impact assessment of medical cannabis therapeutic research; requiring audits; appropriating money; amending Minnesota Statutes 2012, sections 13.3806, by adding a subdivision; 256B.0625, subdivision 13d; proposing coding for new law in Minnesota Statutes, chapter 152.”

Medical cannabis is a concern for some members of the Lincoln Park SAP/HIA Advisory Committee because of its potential impact on crime and safety, social cohesion, economic development, jobs and health. Lincoln Park already has a stigma hanging over the community. The community contains sex offender housing, bars, an infamous low-income apartment complex, and a reputation for crime. The neighborhood reputation is something that the SAP recommendations and activities of local organizations are working to overcome, but it does impact the way people perceive, live in, and interact with the Lincoln Park community. Some of the Advisory Committee members feel that medical cannabis manufacturing and/or distribution in Lincoln Park could negatively impact efforts to remake the community reputation and foster social cohesion.

Initial manufacturers and distributors of medical cannabis were selected in 2014 and none of them are located in Duluth. Looking to the future, the Planning Department drafted zoning guidelines that would permit future medical cannabis manufacturing and distribution activities within Industrial-General and Mixed Use-Business zones of the city, under special use permits with protective buffers around schools and residential zones. The proposed zoning regulations came with maps of the neighborhoods and where medical cannabis activities would be allowed. Figure 6 shows where medical cannabis would be permitted with a special use permit under the proposed future zoning in Lincoln Park. There is one triangle of land between 26th and 22nd Ave W, south of W Michigan St. Currently the Duluth Transit Authority operates here and does not have plans of leaving in the near future.

Medical cannabis is a city-wide issue. The Lincoln Park SAP will not address it explicitly. The Advisory Committee members were encouraged to submit formal comments to the Planning Commission and staff for the proposed zoning regulations during the public comment period. The policy and zoning regulations proposed by the Planning Department were approved by the Planning Commission and went to City Council on April 13. The City Council amended the ordinance to make it more restrictive and health-protective by changing the buffers around residential areas from 200 feet to 1,500 feet (Figure 6). The amendment effectively makes it unlikely any dispensary business could operate in western Duluth, although manufacturing could be allowed deep within some industrial areas along the St. Louis River corridor. The ordinance amendment was heard and approved at the following City Council meeting on April 27. As a result, medical cannabis manufacturing and dispensing will not be allowed in Lincoln Park unless changes to this ordinance are made at a future date.

Figure 6: Medical Cannabis Possible Locations Based on Proposed Future Zoning in Lincoln Park



Social Cohesion

There is not a concise, agreed-upon definition of social cohesion. Essentially, social cohesion describes the strength of the relationships of a community, which can be any group of people. Social cohesion often strengthens the overall “sense of belonging” people have in the community (Forest & Kearns, 2001). “A society lacking cohesion would be one which displayed social disorder and conflict, disparate moral values, extreme social inequality, low levels of social interaction between and within communities and low levels of place attachment” (Forest & Kearns, 2001).

While social cohesion is a measure of the depth of relationships in a community, the relationships themselves are often referred to as “social networks.” Having strong social networks can lead to developing “social capital” which speaks more to “the ability of [people] to secure benefits by virtue of membership in social networks and other social structures” (Eriksson, 2010). Living in a high social capital area can be beneficial even for individuals

with poor social connections, with 'spill over' benefits gained from living in a high social capital community (Putnam, 2000).

Areas with high social cohesion and social capital are characterized by trust, participation and mutual support (Campbell and Jovchelovitch, 2000). Highly cohesive communities can result in community collective action and trust (Woolcock, 2001; Grootaert and van Bastelaer, 2002); higher success in influencing political decisions and fighting cuts to local services, such as health care (Kawachi, Kennedy, Glass, 1999); and 'health-enabling communities,' in that these communities are most likely to support health-enhancing behaviors (Campbell and Jovchelovitch, 2000). "Social capital has been found to be linked to more than just good health; empirical linkages have been found among social capital, the proper functioning of democracy, the prevention of crime, and enhanced economic development" (Putnam, 2000).

Why is social cohesion important for health?

Social cohesion can have impacts on both personal and community health. Affects to personal health include lower blood pressure rates, better immune responses, and lower levels of stress hormones, for people with higher levels of perceived social connectedness (Uchino et al., 1996). Additionally, socially connected people who have higher levels of trust between residents, live longer, have mortality rates one-half or one-third that of socially isolated people, and are generally healthier physically and mentally (Lochner et al., 2003; Leyden, 2003, Brunner, 1997). "Social isolation is considered a risk factor for multiple chronic diseases, including obesity, high blood pressure, cancer, and diabetes (Cacioppo & Hawkley, 2003). And the greater the social isolation of individuals, the greater their symptoms of depression and the more likely they are to report being in fair or poor health, when compared to individuals with larger social networks" (Ferris, 2012).

At a community level, socially cohesive communities are stronger politically and are better at taking action to improve their neighborhood, whether through their own initiatives or by engaging with local government or organizations. The relationships that form the bonds of social cohesion "can create healthy social norms, help people connect with local services, provide emotional support, and increase knowledge about health – or "health literacy" – within social networks (Kim et al., 2008). "Communities with high levels of bridging and linking social capital are also better positioned to influence policies that support health, particularly when there is socioeconomic and demographic diversity within social networks" (Ferris, 2012).

However, social support may also have a negative effect on health by increasing stress due to excessive demands on the support provider (Eriksson, 2010). Additionally, highly cohesive communities can exacerbate social divisions based on race, class, and other social features (Ferris, 2012). Social cohesion can also reinforce negative norms and unhealthy behaviors (e.g., smoking). Gangs are one example of highly bonded groups that exert strong negative influences (Ferris, 2012).

FUTURE LAND USE AND ZONING

The Lincoln Park SAP developed draft land use and zoning recommendations for the neighborhood to align policy tools with the vision and goals for Lincoln Park (see Scoping Summary above). To assess how future land use and zoning recommendations in the SAP could affect these health determinants, MDH analyzed the change

in permitted uses parcel by parcel for 14 permutations of zoning changes throughout the study area and whether the changes would result in a positive or negative impact on each of the three identified health determinants.

Impacts of Future Land Use and Zoning Recommendations on Housing

Housing characteristics, such as housing quality (e.g., cleanliness, structural safety, presence of mold and allergens, etc.) and housing costs (e.g., stress, relocation, ability to afford other necessities, etc.), have large and significant impacts on residents' health (Braubach et al., 2014; Weitzman et al., 2013). Improvements to housing, such as investments in thermal comfort, providing sufficient space for householders, and ensuring ongoing, affordable maintenance, are linked to improved health outcomes and may promote improved social relationships within and beyond the household (Thomson et al., 2013). Zoning is one policy tool that can be used to ensure an adequate supply of housing to meet the needs of a community.

Existing Conditions

An adequate supply of housing depends on the factors of demand matching factors of supply, such as income of area households compared to cost of rent or mortgages, size of households compared to number of bedrooms in housing units, overall demand for housing units compared to the number of parcels available for development, age of housing stock, etc. This section will review some of these current housing conditions in Lincoln Park.

Demand versus Supply

There is high demand for housing across the city of Duluth. The overall rental vacancy rate for the city is 3.7%, which is generally considered low (City of Duluth, 2014a). However, rental vacancy rates for West Duluth and Lincoln Park remain slightly elevated. In some small areas such as East Hillside and the eastern edge of Lincoln Park there was an estimated vacancy of over 7.5%. A majority of the city was in the 0% - 2.5% vacancy range according to United States Postal Service Vacancy Data from the Department of Housing and Urban Development (City of Duluth, 2014a). According to the American Community Survey 2012 5-year estimates, portions of the Lincoln Park neighborhood, especially the study area, has vacancy rates up to 14%.⁹

In Lincoln Park there are 159 parcels in R1-zoning, 109 with a building, including 77 homestead and 32 non-homestead (personal communication, City of Duluth Office of Community Development, December 15, 2014). There are 432 parcels in R2-zoning, 298 with a building, including 161 homestead and 137 non-homestead. More than three-quarters of the R-1 and R-2 empty lots are non-conforming which means that the lot size is too small for future housing development. One implication of legal non-conforming lots is that banks are unlikely to finance development. If there is damage to the building, the owner can rebuild to the same footprint, but cannot expand or improve.

⁹ Census tract 24: 507 units, 440 occupied, 67 vacant (13.2% vacant); Census tract 26: 957 units, 930 occupied, 27 vacant (2.8% vacant); Census tract 156: 1,599 units, 1378 occupied, 221 vacant (14.2% vacant)

Housing Affordability

Affordability is another parameter in the equation of sufficient housing availability. Affordability is based on a balance of household income and cost of housing and other necessary expenses. As a result of low vacancy rates and high demands for housing, the price of housing can often become inflated. Neighborhoods with more affordable levels of housing, such as Lincoln Park, can provide an important supply of housing units.

Median household income in the SAP study area (Census Tract 156) was \$19,825, and \$30,447 across the Lincoln Park neighborhood (ACS 2012 5-Year Estimates). Lincoln Park had the lowest average sales price of Duluth neighborhood at \$93,169, and the areas of Fond du Lac/Gary/New Duluth were next lowest with an average sales price of \$120,503 (City of Duluth, 2014a).

Citywide, 37% of households are paying more than 30% of their income on housing (ACS 2012 5-Year Estimates). Within Lincoln Park, 52% of households across the neighborhood and 56% of households in the study area are paying more than 30% of their income on housing (ACS 2012 5-Year Estimates). Renters and households making less than \$20,000 per year are disproportionately impacted. Nearly 80% of households making less than \$20,000 per year and 66% of renters pay more than 30% of their income on housing in Lincoln Park (ACS 2012 5-Year Estimates).

Approximately one-quarter of households in the Lincoln Park neighborhood pay less than \$500 each month for rent, nearly half pay between \$500-750, and another quarter pay between \$750 and \$1,000. The median rent for the study area was \$615 and the average of the median rents for the three Census Tracts in the study area was \$733.

Duluth average monthly rent¹⁰ was \$720 (City of Duluth, 2014a). Lincoln Park average monthly rent was \$584, the lowest in the City, and had highest vacancy rate (9.1%) (City of Duluth, 2014a). Interestingly, the adjacent neighborhoods of Piedmont Heights and Duluth Heights had the highest monthly rent (\$836) and lowest vacancy rate (1.9%) (City of Duluth, 2014a).

Some households do not earn enough money to afford even the lower end of market-rate housing and may qualify for subsidies (vouchers) or public housing. Households on the waiting list for the public housing program usually have a shorter waiting period – about two months for a four-bedroom apartment and 9-12 months for a two-bedroom apartment – than those on the waiting list for the Housing Choice Voucher (HCV) program, which is approximately 18-24 months (City of Duluth, 2014a). The Housing Indicators Report did not provide a reason for the longer waiting period for smaller housing units. The majority of Lincoln Park's housing supply is 1 to 3 bedroom housing units.

Size of Households

Average household size in the study area was 2.6 for owner-occupied housing units and 1.9 for renter-occupied housing units (ACS 2012 5-year Estimates). This figure was similar across the entire Lincoln Park neighborhood with household sizes of 2.6 and 2.1 for owner-occupied and renter-occupied housing, respectively. The Lincoln Park study area has a greater percentage of smaller housing units than the neighborhood overall. Thirty-six

¹⁰ not including subsidized housing

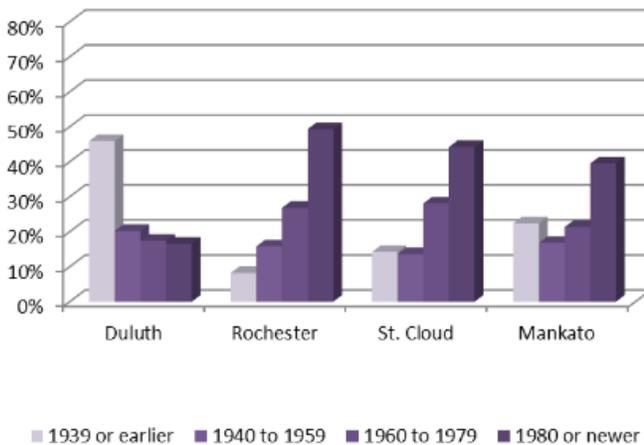
percent of all units in the study area are studios or one-bedroom units, 27% are two-bedroom and 29% are three-bedroom units (ACS 2012 5-year Estimates). The smaller household size and housing units may be skewed by a few larger apartment complexes in the study area, including the Midtowne Manor apartments operated by the Housing & Redevelopment Authority.

Based on the number of occupants per bedroom, it does not appear that overcrowding is an issue in Lincoln Park. In the study area, 93% of occupied housing units have 1 or fewer occupants per bedroom, and this goes up to 96% across the neighborhood (ACS 2012 5-year Estimates).

Age of Housing Stock

Nearly half (45.9%) of Duluth’s units were built before 1940 (Figure 7). This is significantly higher than Minnesota, where the percent of housing units built before 1940 in the state is 18.1%, and 13.9% for the nation (City of Duluth, 2014a). Figure 1 shows the age of Duluth’s housing stock compared to Rochester, St. Cloud and Mankato. In Lincoln Park, 62.5% of study area and 67% of neighborhood-wide housing structures were built before 1940. Ten percent of study area and eight percent of neighborhood-wide housing structures were built since 1980. There has been minimal net gain in housing units in recent years because of Duluth’s concerted efforts to demolish blighted properties (City of Duluth, 2014a).

Figure 7: Age of Housing Stock: City Comparison (ACS, 2012) (Source: 2013 Housing Indicators Report, City of Duluth, 2014)



Summary

The affordability of Lincoln Park’s housing stock meets an important need for lower income households in Duluth. Vacancy rates and lack of overcrowding indicate that there is some existing supply in the neighborhood. Reasons for the higher vacancy rates are speculative but could be reduced with improvements to existing the housing stock, which is very old, and marketing the livability of the community. Future housing development will be hampered by non-conforming lot sizes and redevelopment may be impacted by the amount of work housing stock requires to be upgraded as a result of its age.

How will future land use and zoning meet housing needs?

To assess how future land use and zoning recommendations in the SAP could affect the amount and type of future residential properties, MDH analyzed the change in permitted uses parcel by parcel throughout the study area and whether it would result in a positive or negative impact on available housing. There were 14 permutations of zoning changes, including the following: Industrial General (I-G) to Form Based-5 (F-5), I-G to Mixed Use-Business (MU-B), MU-B to F-5, MU-B to Mixed Use-Commercial (MU-C), MU-B to Mixed Use-Neighborhood (MU-N), MU-N to F-5, MU-N to MU-B, Residential-Traditional (R-1) to MU-N, R-1 to Park and Open Space (P-1), Residential-Urban (R-2) to MU-B, R-2 to MU-C, R-2 to MU-N, and R-2 to P-1. Tables that describe the change in permitted uses for each of these 14 zoning recommendations are included in Appendix A.

I-G to F-5

Industrial General does not allow housing, however the form-based zoning, F-5, does. Therefore, this zoning change has the potential to increase supply of housing. There are 35 parcels, a total of 340,679 sq ft, which are proposed to be converted from I-G to F-5. The smallest lot is 735 sq ft, with an average lot size of 9,734 sq ft.

Twenty-six properties have no estimated value for the building, which means the lot is likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. Most of these properties are located on Michigan, between 30th Ave W and 24th Ave W. These properties are adjacent to existing industrial zoned land, which would reduce its likelihood to include significant amounts of housing in future development. However, these properties also are across from the Heritage Sports Center and Clyde Iron Works, amenities that could be compatible with live-work spaces or higher-intensity urban-style dwellings. The impact of this zoning change will be minimal in magnitude and not very likely.

I-G to MU-B

Neither I-G nor MU-B permits housing to be developed therefore this zoning change will have no impact on housing options. There are 28 parcels, a total of 835,861 sq ft, which are proposed to be converted from I-G to MU-B. The smallest lot is 1,359 sq ft, with an average lot size of 29,852 sq ft.

Twenty-one properties have no estimated value for the building, which means the lot is likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. Most of these properties are located on Michigan or south of Michigan between 26th Ave W and Piedmont Ave/22nd Ave W.

I-G to MU-C

Industrial General does not allow housing, however MU-C zoning does. Therefore, this zoning change has the potential to increase supply of housing. There are 179 parcels, a total of 2,473,677 sq ft, which are proposed to be converted from I-G to MU-C. The smallest lot is 331 sq ft, with an average lot size of 13,819 sq ft.

One-hundred and forty-eight properties have no estimated value for the building, which means the lot is likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. Most of these properties are located on small to medium-sized lots surrounding the Heritage Sports Arena and Clyde Iron Works, currently occupied by surface parking for these facilities and interstate right-of-way. The other re-

zoned properties are clustered near Bent Paddle south of Michigan between Piedmont Ave (22nd Ave W) and 16th Ave W. These parcels consist of surface parking, storage, and a Kia dealership.

There are only a couple properties that have a chance of being redeveloped and the surrounding uses reduce their likelihood of being redeveloped with any significant amounts of housing. There is a small likelihood that mixed-use redevelopment, especially on a couple parcels near Bent Paddle, could include live-work spaces. The impact of this zoning change will be minimal in magnitude and not very likely.

MU-B to F-5

MU-B does not allow housing, however F-5 zoning does. Therefore, this zoning change has the potential to increase supply of housing. There are 69 parcels, a total of 801,314 sq ft, which are proposed to be converted from MU-B to F-5. The smallest lot is 281 sq ft, with an average lot size of 11,613 sq ft.

Twenty-two properties have no estimated value for the building, which means the lot is likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. There are a cluster of properties located between Superior St and 1st St around 29th Ave W, as well as some scattered along Superior St between 26th Ave W and Piedmont (22nd) Ave. The properties on 1st, across from existing R-2 zoning are more likely to be redeveloped with housing either as a primary or mixed use. The properties on Superior are surrounded and across from existing uses that are not aesthetically or operationally compatible with residential. The impact of this zoning change will be relatively small in magnitude but potentially likely on a couple sites on 1st St between 30th Ave W and 28th Ave W.

MU-B to MU-C

MU-B does not allow housing, however MU-C zoning does. Therefore, this zoning change has the potential to increase supply of housing. There are 49 parcels, a total of 329,391 sq ft, which are proposed to be converted from MU-B to MU-C. The smallest lot is 1,223 sq ft, with an average lot size of 6,722 sq ft.

Twelve properties have no estimated value for the building, which means the lot is likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. Most of these properties are located on 1st St W, between 24th Ave W and Piedmont (22nd Ave W), and two are located near 19th Ave W. A couple of the properties are adjacent to existing residential uses and would be very compatible for further housing development; however small lot size may constrain redevelopment even if adjacent vacant lots are combined. It is possible that a four to six unit property could be built. The impact of this zoning change will be relatively small in magnitude and likely for only a couple parcels.

MU-B to MU-N

MU-B does not allow housing, however MU-C zoning does. Therefore, this zoning change has the potential to increase supply of housing. There are 33 parcels, a total of 441,132 sq ft, which are proposed to be converted from MU-B to MU-N. The smallest lot is 1,263 sq ft, with an average lot size of 13,368 sq ft.

Nineteen properties have no estimated value for the building, which means the lot is likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. A few of the undeveloped

parcels are clustered adjacent to the ore docks on Carlton St and next to a funeral home. The rest of these properties are located on Superior St from 16th to 14th Ave W surrounding the Duluth Gospel of Tabernacle Church. There are some existing homes in this area and it may be conducive to more housing. Due to the small number of available parcels, the impact of this zoning change on housing will be small in magnitude but fairly likely at the eastern end of the neighborhood.

MU-N to F-5

Both MU-N and F-5 zoning allow multiple types of housing development. Two parcels are proposed to be converted from MU-N to F-5. One lot is 17,522 sq ft and the other lot is 27,334 sq ft. The two lots are located across from each other at the northeast and northwest corners of 28th Ave W and Superior St. Both lots have development on them currently, including the Western Building apartments and Northfield apartments. The impact of this zoning change will be very minimal.

MU-N to MU-B

MU-B does not allow housing development, while MU-N does. Therefore, depending on the number and location of properties that are being rezoned, this change could potentially impact housing availability. There are 21 parcels, a total of 82,737 sq ft, which are proposed to be converted from MU-N to MU-B. The smallest lot is 585 sq ft, with an average lot size of 3,940 sq ft.

Eighteen properties have no estimated value for the building, which means the lot is likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. Most of these properties are located on W 2nd St between 20th Ave W and 22nd Ave W, directly below Highway 53. Most of this land is owned by the State of Minnesota. None of these parcels currently have housing and it is very unlikely that any of these parcels will be redeveloped. The impact of this zoning change on housing will be negligible.

R-1 to MU-N

Both R-1 and MU-N allow housing development, however MU-N allows higher density housing development, such as multifamily and live-work housing units, which could potentially increase available housing units. There are 138 parcels, a total of 597,102 sq ft, which are proposed to be converted from R-1 to MU-N. The smallest lot is 240 sq ft, with an average lot size of 4,327 sq ft.

Forty-four properties have no estimated value for the building, which means the lots are likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. Most of these properties are located on W 2nd and W 3rd Streets between 34th Ave W and 39th Ave W, technically outside of Lincoln Park, but within the Small Area Plan study area. 11 properties are owned by the City; most of the parcels are adjacent to each other on W 3rd St and 37th Ave W. Another 7 properties are owned by the HRA, adjacent to each other on the north side of W 2nd St, between 36th and 37th Ave W. The state owns another eight properties directly north of Wade Stadium. These clusters of vacant properties have a high likelihood of being redeveloped. The current character of surrounding properties includes one- and two-family dwellings. These vacant properties could provide the opportunity to start to increase density to smaller multi-family or townhouse developments. The impact of this zoning change will be moderate in magnitude and very likely.

R-1 to P-1

This zoning change was not fully analyzed because it is merely an administrative amendment, changing existing parkland zoning from R-1 to P-1. There will be no impact on housing availability as a result of this zoning change.

R-2 to MU-B

R-2 zoning allows higher density zoning development, while MU-B does not allow housing in any configuration. A zoning change from Residential-Urban to MU-B could potentially decrease housing availability if lots were redeveloped. There are five parcels, a total of 58,656 sq ft, which are proposed to be converted from R-2 to MU-B. The smallest lot is 2,003 sq ft, with an average lot size of 11,731 sq ft.

All 5 properties have no estimated value for the building, which means the lots are likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. The three smallest properties are state-owned parcels located below Highway 53 and are unlikely to be developed. The two larger properties are located at 14th and Superior and Michigan streets, right at the entrance to Lincoln Park, referred to as 'the point of rocks.' No housing currently exists on any of these parcels and the parcels are not ideal locations for housing to be developed even if the zoning was not changed from R-2 to MU-B. Therefore, the zoning change will have no impact on housing availability.

R-2 to MU-C

Both R-2 and MU-C zoning allow housing development. R-2 zoning allows all types and densities of housing units, while MU-C allows multi-family and live-work units only, potentially limiting the single and two-family homes prevalent in the Lincoln Park neighborhood. There are 21 parcels, a total of 70,151 sq ft, which are proposed to be converted from R-2 to MU-C. The smallest lot is 1,754 sq ft, with an average lot size of 3,340 sq ft.

Seven properties have no estimated value for the building, which means the lots are likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. All of these properties are located between 24th and 25th Ave W on W 1st St. Most of the lots are narrow (25 feet), but only one of them is not adjacent to another lot with which it could be combined for future development. Existing surrounding uses are one- and two-family dwellings, which are not allowed under the zoning change. Small multi-family units are more likely for these lots than some of the other higher-intensity uses allowed under MU-C zoning. Therefore, the impact of this zoning change will be positive and fairly likely, although small in magnitude.

R-2 to MU-N

Both R-2 and MU-N allow for multiple types of housing developments including single and two-family housing, townhouses, co-housing, and assisted living. MU-N also allows for multi-family and live-work housing, potentially increasing developable housing units on the re-zoned parcels. There are 113 parcels, a total of 610,924 sq ft, which are proposed to be converted from R-2 to MU-N. The smallest lot is 116 sq ft, with an average lot size of 5,406 sq ft.

Thirty-two properties have no estimated value for the building, which means the lots are likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. Several of the vacant properties are located on a triangle of land toward the eastern end of the neighborhood on Piedmont Ave between W 1st St and Superior. The terrain here is steep, rocky, and subsequently not developable. Other vacant parcels are located on W 3rd St between 24th Ave W and 28th Ave W. One property, across from Lincoln park, is over Miller Creek and may not be developable. Another couple properties to the west of 27th appear to be used as surface parking for Holy Trinity Lutheran Church. Three properties – one on the south side of 3rd, just west of 26th and a couple on the north side of 3rd between 24th and 25th – likely have good potential for infill development as one- or two-family dwellings. A third cluster of vacant properties is located at Vernon St, just down from Harrison Community Center. The lots are narrow and shallow, however a couple are located adjacent to each other and could be redeveloped as one- or two-family dwellings if the lots were consolidated. The current zoning, R-2, would allow for this redevelopment option, and therefore, the impact of this zoning change will be insignificant.

R-2 to P-1

This zoning change was not fully analyzed because it is merely an administrative amendment, changing existing parkland zoning from R-2 to P-1. There will be no impact on housing availability as a result of this zoning change.

Summary

At least in the short-term, the rezoning and future land use designations recommended by the SAP will have small, though positive impacts on the potential for new housing units in Lincoln Park. Overall, the rezoning allows for more multi-family and live-work housing that can be blended in with retail or act as a buffer between the lower density residential neighborhoods and commercial uses.

While the zoning designations do not provide any clarification or requirements for housing prices or number of bedrooms per housing unit, the City zoning code has made an effort to make the code flexible to encourage fair housing practices and affordability. For example, the zoning code's requirement that each residential unit have one parking space can be reduced by 30% if located near a mass transit stop, which reduces costs for the developer and can preserve affordability for renters (City of Duluth, 2014b). Still, it remains to be seen how the rezoning will impact housing affordability or demand for specific housing types, even if it increases the number of housing units. A more detailed assessment could have analyzed which parcels had existing buildings that were in disrepair and more likely to be demolished and rebuilt in the near-term. That would give a more complete picture of the potential these rezoning might have on housing availability. See Figure 8 for a summary of the impact analysis.

Figure 8: Summary of Land Use/Zoning Recommendations Impact Analysis: Housing Units, Quality and Affordability

Impact	Direction	Magnitude	Likelihood	Evidence
Housing (I-G to F-5 rezoning)	Positive (+)	Small (*)	Unlikely	Best practice
Housing (I-G to MU-B rezoning)	N/A	N/A	N/A	N/A
Housing (I-G to MUC rezoning)	Positive (+)	Small (*)	Unlikely	Best practice
Housing (MU-B to F-5 rezoning)	Positive (+)	Small (*)	Likely (for select properties on 1 st St)	Best practice
Housing (MU-B to MU-C rezoning)	Positive (+)	Small (*)	Likely (for select properties on 1 st St)	Best practice
Housing (MU-B to MU-N rezoning)	Positive (+)	Small (*)	Likely (for select properties on Superior St)	Best practice
Housing (MU-N to F-5 rezoning)	No change	No change	Unlikely	Best practice
Housing (MU-N to MU-B rezoning)	Negative (-)	Negligible	Unlikely	Best practice
Housing (R-1 to MU-N rezoning)	Positive (+)	Moderate (**)	Very Likely	Best Practice
Housing (R-1 to P-1 rezoning)	N/A	N/A	N/A	N/A
Housing (R-2 to MU-B rezoning)	Neutral	Negligible	Unlikely	Best practice
Housing (R-2 to MU-C rezoning)	Positive (+), small multi-family units	Small (*), perhaps 3 new developments	Likely	Best practice
Housing (R-2 to MU-N rezoning)	Neutral	Negligible	Unlikely	Best practice
Housing (R-2 to P-1 rezoning)	N/A	N/A	N/A	N/A

Impacts of Future Land Use and Zoning Recommendations on Social Cohesion

Existing Conditions

Businesses, organizations and public locations that promote active or passive interaction among neighbors are thought to promote social cohesion (Burns et al, 2000; Forrest, Kearns, 2001; Peterson, et al., 2000). Social cohesion is a measure of the depth of relationships in a community. Characteristics of a socially cohesive community include trust, participation and mutual support (Campbell and Jovchelovitch, 2000). Social cohesion has been positively associated with a variety of health outcomes, such as lower blood pressure, lower obesity and diabetes, better immune responses, lower levels of stress hormones and better mental health (Lochner et al., 2003; Leyden, 2003, Brunner, 1997; Uchino et al., 1996).

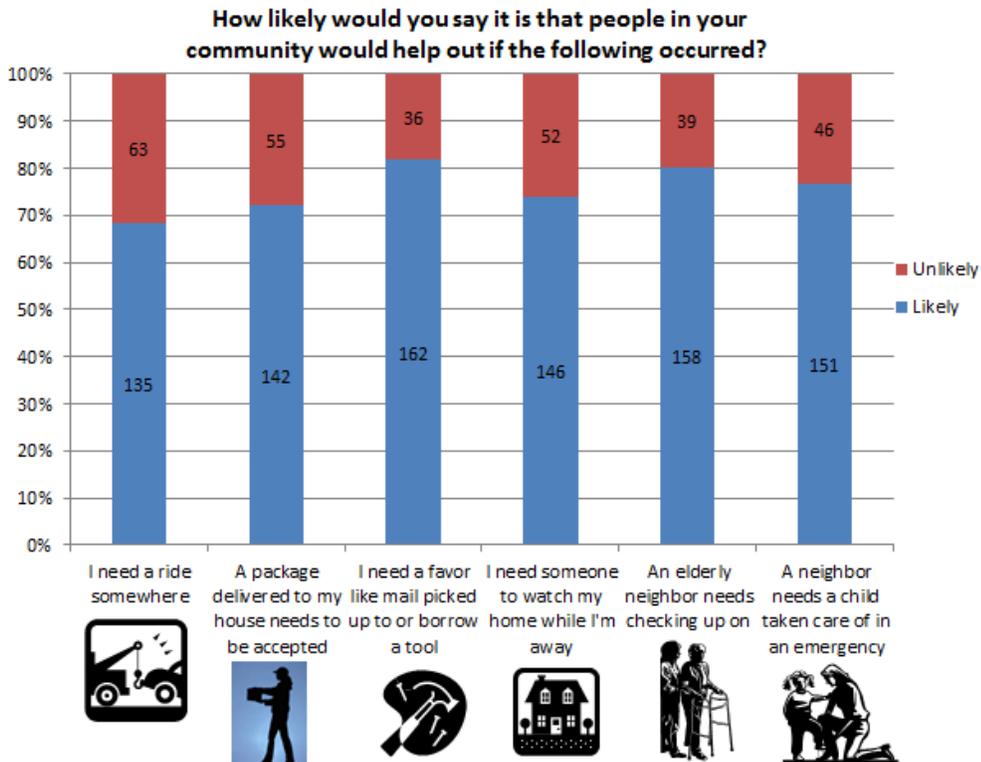
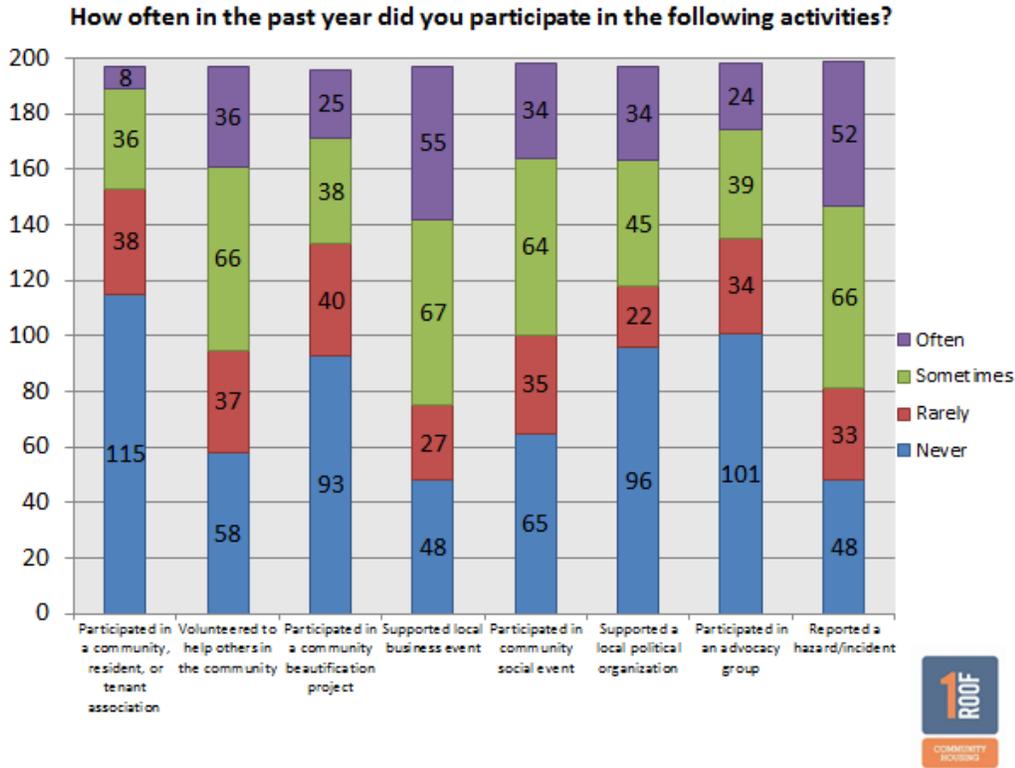
Social cohesion can be evaluated with a number of metrics, including the following:¹¹

- Membership rates of organizations and civic participation
- Trust (survey)
- Income distribution (Gini coefficients and share of income going to middle 60% of population – “middle class consensus”)
- Ethnic heterogeneity

One Roof conducted a survey in Lincoln Park that asked residents questions related to social cohesion. The survey was done in a specific target area, not the entire neighborhood. The target area included the neighborhood west of Lincoln Park (N 26th Ave W). The survey included questions on satisfaction with the neighborhood, whether residents would recommend living in the neighborhood, the length of residence in Lincoln Park, whether residents participate in activities, if neighbors can be relied on for help, what services are accessible, satisfaction with services, rating of public services, and questions about sense of safety for children and the community overall. The responses were mostly positive overall (Figure 9); and the relative access to goods and services was surprising for some Advisory Committee members. Food shopping was the least accessible, but was still accessible for over 50% of respondents. Kwik Trip is now open in Lincoln Park and is known for offering more fresh food options than the Little Store. Survey respondents were less satisfied with the condition of city streets. The most telling response for safety issues was feeling unsafe when walking in the community at night.

¹¹ <http://www.resourcegovernance.org/sites/default/files/Easterly,%20Ritzen%20and%20Woolcock%20-%20Social%20Cohesion,%20Institutions,%20and%20Growth.pdf>

Figure 9: Survey results



In addition to the OneRoof survey, part of the Lincoln Park SAP and HIA has included community engagement, such as an Open House and one-on-one conversations with residents and community members. Out of the one-on-one conversations it became clear that there is a desire for more opportunities for neighbors to connect, including activities and places to get together, such as coffee shops. One community member spoke about the need for more businesses in the area and places to go. All that remains from when they were a kid in the neighborhood is Johnson's Bakery. The businesses, organizations and public locations in Lincoln Park that are most likely to foster social cohesion include the following:

- Organizations: Boys & Girls club, Harrison Community center, Northern Expressions, Community Action Duluth, Ecolibrium3/Our Lincoln Park Portal, Citizens patrol (the contradiction is that the group exists because there is crime and distrust (Fukuyama, 1999; Cheong, 2006))
- Coffee shops/local restaurants: Johnson's Baking, Duluth Grill
- Activities: Hockey/sports arena (Cheong, 2006), Children's museum, Lorenzi's boxing, Wheeler Athletic Complex (Cheong, 2006), Meet on the Street (Open Streets)
- Parks and Recreation: Lincoln Park (Peters et al., 2009; UW, 2014; UK, 2011; Cheong, 2006)
- Churches:
 - Duluth Gospel of Tabernacle Church (1515 West Superior Street; duluthgospeltab.org)
 - First Covenant Church (2101 West 2nd Street; firstcovduluth.org)
 - Lincoln Park Community Church (2202 West 3rd Street; lincolnparkcommunity.com)
 - Zion Lutheran Church (2431 West 3rd Street; zionduluth.org)
 - Bethany Lutheran Church (2303 West 3rd Street)
 - Holy Family Catholic Church (2430 West 3rd Street; holyfamilyduluth.org)
 - Church of Restoration (2623 West 2nd Street; <http://churchofrestorationm.wix.com/about#!home/mainPage>)
 - Holy Trinity Lutheran Church (2701 West 3rd Street)
- Libraries:
 - Duluth Public Library (downtown: 520 West Superior Street)
 - West Duluth Branch Library (5830 Grand Avenue)

Another type of location that can have both positive and negative impacts on social cohesion is bars. Bars are frequently places that community members meet at to discuss community issues, celebrate, vent, and generally build relationships. However, bars (and alcohol more generally) also can lead to negative outcomes, such as drunken and disorderly conduct, fights, domestic abuse, and cause rifts in community cohesion. The bars and/or tap rooms in Lincoln Park include the All American Club, Bergey's, Lake Superior Brewing, Bent Paddle Brewing, and Clyde Iron Works Restaurant & Bar.

According to the OneRoof survey, more than 50% of respondents volunteered to help others, supported a local business event, participated in community social event, or reported a hazard/incident sometimes or often. More than 50% of respondents never participated in a community, resident or tenant organization or participated in an advocacy group, and approximately half never supported a local political organization or participated in a community beautification project. These responses don't indicate that residents are highly engaged in the community, which can be an indication of low community cohesion.

However, studies show that social cohesion and interactions are more likely to happen within the neighborhood at the block level or outside of the neighborhood across other social and lifestyle activities (Kleinhans, 2004). This finding is supported by the OneRoof survey question that asks how likely neighbors would be to help out if needed. Upwards of 70% of residents felt that their neighbors would help if they needed a ride, a package picked up, a small favor, child care, older residents checked on, and help in an emergency. At a block level, it would seem that Lincoln Park has a high level of social cohesion.

At the neighborhood level, residents may rely on formal organizations, such as OneRoof, LISC, Community Action Duluth, and others, to support the neighborhood. This analysis shows that there are many organizations in the neighborhood fulfilling this role. Additionally, there are a number of locations where residents may interact in the community, such as churches and other social gathering spaces, such as Heritage Sports Center, Lincoln Park park, Harrison Community Center, etc. Without survey data to assess the interactions of community members at these locations, it is not possible to assess the level of social cohesion that results from these places.

How will future land use and zoning impact the number of businesses or activities?

To assess how future land use and zoning recommendations in the SAP could affect the number or type of future businesses or activities, MDH analyzed the change in permitted uses parcel by parcel throughout the study area. The analysis specifically focused on activities and businesses that would be allowed under new zoning that might affect social cohesion or sense of community. There were 14 permutations of zoning changes, including the following: Industrial General (I-G) to Form Based-5 (F-5), I-G to Mixed Use-Business (MU-B), MU-B to F-5, MU-B to Mixed Use-Commercial (MU-C), MU-B to Mixed Use-Neighborhood (MU-N), MU-N to F-5, MU-N to MU-B, Residential-Traditional (R-1) to MU-N, R-1 to Park and Open Space (P-1), Residential-Urban (R-2) to MU-B, R-2 to MU-C, R-2 to MU-N, and R-2 to P-1. Tables that describe the change in permitted uses for each of these 14 zoning recommendations are included in Appendix A.

I-G to F-5

New business types allowed under F-5 zoning but not I-G that might support social cohesion or sense of community include museums, libraries and art galleries; parks and playgrounds; churches; schools (K-12 and professional); convention and/or event centers; restaurants; theaters; and preschools and day care facilities. Uses no longer allowed following this zoning change that can negatively affect social cohesion include adult entertainment and book stores. Additional uses that would no longer be permitted include heavy manufacturing, industrial and freight activities. Overall, this zoning change has the potential to increase social cohesion.

There are 35 parcels, a total of 340,679 sq ft, which are proposed to be converted from I-G to F-5. The smallest lot is 735 sq ft, with an average lot size of 9,734 sq ft. All of the properties are located on W Michigan St or W Superior St, between 30th Ave W and 24th Ave W. Twenty-six properties have no estimated value for the building, which means the lots are likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. Many of these lots are currently being used for surface parking. F-5 zoning does allow parking lots as a primary use, but any new development would have to put surface parking that is a supportive or secondary use behind the new building.

The potential impact of this zoning change could be tremendous if the vacant or surface parking lots were converted to new retail businesses, services or mixed-use with housing, but the likelihood is heavily dependent on the development market. According to City Planning staff the likelihood of redevelopment of some of these underdeveloped or vacant lots is very possible; the city is looking at the F-5 zoning to not only allow but promote redevelopment (personal communication, John Kelley, March 5, 2015).

I-G to MU-B

New business types allowed under MU-B zoning but not I-G that might support social cohesion or sense of community include professional schools; museums, libraries or art galleries; churches; convention or event centers; restaurants; and other outdoor entertainment or recreation uses. Uses no longer allowed following this zoning change that can negatively affect social cohesion include adult entertainment and book stores. Additional uses that would no longer be permitted include heavy manufacturing. Overall, this zoning change has the potential to increase social cohesion.

There are 28 parcels, a total of 835,861 sq ft, which are proposed to be converted from I-G to MU-B. The smallest lot is 1,359 sq ft, with an average lot size of 29,852 sq ft. All of the properties are located on Michigan or south of Michigan between 26th Ave W and Piedmont Ave/22nd Ave W. Twenty-one properties have no estimated value for the building, which means the lots are likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. Many of the vacant lots are currently being used for surface parking. MU-B zoning does allow parking lots as a primary use, and as a result the zoning change would not necessarily encourage new uses. A few of the lots are state-owned property for highway right-of-way, which cannot be redeveloped. A few lots between 23rd and 24th could be combined into new redevelopment for businesses or activities that support social cohesion; the buildings adjacent are service oriented and have nice facades and good quality sidewalks that would support additional development of this type.

Due to the location of available lots and the proximal uses, the potential impact of this zoning change would be fairly limited even if some of the vacant or surface parking lots were converted to new retail businesses, services or mixed-use with housing. The likelihood of many of these lots being redeveloped is small.

I-G to MU-C

New business types allowed under MU-C zoning but not I-G that might support social cohesion or sense of community include museums, libraries or art galleries; parks and playgrounds; schools (K-12 and professional); convention or event center; indoor entertainment facility; restaurants; theaters; other outdoor recreational uses; preschool and daycare; and other retail. Uses no longer allowed following this zoning change that can negatively affect social cohesion include adult entertainment and book stores. Additional uses that would no longer be permitted include light and heavy manufacturing; freight; and other industrial uses. Overall, this zoning change has the potential to increase social cohesion.

There are 179 parcels, a total of 2,473,677 sq ft, which are proposed to be converted from I-G to MU-C. The smallest lot is 331 sq ft, with an average lot size of 13,819 sq ft. One-hundred and forty-eight properties have no estimated value for the building, which means the lot is likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. Most of these properties are located on small to medium-sized

lots surrounding the Heritage Sports Arena and Clyde Iron Works, currently occupied by surface parking for these facilities and interstate right-of-way. The other re-zoned properties are clustered near Bent Paddle Brewing south of Michigan between Piedmont Ave (22nd Ave W) and 16th Ave W. These parcels consist of surface parking, storage, and a Kia dealership.

The properties clustered near Bent Paddle Brewing have a greater chance of being redeveloped, and surrounding uses would support more retail, service and entertainment establishments that could support social cohesion. The impact of this zoning change will be moderate in magnitude and likely in the long-term.

MU-B to F-5

New business types allowed under F-5 zoning but not MU-B that might support social cohesion or sense of community include parks and playgrounds; schools (K-12 and universities or colleges); theaters; preschool and daycare facilities; and other retail. There are not any uses no longer allowed following this zoning change that would likely negatively affect social cohesion. Overall, this zoning change has the potential to increase social cohesion.

There are 69 parcels, a total of 801,314 sq ft, which are proposed to be converted from MU-B to F-5. The smallest lot is 281 sq ft, with an average lot size of 11,613 sq ft. All of the parcels are located on W Superior St or W 1st St between 22nd Ave W and 30th Ave W.

Twenty-two properties have no estimated value for the building, which means the lot is likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. There are a cluster of properties located between Superior St and 1st St around 29th Ave W, as well as some scattered along Superior St between 26th Ave W and Piedmont (22nd) Ave. Many of these properties are currently being used for storage and could be redeveloped.

If the vacant parcels were redeveloped to include more retail, theater or services it could do a lot to improve the area and would provide more locations that could promote social cohesion. However, many of the uses allowed under MU-B and F-5 would not promote social cohesion, such as light manufacturing, auto services, or even an upgraded storage warehouse. If redevelopment follows the course of surrounding uses, then promoting social cohesion is unlikely. The impact of this zoning change will be relatively small and not very likely.

MU-B to MU-C

New business types allowed under MU-C zoning but not MU-B that might support social cohesion or sense of community include parks and playgrounds; schools (K-12); theater; preschool and day care; grocery stores; and other retail. Uses no longer allowed following this zoning change that may or may not affect social cohesion include light manufacturing, freight, and heavy vehicle service and sales. Overall, this zoning change has the potential to increase social cohesion.

There are 49 parcels, a total of 329,391 sq ft, which are proposed to be converted from MU-B to MU-C. The smallest lot is 1,223 sq ft, with an average lot size of 6,722 sq ft. Most of these properties are located on W 1st St, between 24th Ave W and Piedmont (22nd Ave W), and another cluster are located on W 1st St between 18th and 19th Ave W.

Twelve properties have no estimated value for the building, which means the lot is likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. A couple of the properties are adjacent to existing residential uses and would be more compatible for low-intensity uses that serve the community and promote interaction among neighbors; however small lot size may constrain redevelopment even if adjacent vacant lots are combined. The impact of this zoning change will be relatively small in magnitude and likely for only a couple parcels.

MU-B to MU-N

New business types allowed under MU-N zoning but not MU-B that might support social cohesion or sense of community include theater; preschool or day care; and other retail. Uses no longer allowed following this zoning change that might support social cohesion include convention or event centers and indoor entertainment facilities. This zoning change could promote or diminish social cohesion.

There are 33 parcels, a total of 441,132 sq ft, which are proposed to be converted from MU-B to MU-N. The smallest lot is 1,263 sq ft, with an average lot size of 13,368 sq ft. Nineteen properties have no estimated value for the building, which means the lot is likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. A few of the undeveloped parcels are clustered adjacent to the ore docks on Carlton St and next to a funeral home. The rest of these properties are located on Superior St from 16th to 14th Ave W surrounding the Duluth Gospel of Tabernacle Church. This could be a prime location for community-serving retail or services. Due to the small number of available parcels, the impact of this zoning change on social cohesion will be small in magnitude but fairly likely at the eastern and western ends of the neighborhood.

MU-N to F-5

There are very few differences between uses allowed under F-5 and MU-N zoning. New businesses allowed under the proposed zoning change that might support social cohesion or sense of community include large retail; convention or event center; indoor entertainment facility; large restaurant; and universities or colleges. Despite minimal differences, it is possible that this zoning change could promote social cohesion.

However, only two parcels are proposed to be converted from MU-N to F-5. One lot is 17,522 sq ft and the other lot is 27,334 sq ft. The two lots are located across from each other at the northeast and northwest corners of 28th Ave W and Superior St. Both lots have development on them currently, including the Western Building apartments and Northfield apartments. The impact of this zoning change will be very minimal.

MU-N to MU-B

New business types allowed under MU-B zoning but not MU-N that might support social cohesion or sense of community include convention or event centers; indoor entertainment facilities; and larger restaurants. However, MU-B allows more intensive land uses that MU-N does not which would be unlikely to promote interaction among residents. Examples include mini-storage facilities, parking lots and structures as primary uses, and light manufacturing, among others. This zoning change could promote or diminish social cohesion.

There are 21 parcels, a total of 82,737 sq ft, which are proposed to be converted from MU-N to MU-B. The smallest lot is 585 sq ft, with an average lot size of 3,940 sq ft. Most of these properties are located on W 2nd St between 20th Ave W and 22nd Ave W, directly below Highway 53. Most of this land is owned by the State of Minnesota. It is very unlikely that any of these parcels will be redeveloped. The impact of this zoning change on social cohesion will be negligible.

R-1 to MU-N

New business types allowed under MU-N zoning but not R-1 that might support social cohesion or sense of community include clubs or lodges (private); professional schools; small restaurants; and other retail. Uses no longer allowed following this zoning change that can positively affect social cohesion include urban agriculture, such as community gardening. Currently there are no community gardens in Lincoln Park, therefore, this zoning change is more likely to promote social cohesion.

There are 138 parcels, a total of 597,102 sq ft, which are proposed to be converted from R-1 to MU-N. The smallest lot is 240 sq ft, with an average lot size of 4,327 sq ft. All of these properties are located on W 2nd and W 3rd Streets between 34th Ave W and 39th Ave W, technically outside of Lincoln Park, but within the Small Area Plan study area. This area is being rezoned to promote the development of a sports corridor between Wade Stadium and Wheeler Athletic Complex. The City would like to see more commercial development, such as retail and restaurants, in this area.

Forty-four properties have no estimated value for the building, which means the lots are likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. Eleven properties are owned by the City; most of the parcels are adjacent to each other on W 3rd St and 37th Ave W. Another seven properties are owned by the HRA, adjacent to each other on the north side of W 2nd St, between 36th and 37th Ave W. The state owns another eight properties directly north of Wade Stadium. These clusters of vacant properties have a high likelihood of being redeveloped. The current character of surrounding properties includes one- and two-family dwellings. These vacant properties could provide the opportunity to start to increase density to mixed-use (vertical and/or horizontal) retail and housing developments. The impact of this zoning change will be moderate in magnitude and very likely.

R-1 to P-1

This zoning change was not fully analyzed because it is merely an administrative amendment, changing existing parkland zoning from R-1 to P-1. There will be no impact on businesses or activities as a result of this zoning change.

R-2 to MU-B

New business types allowed under MU-B zoning but not R-2 that might support social cohesion or sense of community include convention or event centers; indoor entertainment facilities; larger restaurants; and other outdoor entertainment. Uses no longer allowed following this zoning change that can promote social cohesion include parks and playgrounds, urban agriculture (community gardens); day care facilities; and small retail stores. This zoning change could promote or diminish social cohesion.

There are five parcels, a total of 58,656 sq ft, which are proposed to be converted from R-2 to MU-B. The smallest lot is 2,003 sq ft, with an average lot size of 11,731 sq ft. All 5 properties have no estimated value for the building, which means the lots are likely vacant. The three smallest properties are state-owned parcels located below Highway 53 and are unlikely to be developed. The two larger properties are located at 14th and Superior and Michigan streets, right at the entrance to Lincoln Park, referred to as 'the point of rocks.' No development currently exists on any of these parcels and the parcels are not ideal locations for new establishments. Therefore, the zoning change will likely have no impact on social cohesion.

R-2 to MU-C

New business types allowed under MU-C zoning but not R-2 that might support social cohesion or sense of community include professional schools; convention and event centers; large restaurants; indoor entertainment facilities; theaters; large retail; and outdoor entertainment or recreation. Uses no longer allowed following this zoning change that can promote social cohesion include urban agriculture (community gardens). Overall, this zoning change is more likely to have the potential to increase social cohesion.

There are 21 parcels, a total of 70,151 sq ft, which are proposed to be converted from R-2 to MU-C. The smallest lot is 1,754 sq ft, with an average lot size of 3,340 sq ft. All of these properties are located between 24th and 25th Ave W on W 1st St. Existing surrounding uses are one- and two-family dwellings, which are not allowed under the zoning change.

Seven properties have no estimated value for the building, which means the lots are likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. Most of the lots are narrow (25 feet), but only one of them is not adjacent to another lot with which it could be combined for future development. Small retail, mixed-use or multi-family housing developments will be more likely for these lots than some of the other higher-intensity uses allowed under MU-C zoning. The impact of this zoning change will be positive and fairly likely, although small in magnitude.

R-2 to MU-N

New business types allowed under MU-N zoning but not R-2 that might support social cohesion or sense of community include professional schools; and theaters. MU-N does not allow urban agriculture; but otherwise the community-supportive uses allowed under both zoning types are similar. Overall, this zoning change has a pretty neutral impact on social cohesion.

There are 113 parcels, a total of 610,924 sq ft, which are proposed to be converted from R-2 to MU-N. The smallest lot is 116 sq ft, with an average lot size of 5,406 sq ft. There are three main clusters of these proposed rezonings. One cluster is located on a triangle of land toward the eastern end of the neighborhood on Piedmont Ave between W 1st St and Superior. The terrain here is steep, rocky, and subsequently not developable. Another cluster of parcels is located on W 3rd St between 24th Ave W and 28th Ave W. A third cluster of vacant properties is located at Vernon St, just down from Harrison Community Center.

Thirty-two properties have no estimated value for the building, which means the lots are likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. Several of the vacant

properties are located on W 3rd St between 24th Ave W and 28th Ave W. One property, across from Lincoln Park, is over Miller Creek and may not be developable. Another couple properties to the west of 27th appear to be used as surface parking for Holy Trinity Lutheran Church. Three properties – one on the south side of W 3rd St, just west of 26th and a couple on the north side of 3rd between 24th and 25th – likely have good potential for infill development as low-density housing or neighborhood-serving retail or services. A third cluster of vacant properties is located at Vernon St, just down from Harrison Community Center. The lots are narrow and shallow, prohibitive for development. However, a couple of the parcels are adjacent to each other and could be redeveloped as one- or two-family dwellings if the lots were consolidated. The isolated nature of these properties does not make them conducive for supporting businesses.

R-2 to P-1

This zoning change was not fully analyzed because it is merely an administrative amendment, changing existing parkland zoning from R-2 to P-1. There will be no impact on businesses or activities as a result of this zoning change.

Summary

At least in the short-term, the rezoning and future land use designations recommended by the SAP will have small, though positive impacts on the potential for business and related activities that promote social cohesion in Lincoln Park. The proposed zoning changes will allow more parcels to develop libraries, art galleries, churches, theaters, convention or event centers, restaurants, indoor and outdoor entertainment facilities, recreational uses, and other retail. Additionally, fewer parcels will be allowed to have adult entertainment or book stores.

Many parcels proposed to be rezoned from I-G to MU-B, MU-C or F-5 may still redevelop as commercial uses that do not promote social cohesion even if the zoning change allows for neighborhood serving retail and services. Any new development depends on the market and available subsidies or incentives just as much, if not more so, than the allowed zoning. Vacant parcels are more likely to be redeveloped in the near-term, as well as parcels located near other popular commercial locations, such as Bent Paddle Brewing, or non-governmental organizations, such as Ecolibrium3, which may serve as catalysts for adjacent development.

The City hired a Cushman & Wakefield/Northmarq consulting to conduct a retail study of the neighborhood. The study indicated that the area is ripe for redevelopment and has a lot of strengths to support new retail, such as “good bones” in the building stock, double-loaded streets, destination retailers and restaurants (Bent Paddle, Aerostitch, Frost River, Duluth Grill and Clyde Ironworks), sporting complexes and fields, access to the lake front, and bike connections. In time, the rezoning will likely promote social cohesion but by how much and how far in the future are still relatively large unknowns. See Figure 10 for a summary of the impact analysis.

Figure 10: Summary of Land Use/Zoning Recommendations Impact Analysis: Social Cohesion

Impact	Direction	Magnitude	Likelihood	Evidence
Social cohesion (I-G to F-5 rezoning)	Positive (+)	Large (***)	Possible	Best practice
Social cohesion (I-G to MU-B rezoning)	Positive (+)	Small (*)	Unlikely	Best Practice
Social cohesion (I-G to MUC rezoning)	Positive (+)	Moderate (**)	Likely (long-term)	Best practice
Social cohesion (MU-B to F-5 rezoning)	Positive (+)	Small (*)	Unlikely	Best practice
Social cohesion (MU-B to MU-C rezoning)	Positive (+)	Small (*)	Likely (for select properties on 1 st St)	Best practice
Social cohesion (MU-B to MU-N rezoning)	Positive or Negative (+/-)	Small (*)	Likely	Best practice
Social cohesion (MU-N to F-5 rezoning)	Positive (+)	No change	Unlikely	Best practice
Social cohesion (MU-N to MU-B rezoning)	Positive or Negative (+/-)	Negligible	Unlikely	Best practice
Social cohesion (R-1 to MU-N rezoning)	Positive (+)	Moderate (**)	Very Likely	Best Practice
Social cohesion (R-1 to P-1 rezoning)	N/A	N/A	N/A	N/A
Social cohesion (R-2 to MU-B rezoning)	Positive or Negative (+/-)	Negligible	Unlikely	Best practice
Social cohesion (R-2 to MU-C rezoning)	Positive (+)	Small (*)	Likely	Best practice
Social cohesion (R-2 to MU-N rezoning)	Neutral	Small (*)	Location-dependent (possible on W 3 rd St, unlikely near Harrison Community Center and not possible on Piedmont Ave between W 1 st St and Superior)	Best practice
Social cohesion (R-2 to P-1 rezoning)	N/A	N/A	N/A	N/A

Impacts of Future Land Use and Zoning Recommendations on Access to Healthy Food

Existing Conditions

Access to healthy food is a function of the food environment in a community, the cost of fresh high-nutrient food products, and transportation available to access food retailers. There are potential serious health outcomes related to residents' access to healthy food. Studies suggest that living near a supermarket increases consumption of fruits and vegetables and reduces risk of being overweight or obese and associated health problems, such as diabetes and cardiovascular disease (Odoms-Young et al., 2009; Bader, 2010; Pine & Bennett, 2011).

Lincoln Park Food Environment

Lincoln Park has a number of convenience stores that provide access to packaged foods and a limited selection of fresh produce, but lacks a full service grocery store or supermarket. The closest grocery stores include Super One Foods on N Central Ave in West Duluth and Super One Foods and Target near the Miller Hill Mall north of Lincoln Park. The University of Minnesota-Duluth conducted a food access assessment of the Lincoln Park/West End area of Duluth in 2011. The study found that "Lincoln Park/West End residents purchase groceries at the West Duluth Super One, but also travel to grocery outlets throughout the Twin Ports area. They order food from food buying clubs and utilize a variety of federal government programs that provide food. Residents also hunt, fish and garden to provide themselves with the types of food they wish to consume" (Pine and Bennett, 2011).

A list of all the places residents of Lincoln Park can access raw or prepared foods are listed below.

- Corner stores/Gas stations
 - Kwik Trip (Opened late 2014)
 - Little Store
 - Holiday
 - Interstate Spur (Closed early 2015)
- Restaurants
 - Duluth Grill
 - Johnson's Baking
 - Subway
 - Burger King
 - Quiznos
- Bars
 - Clyde Iron Works Restaurant and Bar
 - All American Club
 - Bergey's
 - Bedrock Bar
- Service organizations/providers
 - Salvation Army (daily hot meals at 11:30am)

- Boys & Girls Club in Lincoln Park: meals and snacks for participating children, as well as family meals throughout the year (Feast of Thanks at Holy Family Catholic Church on Nov 25, 2014)
- Food shelves: (CHUM food shelf on Tues and Thurs in West Duluth). “27% of respondents rating the food shelf as being at least “somewhat important” and 10.5% describing it as “very important” to provisioning their households (Pine and Bennett, 2011) . . . 74% of Lincoln Park/West End EBT users describing the food shelf as “somewhat important” to their diet; 39% of households with children ranked the food shelf as being at least “somewhat important” to their diet”
- Buying clubs (open to all residents; up to 50% off food costs; once-per-month; still require access to distribution site). 12% of respondents ranked SHARE and 10% described Ruby’s Pantry as being at least “somewhat important” in their efforts to access food (Pine and Bennett, 2011).
 - SHARE (distribution site in West Duluth)
 - Angel Food Ministries
 - Ruby’s pantry (\$15 buy-in for \$100 in food, but no choice in the food received – all based on what is donated that month) (distribution site in Central Hillside and Morgan Park)
- SNAP (formerly known as food stamps) and WIC, Federal Free and Reduced Lunch Program and the Afterschool Nutrition Program
- Self-provisioning systems (e.g., hunting, fishing, and gardening) For 25% of respondents, meat from hunting was at least “somewhat important,” while 24% ranked fishing as being “somewhat important” and 48% described gardening as “somewhat important” for provisioning their households.
- [Lincoln Park Farmers’ Market](#), Thursdays from 4-7pm at the Harrison Community Center, June-October, run by Community Action Duluth
- Community garden: One site listed, Emerald Community Garden established 2013 (CHUM)

The UMD study did a survey of fresh produce offered at the local convenience stores compared with the larger supermarkets and grocery stores (Figure 11). It found that “while many traditional grocery items are available at the convenience stores surveyed, it is clear that these businesses are not adequately equipped to provide affordable, healthy food on a scale that would benefit the people of Lincoln Park/West End” (Pine and Bennett, 2011).

Figure 11: Fruits and Vegetables Available at Stores Surveyed (Pine and Bennett, 2011)

	Apple	Banana	Orange	Lettuce	Carrot	Potato
Woodland Marketplace Foods	X	X	X	X	X	X
Cub Foods	X	X	X	X	X	X
Super One Foods	X	X	X	X	X	X
4 th Street Market	X	X	X	X	X	X
The Little Store			X	X		X
Holiday Stationstore	X	X	X			

The UMD study also included a preliminary market analysis which found that the Lincoln Park/West End area could likely support a grocery store. There was strong support from neighborhood survey respondents for a local grocery store. The community outreach for the Lincoln Park SAP and HIA garnered similar feedback: residents ranked access to healthy food as a major priority at the Public Meeting held in September 2014 and consistently listed it as a concern/priority in one-on-one conversations throughout the fall of 2014. In late 2014, Kwik Trip opened a gas station convenience store, a company that is known for providing more fresh food options than many other convenience stores. While this may have increased options for Lincoln Park residents, it does not replace the need for a full-service grocery store.

Cost of Fresh and Healthy Foods

Lincoln Park residents that rely on local convenience stores for some or all of their groceries are likely to pay more than they would at a full service grocery store. The UMD Food Access study found that approximately 10-15% of Lincoln Park/West End residents “experience significant barriers to accessing food. They overpay for food at local convenience stores and, generally, have a difficult time finding the food that they and their families need. In addition, a large number of Lincoln Park/West End community members use “emergency” food shelves to supplement their family’s food supply” (Pine and Bennett, 2011).

The UMD study analyzed the cost of a “food basket” including 3 apples, 2 oranges, a loaf of white bread, a box of cereal, canned peaches, canned corn and skim milk at local convenience stores compared to area supermarkets (see Figure 12) (Pine and Bennett, 2011). This food basket cost \$11.45 on average when purchased at the traditional grocery stores in their survey, while the same food cost \$18.08 on average at the local convenience stores (an average of 58% more). Costs ranged from the lowest food basket price of the grocery stores at Cub Foods which cost \$10.51 to the highest food basket price at the Little Store which cost \$18.97. The survey found that the “price differences [for specific items] ranged from a slightly higher cost for goods such as milk to an astounding 290% increase for vegetable oil” (Pine and Bennett, 2011).

Figure 12: Market Basket of Goods* Comparison (Source: Pine and Bennett, 2011)

Woodland Marketplace Foods	\$11.41
Cub Foods	\$10.51
4 th Street Market	\$13.04
Super One Foods	\$10.84
The Little Store	\$18.97
Holiday Stationstore	\$17.18
*Items included in market basket: 3 apples, 2 oranges, white bread (16 oz.), cereal (12 oz.), canned peaches (15 oz.), canned com (15.25 oz.), and skim milk (1 gal.).	

Federal programs such as the Supplemental Nutrition Assistance Program (SNAP) and Women Infants and Children (WIC) can make food more affordable for households that qualify for assistance. The Kwik Trip and Holiday gas stations both accepted SNAP, Interstate Spur did when it was open, and the Lincoln Park Farmers’ Market does as well, although that is only open seasonally. The major grocery stores and supermarkets in West Duluth and Miller Hill Mall accept SNAP and also accept WIC. None of the convenience stores in Lincoln Park accept WIC.

For a store to be eligible to accept SNAP benefits, it must sell food for home preparation and consumption and meet one of the following criteria:

- A. Offer for sale, on a continuous basis, at least three varieties of qualifying foods in each of the following four staple food groups, with perishable foods in at least two of the categories:
 - meat, poultry or fish
 - bread or cereal
 - vegetables or fruits
 - dairy products; OR
- B. More than one-half (50%) of the total dollar amount of all retail sales (food, nonfood, gas and services) sold in the store must be from the sale of eligible staple foods.

For a store to be eligible to accept WIC benefits, it must carry minimum quantities of infant formula, infant cereal, milk, cheese, eggs, dried peas, beans or lentils, canned beans, peanut butter, fresh fruit and vegetables, canned fish, juice, adult whole grain cereal, baby food fruits and vegetables, whole grains (bread, rice, oatmeal), and additional items upon request of customers. Additionally, there are maximum prices that retailers can sell WIC allowed foods (115% of the state average cost).

Transportation to Food Outlets

Lincoln Park residents can walk, drive, bike or take transit to access food outlets. It takes approximately eight to ten minutes to drive to the Super One in West Duluth or the Super One, Cub Foods or Target near the Miller Hill Mall. This is less than the national average of 15 minutes travel time to a grocery store (USDA, 2009). However, 28 percent of households do not own a vehicle in the SAP study area, and 18 percent do not own a vehicle across the neighborhood. These are very low car ownership rates and indicate that residents likely travel shorter distances to convenience stores for their food purchases, take more time to get to and from the grocery store on transit, or carpool.

Based on 2010 Census data, approximately 1,144 people (18%) live within a quarter-mile of one of Lincoln Park's four convenience stores, and 1,604 people (26%) live within a half-mile. While, some residents may be willing to walk up to one mile to convenience stores, one-half mile is considered a more reasonable walk distance, especially if travelers are carrying heavy grocery bags on their return trip (Bader, 2010; Larsen and Gilliland, 2008).

Duluth Transit Authority buses 1, 2, 3, and 5 run west from W 3rd St to within 3 blocks of the Super One grocery store in West Duluth. Route 4 runs from W Superior St to right in front of the Super One in West Duluth. The trip takes approximately 20 to 25 minutes each way. Route 5 also runs north to Miller Hill Mall and surrounding commercial, including a Target, Cub Foods and Super One Foods. The trip to Miller Hill Mall takes approximately 30 minutes. Routes 1, 2, and 3 run frequently during the week days, starting at 4:30am and going until after midnight. On Saturday and Sunday, these routes have similar frequency but run shorter hours: 6am to 11pm. Route 4 runs from 6am to 6pm approximately every 30 minutes during morning and afternoon peak hours and every hour on off-peak hours on week days and Saturdays, but does not run on Sundays. Route 5 runs once per hour from 7am to 6pm on week days, and 10am to 6pm on Saturdays and Sundays.

Summary

UMD's food survey found that the lowest-income households shopped more often at the convenience stores in the neighborhood than the highest-income households, who did not shop at the convenience stores at all (Pine and Bennett, 2011). This finding is shocking but not surprising. Lower income households are more likely to be constrained by transportation access, and therefore shop where it is more convenient. This hypothesis was supported by the UMD survey: 29% of those households who had no car shopped at neighborhood convenience stores, while only 7% of the households with at least one car shopped at these stores (Pine and Bennett, 2011). As a result of the study, the [Lincoln Park Fair Food Access Campaign](#) formed in 2012 to address the need of access to healthy food in Lincoln Park.

How will future land use and zoning impact access to healthy food sources?

To assess how future land use and zoning recommendations in the SAP could affect access to healthy food sources, MDH analyzed the change in permitted uses parcel by parcel throughout the study area. The analysis specifically focused on activities and businesses that would be allowed under new zoning that offer retail food options, restaurants, or urban farming. The previous section listed a number of different sources for accessing food, however, this analysis will focus mostly on the impact of land use and zoning on retail food outlets and restaurants, and to a limited extent on urban agriculture. There were 14 permutations of zoning changes, including the following: Industrial General (I-G) to Form Based-5 (F-5), I-G to Mixed Use-Business (MU-B), MU-B to F-5, MU-B to Mixed Use-Commercial (MU-C), MU-B to Mixed Use-Neighborhood (MU-N), MU-N to F-5, MU-N to MU-B, Residential-Traditional (R-1) to MU-N, R-1 to Park and Open Space (P-1), Residential-Urban (R-2) to MU-B, R-2 to MU-C, R-2 to MU-N, and R-2 to P-1. Tables that describe the change in permitted uses for each of these 14 zoning recommendations are included in Appendix A.

I-G to F-5

Changing the zoning from I-G to F-5 will allow restaurants, small grocery stores, and other retail. There are no uses under I-G that enable access to healthy food that will be lost. Overall, this zoning change has the potential to increase access to healthy food.

There are 35 parcels, a total of 340,679 sq ft, which are proposed to be converted from I-G to F-5. The smallest lot is 735 sq ft, with an average lot size of 9,734 sq ft. All of the properties are located on W Michigan St or W Superior St, between 30th Ave W and 24th Ave W. Twenty-six properties have no estimated value for the building, which means the lots are likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. Many of these lots are currently being used for surface parking.

The potential impact of this zoning change could be tremendous if the vacant or surface parking lots were converted to new restaurants, small grocery stores, and other retail, but the likelihood is heavily dependent on the development market. These parcels are near some existing food outlets, including Clyde Ironworks restaurant, the convenience stores connected with Holiday and Kwik Trip gas stations, as well as Quiznos and the Duluth Grill. Due to the saturation of convenience stores, it is unlikely that another convenience store would be proposed. However, a restaurant or small grocery store might be feasible in this area.

I-G to MU-B

Changing the zoning from I-G to MU-B will allow restaurants as permitted uses. There are no uses under I-G that enable access to healthy food that will be lost. Overall, this zoning change has the potential to increase access to healthy food.

There are 28 parcels, a total of 835,861 sq ft, which are proposed to be converted from I-G to MU-B. The smallest lot is 1,359 sq ft, with an average lot size of 29,852 sq ft. All of the properties are located on Michigan or south of Michigan between 26th Ave W and Piedmont Ave/22nd Ave W. A few lots between 23rd and 24th could be combined into new redevelopment for a restaurant; the buildings adjacent to these properties are service oriented and have nice facades and good quality sidewalks that would support development of this type. Additionally, the employees at these companies could support a restaurant.

Due to the location of available lots and the proximal uses, the potential impact of this zoning change would be fairly limited even if some of the vacant or surface parking lots were converted to a new restaurant. The likelihood of many of these lots being redeveloped is small.

I-G to MU-C

Changing the zoning from I-G to MU-B will allow restaurants, grocery stores of any size, and other retail as permitted uses. There are no uses under I-G that enable access to healthy food that will be lost. Overall, this zoning change has the potential to increase access to healthy food.

There are 179 parcels, a total of 2,473,677 sq ft, which are proposed to be converted from I-G to MU-C. The smallest lot is 331 sq ft, with an average lot size of 13,819 sq ft. One-hundred and forty-eight properties have no estimated value for the building, which means the lot is likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. Most of these properties are located on small to medium-sized lots surrounding the Heritage Sports Arena and Clyde Iron Works, currently occupied by surface parking for these facilities and interstate right-of-way. The other re-zoned properties are clustered near Bent Paddle Brewing south of Michigan between Piedmont Ave (22nd Ave W) and 16th Ave W. These parcels consist of surface parking, storage, and a Kia dealership.

There are some vacant parcels clustered near Bent Paddle Brewing that consist of surface parking, storage, and a Kia dealership which have a greater chance of being redeveloped. Surrounding uses could support restaurants and possibly a grocery store. Additionally, one of the parcels on W Michigan St between 27th and 29th Ave W is the old post office building. The Lincoln Park SAP Advisory Committee has mentioned that one re-use of this space could include a grocery store, as well as other retail or small market restaurant uses, similar to the Midtown Global Market in Minneapolis, MN. The impact of this zoning change could be significant in magnitude if it included a full service grocery store and additional food outlets.

MU-B to F-5

Changing the zoning from MU-B to F-5 will allow small grocery stores and other retail as permitted uses. Restaurants with drive-in or drive-through are currently permitted uses under MU-B that enable access to

healthy food that will be lost. Few drive-ins or drive-through restaurants offer healthy food options; therefore, this zoning change is more likely to increase access to healthy food.

There are 69 parcels, a total of 801,314 sq ft, which are proposed to be converted from MU-B to F-5. The smallest lot is 281 sq ft, with an average lot size of 11,613 sq ft. All of the parcels are located on W Superior St or W 1st St between 22nd Ave W and 30th Ave W. There are a cluster of parcels located between Superior St and 1st St around 29th Ave W, as well as some scattered along Superior St between 26th Ave W and Piedmont (22nd) Ave, that are currently being used for storage and could be redeveloped.

If the vacant parcels were redeveloped to include more retail or a small grocery store it could do a lot to improve the area and would provide more locations that could promote access to healthy food. The impact of this zoning change could be moderate and possible.

MU-B to MU-C

Changing the zoning from MU-B to MU-C will allow grocery stores of any size and other retail as permitted uses. There are no uses under MU-B that enable access to healthy food that will be lost. Overall, this zoning change has the potential to increase access to healthy food.

There are 49 parcels, a total of 329,391 sq ft, which are proposed to be converted from MU-B to MU-C. The smallest lot is 1,223 sq ft, with an average lot size of 6,722 sq ft. Most of these properties are located on W 1st St, between 24th Ave W and Piedmont (22nd Ave W), and another cluster are located on W 1st St between 18th and 19th Ave W. A couple of potentially vacant parcels are adjacent to existing residential uses and could be more compatible for small retail or a grocers market; however small lot sizes may constrain redevelopment even if adjacent vacant lots are combined. The impact of this zoning change will be relatively small in magnitude and likely for only a couple parcels.

MU-B to MU-N

Changing the zoning from MU-B to MU-N will allow small grocery stores and other small retail as permitted uses, as well as urban agriculture. Restaurants with drive-in or drive-through are currently permitted uses under MU-B that enable access to healthy food that will be lost. Few drive-ins or drive-through restaurants offer healthy food options; therefore, this zoning change is more likely to increase access to healthy food.

There are 33 parcels, a total of 441,132 sq ft, which are proposed to be converted from MU-B to MU-N. The smallest lot is 1,263 sq ft, with an average lot size of 13,368 sq ft. A few seemingly undeveloped parcels are clustered adjacent to the ore docks on Carlton St and next to a funeral home. Additional seemingly undeveloped parcels are located on Superior St from 16th to 14th Ave W surrounding the Duluth Gospel of Tabernacle Church. This could be a prime location for a community market or small retail. Despite the small number of available parcels, if a grocers market was developed in this area, the impact of this zoning change on access to healthy food could be large in magnitude.

MU-N to F-5

Changing the zoning from MU-N to F-5 will allow large restaurants and other large retail as permitted uses. MU-N allows urban agriculture, which would no longer be allowed under an F-5 zoning change. However, only two parcels are proposed to be converted from MU-N to F-5. One lot is 17,522 sq ft and the other lot is 27,334 sq ft. The two lots are located across from each other at the northeast and northwest corners of 28th Ave W and Superior St. Both lots have development on them currently, including the Western Building apartments and Northfield apartments. The impact of this zoning change will be very minimal.

MU-N to MU-B

Changing the zoning from MU-N to MU-B will allow large restaurants as permitted uses. Small grocery stores, small retail and urban agriculture are currently permitted uses under MU-N that enable access to healthy food that will be lost. Theoretically, this zoning change could increase or decrease access to healthy food.

There are 21 parcels, a total of 82,737 sq ft, which are proposed to be converted from MU-N to MU-B. The smallest lot is 585 sq ft, with an average lot size of 3,940 sq ft. Most of these properties are located on W 2nd St between 20th Ave W and 22nd Ave W, directly below Highway 53. Most of this land is owned by the State of Minnesota. It is very unlikely that any of these parcels will be redeveloped. The impact of this zoning change on access to healthy food will be negligible.

R-1 to MU-N

New uses allowed under MU-N zoning but not R-1 that might support access to healthy food include small restaurants, small grocery stores, and other retail. There are no currently permitted uses that promote access to food that would be lost by changing R-1 zoned parcels to MU-N.

There are 138 parcels, a total of 597,102 sq ft, which are proposed to be converted from R-1 to MU-N. The smallest lot is 240 sq ft, with an average lot size of 4,327 sq ft. All of these properties are located on W 2nd and W 3rd Streets between 34th Ave W and 39th Ave W in an area that is being rezoned to promote the development of a sports corridor between Wade Stadium and Wheeler Athletic Complex. The City would like to see more commercial development, such as retail and restaurants, in this area.

Forty-four properties have no estimated value for the building, which means the lots are likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. Eleven properties are owned by the City; most of the parcels are adjacent to each other on W 3rd St and 37th Ave W. Another seven properties are owned by the HRA, adjacent to each other on the north side of W 2nd St, between 36th and 37th Ave W. The state owns another eight properties directly north of Wade Stadium. These clusters of vacant properties have a high likelihood of being redeveloped. If redevelopment included a grocers market to serve sports patrons or new restaurants, the impact of this zoning change on access to healthy food could be moderate in magnitude.

R-1 to P-1

This zoning change was not fully analyzed because it is merely an administrative amendment, changing existing parkland zoning from R-1 to P-1. There will be no impact on access to healthy food as a result of this zoning change.

R-2 to MU-B

New uses allowed under MU-B zoning but not R-2 that might support access to healthy food include large restaurants. Uses no longer allowed following this zoning change that can positively affect access to healthy food include urban agriculture, such as community gardening, and small retail stores. While there are currently no community gardens in Lincoln Park, this zoning change could potentially increase or decrease access to healthy food.

There are five parcels, a total of 58,656 sq ft, which are proposed to be converted from R-2 to MU-B. The smallest lot is 2,003 sq ft, with an average lot size of 11,731 sq ft. All 5 properties have no estimated value for the building, which means the lots are likely vacant. The three smallest properties are state-owned parcels located below Highway 53 and are unlikely to be developed. The two larger properties are located at 14th and Superior and Michigan streets, right at the entrance to Lincoln Park, referred to as 'the point of rocks.' No development currently exists on any of these parcels and the parcels are not ideal locations for new establishments. Therefore, the zoning change will likely have no impact on access to healthy food.

R-2 to MU-C

New uses allowed under MU-C zoning but not R-2 that might support access to healthy food include large restaurants, small or large grocery stores, and large retail stores. Uses no longer allowed following this zoning change that can positively affect access to healthy food include urban agriculture, such as community gardening.

There are 21 parcels, a total of 70,151 sq ft, which are proposed to be converted from R-2 to MU-C. The smallest lot is 1,754 sq ft, with an average lot size of 3,340 sq ft. All of these properties are located between 24th and 25th Ave W on W 1st St. Existing surrounding uses are one- and two-family dwellings, which are not allowed under the zoning change.

Seven properties have no estimated value for the building, which means the lots are likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. Most of the lots are narrow (25 feet), but only one of them is not adjacent to another lot with which it could be combined for future development. Small grocer or other retail developments will be more likely for these lots than some of the other higher-intensity uses allowed under MU-C zoning, such as a large grocery store. The impact of this zoning change could be positive, due to the rezoning allowing more types of uses that could promote access to healthy food, and fairly likely, although small in magnitude.

R-2 to MU-N

New uses allowed under MU-N zoning but not R-2 that might support access to healthy food include small grocery stores. There are no currently permitted uses that promote access to food that would be lost by changing R-1 zoned parcels to MU-N.

There are 113 parcels, a total of 610,924 sq ft, which are proposed to be converted from R-2 to MU-N. The smallest lot is 116 sq ft, with an average lot size of 5,406 sq ft. There are three main clusters of these proposed rezonings. One cluster is located on a triangle of land toward the eastern end of the neighborhood on Piedmont Ave between W 1st St and Superior. The terrain here is steep, rocky, and subsequently not developable. Another cluster of parcels is located on W 3rd St between 24th Ave W and 28th Ave W. A third cluster of properties is located at Vernon St, just down from Harrison Community Center.

Thirty-two properties have no estimated value for the building, which means the lots are likely vacant. Vacant lots are more likely to change over to new development in the short- and long-term. Several of the vacant properties are located on W 3rd St between 24th Ave W and 28th Ave W. One property, across from Lincoln Park, is over Miller Creek and may not be developable. Another couple properties to the west of 27th appear to be used as surface parking for Holy Trinity Lutheran Church. Three properties – one on the south side of W 3rd St, just west of 26th and a couple on the north side of 3rd between 24th and 25th – likely have good potential for infill development as neighborhood-serving retail or services, such as a neighborhood market. A third cluster of vacant properties is located at Vernon St, just down from Harrison Community Center. The lots are narrow and shallow, prohibitive for development. However, a couple of the parcels are adjacent to each other and could be redeveloped as one- or two-family dwellings if the lots were consolidated. The isolated nature of these properties does not make them conducive for supporting businesses.

R-2 to P-1

This zoning change was not fully analyzed because it is merely an administrative amendment, changing existing parkland zoning from R-2 to P-1. There will be no impact on access to healthy food as a result of this zoning change.

Summary

The rezoning and future land use designations recommended by the SAP could possibly have a moderate to significant and mostly likely positive impacts on access to healthy foods. The proposed zoning changes will allow more parcels to develop as small or large grocery stores, retail stores and restaurants, as well as urban agriculture.

Many parcels proposed to be rezoned from I-G to MU-B, MU-C or F-5 may still redevelop as commercial uses that do not promote access to healthy food even if the zoning change allows for grocery stores or restaurants. Any new development depends on the market and available subsidies or incentives just as much, if not more so, than the allowed zoning. Vacant parcels are more likely to be redeveloped in the near-term, as well as parcels located near supportive/compatible uses, such as Bent Paddle Brewing, existing restaurants, or catalyzing activities, such as the sports corridor between Wade Stadium and Wheeler Athletic Complex.

The Cushman & Wakefield/Northmarq retail study and the UMD Food Access Study indicated that the neighborhood could support a grocery store. In time, the rezoning will likely promote access to healthy food but by how much and how far in the future are still relatively large unknowns. The UMD Food Access Study also discussed the options of a Food Hub (distributes fresh produce weekly to neighborhood institutions that in turn sell the produce to families with limited access to grocery stores). “Duluth-based programs, such as Seeds of Success, Institute for Sustainable Futures, and the Sustainable Agriculture Project at the University of Minnesota Duluth are all interested in pursuing this model” (Pine and Bennett, 2011).

Additional land use activities in the Lincoln Park neighborhood that could support access to healthy food include the possible identification of a parcel of land for revitalization into a community garden, edible forest, or other food access and education activities. This work is supported by Community Development Block Grant funds provided to West Duluth Food Access and Education in the 2015-2019 Consolidated Plan (City of Duluth, 2014b). See Figure 13 for a summary of the impact analysis.

Figure 13: Summary of Land Use/Zoning Impact Analysis: Access to Healthy Food

Impact	Direction	Magnitude	Likelihood	Evidence
Access to healthy food (I-G to F-5 rezoning)	Positive (+)	Moderate (**)	Possible	Best practice
Access to healthy food (I-G to MU-B rezoning)	Positive (+)	Small (*)	Unlikely	Best Practice
Access to healthy food (I-G to MU-C rezoning)	Positive (+)	Significant (***)	Possible	Best practice
Access to healthy food (MU-B to F-5 rezoning)	Positive (+)	Moderate (**)	Possible	Best practice
Access to healthy food (MU-B to MU-C rezoning)	Positive (+)	Small (*)	Possible/Likely (for select properties on 1 st St)	Best practice
Access to healthy food (MU-B to MU-N rezoning)	Positive (+)	Significant (*)	Possible	Best practice
Access to healthy food (MU-N to F-5 rezoning)	Positive (+)	No change	Unlikely	Best practice
Access to healthy food (MU-N to MU-B rezoning)	Positive or Negative (+/-)	Negligible	Unlikely	Best practice
Access to healthy food (R-1 to MU-N rezoning)	Positive (+)	Moderate (**)	Likely	Best Practice
Access to healthy food (R-1 to P-1 rezoning)	N/A	N/A	N/A	N/A
Access to healthy food (R-2 to MU-B rezoning)	Positive or Negative (+/-)	Negligible	Unlikely	Best practice
Access to healthy food (R-2 to MU-C rezoning)	Positive or Negative (+/-)	Small (*)	Likely	Best practice
Access to healthy food (R-2 to MU-N rezoning)	Positive (+)	Moderate (**)	Location-dependent (possible on W 3 rd St, unlikely near Harrison Community Center and not possible on Piedmont Ave between W 1 st St and Superior)	Best practice
Access to healthy food (R-2 to P-1 rezoning)	N/A	N/A	N/A	N/A

HOUSING

The pathway diagram in the Scoping Summary (found above) describes how proposed recommendations may affect health determinants and outcomes. Housing issues to be addressed include current housing needs, existing housing policies, impacts to socializing and community interactions, and the ability to afford healthy food, health care, and other basic needs.

How do existing housing policies meet current housing needs in the neighborhood?

Needs of current and future residents

The City of Duluth 2015-2019 Consolidated Plan for housing and community development identifies the need for 4,400 new housing units across the city. The major housing concerns and needs identified in the Plan include housing costs/affordability, especially for renters and persons of color, homelessness, and populations with special needs (e.g., disabled, seniors, and persons with mental health issues).

Minnesota Housing's Duluth Housing and Community Assessment (February 2014) also highlighted the need for more affordable housing in Duluth. The MN Housing report notes that the number of cost-burdened households has increased as a result of housing costs increasing 13% in 10 years and income not rising as fast as housing costs (-11% to +1% change in income over 10 years). Part of the cost of housing includes the costs to heat and cool it year-round. Households that pay more than 10% of their income are rated as being in 'fuel poverty' according to World Health Organization (WHO) standards (WHO, 2013). The inability to afford adequate heating levels and thermally inefficient housing has been associated with excess death in winter, as well as affecting heart and respiratory disease. Older adults and children are often the most impacted populations (WHO, 2013). Households that are housing cost-burdened and/or facing fuel poverty often have to choose between paying rent and utility bills, and other necessities such as medication, food, clothing, etc.

The City's 2015-2019 Consolidated Plan highlighted specific concerns and needs in Lincoln Park, including lack of larger and upscale rental units, the underutilization of financing tools to expand housing supply, and the age and maintenance requirements of the existing housing stock. The findings come from a Maxfield Research analysis, which also found that banks are not willing to give loans for mortgage and improvements because the cost of the necessary upgrades "would not be reflected in the house's market value thus creating a value gap which a commercial bank would not support" (City of Duluth, 2014b).

Despite certain concerns and barriers, Lincoln Park could play an instrumental role in providing for some of the City's identified housing needs. For example, workforce housing is a priority area citywide and Lincoln Park is a "community recovery tract," which makes it eligible for priority funding. Additional strengths and weaknesses of Lincoln Park's housing stock are further outlined in the Land Use and Zoning section of this HIA.

The need for additional housing across the City is great and complex. Need varies across demographic and socioeconomic groups, including older adults, college students, disabled persons, low-income residents, and persons who require additional services, such as transitional housing. For Lincoln Park residents, vacancy rates indicate that units are available but the issue lies in the quality of the units, whether they are habitable, whether banks will provide loans to improve deteriorated housing, whether lots are large enough to develop on, and

whether residents can afford upgrades even with existing housing rehabilitation resources. The Lincoln Park SAP Advisory Committee identified increasing homeownership, increasing the quality of the housing stock, and reducing cost-burden as the primary goals of the housing strategies in the Lincoln Park SAP.

Review of existing housing policies and effectiveness

The first step in understanding whether existing housing policies meet current housing needs and where gaps might exist is to inventory the housing policies. The HIA reviewed the City of Duluth’s most recent Consolidated Plan that describes organizations and resources dedicated to improving housing conditions and affordability. Figure 14 provides a review of some of the main existing housing policies, programs, organizations in Duluth.

Figure 74: Review of Existing Housing Policies, Programs, Organizations

Organization or Program Name	Description of Activities, Resources or Services
One Roof Community Housing	One Roof provides “everything you need to find, buy and fix up a home.” Created out of a merger of Neighborhood Housing Services and Northern Communities Land Trust, One Roof Community Housing is a non-profit organization committed to providing housing services and building and sustaining affordable homes and healthy neighborhoods. One Roof offers a range of services including affordable homeownership opportunities , education & counseling , rehabilitation loans & down payment assistance , and a tool-lending library . As of 12/31/13, there were 39 One Roof Community Land Trust homes in Lincoln Park (out of 258 total). One Roof also works in rental housing, and was awarded \$700,000 in Rental Rehab Deferred Loan Program from MHFA that was used in Lincoln Park in 2013 near the new Middle School.
Duluth HRA	Duluth HRA owns and manages 1,152 units, including six high-rise housing developments, as well as scattered site properties located throughout the City. The HRA also owns public housing units located within its three HOPE VI mixed income developments. The HRA also provides HUD funded rental assistance to 1,472 participating households under the Section 8 Housing Choice Voucher program. Currently there are 1,171 households on the waiting list for public housing units, and 1,380 households on the list for the Section 8 Housing Voucher Choice program. The HRA estimates that it will serve 200 new households in the coming year under the Section 8 program and that it will serve 250 new households under the public housing program.
Housing Resource Connection	HRC is a collaboration between the City, the Duluth HRA, One Roof Community Housing, Ecolibrium3, and the Arrowhead Economic Opportunity Agency. It is a place for Duluth residents to locate and apply for a variety of housing resources and assistance, including low-interest and deferred loans for rehabilitation of rental properties and single-family owner-occupied homes. CDBG funds (see below) will be used for emergency rehabs; homeowner rehab to address code deficiencies, lead paint hazards, energy efficiency; and for the rehab of acquired properties for sale to eligible homebuyers. Healthy home protocols will be used.] [Allocation - \$475,000, CDBG funds]
Community Development Block Grant (CDBG)	The Community Development Block Grant (CDBG) program provides communities with resources to address a wide range of unique community needs. CDBG funding is an annual funding cycle that community organizations can apply for including public service, public facilities, housing, and economic development. CDBG eligible areas – 51% LMI [Annual allocation: 2,224,734]
HOME Investment Partnership	The HOME Investment Partnership (HOME) provides funding to a wide range of activities that build, buy, and rehabilitate affordable housing for rent or homeownership or provide

	direct rental assistance to low-income people ¹² . HOME funding also works on an annual funding cycle. [Annual allocation: 544,482]
Emergency Shelter Grant	The Emergency Shelter Grant (ESG) is a grant program that provides homeless persons with basic shelter and essential supportive services. ESG also has an annual funding cycle. [Annual allocation: 183,852]
Homelessness Prevention and Rapid Re-housing Program	The Homelessness Prevention and Rapid Re-housing Program (HPRP) is a grant program that provides funding for stabilization assistance to homeless individuals. CHUM Shelter, Safe Haven Shelter, AICHO, Salvation Army and Life House all participate in Rapid Rehousing programming (funding comes from ESG, Continuum of Care Program and through the state's Family Homeless Prevention and Assistance Program (FHPAP)).
Neighborhood Stabilization Program (NSP)	The Neighborhood Stabilization Program (NSP) is a grant program that provides funding for the purpose of stabilizing communities that have suffered from foreclosures and abandonment.
Duluth LISC	Duluth LISC provides assistance to Community Development Corporations for planning and implementation of community goals, as well as bridge financing to promote development that revitalizes neighborhoods through housing and business redevelopment.
Additional services	Additional services for homeless, battered women, mentally ill and elderly/disabled are provided throughout the city. For example, Center City Housing Corporation develops affordable and transitional housing for Duluth residents in need. The Esmond Building in Lincoln Park includes 70 housing affordable units through MHFA and GMHF Funding Assistance. The old Lincoln Park Middle School will include affordable and supportive housing units, a partnership with Community Action Duluth.

Source: City of Duluth [Consolidated Plan, draft October 2014](#)

This inventory of policies and resources demonstrates that a lot already exists for Lincoln Park organizations and residents to take advantage of. However, there is always more that can be done, or ways current resources can be used better or expanded. When discussing housing recommendations for the Lincoln Park SAP, the Advisory Committee discussed barriers to using the housing assistance products. The Consolidated Plan also provides a list of barriers to affordable housing (see box) and strategies to remove or overcome barriers. The barriers and strategies that the Advisory Committee discussed as important for Lincoln Park are bolded.

¹² There is a gap between federal housing voucher rent limits and the actual market conditions in Duluth. For HOME funded rental projects, owners can't accept the full Housing Voucher payment, only that amount under the HOME rent limit. This is a disincentive to housing developers to participate in the HOME Program due to the reduction in operating income. To date, only non-profit housing developers have utilized HOME funding for the creation of affordable rental units (Consolidated Plan, 2014).

Barriers to Affordable Housing

- **Lack of annual budgeted funding to demolish or repair buildings condemned for demolition or human habitation, allowing blight to persist in LMI neighborhoods.**
- The City requires assessments placed on vacant lots where structures have been demolished be paid by any new owner, rendering otherwise buildable infill sites financially infeasible for redevelopment.
- **“One-for-one” replacement requirements when structures are demolished on 25 front foot unbuildable lots.**
- Sewer utility fees and other utility hook-up fees increase the cost of construction of affordable single-family homes.
- Limited Minnesota Housing funding for rehab of aging single-family structures occupied by LMI households, which leads to higher maintenance costs.
- Lack of a policy to require improvements to foreclosed properties in LMI neighborhoods that are on the vacant property register.
- Inflexible policies related to Comfort System’s energy improvement programs that limit access to loans by LMI households, including refusal to subordinate when first mortgages are refinanced.
- Minnesota State Historic Preservation Office policies that create additional rehab costs, such as wooden windows and doors repaired rather than replaced by new historically designed materials.
- Outdated historic property references that trigger SHPO review of affordable housing rehab projects on buildings not eligible for listing, which increases costs and delays.
- Lack of direction from City Administration to enforce existing rental license program.
- No education requirement for owners and/or managers to secure a rental license.
- **Lack of direction from City Administration to enforce housing maintenance code.**
- Lack of energy standards for existing housing stock that result in higher costs for LMI households living in older homes that are energy inefficient.
- Housing & Redevelopment Authority policies that prevent LMI households with poor rental histories or criminal backgrounds from securing assisted housing.
- HUD HOME Program after-rehab value limit based on 95% of median sales price from the extensive Duluth/Superior metropolitan statistical area, and the value limit not adjusted for homes with three or more bedrooms occupied by larger families.
- **HUD HOME Program ruling that disallows use of local exception rents in favor of fair market rents in HOME assisted affordable rental housing.**

Strategies to Remove or Ameliorate the Barriers to Affordable Housing

- Support selected demolition of blighted properties in LMI neighborhoods. If funded by Community Development, requirement will be to leave a “clean” site for redevelopment.
- Community Development supported rehab projects will address all needed repairs and updates, including housing code, energy efficiency, and healthy home deficiencies.
- Implement acquisition/rehab/resale activities to address vacant foreclosed properties in LMI neighborhoods.
- Review annual Housing Report sales data to determine if a local study of median sales price would increase after-rehab value limit.
- Require rehab programs receiving Community Development funding to increase energy efficiency in existing homes by 20%, and require funded new construction to meet Energy Star standards.
- Provide funding for tenant-based rental assistance to help the “hard-to-house” and homeless population to secure adequate housing.
- Modify policies to eliminate the “re-instatement” of special assessments on tax forfeit lots that have the potential for redevelopment.
- Support additional historic surveys in the central and western areas of Duluth.
- Support the establishment of inclusionary affordable housing in zoning policies.
- Encourage Comfort Systems to revise their loan programs to be more “user friendly” and to coordinate with the Housing Resource Connection.
- Integrate rental license building inspectors into the “One Stop Shop”.
- **Work with St. Louis County and the Minnesota Department of Revenue to revise policies to encourage redevelopment of tax forfeit land.**
- Strengthen rental license program to include such requirements as common applications and leases, affordable application and damage fees, and timely and consistent enforcement of building standards.
- Reduce property tax valuations to reflect affordable housing restrictions that would prohibit owners from selling at full market rate.

How will proposed housing policies meet housing needs?

There are many good activities going on in the community and many resources are targeted to Lincoln Park because it has a higher percentage of low-income residents and housing stock that requires upgrading. The SAP Housing recommendations focus on increased utilization of existing programs and policies. As described in the barriers to affordable housing, meeting future housing needs through enforcing codes, increasing awareness of assistance programs, demolishing properties, and creating a ‘revitalization area’, will be limited by lack of annual budgeted funding for inspections and enforcement of code, hurdles for owners/developers, and reticence on the part of banks to lend for rehab.

As previously mentioned, the Lincoln Park SAP Advisory Committee identified increasing homeownership, increasing the quality of the housing stock, and reducing cost-burden as the primary goals of the housing strategies in the Lincoln Park SAP.

Increasing Homeownership

Studies have shown that homeownership can have positive impacts on physical health outcomes, as well as mental health and social cohesion (Dietz, 2003). Even following the aftermath of the Recession, homeownership is still a desirable goal for most people and is connected to positive physiological and psychological outcomes (Rohe et al., 2013). The Lincoln Park SAP recommendation for increasing the promotion and education of the Housing Resource Connection will promote homeownership through the utilization of rehab incentives for new and existing homeowners. The recommendation to establish a Lincoln Park Housing Revitalization Area may promote homeownership by marketing the area to new and first-time home buyers. Screening “eyes-sores” and demolishing condemned and blighted properties may increase property values of proximate residences (Veisten et al., 2012) and encourage existing homeowners to invest in their properties, but may not directly contribute to homeownership. Enforcing rental codes and encouraging second-floor apartments are unlikely to affect homeownership levels, and are not the intent of the recommendations.

Increasing Quality of Housing Stock

The quality of housing stock has a great impact on health outcomes. Studies have shown that the density of housing code violations are associated with rates of asthma-related emergency department visits and hospitalizations (Beck et al., 2014). The Marin County Housing Code Enforcement Policies HIA documented the benefits of enforcing housing codes in the prevention of diseases and poor health outcomes related to exposure to raw sewage, disease vectors (including cockroaches, mice, rats), electrical issues, heat issues, and dampness and mold (Human Impact Partners, 2012). Enforcing housing inspections, as recommended by the Lincoln Park SAP, could have a significant, positive impact on health outcomes, especially for sensitive populations, such as children and persons with pre-existing health conditions including asthma and allergies.

Additionally, the Lincoln Park SAP recommendation to demolish condemned and blighted buildings will improve housing stock by removing inhabitable and potentially dangerous buildings that could be potential hazards. The Lincoln Park SAP recommendation to create a ‘Lincoln Park Housing Revitalization Area’ that utilizes resources from the Housing Resource Connection and other programs, which focus on rehabilitation, will also improve the quality of the housing stock. Making necessary repairs to homes that may increase safety and reduce exposure to potential hazards, such as lead paint, mold and allergens, and electrical, heat and plumbing issues.

Screening vehicle-parking, parking lots, storage and other incompatible land uses from residential uses won’t improve the physical integrity of the housing stock itself, but will improve the aesthetic environment surrounding it. Especially if green walls or other natural buffers are used for screening they can result in increases in property values (Veisten et al., 2012).

Reducing Housing Cost Burden

Housing costs were identified as the number one housing issue across the City, and a major concern for residents of Lincoln Park. In Lincoln Park especially, it is important to balance building new homes and improving existing housing stock with maintaining affordability for current and future residents while not creating an area of concentrated poverty or displacing residents who want to live in Lincoln Park. The City and the SAP Advisory Committee hope that using the existing financing tools to complete rehabilitations will help keep costs low for current homeowners and potentially increase affordability if the renovations can save money over time (e.g., energy efficiency upgrades through improved insulation). Additionally, some resources are available for specific, low- or fixed-income persons, such as County programs that offer property tax breaks for veterans, seniors, disabled, etc. (i.e., caps property tax at fixed percent of household income).

While improving the quality of housing conditions in Lincoln Park will have likely, significant positive health outcomes for occupants, enforcing the housing code may have the unintended consequence of increasing costs for property owners which may then be passed on to tenants through increases to rents to pay for necessary improvements. The Advisory Committee has recognized that bank loans are very difficult to obtain for housing improvements on properties that have limited value-capture due to the generally low housing prices in the neighborhood. This may increase the likelihood that low-income renters could be displaced by some of the recommendations. Additionally, while increasing homeownership is a goal of the Housing Recommendations, the 'Lincoln Park Housing Revitalization Area' may result in displacement of renters if current rental properties are sold to homesteaders. Housing instability and displacement can cause negative impacts on stress and mental health, which in turn can result in poor physical health outcomes (Human Impact Partners, 2012).

Summary

Overall, the Lincoln Park SAP Housing recommendations will have likely, positive impacts on meeting the housing goals and health outcomes related to homeownership and housing quality, while impacts on cost-burden could be positive or negative, depending on whether the resident is a renter or owner. See Figure 15 for a summary of the impact analysis.

Figure 15: Summary of Housing Recommendations Impact Analysis: Housing Quality, Homeownership, Housing Cost-Burden

Recommendation	Direction	Magnitude	Likelihood	Evidence
Enforcing existing rental and building codes	Positive (+) for housing quality	Significant (***)	Likely (***)	Strong (***)
	Neutral (-) for homeownership	N/A	N/A	N/A
	Negative (-) for housing cost-burden	Moderate (**)	Possible (**)	Generally consistent with public health best practice (*)
Screening eyesores, such as vehicle parking, storage, etc., especially along W 1 st St	Positive (+) for housing quality and homeownership	Moderate (**)	Likely (***)	Some good studies (**)
	Neutral (-) for housing cost-burden	N/A	N/A	N/A
Using zoning to encourage second-floor apartments on Superior St	Neutral (-) for housing quality, homeownership and housing cost-burden	N/A	N/A	N/A
Increasing utilization of housing assistance products to improve housing stock	Positive (+) for housing quality and homeownership	Significant (***) – for ‘focus area’	Likely (***)	Strong (***)
	Positive (+) or Negative (-) for housing-cost burden	Moderate (**)	Possible (**)	Generally consistent with public health best practice (*)
Demolishing condemned/blighted properties and sell to adjacent owners	Positive (+) for housing quality and homeownership	Moderate (**)	Likely (***)	Some good studies (**)
	Neutral (-) for housing cost-burden	N/A	N/A	N/A
Creating a six-block ‘Lincoln Park Housing Revitalization Area’	Positive (+) for housing quality and homeownership	Significant (***) – for ‘focus area’	Likely (***)	Strong (***)
	Positive (+) or Negative (-) for housing-cost burden	Moderate (**)	Possible (**)	Generally consistent with public health best practice (*)

The Lincoln Park SAP recommendations focus on targeting existing strategies and resources on specific properties and blocks because agencies involved in housing and redevelopment have found that targeted outreach, education and resource infusion is the most effective way to make improvements. Additionally, using both carrots (incentives) and sticks (regulation and enforcement) increases likelihood of improvements, especially for rental properties (personal communications, Pat Kramer, 1/26/2015). Ultimately, implementation of the housing plan falls primarily on City staff and the HRA, and there has to be accountability and follow-through if the recommendations are going to be effective.

Overcoming the barriers identified by the SAP Advisory Committee and in the Consolidated Plan is critical for future success in the neighborhood and providing quality, affordable housing to residents. For example, the Analysis to Impediments to Fair Housing within the Consolidated Plan talks about the City's progress in catching up on inspections. While the City has managed to clear the backlog, it now faces the "daunting task" of enforcing the housing code (City of Duluth, 2014b). To ensure that these recommendations are implemented to promote the health and safety of residents, the City should identify sufficient resources to continue housing inspections into the future.

Another barrier identified in the Analysis of Impediments to Fair Housing was education and information, as well as by the Lincoln Park SAP Advisory Committee. Almost 35% of landlords manage five units or less and most likely do not have rigorous training on fair housing issues (City of Duluth, 2014b). Beyond knowledge of fair housing laws, these landlords may lack knowledge of general programs and services offered for rehabilitation and upgrades to rental housing. As a result, outreach, canvassing and targeting specific areas with resources will likely continue to be an effective way to see change in utilization of housing assistance products.

Finally, while improving housing conditions is an important and necessary goal, the City, HRA and other housing partners should be proactive in promoting the development of new affordable rentals simultaneous with improving housing conditions to ensure that impacts on potentially displaced residents are minimized.

How do existing housing conditions and options impact socializing and community interaction?

Existing Conditions

Residential stability, measured by years at current address and in the neighborhood, owner-occupancy, and single-family dwellings, is associated with higher levels of social cohesion in neighborhoods (Greenberg, Rohe, Williams, 1982; Dietz, 2003; Rohe et al., 2013). Residential mobility, or the amount a person or family moves residences, is often used synonymously with residential stability and is considered a negative indicator of stability. This is certainly the case if mobility is related to loss of employment or inability to afford their current living conditions, or if the new housing or community the resident moves to is lower quality or unsafe (Cole et al, 2005; Beatty et al, 2009). However, if residential mobility is voluntary, it can have positive impacts on individual residents and the community if the resident is moving into a community by choice and improving their circumstances (Livingstone, Bailey and Kearns, 2008). For both voluntary or non-voluntary mobility, high levels of population turnover can lead to a weakening of social bonds and networks for the individuals who are mobile,

and can negatively impact social cohesion at the community level (Livingstone, Bailey and Kearns, 2008; Beatty et al, 2009).

Homeowners tend to be less mobile and generally assumed to invest more in their community and build social bonds with neighbors (Brown, Perkins, Brown, 2003; Rohe et al., 2013). Figures 16 through 18 demonstrate the residential mobility, housing tenure and relative amount of single-family housing in the Lincoln Park study area compared to the neighborhood, city and state. Overall, mobility in the Lincoln Park study area is higher (more residents are new to their housing units), rental occupancy is higher, and fewer units are single-family (either detached or attached).

Figure 16: Residential Mobility (Source: American Community Survey 2012 5-year estimates)

	Moved in 2010 or later	Moved in 2000 to 2009	Moved in 1990 to 1999	Moved in 1989 or earlier
Study Area (Census Tract 156)	23%	55%	10%	12%
Lincoln Park (Tracts 24, 26 & 156)	15%	52%	14%	18%
Duluth	13%	50%	16%	21%
Minnesota	10%	49%	20%	21%

Figure 17: Tenure (Owner-Occupied v. Rental Households) (Source: American Community Survey 2012 5-year Estimates)

	Total Households (Occupied Housing Units)	Percent of Households: Renters
Study Area Blocks	1,283	73%
Lincoln Park	2,691	52%
Duluth	35,705	40%
Minnesota	2,087,227	27%

Figure 18: Number of Units in Structure (Source: American Community Survey 2012 5-year Estimates)

	Single-family (attached & detached)	2 to 4 units	5 or more units
Study Area Blocks	35%	43%	21%
Lincoln Park	54%	32%	12%
Duluth	64%	12%	21%
Minnesota	75%	4%	17%

The One Roof survey conducted in 2013 found that 40% of the 199 respondents had lived in Lincoln Park 5 years or less. Seventy-two percent of respondents probably or definitely would recommend Lincoln Park as a place to live. More than 50% of respondents volunteered to help others, supported a local business event, participated in community social event, or reported a hazard/incident sometimes or often. More than 50% of respondents never participated in a community, resident or tenant organization or participated in an advocacy group, and approximately half never supported a local political organization or participated in a community beautification

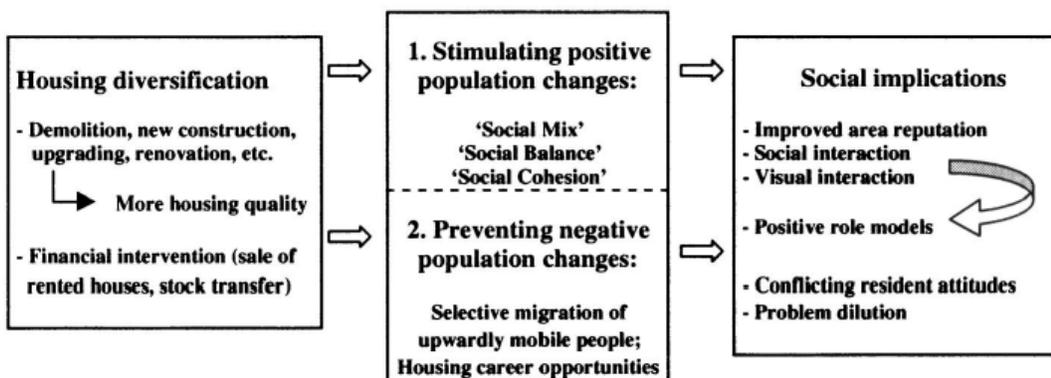
project. Upwards of 70% of residents felt that their neighbors would help if they needed a ride, a package picked up, a small favor, child care, older residents checked on, and help in an emergency.

The One Roof survey responses support the US Census data findings that residents are fairly new to the community. Additionally, survey responses indicate that, in general, residents like the neighborhood but may not be highly engaged in the community, which can be an indication of low community cohesion. However, at a block level, it would seem that Lincoln Park has a high level of social cohesion based on responses about helping out neighbors.

How will proposed housing policies impact socializing and community interaction?

Studies have shown that higher levels of homeownership and improvements to the physical environment and quality of housing stock support higher levels of social cohesion (Brown, Perkins, Brown, 2003; Cohen et al., 2003; Rohe, 2013). Kleinhans (2004) created a diagram (Figure 19) that demonstrates the assumed cause-and-effect relations of housing diversification, showing how improvements in housing stock as a result of demolition, rehabilitation, and new construction may lead to social cohesion and positive interactions. The Lincoln Park SAP Housing recommendations for demolishing condemned/blighted properties and selling to adjacent owners; enforcing existing rental and building codes; increasing utilization of housing assistance products to improve housing stock; and creating a six-block 'Lincoln Park Housing Revitalization Area', will improve the physical environment of the neighborhood, improve the quality of the housing stock, and promote homeownership. Increasing homeownership may also have a cyclical relationship with more improvements to housing and living environment (Kleinhans, 2004).

Figure 19: Assumed cause-and-effect relations of housing diversification (Source: Kleinhans, 2004)



Over time improved physical characteristics of the neighborhood and rates of homeownership may increase levels of social cohesion. However, studies have shown that there is little interaction between owner-occupiers and renters. Kleinhans (2004) found that the "differences in lifestyles and socio-economic characteristics, such as income, age, household composition and education are important underlying factors" in the development of social bonds, perhaps more so than neighborhood. Social cohesion developed within the neighborhood is strongest the closer the neighbors are, indicating that residents of diverse socioeconomic backgrounds or tenure may have stronger relationships if rental and owner-occupied properties are "pepper-potted" within a street or

block, rather than segregated by tenure (Kleinhans, 2004). Additionally, providing neighborhood activities that promote regular encounters can be instrumental in developing social cohesion among neighbors (Brown, Perkins, Brown, 2003).

One potential negative impact of enforcing the building code and making improvements to the housing stock is the possibility that increased rehabilitation costs could result in higher rents and displacement of some residents, particularly lower-income renters (See Impact on Housing Needs, page 8). Residential infill in urban areas can lead to displacement of existing residents if new housing units cost more and subsidized or rent controlled units are not retained. The displacement of people can create stress, can result in poorer housing quality for tenants, and can destroy cohesive communities (Guzman, Bhatia & Durazo, 2005).

The Lincoln Park SAP recommendation to improve screening for vehicle parking, parking lots, storage and other eyesores also has the potential to promote social cohesion and mental health in the community, particularly if screening includes green walls, trees and other natural barriers (Holtan, 2014). Greening was identified as a priority by community members and the Advisory Committee. Increasing greenscapes and reducing exposure to incompatible uses and chronic noise can improve mental health outcomes, social capital at the individual level, and social ties among neighbors (Miles, 2011; Holtan, 2014).

The Housing recommendation to use zoning and building code enforcement to encourage second story apartments on the Superior Street Corridor could have a positive or negative effect on social cohesion. If second story residences are developed as live-work spaces or artists' lofts, they could promote new communities (Covert, 2012). However, it is important to foster the relationships between new and existing residents, and ensure that the positive aspects of gentrification do not displace residents. Additionally, one study found that while increasing density can improve access to services it could worsen neighborhood problems and dissatisfaction (Bramley and Power, 2009).

Summary

Overall, the Lincoln Park SAP Housing recommendations will likely improve the conditions that promote social cohesion in the study area, such as physical environment, homeownership, and housing quality. However, there is the possibility that improvements could lead to higher housing costs and potentially displacement of residents, negatively impacting social connections. See Figure 20 for a summary of the impact analysis.

Figure 20: Summary of Housing Recommendations Impact Analysis: Social Cohesion

Recommendation	Direction	Magnitude	Likelihood	Evidence
Enforcing existing rental and building codes	Positive (+) or Negative (-)	Moderate (**)	Possible (**)	Some good studies (**)
Screening eyesores, such as vehicle parking, storage, etc., especially along W 1 st St	Positive (+)	Significant (***)	Likely (***)	Some good studies (**)

Using zoning to encourage second-floor apartments on Superior St	Positive (+) or Negative (-)	Moderate (**)	Possible (**)	Some good studies (**)
Increasing utilization of housing assistance products to improve housing stock	Positive (+)	Significant (***)	Likely (***)	Strong (***)
Demolishing condemned/blighted properties and sell to adjacent owners	Positive (+)	Significant (***)	Likely (***)	Strong (***)
Creating a six-block 'Lincoln Park Housing Revitalization Area'	Positive (+) or Negative (-)	Significant (***)	Likely (***)	Strong (***)

How do existing housing costs impact ability to afford healthy food, health care, and other basic needs?

Cost of living/ income to meet basic needs

The following hourly wage and monthly living expenses tables (Figures 21 and 22) are provided by the MIT Living Wage Calculator¹³ and the 2013 DEED Cost of Living Study¹⁴. The DEED study reports the cost of living for a family of four in St. Louis County to be \$60,017, or \$14.43/hour for two full time working parents. The MIT Living Wage calculator estimates the cost of living in St. Louis County for a family of four to be \$37,515 based on a single working parent and no child care costs. Overall, the Living Wage calculator underestimates costs compared to the DEED study. The DEED study is probably the more relevant and trustworthy source since it is MN specific and very transparent in its calculations.

Figure 21: Hourly Wages - Living Wage, Poverty Wage and Minimum Wage (Source: MIT Living Wage Calculator and 2013 DEED Cost of Living Study)

Hourly Wages (full time, sole provider)	1 Adult	1 Adult, 2 Children	2 Adults, 2 Children	2 Adults, 2 Children (DEED)
Living Wage	\$8.00	\$24.00	\$18.04	\$14.43
Poverty Wage	\$5.21	\$8.80	\$10.60	
Minimum Wage	\$7.25	\$7.25	\$7.25	

¹³ <http://livingwage.mit.edu/places/2713717000>

¹⁴ http://mn.gov/deed/images/Cost_of_Living_Study_Annual_Report.pdf

Figure 22: Monthly Living Expenses (Source: MIT Living Wage Calculator and 2013 DEED Cost of Living Study)

Monthly Expenses	1 Adult	1 Adult, 2 Children	2 Adults (1 working), 2 Children	2 Adults (both working), 2 Children (DEED)
Food	\$242	\$536	\$713	\$814
Child Care	\$0	\$975	\$0	\$1,140
Medical	\$123	\$383	\$326	\$341
Housing	\$409	\$629	\$629	\$922
Transportation	\$306	\$686	\$736	\$965
Other/Misc	\$60	\$210	\$165	\$278
Required annual income before taxes	\$16,649	\$49,918	\$37,515	\$30,009

In the Lincoln Park study area, only 16% of households make \$50,000 or more, an average of the MIT and DEED cost of living reports (see Figure 23). This goes up to 42% of all married-couple families. It should be noted that these figures do not separate out families with and without children.

Figure 23: Income by Household Type in the Lincoln Park Study Area* (Source: American Community Survey 2012 5-year Estimates)

	Households	Families	Married-Couple Families	Nonfamily Households
Less than \$35,000	70%	67%	36%	78%
\$35,000 - \$49,999	14%	14%	22%	11%
\$50,000 or more	16%	19%	42%	11%
Median Income	\$19,825	\$22,813	\$46,375	\$15,606

Housing costs

As reported previously, housing costs are lower and vacancy rates are higher in Lincoln Park, potentially providing a source of available, affordable housing. Duluth average monthly rent¹⁵ was \$720 (2013 – City of Duluth Rental Survey). Lincoln Park average monthly rent was \$584, the lowest in the City (City of Duluth, 2014a). The median rent for the study area was \$615 and the average of the median rents for the three Census Tracts in the study area was \$733 (ACS 2012 5-Year Estimates).

Approximately one-quarter of households in the Lincoln Park neighborhood pay less than \$500 each month for rent, nearly half pay between \$500-750, and another quarter pay between \$750 and \$1,000. Unfortunately, 52% of Lincoln Park households neighborhood-wide and 56% of households in the study area are still paying more than 30% of their income on housing (ACS 2012 5-Year Estimates). Renters and households making less than \$20,000 per year are impacted more. Nearly 80% of households making less than \$20,000 per year and 66% of renters pay more than 30% of their income on housing in Lincoln Park (ACS 2012 5-Year Estimates).

The cost of energy is often not considered when calculating housing costs. According to the Minnesota Department of Commerce, a typical Minnesota home uses about 190 million British Thermal Units (mmBTU) of

¹⁵ not including subsidized housing

energy every year to heat, cool, light, and operate appliances and electronics (Commerce, 2013). Fifty-five percent of that energy use goes towards heating and cooling. Average annual residential energy costs in Minnesota are estimated at \$2,085, which is a significant burden on lower-income households (Trisko, 2013). Older homes are often less energy efficient and may use more energy than the average households. In Lincoln Park, 62.5% of study area and 67% of neighborhood-wide housing structures were built before 1940. Many of these home could see significant cost savings if they had energy efficiency improvements.

Cost of Fresh and Healthy Foods

The ability to afford fresh and healthy foods is one of the factors determining whether households will purchase and consume fresh and healthy foods. Other factors include cultural preference and accessibility of food retailers. Lincoln Park has a number of convenience stores that provide access to packaged foods and a limited selection of fresh produce, but lacks a full service grocery store or supermarket.

Lincoln Park residents that rely on local convenience stores for some or all of their groceries pay on average 58% more than they would at a full service grocery store (Pine and Bennett, 2011). Approximately 10-15% of Lincoln Park/West End residents “experience significant barriers to accessing food” (Pine and Bennett, 2011). A large number of Lincoln Park/West End community members use “emergency” food shelves to supplement their family’s food supply (Pine and Bennett, 2011).

This discussion serves to draw the conclusion that any reduction in housing costs would greatly benefit many Lincoln Park households’ ability to afford fresh and healthy food, as well as other basic needs.

How will proposed housing policies impact ability to afford healthy food, health care, and other basic needs?

The impact analysis of how the Lincoln Park SAP Housing recommendations could impact housing cost-burden in Lincoln Park is relevant to the discussion of access and affordability of healthy food. Increasing utilization of the Housing Resource Connection housing assistance products, such as rehabilitation assistance, will likely help to maintain or potentially reduce housing costs. For example, increasing energy efficiency could lower utility costs and fuel poverty and potentially free up resources for purchasing healthy food (Kirkpatrick and Tarasuk, 2011). Faced with limited resources to purchase foods, families may seek help from relatives or charitable sources, reduce the quality of the foods they eat, skip meals, or eat less (McIntyre, 2003).

Enforcing the rental and building code will undoubtedly improve the quality of housing conditions in Lincoln Park and have likely, significant positive health outcomes for occupants. However, it may have the unintended consequence of increasing costs for property owners which may then be passed on to tenants through increases to rents to pay for necessary improvements. Higher housing costs force lower income households to choose between rising rents, adequate food, health care, and other basic needs, potentially leading to instances of food insecurity¹⁶ (Kirkpatrick and Tarasuk, 2011).

¹⁶ The inability to obtain adequate food due to financial constraints (Kirkpatrick and Tarasuk, 2011)

The Housing recommendation to screen eyesores from land uses that are incompatible with residential uses is unlikely to have an impact on access to healthy food directly or indirectly, as related to changes in housing costs. The Housing recommendation to demolish condemned/blighted properties and sell lots to adjacent owners also is unlikely to have direct or indirect impacts on access to healthy foods. However, if newly vacant properties are not sold to adjacent property owners and zoned for R-1, R-2, or MU-N they could be used for urban agriculture, or if zoned MU-N, MU-C, or F-5 they could support a small grocery store.

The Housing recommendation to using zone to encourage second story apartments may increase residents' access to convenience stores and their retail food options if the apartments are located near the Kwik Trip or Little Store on W Superior St, and the new residents come from a lower-access food environment. Otherwise, this recommendation is unlikely to impact access to healthy, affordable food.

Creating a six-block 'Lincoln Park Housing Revitalization Area' is unlikely to have any direct impact on access to healthy food. If new residents move into this area and either walk to Kwik Trip or take the bus to the Super One in West Duluth, their access to healthy food may increase but that would depend on the food environment from which they came.

Summary

Overall, the Lincoln Park SAP Housing recommendations could have limited impact on access to healthy food for Lincoln Park residents, through either direct physical access or through indirect access as a result of changes in financial resources. The impact could be either positive or negative, depending on whether a household moved into Lincoln Park from a lower- or higher-food-access community, or saw increases or decreases in their housing expenditures. See Figure 24 for a summary of the impact analysis.

Figure 24: Summary of Housing Recommendations Impact Analysis: Food Access

Recommendation	Direction	Magnitude	Likelihood	Evidence
Enforcing existing rental and building codes	Positive (+) or Negative (-) – <i>Housing Costs</i>	Moderate (**)	Possible (**)	Some good studies (**)
Screening eyesores, such as vehicle parking, storage, etc., especially along W 1 st St	Neutral (~)	N/A	N/A	N/A
Using zoning to encourage second-floor apartments on Superior St	Positive (+) or Negative (-) – <i>Physical Access</i>	Limited (*)	Possible (*)	Some good studies (**)
Increasing utilization of HRC housing assistance products to improve housing stock	Positive (+) or Negative (-)	Moderate (**)	Possible (*)	Some good studies (**)
Demolishing condemned/blighted properties and sell to adjacent owners	Positive (+) or Neutral (~)	Limited (*)	Possible (*)	Generally consistent with public health best practices (*)
Creating a six-block 'Lincoln Park Housing Revitalization Area'	Positive (+) or Negative (-) – <i>Physical Access</i>	Limited (*)	Possible (*)	Some good studies (**)

ECONOMIC DEVELOPMENT

The HIA assessed how achieving the goals stated in the Scoping Summary above could impact employment opportunities (i.e., living wage jobs), social cohesion, and access to healthy food, which were selected as particular concerns by stakeholders and the SAP Advisory Committee.

Employment Opportunities/Living Wage Jobs

Employment and Health

Employment and income have been demonstrated to have significant impacts on health outcomes. A rigorous review of literature found that across high quality, longitudinal studies employment is beneficial for health, particularly for depression and general mental health (van der Noordt et al., 2014). Additionally, re-employment was found to decrease the risk of psychological distress, improve mental well-being, and increased recovery from psychiatric morbidity (van der Noordt et al., 2014). An earlier review of literature analyzing the effects of employment on health found evidence for lower mortality rates for employed people and positive effects for re-employment on physical health, psychological distress and minor psychiatric morbidity (Waddell and Burton, 2006, as cited in van der Noordt et al., 2014).

Positive health effects of employment were explained by structure of the day, financial security, opportunities to increase skills, interaction with others, meaningful life goals, and purpose and providing a sense of personal achievement (Dodu, 2005). Some occupations were associated with negative health effects. The mechanisms causing negative health effects were heavy physical work, stressors and exposure to radiation, vibration, high noise levels and polluted air (Dodu, 2005).

These findings are not surprising. Employment and the associated income and potential benefits that come with it determine whether a person has access to health care (employer sponsored benefits or single-payer), the quality of the housing and neighborhood in which one can afford to live, the quality of the schools in the neighborhood, access to healthy foods, and safe environments for recreation (MDH, 2014a).

Employment opportunities that provide benefits, such as health care and paid leave, are important for employees' health. A recent MDH white paper found that employees with benefits, specifically paid leave, are healthier (MDH, 2015). People with paid leave use less sick time and health care and their children do better in school. Paid maternity leave contributes to better maternal mental and physical health, better prenatal and postnatal care, more breastfeeding, and greater parent/infant bonding. Elders cared for by family members with paid leave more often enjoy a higher quality of life (MDH, 2015).

Unfortunately, the MDH white paper also found that people with lower incomes, part-time workers, and single parents are least likely to have access to paid sick and family leave, and are disproportionately populations of color and American Indians (MDH, 2015). Additionally, unemployment is associated with adverse mental health effects (Ezzy, 1993) and adverse physical health effects (as a result of poor living standards and unhealthy behavior) (Korpi, 2001).

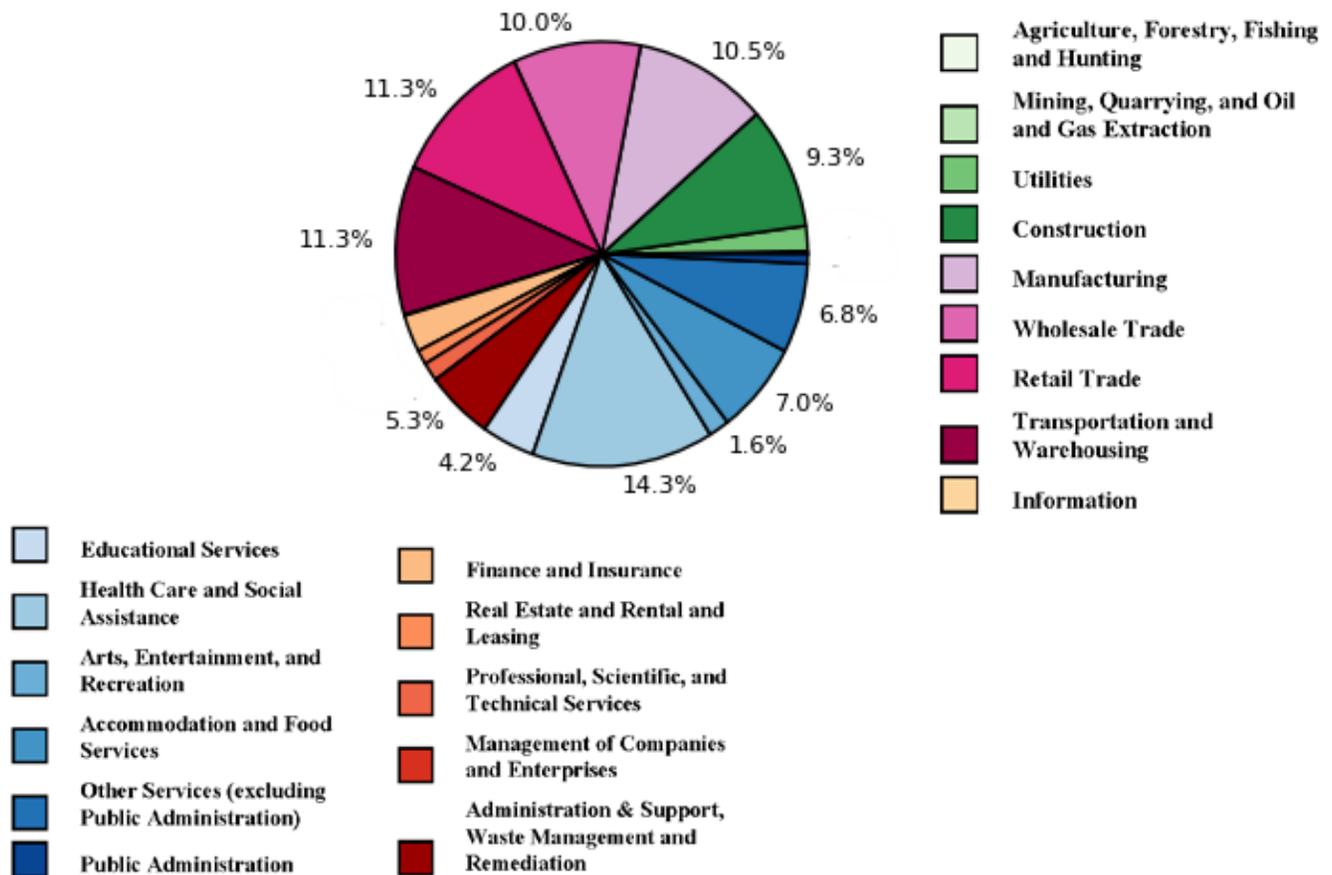
Existing Conditions

According to U.S. Census 2011 LEHD Origin Destination Employment Statistics, only 37 out of 919 residents both work and live in the Lincoln Park study area. Approximately 2,600 are employed by companies within the study area but live elsewhere, and 882 live in the study area but are employed elsewhere (U.S. Census, 2013).

Approximately 30% of study area residents earned \$15,000 per year or less, nearly 50% earned \$15,001 to \$39,996, and 20% earned more than \$39,996 per year (see Figure 25) (U.S. Census, 2013). Twenty six percent of residents worked in health care and social assistance, 11% in accommodation and food services, another 11% in retail trade, and approximately 5% in each of the following industries: manufacturing, waste management and remediation, educational services, and transportation and warehousing.

Employment opportunities in the study area paid slightly higher than residents' earnings. Approximately 30% of employees earned \$15,000 per year or less, just over 40% earned \$15,001 to \$39,996, and nearly 30% earned more than \$39,996 per year (U.S. Census, 2013). Top industries for employment in the study area included health care and social assistance (14% of jobs), retail trade (11% of jobs), transportation and warehousing (11% of jobs), manufacturing (10% of jobs), wholesale trade (10% of jobs), construction (9% of jobs), and accommodation and food services (7% of jobs) (Figure 25).

Figure 25: Job Counts in the Lincoln Park Study Area by NAICS Industry Sector, 2011 (U.S. Census, 2013)



The residents who live and work in the study area earn less proportionately than the residents that leave and the employees that flow in to the study area to work (Figure 26): 40% earned \$15,000 per year or less, 46% earned \$15,001 to \$39,996, and only 14% earned more than \$39,996 per year (U.S. Census, 2013).

Figure 26: Earnings for Study Area Residents and Workers (Source: U.S. Census, 2013)

Annual Earnings	Study Area residents	Study Area workers	Study Area residents who live and work in Study Area
\$15,000 per year or less	31%	29%	40%
\$15,001 to \$39,996	49%	43%	46%
more than \$39,996 per year	20%	28%	14%

According to the MIT Living Wage Calculator, an individual earning \$16,649 per year in St. Louis County, MN would be able to afford basic living expenses. Therefore, it can be assumed that any worker earning \$15,000 per year or less is not making a living wage. A family of four with one working adult and two children would need to earn \$37,515 per year. As a result, if the 20% of study area residents that make more than \$39,996 per year are heads of household, it could be assumed that they are making a living wage. However, according to the 2013 DEED Cost of Living Study, a family of four with two working adults and two children in day care would need to earn a combined salary of \$60,017. Unfortunately, the U.S. Census Bureau OnTheMap tool does not break down income by household or family composition, so it is unknown which earners are single individuals, heads of household, dual-income families, or families with children. Overall, a sizable share of residents and workers in the study area do not make a living wage.

While 87% of Lincoln Park’s working residents were white, 5% black, and 4% American Indian, among all workers employed in the study area 95% were white, and less than 2% were either black or American Indian. The Inflow/Outflow analysis does not share the race or ethnicity of workers who live and work in the study area. Therefore it cannot be determined whether there is any racial disparity in the residents leaving the study area to work elsewhere.

The Inflow/Outflow analysis also provides a breakdown of employment by age. The majority of the Lincoln Park study area residents that live and work in the study area are between 30 to 54 (73%), while half of residents that leave the area to work are 30 to 54, one-third are 29 or younger, and one-sixth are 55 or older (U.S. Census, 2013). Of workers who flow into the study area, over half are 30 to 54 years old, over one-quarter are 29 or younger, and about one-fifth are 55 or older.

The OnTheMap Distance/Direction analysis shows that nearly three-quarters of residents who travel outside the study area work within 10 miles of where they live and many of them are working in Duluth, mostly in downtown (U.S. Census, 2013).

How will proposed economic development policies impact employment opportunities?

The Lincoln Park SAP Economic Development goals include redeveloping and revitalizing the neighborhood's retail core, promoting brownfield cleanup and redevelopment, and adaptive reuse to promote mixed-use housing and commercial opportunities. The recommendations to achieve these goals include promoting City Business Development policies, utilizing NGO and City loan/grant programs, and assisting brownfield cleanup and redevelopment. These recommendations are too vague to analyze individually. In theory, properties that are vacant or underutilized are more likely to be redeveloped and promote employment opportunities. Therefore, the HIA assessed the potential impact of full-scale redevelopment of vacant and underutilized parcels in the Lincoln Park study area on employment opportunities.

The HIA identified 429 parcels that will be zoned F-5, MU-B, MU-C, MU-N, or I-G following the proposed zoning recommendations and that have an estimated building value of less than \$10,000 (see Figure 27). The selection of \$10,000 as a building value for redevelopment was arbitrary. The majority of the parcels included had a building value of \$0. Many of these parcels are currently being used as storage or surface parking for the adjacent parcel. Time and resource limitations prevented a more in depth and potentially accurate analysis to identify parcels for future commercial redevelopment.

Figure 27: Properties Zoned F-5, MU-B, MU-C, MU-N or I-G with Estimated Building Value <\$10,000

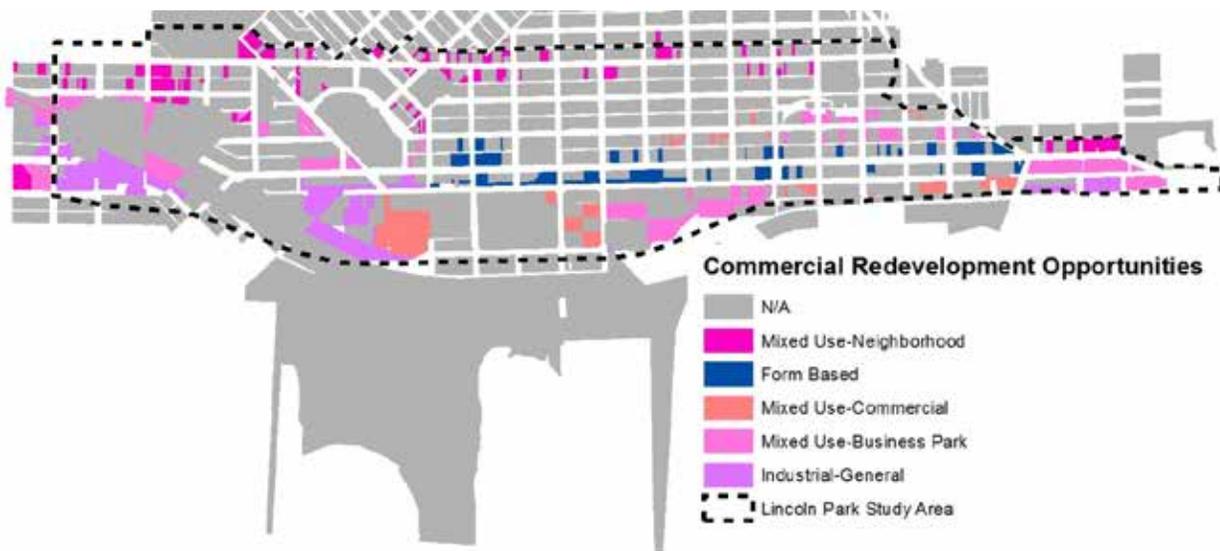


Figure 28 shows the number of parcels that have an estimated building value of less than \$10,000 and the total number of square feet of land for those parcels by future zoning. Parcels that were located in highway/interstate right of way, below the Ore Docks, owned by the Railroad, or had a lot width that was less than 50 feet or lot depth less than 140 feet and was not adjacent to another vacant/underutilized parcel it could be combined with were excluded from this summary.

Figure 28: Number of Parcel and Total Square Feet by Future Zone

Future Zone	Number of Parcels	Total Square Feet
F-5	64	495,447
I-G	93	927,347
MU-B	84	1,128,430
MU-C	71	525,059
MU-N	117	582,176
Total	429	3,658,458

In order to estimate the potential future jobs that could be created on these properties, MDH reviewed a number of studies that provided estimates of square feet per employee by industry type. Appendix B shows the number of square feet per employee by industry type. Current job density in the study area is approximately 5,700 square feet (sf) per employee based on future zoning and number of current employees. Assuming all the construction, manufacturing, wholesale trade, transportation and warehousing employment occurs in zoning districts I-G and MU-B, and all other industries (e.g., retail, food service, healthcare and social assistance, etc.) occur in the F-5 and MU-N zoning districts, the square feet per employee are closer to 6,500 in I-G and MU-B and 5,000 in F-5, MU-N and MU-C zones. Lincoln Park’s existing job density, while not calculated using the same methodology as the studies referenced in Appendix B, is much lower than other sources would indicate.

The HIA also reviewed some recent case studies of brownfield redevelopment sites in Duluth. IKONICS developed a new facility on the former Atlas Cement Plant in Morgan Park. The first phase of development included a 44,280 sf building on 11 acres, which now employs 17 full time staff¹⁷. Based on the property square footage, this would calculate out to be 28,185 sf per employee, or 2,605 sf per employee based on the building size. The Clyde Park/Heritage Sports Center redevelopment in Lincoln Park was built on 10 acres and was estimated to create 98 jobs, for a job density of 4,444 sf per employee¹⁸. The Canal Park brewery was developed on 18,600 sf and employs 102 full and part time staff, for a job density of 182 sf per employee¹⁹.

To calculate potential future jobs, it would be best to know the floor area ration (FAR) allowed within each zoning district. The City of Duluth Unified Development Chapter (UDC) does not define FAR by zoning district, but rather describes the types of buildings, building design and building height allowed within zoning districts. Time and resource limitations resulted in a more cursory analysis with the assumption that commercial and industrial redevelopment would be one-level buildings and cover 50% of each property. Based on these assumptions and the number of square feet per employee from Appendix B, the HIA identified likely future redevelopment within each zoning district by industry type. The amount of square feet within each zone was divided among the possible industry types based on the proportion of current jobs in that industry. For example, manufacturing accounts for 11% of employment in the study area. It was assumed that the industries operating in I-G would include manufacturing, construction, wholesale trade, transportation and warehousing, utilities and administration and waste services, which account for 48% of employment in the study area. If development

¹⁷ MPCA, <http://www.pca.state.mn.us/index.php/view-document.html?gid=17066>

¹⁸ MN Brownfields, http://mnbrownfields.org/wp-content/uploads/2014/02/Brownfields_Resource_Guide_2012.pdf

¹⁹ MN Brownfields, <http://mnbrownfields.org/case-studies/canal-park-brewing/>

occurred on the 927,000 sf of vacant or underutilized land in future I-G zone areas, it was assumed that manufacturing would be the industry operating on 11 out of every 48 developable parcels. This rough calculation was made in an attempt to assign parcels to industries more proportionately than simply allocating square footage equally among all industries within a zone.

The analysis found that if all vacant and underutilized parcels identified in this analysis were redevelopment, there is the potential to create over 4,700 jobs within the Lincoln Park study area (see Figure 29). This provides a snapshot of a hypothetical redevelopment scenario based upon the assumptions detailed herein.

Figure 29: Potential Job Creation by Redevelopment of Vacant and Underutilized Parcels

Future Zone	Future Redevelopment by Industry	Total Square Feet	Sf/emp	Estimated Jobs Created
F-5	Retail (11%)	139,741	615	114
	Office (7%)	88,926	315	141
	Food Service (7%)	88,926	150	296
	Healthcare & Social Services (14%)	177,853	250	356
	Manufacturing (11%)	212,517	675	157
I-G	Construction (9%)	173,877	275	316
	Wholesale, Transportation, Warehousing & Utilities (23%)	444,354	1250	178
	Administration & Waste Services (5%)	96,599	150	322
MU-B	Manufacturing (11%)	288,668	675	214
	Construction (9%)	236,183	275	429
	Wholesale, Transportation, Warehousing & Utilities (23%)	603,579	1250	241
MU-C	Retail (11%)	148,094	615	120
	Office (7%)	94,241	315	150
	Food Service (7%)	94,241	150	314
	Healthcare & Social Services (14%)	188,483	250	377
MU-N	Retail (11%)	355,774	615	289
	Food Service (7%)	226,402	150	755
All	All	3,658,458		4,770

Not all jobs provide the income, benefits and security necessary to lead a productive and healthy life. As described in the previous section, many retail and food service jobs do not pay living wages or provide benefits and paid sick leave, all of which are important for employee health. Retail salespersons and cashiers have the largest employment of all occupations across the U.S. (BLS, 2014). The third largest industry was food preparation and serving, which paid the lowest wages on average (\$18,000 per year). Cashiers had the second lowest wages on average and retail salespersons had the fourth, making approximately \$20K and \$25K per year, respectively. Figure 30 shows the average weekly and approximate annual wage by industry in the Lincoln Park zip code. Wholesale trade, transportation and warehousing, construction, and government health care and social assistance occupations were more likely to pay living wages, based on the MIT and DEED living wage

calculators discussed in the previous section. Based on the calculations of future potential jobs created, only 40% of new jobs are in these industries and would be more likely to be living wage jobs.

Lincoln Park residents and the SAP Advisory Committee agreed on the importance of access to healthy food. If the neighborhood recruited a grocery store, it would increase access to fresh, more affordably-priced produce than what is currently available, but it might not increase living wage jobs if clerks are paid minimum wage. However, some chains do provide living wage jobs with benefits. For example, Aldi, the German discount grocery store, pays cashiers a minimum hourly salary of \$10.50 and provides medical, dental, vision and prescription benefits, vacation time and paid holidays, retirement plan options, and life and disability insurance (CSM, 2014). Aldi also announced recently that it would begin hiring recent college graduates as district managers with an annual salary of \$75,000 (plus a corporate credit card, company car, and paid gas for professional and personal use). Locally, Whole Foods Co-op offers higher-than average starting wages for deli counter/kitchen clerks (\$10/hour) and assistant managers (\$16.50/hour).

Figure 30: Average Weekly Wage by Industry in Zip Code 55806 (Source: MN Department of Employment and Economic Development, QCEW)

Industry	Average Weekly Wage (2013)	Approximate Annual Income
Total (All Industries)	\$664	\$35,000
	Government: \$1,062	\$55,000
	Private: \$578	\$30,000
Manufacturing	\$583	\$30,000
Wholesale Trade	\$952	\$50,000
Retail Trade	\$559	\$30,000
Transportation and Warehousing	\$945	\$50,000
	Government: \$1,062	\$55,000
	Private: \$817	\$42,000
Health Care and Social Assistance	\$444	\$23,000
	Government: \$966	\$50,000
	Private: \$440	\$23,000
Accommodation and Food Services	\$264	\$14,000

Summary

Brownfield cleanup and redevelopment and dedicated City and NGO resources with strong public support for revitalization in the Lincoln Park retail core and Clyde Park/Heritage Center and Sports Corridor will likely promote expansion of existing businesses and/or new businesses locating in the neighborhood. Studies have shown the effectiveness of public investment in redevelopment to promote job creation. Minnesota Brownfields, a local non-profit that supports brownfield cleanup and redevelopment, found that 30.8 pre-development jobs are created on average for brownfield cleanup, and for every \$100,000 spent on project site cleanup or construction, 1 direct and 0.5 indirect jobs (MN Brownfields, 2011).

The Cushman & Wakefield/Northmarq retail study identified opportunities for Lincoln Park, including promoting office space for entrepreneurial businesses, hospitality, grocery, drug store, convenience goods and specialty stores. Stakeholder input prioritized increased access to healthy food and destination retail. Based on the

employment opportunity analysis of vacant and underutilized parcels in the study area, there is tremendous opportunity for employment if the SAP recommendations are implemented full scale across the neighborhood.

The HIA analysis found that if vacant and underutilized parcels in the study area were completely redeveloped, there is the potential to create over 4,700 new jobs. However, not all employment provides living wages and benefits. The food service and retail jobs that have been highlighted by the Cushman & Wakefield/Northmarq study and neighborhood priorities would be less likely to provide living wage jobs. The HIA analysis found that 60% of new jobs could be in industries that are less likely to provide living wages. See Figure 31 for a summary of the impact analysis of the Lincoln Park SAP Economic Development recommendations.

Figure 31: Summary of Economic Development Recommendations Impact Analysis: Employment Opportunities

	Direction	Magnitude	Likelihood	Evidence
Redeveloping and revitalizing the retail core	Positive (+) for lower paying retail and food service jobs	Moderate (**) – jobs not exclusive to Lincoln Park residents	Possible (**)	Some good studies (**)
Brownfield redevelopment	Positive (+), potential for lower paying retail and food service, and higher-paying industries	Moderate (**) – jobs not exclusive to Lincoln Park residents	Possible (**)	Some good studies (**)
Build out Clyde Park Complex	Positive (+) for lower paying accommodation, retail or food service jobs	Moderate (**) – jobs not exclusive to Lincoln Park residents	Possible (**)	Some good studies (**)
Adaptive reuse of existing multistory buildings	Neutral (-)	N/A	N/A	N/A
Reduce crime rate and improve perception of Lincoln Park	Neutral (-)	N/A	N/A	N/A

Social Cohesion

Existing Conditions

Definitions of social cohesion often describe communities or societies that share similar ingredients, including a sense of inclusion and belonging, a common set of values, participating actively in public affairs, recognizing and tolerating differences, and enjoying a degree of equality in access to public goods and services and the distribution of income and wealth ([URB-AL III Programme Orientation and Coordination Office](#)). Communities that lack social cohesion often suffer from severe socioeconomic inequity. Therefore, “social capital cannot be

conceived in isolation from economic and political structures, since social connections are contingent on, and structured by, access to material resources" (Wakefield and Poland, 2004).

If that is the case, Lincoln Park's Economic Development recommendations are well positioned to influence the social cohesiveness of the community. As described in Land Use/Zoning, businesses, organizations and public locations that promote interaction among neighbors are thought to promote social cohesion (Burns et al, 2000; Forrest, Kearns, 2001; Peterson, et al., 2000). This section will assess how the Economic Development recommendations may or may not promote social cohesion and community identity through local businesses that promote social cohesion, employment opportunities, and real and perceived crime.

Local businesses that promote social cohesion

The Land Use/Zoning section provided an overview of existing businesses that could promote social cohesion through community interaction, including non-profit and service-based organizations with programming (e.g., Boys and Girls club and Northern Expressions), coffee shops and restaurants, indoor and outdoor recreation and cultural facilities, and churches. Many of these businesses are locally owned and operated by families, including Johnson's Bakery, Duluth Grill, and Lorenzi's Boxing. Supporting local economic development (i.e., locally owned business ventures and industry) is an essential step towards achieving social cohesion objectives" ([URB-AL III Programme Orientation and Coordination Office](#)).

Jobs and social cohesion

The previous section discusses the potential development of employment opportunities as a result of the Economic Development recommendations. While the literature is thin on empirical evidence, there is general agreement that employment also is a means for developing social cohesion. At the most basic level, employment provides people with connections to others through networks. The workplace can be a place to interact with people from different backgrounds and life experiences and to build social networks from others' networks (World Bank, 2012). Employment's impact on mental health, as described in the introduction to this section, can also impact whether people withdraw from social interactions or engage in them, which impacts social cohesion (World Bank, 2012). Some jobs can create economic and social ties and are positively correlated with social cohesion. "Jobs that are empowering, build agency, and provide access to voice can increase trust and people's willingness to participate in civil society" (World Bank, 2012).

Conversely, job loss, lack of access to jobs, and unemployment negatively impact social cohesion (World Bank, 2012). Persons experiencing unemployment may disconnect from the community, feel depressed, lose trust in others, and have limited hope for the future (World Bank, 2012). Being in a situation with no jobs or jobs with limited opportunities for growth can lead to alienation, frustration, and possibly criminal activity (World Bank, 2012). Long-term unemployment and underemployment particularly among young people are disruptive factors for a community (Forrest and Kearns, 2001; Fukuyama, 1999a).

Figures 32 and 33 show unemployment rates in Lincoln Park study area compared to the neighborhood, City and state. Unemployment rates in the Lincoln Park study area and neighborhood are significantly higher than both

the City and state. Unemployment rates are more than twice as high for youth (16 to 19 years old), African Americans, and American Indians for all geographies.

Figure 32: Unemployment (ACS 2008-2012 5-year estimates)

	Unemployment Rate: Population 16 and over	Unemployment Rate: 16 to 19 years	Unemployment Rate: Black/African American	Unemployment Rate: American Indian
Study Area (Census Tract 156)	20%	42%	50%	39%
Lincoln Park (Tracts 24, 26 & 156)	19%	65%	48%	41%
Duluth	9%	29%	31%	21%
Minnesota	7%	20%	18%	18%

Notes:

(1) labor force participation rates for population 16 to 19 = 66% (LP), 45% (Duluth), 52% (MN), compared to population 16 and over = 68% (LP), 65% (Duluth), 71% (MN)

(2) labor force participation rates for Black/African American = 62% (LP), 60% (Duluth), 68% (MN)

(3) labor force participation rates for American Indians = 90% (LP), 53% (Duluth), 60% (MN)

Figure 338: Unemployment (MN Department of Employment & Economic Development, July 2014)

	Current Unemployment rate	2013 Annual Average Unemployment rate	Peak Recession Unemployment rate (March 2009)
Duluth	5.0%	5.6%	8.9%
Minnesota	4.2%	5.1%	9.0%

Crime level and “Perception” impacts on social cohesion

The Transportation section touched on the connections between personal safety, crime and social cohesion. High rates of community violence can create real or perceived unsafe environments which may increase isolation of residents and hinder social cohesion among neighbors (Sampson et al, 1997; Fullilove et al., 1998).

Crime rates in Lincoln Park were presented in the Transportation section and are repeated here. Figure 34 shows a crime density map for Lincoln Park, highlighting the areas where crimes happen most frequently. The data for this map includes one year of violent and property crimes from March 2014 – February 2015. Figure 35 shows the number and rate by type of crimes in the Lincoln Park neighborhood compared to Duluth. Crime rates in Lincoln Park are higher than Duluth for every type of crime.

Figure 34: Crime density map (Source: RAIDS online, March 2014-February 2015)

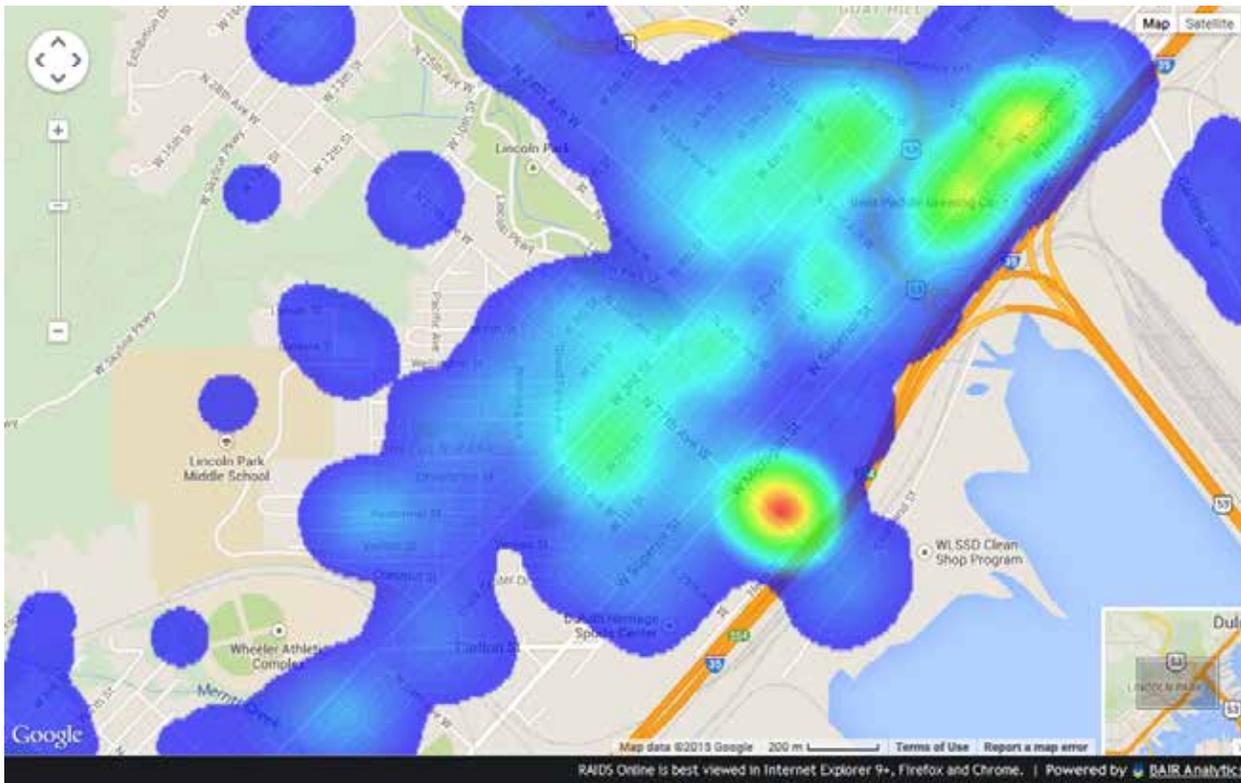


Figure 359: Number and type of crime in the Lincoln Park neighborhood

Type of Crime	Occurrences/Rate per 100,000 Lincoln Park (March 2014 – February 2015, RAIDS online)	Occurrences/Rate per 100,000 Duluth (Annual average 2004-2013, Duluth Police Department)
Homicide	1/16	2/2
Robbery	12/195	99/115
Aggravated Assault	35/570	203/235
Assault (other)	117/1,905	991/1,148
Burglary	72/1,172	663/768
Theft, Fraud, and Theft-other	275/4,478, 34/554, and 6/98, respectively	3314/3,842, 291/338, and 33/38, respectively
Motor vehicle theft	26/423	202/234
Arson	3/49	19/21
DUI	42/684 (mostly between midnight & 3am Thur, Sat & Sun)	336/390
Drugs/narcotics violations	86/1,400	493/572
Disorderly conduct	51/830	1,005/1,165
Vandalism	184/2,996	1,434/1,662

Lincoln Park residents and organizations have prioritized community safety, coming together to form the Lincoln Park Citizens Patrol and the community safety initiative “CommU-N-ItY Compstat” to address safety issues and assign police personnel based on analysis of crime data. Organizing the community into collective action around crime and safety, such as the Lincoln Park Citizens Patrol, is one way to improve real and perceived safety in a neighborhood (Sampson et al, 1997). Organized groups like a citizen’s patrol increase interaction and social connections among residents. Residents that experience greater integration among their neighbors perceive their neighborhood to be safer (Adams et al, 2000). Peterson et al. (2000) suggests that economic deprivation is a contributing factor to violence and crime, and rather than policing crime, providing economic opportunities (i.e., jobs) may be a better solution.

An issue that came up repeatedly at the Lincoln Park SAP Advisory Committee meetings was the way Lincoln Park is always reported on with bad statistics (i.e., crime). Stakeholders described that realtors will discourage new homebuyers to look at homes in Lincoln Park (personal communication, Advisory Committee meeting, June 2014).

The Gary/New Duluth Small Area Plan HIA also dealt with the concept of re-branding a community based on its assets, rather than focusing on its weaknesses to improve public relations, sense of belonging, and social cohesion (MDH, 2014b). While the empirical evidence is weak in this area, MDH (2014b) was able to find a few articles and economic development strategies built on the concept of branding a community to 1) develop a sense of pride and belonging to a community for existing residents, and 2) to attract new residents and drive economic development. One resource purported that “People define themselves by where they live. . . Their neighborhood, and what it says about who they are and how they want to live, is important” (Stabert, 2012, as cited in MDH, 2014b).

How will proposed economic development policies impact community identity and social cohesion?

This section outlines the importance of employment for promoting social cohesion through social networks developed at work, as well as potentially reducing violence and crime that can have a negative impact on social cohesion within the community. The previous section analyzed how the Economic Development recommendations could lead to over 4,700 new jobs in the Lincoln Park study area if there was complete redevelopment of all vacant and underutilized parcels. Currently only a small fraction of Lincoln Park study area jobs are held by Lincoln Park study area residents. If more residents were connected to new job opportunities in the neighborhood it could have significant, positive, far-reaching impacts on the social cohesion within the community.

Additionally, the Economic Development recommendations specifically target resources and attention to revitalizing the retail core of the neighborhood and the Clyde Park Complex development to serve neighborhood residents with destinations and services. More businesses and public locations for residents to visit will likely promote active and passive interaction among neighbors which can in turn promote social cohesion (Burns et al, 2000; Forrest, Kearns, 2001; Peterson, et al., 2000). Residents expressed a desire for more opportunities for neighbors to connect, including activities and places to get together, such as coffee shops. If these types of location are supported through the City Business Development policies and NGO and City loan/grant programs,

the recommendations will likely support existing relationships and could build new ones, having a positive impact on social cohesion. If the neighborhood attracts more venues that sell alcohol or other 'sin' products, social cohesion may be negatively impacted. Studies suggest that there are both positive and negative social impacts related to bars and similar establishments. They can be places to connect with one another but may also result in disturbances (see Land Use – Social Cohesion analysis).

The recommendation to encourage adaptive reuse of existing multistory buildings to promote housing on upper levels and retail/commercial options on first floors could have positive or negative impacts on social cohesion, depending on the type of retail/commercial businesses and the new residents that move into the upper floor units. The Lincoln Park SAP Housing recommendations analysis discussed the positive or negative effects on social cohesion that the recommendation to use zoning and building code enforcement to encourage second story apartments on the Superior Street Corridor could have. If second story residences are developed as live-work spaces or artists' lofts, they could promote new communities (Covert, 2012). However, it is important to foster the relationships between new and existing residents, and ensure that the positive aspects of gentrification do not displace residents. One study found that while increasing density can improve access to services it could worsen neighborhood problems and dissatisfaction (Bramley and Power, 2009).

The second set of Economic Development recommendations around brownfield cleanup and redevelopment could have a positive impact on social cohesion if vacant and blighted properties are redeveloped. Blighted and underutilized properties are associated with higher crime levels and fear among residents (Hollander, 2009), and may therefore affect social cohesion. There is a clear link between public signs of disorder (such as vacant housing, burned out buildings, vandalism, and litter) and more serious crime (Skogan, 1990). Conversely, areas that appear to be well maintained and cared for, and provide destinations within walking of residences can reduce crime and promote social cohesion (Leyden, 2003).

Similarly, the Economic Development recommendation to lower the crime rate and improve perception of overall safety in Lincoln Park through maintaining and supplementing neighborhood policing and citizens crime watch efforts could have positive impacts on social cohesion. However, the recommendation does not define what "maintain" or "supplement" entails. For example, whether the City is willing to dedicate additional financial or in-kind (i.e., staff) resources or if the recommendation is this a statement in support of the residents and organizations already involved in community crime watch programs to continue the work they are doing with their existing resources. If the latter, then the recommendation will not negatively impact social cohesion but would not likely have any positive impact on it either. If the recommendation is to provide additional resources to the existing efforts, and crime rates were reduced as a result, then there would likely be a positive impact on social cohesion. Additionally, as mentioned previously, promoting job opportunities could be a more effective way of contributing to both lower crime rates and higher levels of social cohesion.

The Economic Development recommendation to develop and exploit more positive "PR" stories about the neighborhood could impact residents' identity with the neighborhood and foster a stronger sense of place or belonging. Feeling a sense of belonging or attachment to one's neighborhood can foster feelings of pride and a general sense of well-being (Brown, Perkins, Brown, 2003). This "place attachment" is encouraged through "daily encounters with the environment and neighbors, seasonal celebrations, continued physical personalization and upkeep, and affective feelings toward and beliefs about the home and neighborhood"

(Brown, Perkins, Brown, 2003). Place attachment can also motivation renovations and other neighborhood improvements (Brown, Perkins, Brown, 2003).

One way to create positive “PR” stories is using Community Asset Mapping, a concept developed by McKnight and Kretzmann (1996). Often, lower income urban neighborhoods are noted for their deficiencies and needs. The alternative is to “develop policies and activities based on the capacities, skills, and assets of low-income people and their neighborhoods” (McKnight and Kretzmann, 1996). This is necessary for reasons: 1) because “community development only takes place when local community people are committed to investing themselves and their resources in the effort,” and 2) because there is unlikely to be a ‘silver bullet’ corporate headquarters, major institution or infusion of federal dollars to suddenly arrive in the community and solve any deficiencies or needs. The solution must come from internal resources, as limited as they may be. The authors argue that “even poorest city neighborhood is a place where individuals and organizations represent resources upon which to rebuild” (McKnight and Kretzmann, 1996).

Summary

The long term impacts of the Economic Development recommendations on social cohesion could be significant. If the proposed goals are achieved, new jobs could foster social networks and reduce crime, lower crime rates and development that improves the aesthetics of the community could foster a sense of place and community, and more parcels may develop as attractions and gathering places for residents to interact and develop social connections. Vacant and underutilized parcels are more likely to be redeveloped in the near-term, as well as parcels located near other popular commercial locations which may serve as catalysts for adjacent development. One of the major limitations of the Economic Development recommendations is that they do not specify if additional or new policies and/or resources will be dedicated to achieving the listed goals, or whether the recommendations highlight existing opportunities. If the recommendations are relying on existing resources to achieve significant change, they should specify how this will be accomplished (e.g., through dedicated staff administering resources in a more directed, location-specific manner). See Figure 36 for a summary of the impact analysis of the Lincoln Park SAP Economic Development recommendations.

Figure 36: Summary of Economic Development Recommendations Impact Analysis: Safety and Social Cohesion

	Direction	Magnitude	Likelihood	Evidence
Redeveloping and revitalizing the retail core	Positive (+)	Significant (***) – if redevelopment comes with jobs	Possible (**) – depends on whether additional resources are dedicated	Strong (***)
Brownfield redevelopment	Positive (+)	Significant (***) – if redevelopment comes with jobs	Possible (**) – depends on whether additional resources are dedicated	Strong (***)

Build out Clyde Park Complex	Positive (+)	Significant (***) – if redevelopment comes with jobs	Possible (**) – depends on whether additional resources are dedicated	Strong (***)
Adaptive reuse of existing multistory buildings	Positive (+) or Negative (-)	Moderate (**)	Possible (**)	Some good studies (**)
Reduce crime rate and improve perception of Lincoln Park	Positive (+)	Significant (***)	Possible (**) – depends on whether additional resources are dedicated	Strong (***)

Access to Healthy Food

Existing Conditions

The Lincoln Park food environment has been extensively detailed in the Land Use/Zoning, Housing and Transportation sections. Lincoln Park has a number of convenience stores that provide access to packaged foods and a limited selection of fresh produce, but lacks a full service grocery store or supermarket. A representative list of all the retail locations residents of Lincoln Park can access foods within the neighborhood are listed below. This list excludes services, such as food shelves, Salvation Army free hot meals and buying clubs, as well as self-provisioning (i.e., gardening, fishing, and hunting).

- Corner stores/Gas stations
 - Kwik Trip (Opened late 2014)
 - Little Store
 - Holiday
 - Interstate Spur (Closed early 2015)
- Restaurants
 - Duluth Grill
 - Johnson’s Baking
 - Subway
 - Burger King
 - Quiznos
- Bars
 - Clyde Iron Works Restaurant and Bar
 - All American Club
 - Bergey’s
 - Bedrock Bar

- Lincoln Park Farmers' Market, Thursdays from 4-7pm at the Harrison Community Center, June-October, run by Community Action Duluth
- Community garden: One site listed, Emerald Community Garden established 2013 (CHUM)

The UMD Food Access study compared fresh produce offered at the local convenience stores to the larger supermarkets and grocery stores outside Lincoln Park and found that "while many traditional grocery items are available at the convenience stores surveyed, it is clear that these businesses are not adequately equipped to provide affordable, healthy food on a scale that would benefit the people of Lincoln Park/West End" (Pine and Bennett, 2011).

How will proposed economic development policies impact access to affordable, healthy food?

There are two fundamental ways that the Economic Development recommendations could impact access to affordable, healthy food. The first is by improving physical access to healthy food options (Odoms-Young et al., 2009). The adaptive reuse of buildings, brownfield redevelopment, or revitalization of the retail core and/or Clyde Park Complex could result in new food retail outlets or urban/community gardens. The second way is through increased job opportunities that pay a living wage which provide families with more money to spend on healthy and affordable food (Odoms-Young et al., 2009; Connuscio et al., 2014).

The earlier section that identified the vacant and underutilized parcels in the study area could be used to highlight locations of new food retail establishments. Additionally, those parcels that were excluded from the analysis due to their small size could be ideal for an urban/community garden. Figure 37 shows where vacant and underutilized parcels zoned as MU-N are located, which could host either small grocery or urban agricultural uses. Urban/community gardens may also be used as interim uses on any vacant plots until a higher value development occurs. Community Action Duluth and Fair Food Access are developing a greenhouse in the Denfeld neighborhood, directly west of Lincoln Park. The project expects to break ground in summer 2015, with initial produce for sale in 2016, which could support a year-round farmers' market at the Harrison Community Center in Lincoln Park.

It is likely that any redevelopment in the retail core or between Clyde Park and the Sports corridor (Wade Stadium and Wheeler Athletic Fields) would likely increase food services, such as restaurants serving visitors to retail outlets, Heritage Stadium, the Children's Museum and baseball events. The food served at these locations may not be healthy or affordable, but it would increase options for study area and neighborhood residents.

Brownfield redevelopment could contribute to the remediation of soils and improve water quality in the study area and adjacent waterways. Remediated soils improve water quality and will potentially reduce contaminants in produce grown on cleaned-up sites (EPA, 2011). EPA has placed a priority on food production on brownfield sites. Its website has an entire section on [Urban Agriculture & Improving Local, Sustainable Food Systems](http://www.epa.gov/brownfields/urbanag/index.html) (www.epa.gov/brownfields/urbanag/index.html).

Figure 37: Commercial Redevelopment Opportunities for Retail Food or Urban Agriculture



Another way that urban communities have promoted access to fresh produce is through mobile produce markets. While a mobile market would have less of a positive impact on the economic development of the neighborhood, it could be a more viable short term solution to increase access to fresh produce for residents. See Appendix C for more information on mobile markets, food hubs and farmers’ markets.

Figure 38 provides a summary of the impact analysis of the Lincoln Park SAP Economic Development recommendations on access to affordable, healthy food.

Figure 38: Impact Analysis of Economic Development recommendations on Access to Affordable, Healthy Food

	Direction	Magnitude	Likelihood	Evidence
Redeveloping and revitalizing the retail core	Positive (+) – overall food access	Moderate (**)	Likely (***)	Generally consistent with public health best practice (*)
Brownfield redevelopment	Positive (+) – overall food access	Small (*)	Possible (**)	Generally consistent with public health best practice (*)
Build out Clyde Park Complex	Positive (+) – overall food access	Moderate (**)	Likely (***)	
Adaptive reuse of existing multistory buildings	Positive (+) – overall food access	Moderate (**)	Possible (**)	
Reduce crime rate and improve perception of Lincoln Park	Neutral (-)	N/A	N/A	N/A

TRANSPORTATION

The HIA will examine safety/social cohesion and access to healthy food as health determinants for the following Assessment because they were identified as particular concerns by stakeholders and the SAP Advisory Committee.

Existing Conditions: How does safety affect community interactions on the street and social cohesion?

Feelings of community safety are based on multiple environmental conditions, including traffic safety and personal safety and crime. Personal safety and crime are strongly related to promoting social cohesion (Hartnagel, 1979). High rates of community violence can create real or perceived unsafe environments which may increase isolation of residents and hinder social cohesion among neighbors (Sampson et al, 1997; Fullilove et al., 1998).

Unsafe environmental conditions – including traffic safety and crime – are barriers to physical activity, such as walking for leisure or transportation (Pollack et al., 2014; CDC, 2005; Grow et al., 2008; Day, 2006; Gustat et al., 2014). If residents are not being physically active in their neighborhoods, they may be less likely to interact with each other and therefore there could be a negative impact on social connections and social cohesion.

Neighborhoods that are more walkable and less auto-dependent have higher levels of social cohesion (Rogers et al., 2010; Freeman, 2001; Williamson, 2002; Leyden, 2003). Walkable neighborhood residents were more likely to know their neighbors, participate politically, trust others and be socially engaged, suggesting that policies and projects that support walking and public transit use, and increase land use mix, tend to increase community cohesion (Litman, 2012). Traffic speed, traffic volume, and road design also affected whether residents were likely to know or interact with their neighbors (Litman, 2012).

Of particular importance for community cohesion is the security and attractiveness of walking conditions, including the quality of sidewalks and crosswalks, minimal motor vehicle traffic volumes and speeds, and amenities such as shade and shelter from rain, landscaping and the presence of other pedestrians. These factors can be improved through streetscaping (improving the function and aesthetics of streets), traffic calming (designing streets to reduce excessive traffic speeds and volumes), and security improvements (VTPI 2008; Litman, 2012).

Existing Conditions: How safe are neighborhood streets today?

Street safety includes traffic safety and personal safety from crime. Traffic safety and comfort of pedestrian and bicycle travel can be measured in the total amount of traffic (annual average daily traffic (AADT) volumes), pedestrian and bicycle traffic (manual or automated counts), and number of motor vehicle, pedestrian and bicycle crashes.

In the Lincoln Park study area, the roadways with the highest traffic volumes include 27th Ave W from the I-35 exit to Michigan and Superior streets, Superior St between 21st Ave W and 16th Ave W, W 3rd St between 24th Ave W and 27th Ave W, and W 3rd St west of 34th Ave W (from Wade Stadium and Wheeler Athletic complex west).

Bicycle and pedestrian counts were collected manually are limited to specific intersections in the study area. Counts were collected in October 2014 at the intersections of Superior St & 27th Ave W and Michigan St & 27th Ave W during peak hours of traffic (7 to 9am, 11:30am-1:30pm, and 4-6pm). Figure 39 shows the results of the counts. Counts were also collected in September 2014 during a 12-hour screenline count²⁰ done on Superior St. There were 62 pedestrians and 49 bicyclists counted over 12 hours. This is a big pedestrian and bike area and it is suspected that counts will only increase now that the new Kwik Trip is open.

Figure 39: Bicycle and Pedestrian Counts, Lincoln Park 2014 (Source: MIC, 2015)

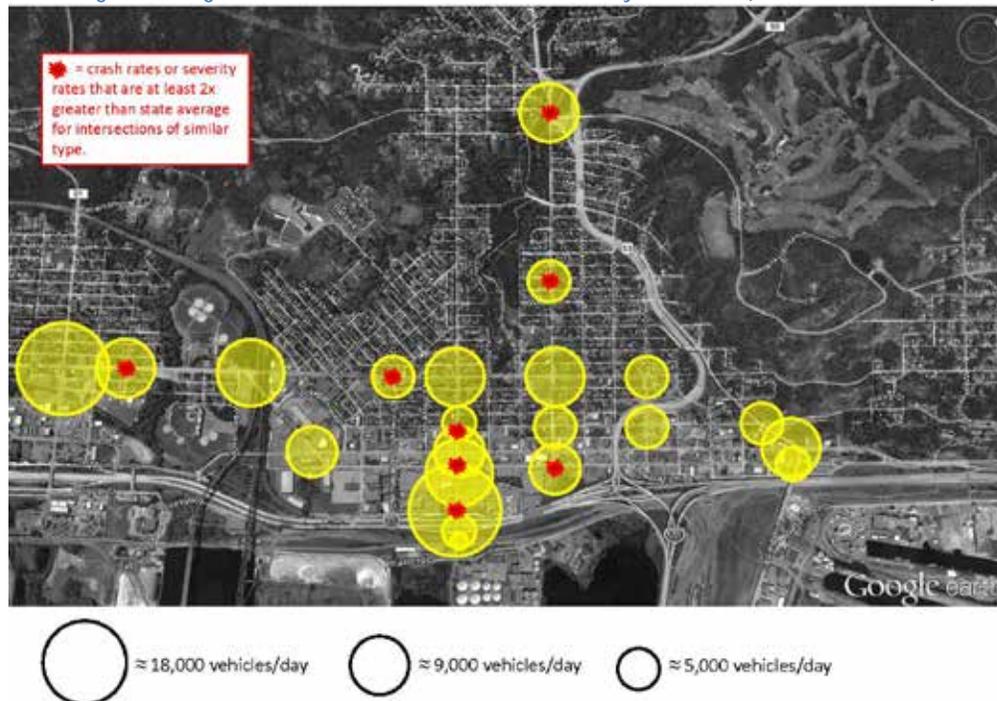
Intersection	7am-9am	11:30am-1:30pm	4:00-6:00pm
Superior & 27th Ave W	Peds: 15 Bikes: 11	Peds: 14 Bikes: 1	Peds: 14 Bikes: 8
Michigan & 27th Ave	Peds: 11 Bikes: 8	Peds: 12 Bikes: 2	Peds: 23 Bikes: 8

Additionally, counts of transit riders getting on and off of buses at bus stops can be thought of as proxy counts for pedestrian traffic, since every bus trip begins and ends with a pedestrian movement. Also, it is reasonable to assume that at least 50% of these totals would be someone crossing a street, which demonstrates potential conflicts with motor vehicles. Bus stops with the most ridership include W Superior St and 20th Ave W and 21st Ave W and W 2nd St, with between 301-700 riders getting on or off the bus on average every day. Six more intersections between 21st and 29th Ave W on W 3rd St have between 101-300 riders getting on and off the bus daily, as well as at stops near the intersections of 21st Ave W, 18th Ave W, and 17th Ave W on W Superior St.

The intersections with the greatest number of crashes from 2009-2013 (Figure 40) include Michigan and 27th (29 crashes), Piedmont Ave & Superior St (15 crashes), and 3rd St and 27th Ave W (15 crashes). Rates of crashes and severity of crashes at specific intersections also were analyzed. The intersections in the study area with crash rates or severity higher than the Minnesota average for an intersection of that traffic volume include: Skyline Parkway & 24th Ave, Michigan St & 24th Ave W, W 7th St & 24th Ave W (severity rate only), Helm St & 27th Ave W, Michigan St & 27th Ave W, 2nd Ave W & 27th Ave W, and 3rd St & 29th Ave W. Figure 2 is a “sketch” image showing where the locations of concern are, and the relative levels of traffic that are moving through those locations. From this image, you can see which areas represent those that could be deemed a health concern for pedestrians or cyclists from the standpoint of exposure to potential conflicts. The segment of 27th Ave W from W 1st St down to I-35 is a major concern because it has the most crashes across the corridor and is known to have a lot of pedestrian movement.

²⁰ Screenline counts track bicycle and pedestrian traffic entering and leaving a specific corridor, in this case W Superior St W, near the intersection of W Superior St and 27th Ave W

Figure 40: High concern areas due to crash rate, severity and AADT (Source: MIC, 2015)

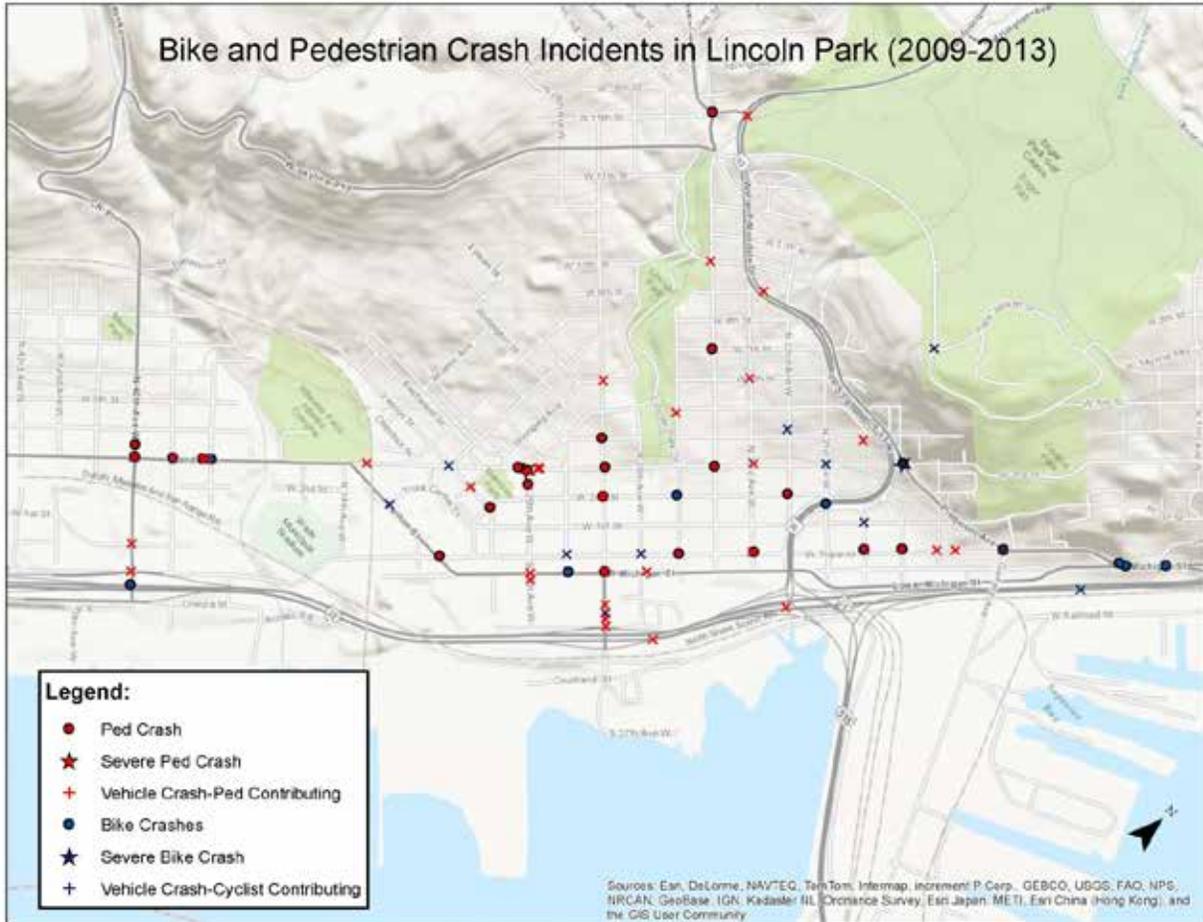


Regarding pedestrian and bicycle crashes specifically, there have been 53 pedestrian and 40 bicycle incidents between 2009 and 2013, including vehicle crashes in which a pedestrian or cyclist was a contributing factor but was not struck by the vehicle. There have been 20 pedestrian and 14 bicycle direct crashes. Fortunately, there were no fatalities and only two serious injuries. Figure 41 shows bicycle and pedestrian crashes and incidents from 2009-2013.

The following areas jump out as high concern:

- W 3rd Street - from 40th Ave W to 38th Ave W
- The vicinity of W 3rd Street & 29th Ave W (just east of Harrison Park)
- 27th Ave W – from W 4th St to I-35
- Michigan St – between Superior St and Glen Place Dr

Figure 101: Bike and Pedestrian Crash Incidents in Lincoln Park 2009-2013 (Source: MIC, 2015)



Lincoln Park ranks 4th worst out of 25 ranked neighborhoods for bicycle, pedestrian, and bus crashes per 1,000 residents. The ranking also take into account crashes where pedestrians or cyclists were a contributing factor to the crash but were not struck by a vehicle. Only downtown, Spirit Valley and Central Hillside have worse cumulative crash rates.

Personal safety from crime also is important for affecting whether people will be out walking and bicycling in their neighborhood. Figure 42 shows a crime density map for Lincoln Park, highlighting the areas where crimes happen most frequently. The data for this map includes one year of violent and property crimes from March 2014 – February 2015. Figure 43 shows the number and rate by type of crimes in the Lincoln Park neighborhood compared to Duluth. Crime rates in Lincoln Park are higher than Duluth for every type of crime.

Figure 42: Crime density map (Source: RAIDS online, March 2014-February 2015)

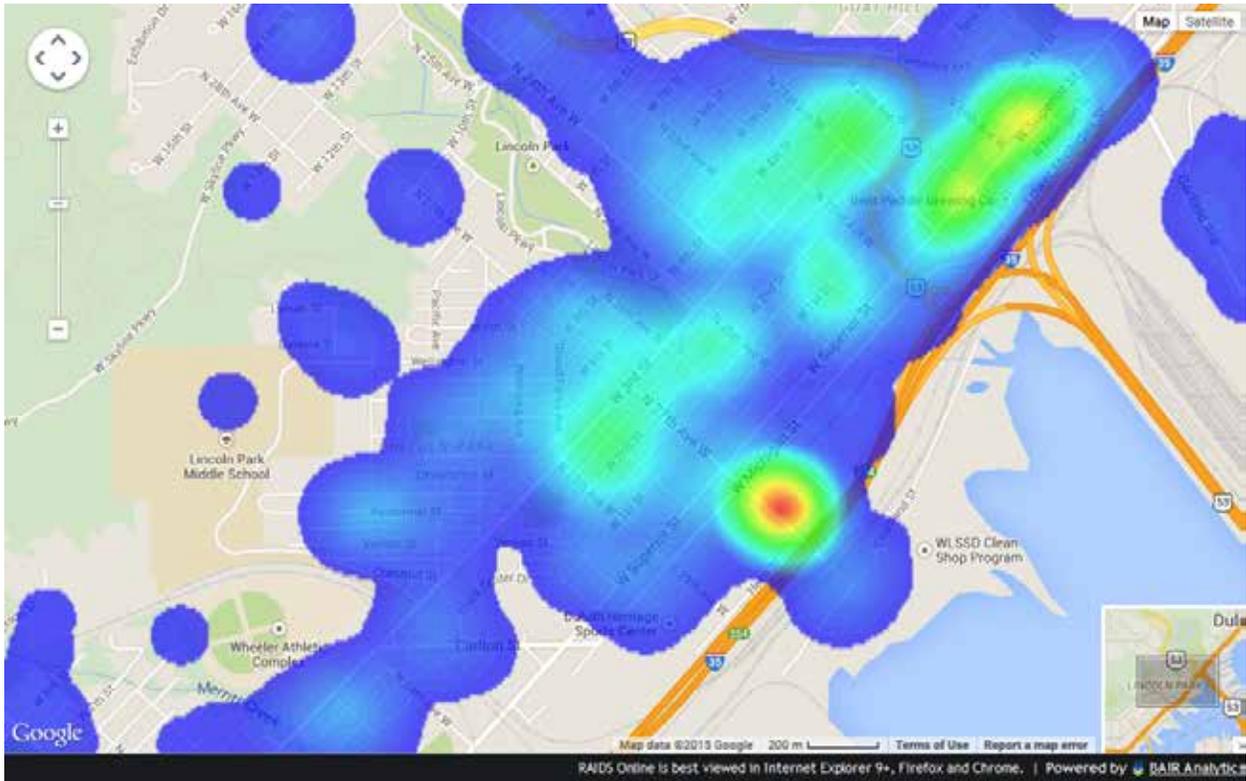


Figure 43: Number and type of crime in the Lincoln Park neighborhood

Type of Crime	Occurrences/Rate per 100,000 Lincoln Park (March 2014 – February 2015, RAIDS online)	Occurrences/Rate per 100,000 Duluth (Annual average 2004-2013, Duluth Police Department)
Homicide	1/16	2/2
Robbery	12/195	99/115
Aggravated Assault	35/570	203/235
Assault (other)	117/1,905	991/1,148
Burglary	72/1,172	663/768
Theft, Fraud, and Theft-other	275/4,478, 34/554, and 6/98, respectively	3314/3,842, 291/338, and 33/38, respectively
Motor vehicle theft	26/423	202/234
Arson	3/49	19/21
DUI	42/684 (mostly between midnight & 3am Thur, Sat & Sun)	336/390
Drugs/narcotics violations	86/1,400	493/572
Disorderly conduct	51/830	1,005/1,165
Vandalism	184/2,996	1,434/1,662

Lincoln Park residents made increasing safety a community priority and joined together to form the Lincoln Park Citizens Patrol. "The now 75+ member Citizen Patrol has organized a thorough patrol schedule and responds to neighborhood incidents with an increased and very visible presence across Lincoln Park" (LP Citizens Patrol website

(http://www.lisc.org/duluth/partners_and_supporters/community_safety_initiative/lincoln_park_citizens_patrol.php), 2015). Additionally, four organizations including Duluth Police Department, Duluth LISC, 1Roof Community Housing and At Home In Duluth Collaborative started the community safety initiative "CommU-N-Itty Compstat" to address safety issues and assign police personnel based on analysis of crime data.

Although higher crime rates can affect residents' perception of safety, and therefore their activity levels in the community, organizing the community into collective action around crime and safety, such as the Lincoln Park Citizens Patrol, is one way to improve real and perceived safety in a neighborhood (Sampson et al, 1997). Organized groups like a citizen's patrol increase interaction and social connections among residents. Residents that experience greater integration among their neighbors perceive their neighborhood to be safer (Adams et al, 2000).

Impact: How will the multimodal transportation recommendations impact safety, socializing and social cohesion?

The goal of the Lincoln Park SAP transportation recommendations is "Provide safe, convenient, and efficient multimodal transportation options for residents, businesses, and visitors." The draft recommendations were broken down by motorized, active transportation and transit subheadings. This section will review the motorized, active transportation and transit recommendations for their impact on safety, socializing and social cohesion separately.

Motorized Transportation Recommendations

The Motorized recommendations included six recommendations. The six recommendations are as follows:

1. Monitor traffic operations and safety along 27th Ave W between W 3rd St and I-35
2. Review parking needs in the Lincoln Park neighborhood business areas
3. Convert the following street segments from one-way to two-way:
 - a. Michigan St - from 21st Ave E to 19th Ave W.
 - b. W 1st St - from 27th Ave E to 22nd Ave W.
4. Repair or replace road pavements in poor condition
5. Reconstruct/Redesign the segment of 27th Avenue W between W 3rd St and I-35 to meet increased demand of multiple user groups.
6. As part of a "Can of Worms" reconstruction, incorporate the following improvements (contingent upon design):
 - a. Create a secondary street connection to Courtland St, aligning with the intersection of Lower Michigan St & 21st Ave W. Incorporate access to the waterfront.
 - b. Seek to improve connection of W 3rd St to Piedmont Ave via street realignments.

Monitor and the reconstruct/redesign the 27th Ave W corridor from W 3rd Street to I-35 (#1, 5): These recommendations have the potential to significantly impact safety. As previously documented, this is one of the highest traffic corridors in the neighborhood and has conflicts for motorists, pedestrian and bicyclists at multiple intersections. Additionally, the neighborhood has higher than average percentages of disabled persons for all age groups (Figure 44) and households without a motor vehicle, indicating a greater need for transportation infrastructure that provides safe accommodation for all users and particularly vulnerable pedestrians. The corridor will only increase in traffic volumes and potential conflicts for all modes with the new Kwik Trip gas station and market and future development in the neighborhood. As long as the monitoring and reconstruction/redesign intentionally focuses on the safety and needs of all users, it will likely improve safety conditions along this problem corridor. One way to ensure that this recommendation is implemented with the needs of all users in mind is if the City adopted a Complete Streets Policy. The City adopted a Complete Streets resolution in 2009, but never formally adopted a written policy.

Figure 44: Percent of Population with a Disability (Source: American Community Survey 2012 5-year estimates)

	With a disability	With a disability (under 18 years)	With a disability (18 to 64 years)	With a disability (65 years & over)
Study Area (Census Tract 156)	17%	6%	17%	44%
Lincoln Park (Tracts 24, 26 & 156)	16%	7%	17%	45%
Duluth	12%	4%	10%	36%
Minnesota	10%	4%	8%	32%

Assess parking requirements (#2): This recommendation is unlikely to have any real impact on safety, although either improving or reducing surface parking could increase the attractiveness of the built environment for pedestrians and bicyclists and addressing access points (curb cuts) to parking lots may impact safety for all road users.

Conversion of one-way to two-way (#3): This recommendation has the potential to impact safety, but studies have shown both positive and negative impacts. Some studies show an increase in traffic safety, especially for pedestrians, by reducing travel speeds, eliminating the most dangerous vehicle/pedestrian conflict (a left turn from a one-way street), and the accessibility of the neighborhood through the elimination of motorists using one-way roads as cut through routes between arterial roadways (Gilham, 2014; Baco, 2009). Studies favoring one-way roads as safer cite fewer vehicle/pedestrian conflict points and the need of both drivers and pedestrians to only be aware of traffic traveling in one direction (Baco, 2009). However, this argument does not consider that pedestrians may be approaching vehicles turning onto one-way streets from the opposite direction of traffic and therefore a vehicle will not be looking for her. While turns on two-way streets are still dangerous, motor vehicles and pedestrians alike are more likely to look in all directions for potential conflicts. In recent years, two-way streets are generally thought to be safer.

Repair and replace road pavements in poor condition (#4): This recommendation could impact safety by reducing potential accidents of bicyclists hitting uneven pavement or pot-holes and blown-tires for both cyclists

and motorists. Safety could be negatively impacted, however, if road conditions are improved but sidewalks are not, thereby encouraging pedestrians to travel in the roadway.

Improve connections between W 3rd St and Piedmont and Lower Michigan and Cortland (#6): This recommendation will increase accessibility for motorists to and within the neighborhood, but safety impacts are unknown. Safety will primarily be impacted by the design of the roadways, which has yet to be studied.

Summary

Most of the proposed recommendations will likely have unknown, neutral or positive impacts on traffic safety for motorists and non-motorized users. There does not appear to be any known significant negative impacts on traffic safety. As outlined in the previous section, communities that are more walkable, accessible and safe, tend to have higher levels of activity which increases potential for interaction and social cohesion. See Figure 45 for a summary of the impact analysis.

The connections between the six motorized recommendations and personal safety related to crime are more difficult to assess. Crime may be impacted by characteristics of the built environment that increase the number of people out traveling, whether in cars, on foot or by bike that are interacting and observing their surroundings. This phenomenon is called ‘natural surveillance.’ Most literature indicates that the more people are active in a community, the higher the natural surveillance and the more crime is deterred (Foster & Giles-Corti, 2008). However, greater walkability can be associated with more crime (Foster & Giles-Corti, 2008). Improvements in the condition of neighborhood can signal to residents that the neighborhood is well taken care of and deter crime. However, it is unknown if these neighborhood improvements extend to improved road conditions.

Improvements to neighborhood conditions can increase sense of pride and belonging which foster social cohesion (Henning and Lieberg, 1996; Forest & Kearns, 2001). Additionally, communities that are more active by foot or otherwise may increase interactions among residents, which can also foster social cohesion (Rogers et al., 2010; Litman, 2012). If transportation infrastructure improvements do have a positive impact on crime, that may also improve social cohesion in the neighborhood (Sampson et al, 1997).

Figure 45: Summary of Motorized Transportation Recommendations Impact Analysis: Safety and Social Cohesion

Impact	Direction	Magnitude	Likelihood	Evidence
Safety (traffic)	Positive (+) - #1,4,5 Neutral - #2 Unknown - #3,6	Large (***) - #1,5 Moderate (**) - #4,6 Small (*) - #2,3	Very likely - #1,3,4,5 Unknown - #2,6	Strong (***)
Safety (crime)	Positive or Negative (+/-) – general improvements to infrastructure	Unknown	Unlikely	Some good studies (**), but inconclusive
Social interaction/ cohesion	Positive (depends on positive impact of traffic and personal safety)	Small (*)	Possible (depends on impact of traffic and personal safety)	Some good studies (**), but inconclusive

Active Transportation Recommendations

The Active Transportation recommendations included twelve recommendations. The twelve recommendations are as follows:

1. Develop an access management policy
2. Reduce width of travel lanes on Skyline Parkway to increase shoulders
3. Make improvements to Cross City Trail (curb cuts, increase visibility, etc.)
4. Develop segment of Cross City Trail from Carlton & Superior St to Wade Stadium and Wheeler Complex along Merritt Creek
5. Repair or replace sidewalk segments in poor condition
6. Increase bike parking opportunities
7. Formalize public right-of-ways between Superior St and Michigan St at 28th Ave W and 26th Ave W as pedestrian walkways
8. Construct three paved multi-use trails: connecting Michigan to Atlantic Ave on Devonshire, through Lincoln Park at W 6th St, and linking Anson Ave to W 10th St
9. Plant a natural buffer or install special infrastructure between Cross City Trail and I-35
10. Improve connection between Heritage Center and Harrison Park (two-way bike lane and multi-use trail)
11. Include a sidewalk or trail as part of future access to Courtland St (see Motorized Transportation recommendation #6)
12. Enhance 26th Ave W as a greenway connection between Superior St and Lincoln Park park

Access management policy (#1): This recommendation could have a large impact on traffic safety, especially for pedestrians and bicyclists who are the most vulnerable travelers. Access management is the process of limiting the number of driveways and intersections (access points) on a roadway. Access management also controls turning movements onto and off of roadways, consolidates parking lots and encourage internal traffic flow, locates driveways away from intersections, etc. The purpose of access management is to improve traffic flow, while a major co-benefit is improving traffic safety (Gluck et al., 1999; Demosthenes, 2003; Dixon et al., 2012; Schultz et al, 2010). Access locations (driveways and intersections) account for more than 60% of vehicular crashes in urban areas (Demosthenes, 2003). Therefore, the fewer driveways there are on any given block crossing a sidewalk or bike lane, or entering into traffic, the fewer the potential points of conflict and crashes.

Reduce width of travel lanes on Skyline Parkway to increase shoulders (#2): This recommendation has significant potential to increase safety for bicyclists on the Skyline Parkway, and potentially increase the number of bicyclists using this roadway. Narrowing motor vehicle travel lanes is one strategy for effective traffic calming, which reduces motor vehicle travel speeds, reduces the total number of crashes, and reduces the severity of crashes. At the same time, this recommendation widens the shoulders for bicycle travel, which creates a more comfortable environment for bicyclists and extra space that cyclists have to take evasive action if potential for a collision arises (Turner et al, 2009).

Improve/extend/create dedicated and separated bicycle and pedestrian infrastructure (#3,4,7, 8,9,10,11,12):

The physical and visual experience of walking and bicycling trails is large determinant in whether infrastructure is used and the rate and frequency it is used (Pikora et al, 2003). Clean, visually attractive paths and sidewalks that are separated and buffered from motor vehicle traffic, noise and pollution are more likely to be used (Pikora et al, 2003). Numerous studies show that dedicated and separated bike lanes and pedestrians paths encourage bicycle and pedestrian travel (Dill & Carr, 2003; Koorey et al, 2009; Winters et al, 2011).

Well maintained sidewalks and paths will increase safety for users due to potential falls as a result of repairs in poor pavement conditions. "At-grade trail crossings have frequently been the sites of bicycle, pedestrian, and snowmobile crashes in Minnesota and throughout the nation" ([MnDOT, 2013](#)). Increasing the visibility of trails and sidewalks, especially at intersections, will increase safety by alerting drivers to the possible presence of pedestrians and bicyclists. The Minnesota Department of Transportation developed a resource call "[Best Practices Synthesis and Guidance in At-Grade Trail-Crossing Treatments](#)," which lists a number of options for increasing visibility of trail crossings for the purpose of improving safety and reducing crashes.

Providing dedicated pedestrian and bicycle infrastructure and expanding those systems to provide access to destinations are important for increasing the number of pedestrians and bicyclists (Pikora, 2003; Dill & Voros, 2007; Dill, 2009; Shay et al, 2009). Cities with high rates of walking and bicycling have lower risk of fatal and severe crashes for all road users due to street network design and the presence of a large number of bicyclists, which both reduce vehicle speeds (Garrick & Marshall, 2011). Providing infrastructure for bicyclists has been shown to redirect new and existing bicycle traffic to the routes with designated infrastructure, and may result in more bicyclists abiding by the rules of the road, increasing safety for all users (Parker et al, 2013).

Roads with lower design speeds, designated bicycle-only facilities (i.e., bicycle lanes and paths), and street-lighting, paved surfaces, and low-sloped grades contribute to fewer and less severe accidents (Frith, 2012; Reynolds et al, 2009).

Repair or replace sidewalk segments in poor condition (#5): Improving sidewalk conditions will reduce the risk of trips and falls on uneven pavement, make it easier for older adults and persons with mobility disabilities to get around, increase the comfort of pushing a stroller, and generally improve safety conditions for all pedestrians. Sidewalks, along with reduced traffic flow and destinations (i.e., retail shops), have been show to increase walking within ones neighborhood (Corti et al., 1996). Additionally, attractiveness of paths, shading, low flow traffic and destinations have been identified as characteristics of the environment that increase walking (Wright et al, 1996). The Metropolitan Interstate Council (MIC) and St. Louis County Public Health have developed Safe Routes to School Plans for the Lincoln Park middle school, which could provide guidance and recommendations for all pedestrians, but especially children, some of the most vulnerable travelers.

Increase bike parking opportunities (#6): More bicycles parked in public places could increase incidence of bicycle theft. [Bike Off!](#), an English advocacy organization that has reviewed dozens of studies on the subject of bicycle theft, recommends using the principles of Crime Prevention Through Environmental Design (CPTED) to place bicycle parking appropriately in the context of the streetscape. Another study from Europe reported that increases in bicycling and bicycling parking can lead to an increase in bike theft, but that efforts to educate around 'good' locking practices through publicity may mitigate some theft ([Sidebottom et al, 2009](#)).

Summary

All of the Active Transportation recommendations will have direct, positive impacts on traffic safety, with the exception of #6 which supports increased bike parking opportunities and is unrelated. Well documented safety improvements that are proposed include reducing the potential for conflicts between motorists and pedestrians and bicyclists through buffered and segregated/dedicated infrastructure, increased visibility and reduced conflict points (e.g., driveways and intersections). Narrowed lane widths are proven traffic calming measures that slow motorists, reduce crashes and reduce severity of crashes. Improvements in pavement conditions also will increase safety from falls or pedestrians who may currently walk in the street due to poor sidewalk conditions.

The connections between the majority of the active transportation recommendations and personal safety related to crime are more difficult to assess than traffic safety. As noted in the Motorized section above, crime may decrease as a result of urban design ([Day et al, 2007](#)) and more people active in the neighborhood, increase as a result of more people active in the neighborhood, and possibly increase for bike thefts specifically if more are parked in public places.

Social cohesion will be positively affected by the increase in traffic safety and resulting likely increase in bicyclists and pedestrians in the community which will create more opportunities for formal and informal interaction. Changes in quality of the active transportation infrastructure may also impact social cohesion, related to a sense of pride and belonging to one's neighborhood, as well as any possible decreases in crime. However, if crime increases, social cohesion may be negatively impacted. The studies on the subject are inconclusive and therefore it is difficult to say with certainty whether social cohesion will improve as a result of the active transportation recommendations. See Figure 46 for a summary of the impact analysis.

Figure 46: Summary of Active Transportation Recommendations Impact Analysis: Safety and Social Cohesion

Impact	Direction	Magnitude	Likelihood	Evidence
Safety (traffic)	Positive (+) – #1,2,3,4,5,7,8,10, 11,12	Large (***)	Very Likely	Many peer reviewed papers (***)
Safety (crime)	Positive or Negative (+/-) #1,2,3,4,5,7,8,10, 11,12	Unknown	Unknown	Some good studies (**)
	Negative (-) - #6	Small (*)	Likely	
Social interaction/ cohesion	Positive (+)	Large (***)	Possible	Some good studies (**)

Transit Recommendations

The Transit recommendations included four recommendations. The four recommendations are as follows:

1. Conduct a coordinated transit network plan for the City of Duluth aimed at better matching land use ordinances with goals for the transit network
2. Enhance the vicinity of Superior St & Cross City Trail spur as a bus stop serving the Heritage Center. Create a dedicated waiting area for bus riders.
3. Convert parking lane on south side of Grand Ave (from Carlton St to Central Ave.) to a dedicated in-bound lane.
4. Prioritize key bus stops and transfer points, determine space requirements, and install bus shelters

The transit recommendations can be generally summarized as making the walking and waiting environment to and around bus stops more comfortable for pedestrians and transit riders. The improvements to the walking and waiting environment might impact transit ridership (Taylor & Fink, 2003) and therefore the number of pedestrians and possibly bicyclists going to and from transit stops, the transit recommendations do not specifically address characteristics that would have a significant or likely impact on traffic safety measures.

While there are a number of articles on how safety affects transit ridership (Taylor & Fink, 2003; Spears et al., 2013; Delbosc & Currie, 2012), there is limited evidence supporting a causal chain the other direction – that improved transit infrastructure may affect traffic safety or personal safety/crime. Liggett et al (2003) found that the most important predictor of bus stop crime was location, including factors such as visibility and surveillance from surrounding buildings, distance from undesirable establishments, and cleanliness (free of graffiti and litter). Another logical connection is that transit improvements would positively impact transit ridership (VTPI, 2014) and therefore pedestrian activity and natural surveillance around transit stops. However, as discussed previously under motorized and active transportation, there is a debate in the research whether pedestrian activity in a neighborhood enhances surveillance, and therefore safety, or actually increases crime.

The connection between improvements to bus stops and social cohesion is more indirect. If bus stop and general transit improvements reduce crime, there could be an increase in social cohesion in the surrounding community. Additionally, if improvements to bus stops and transit service lead to increased transit ridership, it could mean that more residents are getting out to social engagements as a result of increased access and comfort (Litman, 2012). While this would not necessarily increase social cohesion within the neighborhood, it could reduce social isolation, especially for the elderly and disabled that have limited access to other modes of transportation (STPP, 2004). See Figure 47 for a summary of the impact analysis.

Figure 47: Summary of Transit Recommendations Impact Analysis: Safety and Social Cohesion

Impact	Direction	Magnitude	Likelihood	Evidence
Safety (traffic)	Unknown	Small (*)	Unlikely	Limited
Safety (crime)	Positive (+) – #2,4 with appropriate precautions	Medium (**)	Likely	Some good studies (**)
Social interaction/ cohesion	Positive (+)	Small (*)	Possible	Generally consistent with public health principles (*)

Existing Conditions: Does the existing transportation infrastructure provide access to goods and services, including healthy food?

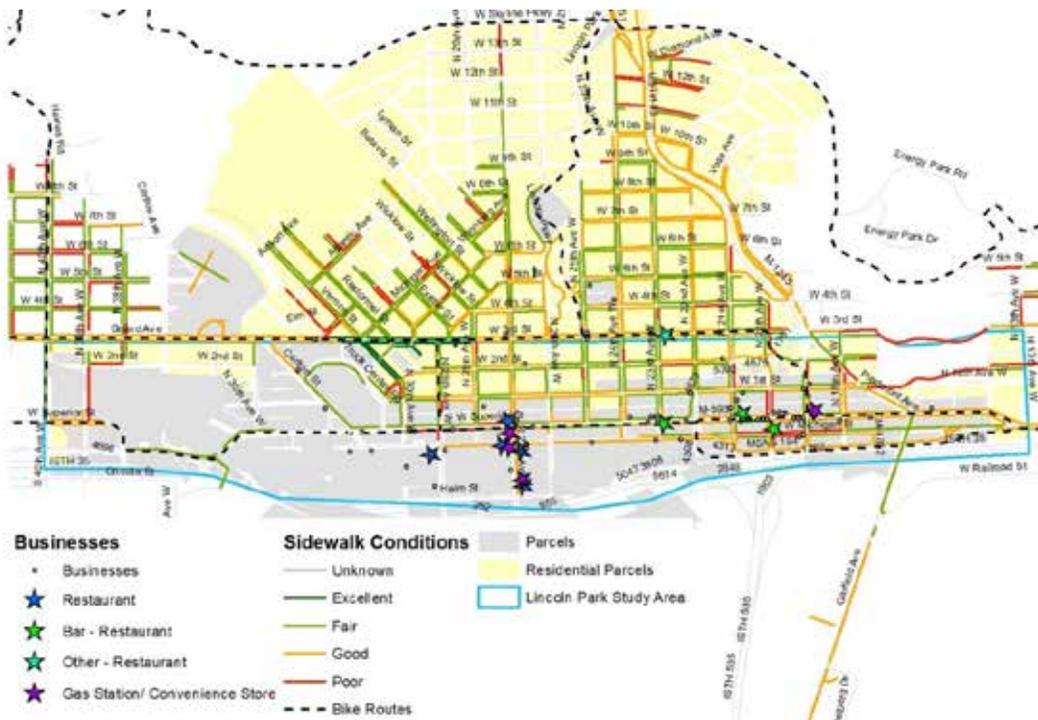
Motor vehicle Access:

Lincoln Park residents can walk, drive, bike or take transit to access food outlets. It takes approximately eight to ten minutes to drive to the Super One in West Duluth or the Super One, Cub Foods or Target near the Miller Hill Mall. This is less than the national average of 15 minutes travel time to a grocery store (USDA, 2009). However, in the SAP study area (Census Tract 156), 28 percent of households do not own a vehicle, and 18% do not own a vehicle across the neighborhood – Census Tracts 156, 24 & 26). These are very low car ownership rates and indicate that residents likely travel shorter distances to convenience stores for their food purchases, take more time to get to and from the grocery store on transit, or carpool.

Pedestrian Access:

Based on 2010 Census data, approximately 1,144 people (18%) live within a quarter-mile of one of Lincoln Park’s four convenience stores, and 1,604 people (26%) live within a half-mile. Figure 48 shows the sidewalk conditions and location of designated bike lanes/paths in the Lincoln Park study area relative to the location of food outlets including restaurants, bars, and convenience stores. The majority of sidewalk conditions closest to the restaurants and convenience stores on 27th Ave W are in “good” condition, which is the second worst condition. Sidewalk conditions in the old main street business district on Superior and Michigan from 23rd Ave W to 18 Ave W that provide access to a few bar/restaurants and brewery are in “good” or “poor” condition.

Figure 48: Bike Lanes and Sidewalk Conditions Near Food Outlets in Lincoln Park (Data Source: MIC, 2011 & 2015)



One limitation of this dataset is that it was last updated in 2011, and some segments of sidewalk, especially where new developments (i.e., Kwik Trip) has happened since then does not account for new or replaced sidewalks. However, this does give an overall picture of the sidewalk conditions, where improvements should be prioritized to improve pedestrian access to food outlets.

Priority areas could include those that provide access to the convenience stores that sell more fresh produce and staples. Additionally, when improvements to sidewalk conditions are made, streetscaping should be considered (e.g., street trees, benches, public art, etc.) to encourage a better quality pedestrian environment and places for people to rest if they need to pause while carrying home grocery bags.

Bicycle Access:

Bicycle lanes are represented by black dashed lines on Figure 48. For bicyclists to access the restaurants and convenience stores located on 27th Ave W via designated bike routes from the residential areas north of the study area, they would need to take either 29th or 19th Ave W north or south and then go east or west on Superior (depending on their direction of origin). The Cross City Trail on Superior is the only separated bike path through the neighborhood. This trail will eventually connect to other neighborhoods across the city, improving access to the Super One in West Duluth. Currently, bicyclists can take W 3rd St west as it becomes Grand Ave and take a left on Central Ave in West Duluth to access the Super One. The improvements to connections on the Cross City Trail will allow bicyclists to travel away from motor vehicles, which encourages more riders and increase access for new, less confident riders.

Transit Access:

Duluth Transit Authority buses 1, 2, 3, and 5 run west from W 3rd St to within 3 blocks of the Super One grocery store in West Duluth. Route 4 runs from W Superior St to right in front of the Super One in West Duluth. The trip takes approximately 20 to 25 minutes each way. Route 5 also runs north to Miller Hill Mall and surrounding commercial, including a Target, Cub Foods and Super One Foods. The trip to Miller Hill Mall takes approximately 30 minutes. Routes 1, 2, and 3 run frequently during the week days, starting at 4:30am and going until after midnight. On Saturday and Sunday, these routes have similar frequency but run shorter hours: 6am to 11pm. Route 4 runs from 6am to 6pm approximately every 30 minutes during morning and afternoon peak hours and every hour on off-peak hours on week days and Saturdays, but does not run on Sundays. Route 5 runs once per hour from 7am to 6pm on week days, and 10am to 6pm on Saturdays and Sundays.

Figure 49 shows the annual average number of transit riders getting on (boardings) and off (alightings) of buses in the Lincoln Park neighborhood. Bus stops with the most ridership include W Superior St and 20th Ave W and 21st Ave W and W 2nd St, with between 301-700 riders getting on or off the bus on average every day. Six more intersections between 21st and 29th Ave W on W 3rd St have between 101-300 riders getting on and off the bus daily, as well as at stops near the intersections of 21st Ave W, 18th Ave W, and 17th Ave W on W Superior St.

Figure 49: Annual Average Daily Transit Boardings and Alightings (2008) (Source: MIC, 2015)



Figure 50 shows the bus shelter and pedestrian environment at the intersection of 21st Ave W and W 2nd St, indicated on the map as one of the two busiest bus stops for boardings and alightings. Notice the bus shelter in the foreground for west-bound Route-4 buses and the bus shelter in the background across the street in front of the Midtown Manner apartments which is served by west-bound bus routes 1, 2, and 3. Other bus stops along Superior heading towards downtown and along W 3rd St heading east from West Duluth include benches and occasionally a shelter at more popular stops (e.g., churches). The pedestrian environment and sidewalk conditions are generally very good along the W Superior St stretch of the old main commercial corridor and W 3rd St. Benches and shelters at every bus stop would improve the waiting environment for a continental climate that experiences an average of 120 days with precipitation per year.

Figure 50: Bus Shelter and Pedestrian Environment at 21st Ave W & W 2nd St (Source: GoogleMaps, 2011)



Impact: How will the multimodal transportation recommendations impact access to goods and services (specifically, healthy food)?

Most research on the impact of the built environment on access to healthy food focuses specifically on distance to food retail outlets (Odoms-Young et al., 2009). Other factors that have been recognized to influence the purchase and consumption of healthy food include cultural preference for certain foods, cost of foods, and education around food purchasing and preparation (Odoms-Young et al., 2009). There have been few studies specifically looking at how transportation influences access to healthy foods and therefore consumption of healthy foods (D'Angelo et al., 2011; Bader, 2010).

There has been growing interest in the social environment impact on food access and consumption. Connuscio et al. (2014) reported that survey respondents “chose to shop at stores that met a range of social needs. Those needs ranged from practical financial considerations, to fundamental issues of safety, to mundane concerns about convenience, and juggling multiple work and family responsibilities.” Additionally, “in deciding where to shop in this urban context, participants adapted their routines to avoid unsafe places and the threat of violence.

Participants also discussed the importance of convenient stores that allowed for easy parking, accommodation of physical disabilities or special needs. . ." (Cannuscio et al., 2014).

A study by Bader et al. (2010) in New York City looked at the impacts of variation in vehicle ownership rates, public transit access, and impediments to pedestrian travel, such as crime and poor traffic safety, on disparities in food environments. The study found that neighborhoods with lower vehicle ownership and higher crime negatively affected access to supermarkets, especially for African Americans and lower income areas. Neighborhoods with good public transit service and traffic safety tended to reduce disparities in food access (Bader et al., 2010).

Most of the studies investigating the connection between crime and traffic safety on food access rely on the research connecting crime and traffic safety on physical activity (Odoms-Young et al., 2009; Bader, 2010; D'Angelo et al., 2011). The logical connection is that if studies have found people are less likely to be active in unsafe environments, they will also be deterred from traveling to and shopping in unsafe environments. Pedestrians and transit riders are likely to be impacted more because they spend more time out in those environments (Bader et al., 2010).

Motorized Transportation Recommendations

Based on the studies connecting safe traffic and pedestrian environments and food access (Odoms-Young et al., 2009; Bader, 2010; D'Angelo et al., 2011; Connuscio et al., 2014) and the Motorized Transportation Recommendations' predicted improvements to safety for motorists, pedestrians and bicyclists (e.g., access management, reduced lane widths, etc.), the Motorized Transportation Recommendations are likely to increase access to retail food outlets within the Lincoln Park neighborhood. The retail food outlets within walking distance in Lincoln Park carry fewer options and less fresh produce than super markets, and therefore may not increase access to fresh and healthy food. Additionally, food items cost more at the local convenience stores than at super markets outside of the Lincoln Park neighborhood, and therefore food affordability will likely not improve as a result of the Motorized Transportation Recommendations. However, overall access to food in the neighborhood will increase, including limited options to fresh, healthy foods (Figure 51).

Figure 511: Summary of Motorized Transportation Recommendations Impact Analysis: Food Access

Impact	Direction	Magnitude	Likelihood	Evidence
Access to healthy food	Positive (+)	Moderate (**)	Likely (***)	Some good studies (**)

Active Transportation Recommendations

The Active Transportation Recommendations will likely improve safety, particularly for pedestrians and bicyclists (e.g., improved sidewalk and bicycle path infrastructure and connections). The improvements to the pedestrian environment and traffic safety are likely to encourage more pedestrian and bicyclist travel and recent studies indicate that these improvements may also increase food access within the neighborhood (Odoms-Young et al., 2009; Bader, 2010; D'Angelo et al., 2011; Connuscio et al., 2014). The retail food outlets within walking distance in Lincoln Park carry fewer options and less fresh produce than super markets, and therefore may not increase

access to fresh and healthy food. Additionally, food items cost more at the local convenience stores than at super markets outside of the Lincoln Park neighborhood, and therefore food affordability will likely not improve as a result of the Active Transportation Recommendations. However, overall access to food in the neighborhood will increase, including limited options to fresh, healthy foods.

Improved trail connections for cyclists may also increase access to healthy and affordable foods by enabling bicyclists to travel to the Super One Foods in West Duluth on primarily segregated bike trails, which increase safety and comfort for trail users. See Figure 52 for a summary of the impact analysis of the Active Transportation Recommendations on food access.

Figure 122: Summary of Active Transportation Recommendations Impact Analysis: Food Access

Impact	Direction	Magnitude	Likelihood	Evidence
Access to healthy food	Positive (+)	Moderate (**)	Likely (***)	Some good studies (**)

Transit Recommendations

The Transit Recommendations for improvement to bus stop environment (e.g., shelters) will likely encourage transit ridership and increase access to grocery stores. The studies looking at travel time as an indicator of food access point out that persons who take public transit to food retail outlets spend more time traveling than persons who walk or drive (Odoms-Young et al., 2009; Bader, 2010; D’Angelo et al., 2011). The Transit Recommendations will not increase frequency of service or impact overall travel time; therefore the impact of the recommendations on access to healthy, affordable foods is moderate. However, the Transit Recommendations are increasing access to full service grocery stores, which provide greater selection and lower cost options for healthy foods. See Figure 53 for a summary of the impact of the Transit Recommendations on food access.

Figure 53: Summary of Transit Recommendations Impact Analysis: Food Access

Impact	Direction	Magnitude	Likelihood	Evidence
Access to healthy food	Positive (+)	Moderate (**)	Likely (***)	Some good studies (**)

RECOMMENDATIONS

In order to promote the positive impacts of the Lincoln SAP and reduce the negative effects, the HIA proposes a number of recommendations. The recommendations were developed by the HIA Technical Advisory Committee and HIA project team, with input from community members. Each recommendation includes a priority level (low to high) that was identified by the HIA Technical Advisory Committee based on a combination of the recommendation's significance for health impacts and feasibility the recommendation based on the City's activities and priorities.

Future Land Use/Zoning Recommendations

Recommendations related to future land use/zoning were developed based on an examination of three factors that can impact public health: housing availability, quality and affordability, community building/social cohesion, and access to healthy food. Final recommendations were to:

- Consider a model foods ordinance similar to the City of Minneapolis Staple Food Ordinance to ensure that all small corner stores stock a variety of healthy foods.
- Consider zoning regulations or necessary ordinances for mobile food markets that could travel the neighborhoods designated as food deserts to increase access to healthy food. See regulations for mobile retail (e.g., Fig Leaf).

Housing Recommendations

Recommendations related to housing were developed based on an examination of three factors that can impact public health: housing quality/affordability, social cohesion, and food access. Final recommendations were to:

- Enforce existing rental and building codes
- Screen eyesores, such as vehicle parking, storage, etc., especially along W 1st St
- Use zoning to encourage second-floor apartments on Superior St
- Increase utilization of housing assistance products to improve housing stock
- Demolish condemned/blighted properties and sell to adjacent owners
- Create a six-block 'Lincoln Park Housing Revitalization Area'

Economic Development Recommendations

Recommendations related to economic development were developed based on an examination of three factors that can impact public health: employment opportunities, social cohesion, and access to affordable, healthy food. Final recommendations were to:

- Redevelop and revitalize the retail core
- Redevelop brownfields
- Build out Clyde Park Complex
- Promote adaptive reuse of existing multistory buildings
- Reduce crime rate and improve perception of Lincoln Park

Transportation Development Recommendations

Recommendations related to transportation were developed based on an examination of three factors that can impact public health: safety, social cohesion, and access to healthy foods. Two primary transportation areas assessed were active transportation and transit.

Transit recommendations were to:

- Conduct a coordinated transit network plan for the City of Duluth aimed at better matching land use ordinances with goals for the transit network
- Enhance the vicinity of Superior St & Cross City Trail spur as a bus stop serving the Heritage Center. Create a dedicated waiting area for bus riders.
- Convert parking lane on south side of Grand Ave (from Carlton St to Central Ave.) to a dedicated in-bound lane.
- Prioritize key bus stops and transfer points, determine space requirements, and install bus shelters

Active transportation recommendations were to:

- Develop an access management policy
- Reduce width of travel lanes on Skyline Parkway to increase shoulders
- Improve/extend/create dedicated and separated bicycle and pedestrian infrastructure
- Repair or replace sidewalk segments in poor condition

Increase bike parking opportunities

Figure 54 outlines modifications to the SAP recommendations that will support the health determinants of healthy, quality housing, safety and social cohesion, access to healthy food and living wage job opportunities, which are the focus of this HIA.

Figure 54: Recommended modifications to the SAP

Health Determinant	HIA Recommendation	Section of SAP or related Recommendation	Lead	Partners	Timeline
Access to healthy food	Consider a model foods ordinance similar to the City of Minneapolis Staple Food Ordinance ²¹ to ensure that all small corner stores stock a variety of healthy foods.	Land Use/Zoning	Partnership between local public health and City Planning ²²	Fair Food Access (Duluth LISC, Seeds to Success, Duluth Community Garden, CHUM, Healthy Duluth Area Coalition)	2015-2016

²¹ See Minneapolis example [staple foods ordinance](#) (passed 2008, strengthened 2014) and the [Minneapolis Healthy Corner Store Program \(www.health.state.mn.us/divs/oshii/docs/Mpls_Healthy_Corner_Store.pdf\)](#) which was an effort to increase compliance with the ordinance (75% of corner stores did not meet produce requirements in 2009)

²² Minneapolis Healthy Corner Store Program run by local public health department

Health Determinant	HIA Recommendation	Section of SAP or related Recommendation	Lead	Partners	Timeline
Access to healthy food	Consider zoning regulations or necessary ordinances for mobile food markets that could travel the neighborhoods designated as food deserts to increase access to healthy food. See regulations for mobile retail (e.g., Fig Leaf).	Land Use/Zoning	City Planning	Fair Food Access partners	2015-2016
Safety Access to goods/services (healthy food)	Follow up with Resolution 10-0128R Providing for a Complete Streets Policy (March 2010) by developing and enacting a Complete Streets policy. ²³	Transportation – Active Transportation	City Planning	Healthy Duluth Area Coalition, ARDC, City Public Works, local public health	2016-2017
Safety	Locate bus stops away from entrances to bars, within sight of other locations (natural surveillance).	Transportation – Transit (amendment to Recommendations T and V.)	DTA, City Planning, City Engineering		2015-2019 (T), 2020-2029 (V)
Access to healthy food Social cohesion	Wayfinding – point out access to local retail, service and recreation destinations (e.g., Wheeler, Wade, Heritage, and “restaurants & shops” in central business district). ²⁴	Transportation – Active Transportation Motorized (interstate signage)	City Planning City Engineering	Ecolibrium3, Lincoln Park Business Group (LPBG), Healthy Duluth Area Coalition	2015-2017
Social cohesion	Encourage more greening by developing a Lincoln Park streetscape program or requirements for street trees and street and	Transportation – Active Transportation (K)	City Engineering	LPBG, City Business & Economic Development (BED)	2015 - ongoing

²³ Model language is provided in the Local Government Complete Streets Toolkit and other resources, available on the [Minnesota Complete Streets Coalition website \(www.mncompletestreets.org/resources.html\)](http://www.mncompletestreets.org/resources.html).

²⁴ There is a group working with the business group on this area. There have been discussions about an entry monument, kiosk with information and/or map of businesses. The City has some money related to the Cross City Trail for bike parking, wayfinding, etc.

Health Determinant	HIA Recommendation	Section of SAP or related Recommendation	Lead	Partners	Timeline
	building lighting in sidewalk replacement projects. Work with business owners and City Engineering on proper placement of street trees and lighting.				
Housing Quality	Host annually an informational session in Lincoln Park on the acquisition of vacant residential buildings (or parcels), purchasing a home, and rehabilitation.	Add to Housing 1-B	Housing Resource Connection (Community Development, HRA, Ecolibrium3, OneRoof)	At Home in Duluth, Duluth LISC, Advance Lincoln Park	2016 – ongoing
Housing Quality and Affordability	Include “energy efficiency programs/assistance for home owners and renters, if available” in Housing recommendation 1-B. Energy efficiency improvements increase the value of home and could reduce housing cost-burden.	Add to Housing 1-B	Housing Resource Connection	Duluth LISC, Advance Lincoln Park	2015
Social cohesion	Encourage screening between residential and non-residential uses to use “green wall” or other type of green screening as an alternative to hard-scape, while keeping in mind Crime Prevention Through Environmental Design best practices for safety and defensible space.	Add to Housing 2-A	City Planning	LPBG, Ecolibrium3, Healthy Duluth Area Coalition	2015 – ongoing
Living wage jobs	Enforce Duluth’s first source hiring requirement in development	Economic Development	City BED, Workforce Center	At Home, Duluth At Work, The	2015 – ongoing

Health Determinant	HIA Recommendation	Section of SAP or related Recommendation	Lead	Partners	Timeline
Safety/Social Cohesion	agreements and consider tying requirement for attempted local hiring to the storefront loan program if there is a resulting increase in jobs. Increasing employment in the community may have a positive impact on crime levels and social cohesion.			Table - Employment	
Living wage jobs	To support redevelopment of buildings and parcels in Lincoln park, explore the possibility of unique building ownership models, such as non-profit owners with businesses run by for-profit companies.	Economic Development	City BED	DEDA	2015-2017
Social cohesion					
Access to goods and services (healthy food)					

COMMUNICATION & DISSEMINATION PLAN

The purpose of the Communication and Dissemination Plan is to identify what information should be communicated, who the audiences of the information are, and how and when the information should be disseminated. But first, the Plan must establish the Why.

Why is a Communication and Dissemination plan important?

First and foremost, a Communication and Dissemination Plan is important to convey the outcome of all the hard work that went into the HIA from May 2014 through May 2015 to the stakeholders and decision makers. Stakeholders may use this information as leverage to advocate for positive change in their community. Decision makers may use HIA findings to implement policies that are more health promoting. Communicating the findings broadly can create accountability for implementing the recommendations. Additionally, a Communication and Dissemination Plan is important to share lessons learned with HIA practitioners in the community to build capacity of HIA and health in all policies work.

What information should be communicated?

The key information to be shared includes the main findings and recommendations of the HIA. The Lincoln Park SAP is broken into four sets of recommendations: Land Use/Zoning, Housing, Economic Development and Transportation. The HIA findings and recommendations are broken out accordingly.

Land Use/Zoning Key Messages

The three health determinants assessed for Land Use recommendations included 1) housing availability, quality and affordability; 2) community building/social cohesion; and 3) access to healthy food. Overall, the recommendations will likely have a positive impact on the number of housing units available (such as more multi-family and live-work housing), opportunities for land uses that encourage interaction among community members (such as libraries, art galleries, churches, theaters, etc.), and access to healthy food by increasing the number of parcels that allow small or large grocery stores, retail stores and restaurants, as well as urban agriculture. The Land Use recommendations will have little to no direct impact on the quality or affordability of housing units.

Housing availability, quality and affordability:

Availability (i.e., total number of housing units) - Short term: small, though positive impacts on the potential for new housing units in Lincoln Park (more multi-family and live-work housing)

Affordability - zoning designations do not provide any clarification or requirements for housing prices or number of bedrooms per housing unit

Quality – any new housing will need to meet building code, no direct impact of zoning changes

Social cohesion:

Short-term: small, though positive impacts on the potential for business and related activities that promote social cohesion

More parcels will allow libraries, art galleries, churches, theaters, convention or event centers, restaurants, indoor and outdoor entertainment facilities, recreational uses, and other retail. Additionally, fewer parcels will be allowed to have adult entertainment or book stores.

Access to healthy food:

Access is a function of location (local food environment), cost, and transportation. Consumption depends on preference and cultural needs. Currently there is no grocery store in the neighborhood; a standard "food basket" is 58% more expensive on average in Loring Park versus Duluth grocery stores (analysis conducted before Kwik Trip opened); and the bus to West Duluth or Miller Hill Mall takes around 30 min each way (not counting wait time) compared to car which takes 10 minutes max. Additionally, 28% of households don't own a car in the study area.

Impact: moderate to significant and mostly likely positive impacts on access to healthy foods. More parcels will allow small or large grocery stores, retail stores and restaurants, as well as urban agriculture.

Additional land use activities in the Lincoln Park neighborhood that could support access to healthy food include the possible identification of a parcel of land for revitalization into a community garden, edible forest, or other food access and education activities. This work is supported by Community Development Block Grant funds provided to West Duluth Food Access and Education in the 2015-2019 Consolidated Plan (City of Duluth, 2014b).

Recommendations

The HIA made two recommendations to the Lincoln Park Small Area Plan Land Use section: 1) that the City consider a model foods ordinance to ensure that all small corner stores stock a variety of healthy foods and 2) that the City also consider an ordinance for mobile food markets to increase access to healthy foods in low-access neighborhoods.

Housing Key Messages

The three health determinants assessed for Housing recommendations included 1) housing needs (tenure, quality and affordability); 2) community building/social cohesion; and 3) access to healthy food. Overall, the recommendations will likely have a positive impact on homeownership and housing quality. The recommendations could possibly have positive or negative impacts on housing affordability (rehab costs could increase housing costs or result in cost savings, such as energy efficiency), community building/social cohesion (homeownership often increase social cohesion, but residents moving in and out of the neighborhood voluntarily or involuntarily can decrease social cohesion), and access to healthy food (could increase if new residents are coming from areas with lower food access or housing costs decrease and free up money for food, or it could be the opposite).

Housing Needs

Homeownership: encouraging rehab programs & 'Housing Revitalization Area' will especially promote homeownership

Quality: All recommendations will improve housing quality as well as overall neighborhood quality/aesthetics/environment

Affordability: Code enforcement and rehabilitation could increase costs for homeowners and costs may be passed on to renters, resulting in worse housing cost burden; however, improvements in energy efficiency could reduce costs and result in lower housing cost burden

Using carrots & sticks, as well as targeting interventions in a specific area have been found to be most effective in past instances.

Social cohesion

Increases in homeownership, improvements in neighborhood aesthetics (housing stock improvement and demolition of blighted properties) can improve social cohesion

Costs of improvements could displace renters, especially low-income, if they can no longer afford rent (landlord passes on costs of improvements). Displacement (involuntary mobility) breaks social bonds at neighborhood level

New residents in new housing/upper story units are a toss-up; could have positive or negative impact. Important to foster socialization among new and existing residents to promote sense of community (e.g., Meet on the Street events, etc.)

Access to healthy food

Housing recommendations/policies could have limited impact on access to healthy food for Lincoln Park residents, through either direct physical access or through indirect access as a result of changes in financial resources. The impact could be either positive or negative, depending on whether a household moved into Lincoln Park from a lower- or higher-food-access community, or saw increases or decreases in their housing expenditures.

Recommendations

The HIA made three recommendations to the Lincoln Park Small Area Plan Housing section: 1) to annually host an informational session in Lincoln Park on the acquisition of vacant residential buildings (or parcels), purchasing a home, and rehabilitation; 2) to reduce housing-cost burden by including “energy efficiency programs/assistance for home owners and renters, if available” in Housing recommendation 1-B; and 3) to promote social cohesion by using “green walls” or other type of green screening and Crime Prevention Through Environmental Design best practices for buffering residential uses from incompatible uses.

Economic Development Key Messages

The three health determinants assessed for Economic Development recommendations included 1) employment/living wage jobs, 2) community building/social cohesion, and 3) access to healthy food. Overall, the recommendations will likely have a positive impact on total number of jobs, approximately 40% of which could be in industries that are more likely to provide living wage jobs; on social cohesion through employment opportunities; and access to healthy food through building redevelopment, increased jobs and wages to afford healthy food, and potentially urban agriculture.

Employment/Living wage jobs

The analysis found that if all vacant and underutilized parcels identified in this analysis were redevelopment, there is the potential to create over 4,700 jobs within the Lincoln Park study area (see Figure 6). This provides a snapshot of a hypothetical redevelopment scenario which is likely very optimistic and has many limitations. The food service and retail jobs that have been highlighted by the Cushman & Wakefield/Northmarq study and neighborhood priorities would be less likely to provide living wage jobs. Only 40% of new jobs are in industries more likely to provide living wage jobs (wholesale trade, transportation and warehousing, construction, and government health care and social assistance).

Community building (social cohesion)

New jobs could foster social networks and reduce crime, lower crime rates and development that improves the aesthetics of the community could foster a sense of place and community, and more parcels may develop as attractions and gathering places for residents to interact and develop social connections.

Access to Healthy Food

Improving physical access to healthy food options through the adaptive reuse of buildings, brownfield redevelopment, or revitalization of the retail core and/or Clyde Park Complex could result in new food retail outlets or urban/community gardens (urban/community gardens can be interim/ temporary use). Also, brownfield cleanup can improve soil quality for urban agriculture food production. The other way the SAP recommendations could increase access to healthy food is through increased job opportunities that pay a living wage, which can provide families with more money to spend on healthy and affordable food.

Recommendations

The HIA made two recommendations to the Lincoln Park Small Area Plan Economic Development section: 1) to enforce Duluth's first source hiring requirement in development agreements and consider tying requirement for attempted local hiring to the storefront loan program if there is a resulting increase in jobs; and 2) support redevelopment of buildings and parcels in Lincoln park, explore the possibility of unique building ownership models, such as non-profit owners with businesses run by for-profit companies.

Transportation Key Messages

The three health determinants assessed for Transportation recommendations included 1) safety (traffic and crime), 2) community building/social cohesion, and 3) access to healthy food. Overall the recommendations will likely have a significant positive impact on traffic safety for all users, and particularly for pedestrians and bicyclists; and possible positive impact on community building/social cohesion and access to healthy foods. Crime levels may be positive or negatively impacted; if more people are active in a community it can result in 'natural surveillance', more 'eyes on the street' and less crime; or more activity can sometimes result in higher crime levels (bike theft as a result of more bike parking).

Safety

Safety looked at traffic safety and personal safety (crime or perception of crime).

Traffic safety: Significant positive impacts on traffic safety for motorists and non-motorized users (traffic calming, improved ped/bike infrastructure, reduced conflict points (access management), etc.)

Personal safety (crime): if more people are active in a community it can result in 'natural surveillance', more 'eyes on the street' and less crime; or more activity can sometimes result in higher crime levels (bike theft as a result of more bike parking)

Community building (social cohesion)

As outlined in the previous section, communities that are more walkable, accessible and safe, tend to have higher levels of activity which increases potential for interaction and social cohesion.

If bus stop and general transit improvements reduce crime, there could be an increase in social cohesion in the surrounding community. Additionally, if improvements to bus stops and transit service lead to increased transit ridership, it could mean that more residents are getting out to social engagements as a result of increased access and comfort – reduced social isolation.

A lot of the potential for social cohesion is dependent on changes in crime or perceived safety.

Access to healthy food

Based on the studies connecting safe traffic and pedestrian environments and food access and the Motorized Transportation Recommendations' predicted improvements to safety for motorists, pedestrians and bicyclists (e.g., access management, reduced lane widths, etc.), the Motorized, Active and Transit Recommendations are likely to increase access to retail food outlets within the Lincoln Park neighborhood.

Affordability will likely not improve as a result of the Motorized Transportation Recommendations

Improved trail connections and segregated bike trails for cyclists may increase access to healthy and affordable foods at the Super One Foods in West Duluth.

The Transit Recommendations will not increase frequency of service or impact overall travel time; therefore the impact of the recommendations on access to healthy, affordable foods is moderate. However, the Transit Recommendations are increasing access to full service grocery stores, which provide greater selection and lower cost options for healthy foods.

Recommendations

The HIA made four recommendations to the Lincoln Park Small Area Plan Transportation section: 1) to continue safety improvements for pedestrians and bicyclists, adopt a Complete Streets policy for the City; 2) to promote safety from crime, locate bus stops away from entrances to bars, within sight of other locations; 3) to increase access to food options and opportunities for positive community interaction, include local retail, service (including food) and recreation destinations on wayfinding signage; and 4) to promote safety and community building/social cohesion, encourage more greening by developing a Lincoln Park streetscape program or requirements for street trees and street and building lighting in sidewalk replacement projects.

Who are the audiences?

The important audiences for these messages include the persons and organizations identified in the stakeholder analysis during Scoping. Stakeholders include the following groups:

- Residents of the Lincoln Park SAP study area and broader neighborhood (Citizens Patrol, tenants associations, as well as unaffiliated residents)
- Business owners (Advance Lincoln Park and Lincoln Park Business Group, as well as unaffiliated businesses)
- Community based organizations (Duluth LISC, Community Action Duluth, CHUM, Healthy Duluth Area Coalition, Ecolibrium3, etc.)
- Local agency staff (Housing Redevelopment Authority, Metropolitan Interstate Council/Arrowhead Regional Development Commission, Duluth Transportation Agency, St. Louis County Public Health, and City staff in Planning, Community Development, Business and Economic Development, Engineering, Parks, and Public Works)
- Local elected officials (Planning Commission and City Council).

How and when will the information be disseminated?

Effective communication strategies and dissemination tactics should reach the identified stakeholders and achieve the HIA goals. The following mechanisms will be used to disseminate messages to stakeholders.

Advisory Committee Meetings and Emails: The Advisory Committee has been the main conduit for stakeholder engagement throughout the SAP and HIA process. The Advisory Committee met at least once per month from May 2014 through April 2015. All meeting materials, announcements, and relevant information were sent to participating committee members by email. The Advisory Committee members represent and have contacts with other members of the community. The Advisory Committee members helped recruit the public to attend public meetings (see below) and when the time comes to send out the press release and/or final SAP and HIA documents (see below), the Advisory Committee can distribute that information on behalf of the project staff.

Lincoln Park Small Area Plan website: The [Lincoln Park Small Area Plan website \(duluthmn.gov/planning/long-range-planning/small-area-plans/lincoln-park-small-area-plan/\)](http://duluthmn.gov/planning/long-range-planning/small-area-plans/lincoln-park-small-area-plan/) will be the official host of the approved Small Area Plan and HIA documents. It provides a repository for meeting information, project contacts, a comment form, and listserv sign-up. Websites provide an easy way to provide information to the general public and host after the completion of the planning process.

Public Meetings: Two public meetings were held as part of the community input process for the SAP and HIA, one in September to get community input on issues and concerns to be addressed in the SAP and HIA, and one in March to get community feedback on draft SAP and HIA recommendations. The public meetings were advertised through flyers to the Advisory Committee, City Departments, and community based organizations. The City's PR office sent a copy of the flyer and a separate press release to the media/press outlets. A reporter from the local newspaper's Sunday Community section spoke with project staff prior to the public meetings, and a reporter from one of the local stations was present at both public meetings.

Presentation to Planning Commission: The SAP and HIA will be presented to the Planning Commission on May 12, 2015. The Planning Commission makes recommendations to the City Council on whether to approve or reject plans. This is the formal way to disseminate information to the Planning Commission. Additionally, a Planning Commission member participated on the Advisory Committee through the entire plan development process.

Presentation to City Council: The SAP and HIA will be presented to the City Council on either June 1 or June 15, 2015. The City Council has the final say on whether to approve or reject plans. This is the formal way to disseminate information to the City Council.

Press Release: The project staff will send out a citywide press release following the City Council decision to advertise the final SAP and HIA. The press release will be sent to the Advisory Committee, City Departments, community based organizations, and the media/press outlets.

Final Report: Project staff also will put together a full accounting of the HIA process, including why the project was selected, how health determinants were chosen, who was involved, how the data was analyzed, and how the recommendations were developed. The HIA report will be available on the MDH HIA website, the City's Lincoln Park website, and the Our Lincoln Park portal. This report will be complete summer 2015.

MONITORING/EVALUATION PLAN

The final step of HIA includes two main components: Monitoring and Evaluation. The main component of Monitoring is to develop a monitoring or “health management” plan to track the decision outcomes, as well as the effect of the decision on health impacts and/or determinants of concern. Monitoring plans are important to make sure that and HIA recommendations are being implemented and having the expected or desired effects. Through monitoring, if it is discovered that the HIA introduced an unintended negative consequence through its recommendations, the recommendation can be revised so that it leads to better health outcomes. Monitoring may track direct health outcomes, such as the number of traffic accidents and injuries at an intersection after improvements were made, or it may track health determinants or exposures, such as air quality, that are linked to health outcomes (National Research Council, 2011).

MONITORING

The Lincoln Park Small Area Plan HIA project staff recognized that project partners would have limited capacity to conduct thorough monitoring of the HIA recommendations and outcomes. Additionally, the HIA recommendations were directly incorporated into the Lincoln Park Small Area Plan. Therefore, it made more sense for staff to develop a monitoring plan that took generalized objectives and outcomes for each section of the Small Area Plan and set responsibilities and timelines for monitoring desired objectives and outcomes, as well as thresholds for re-evaluation of policies, programs and barriers if objectives and outcomes are not being met or having unintended consequences. The monitoring plan is outlined in Figure 55.

Figure 55: Lincoln Park Small Area Plan HIA Monitoring Plan

Desired Objective/Outcome	Indicator(s)	Responsible Agency	Timing	Threshold
Land Use/Zoning Section				
Zoning changes increase opportunities for housing options	<ul style="list-style-type: none"> Proposed zoning changes are adopted 	City of Duluth – Planning Department	Check on progress at end of 2016 and 2017	<ul style="list-style-type: none"> If rezoning does not result in new housing development, reassess barriers
Zoning changes increase opportunities for positive social interaction among Lincoln Park residents and visitors	<ul style="list-style-type: none"> Proposed zoning changes are adopted OneRoof Survey shows increase in measures of social cohesion/ capital 	City of Duluth – Planning Department	Check on progress at end of 2016 and 2017	<ul style="list-style-type: none"> If rezoning does not result in more opportunities for positive social interaction, or there are increases in negative social interaction, reassess policies
Zoning changes increase opportunities for retail food sales and establishments,	<ul style="list-style-type: none"> Proposed zoning changes are adopted City investigates Staple Foods Ordinance and 	City of Duluth – Planning Department	Check on progress at end of 2016 and 2017	<ul style="list-style-type: none"> If rezoning does not result in more healthy food options in existing or new retail

Desired Objective/Outcome	Indicator(s)	Responsible Agency	Timing	Threshold
especially healthy options	removing barriers for mobile food markets			establishments, reassess barriers
Housing Section				
Housing policies increase the quantity, quality and safety of housing options	<ul style="list-style-type: none"> Proposed housing recommendations are implemented, especially education and financial assistance programs 	City of Duluth – Community Development	Check on progress at end of 2015 and 2016	<ul style="list-style-type: none"> If there are no measurable decreases in blighted properties, rental and building code violations, and buffering of incompatible uses, reassess barriers
Housing policies increase opportunities for positive social interaction among Lincoln Park residents	<ul style="list-style-type: none"> Proposed housing recommendations are implemented with thoughtfulness about connecting current and future residents OneRoof Survey shows increase in measures of social cohesion/ capital 	City of Duluth – Community Development	Check on progress at end of 2016 and 2017	<ul style="list-style-type: none"> If housing policies result in involuntarily displacement of current residents due to loss of affordable housing options, reassess policies If housing policies result in increases in negative social interaction, reassess policies
Housing policies increase the affordability of housing and, as a result, the ability to afford healthy food	<ul style="list-style-type: none"> Proposed housing recommendations are implemented, especially energy efficiency improvements and other cost-saving measures 	City of Duluth – Community Development	Check on progress at end of 2016 and 2017	<ul style="list-style-type: none"> If there is no statistically significant decrease in the number and/or rate of cost-burdened households, reassess policies
Economic Development Section				
Economic development policies and programs increase the number of living wage jobs in Lincoln Park	<ul style="list-style-type: none"> Proposed economic development recommendations are implemented 	City of Duluth – Community Development	Check on progress at end of 2016 and 2017	<ul style="list-style-type: none"> If there is no statistically significant increase in jobs and/or decrease in the unemployment rate in Lincoln Park (especially for Black/African American, American

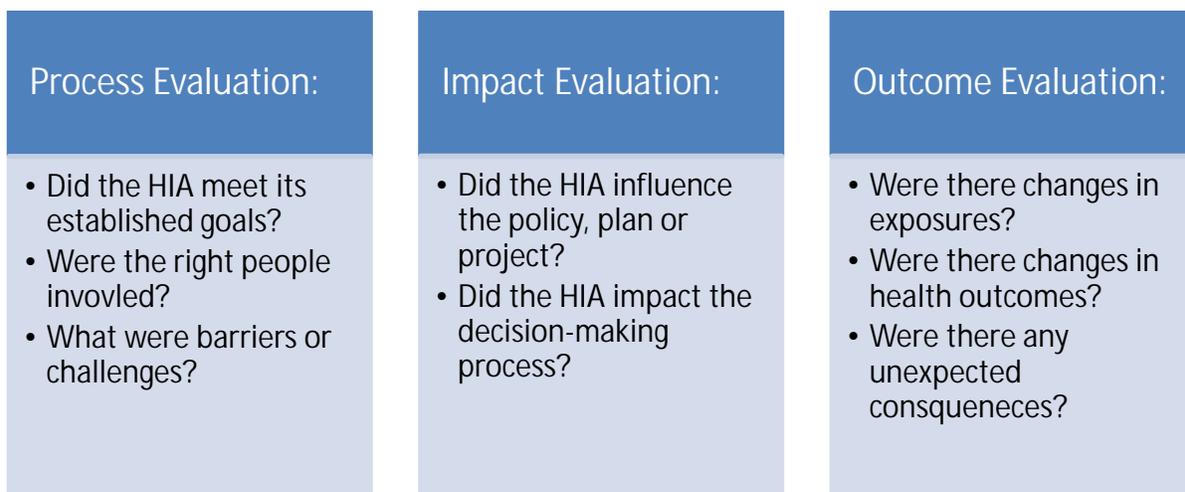
Desired Objective/Outcome	Indicator(s)	Responsible Agency	Timing	Threshold
				Indian, and young adult residents), reassess policies
Economic development policies and programs increase safety, reduce crime rates, and increase opportunities for positive social interaction among Lincoln Park residents and visitors	<ul style="list-style-type: none"> Proposed economic development recommendations are implemented 	City of Duluth – Planning Department	Check on progress at end of 2015, and annually thereafter	<ul style="list-style-type: none"> If there is no statistically significant decrease in crime rates and unemployment rates, reassess policies
Economic development policies and programs increase access to healthy food	<ul style="list-style-type: none"> Proposed economic development recommendations are implemented 	City of Duluth – Planning Department	Check on progress at end of 2016 and 2017	<ul style="list-style-type: none"> If there is no statistically significant decrease in unemployment rates, reassess policies If the economic development policies and programs do not result in more healthy food options in existing or new retail establishments, reassess barriers
Transportation Section				
Transportation projects and policies increase safety for all travelers and reduce crashes	<ul style="list-style-type: none"> Proposed transportation recommendations are implemented Adopt Complete Streets policy 	City of Duluth – Planning Department	Check on progress at end of 2016, and annually thereafter	<ul style="list-style-type: none"> If there is no statistically significant decrease in crashes, especially involving bicyclists and pedestrians, reassess barriers
Transportation projects and policies increase access to healthy food	<ul style="list-style-type: none"> Proposed transportation recommendations are implemented Restaurants and food retailers are included in wayfinding signage 	City of Duluth – Planning Department	Check on progress at end of 2016, and annually thereafter	<ul style="list-style-type: none"> If there is no statistically significant increase in transit ridership to food outlets, reassess barriers If there is no increase in persons reporting biking or walking to grocery

Desired Objective/Outcome	Indicator(s)	Responsible Agency	Timing	Threshold
				store or market, reassess barriers
Transportation projects and policies increase opportunities for positive social interaction among Lincoln Park residents and visitors	<ul style="list-style-type: none"> Proposed transportation recommendations are implemented Measurable increase in tree canopy and/or green landscaping 	City of Duluth – Planning Department	Check on progress at end of 2016, and annually thereafter	<ul style="list-style-type: none"> If there is no statistically significant decrease in crime rates, reassess barriers If there is no measurable increase in tree canopy and/or landscaping, reassess barriers

EVALUATION

The evaluation step of Health Impact Assessment (HIA) is three-fold and includes evaluation of 1) the HIA process, 2) the HIA’s impact, and 3) health outcomes. Process evaluation reflects on the HIA plan and whether the HIA followed its intended plan. Impact evaluation reflects on the impact the HIA had on the decision it was intending to influence, as well as any other impacts, such as increase in partnerships or community empowerment. Outcome evaluation reflects on the health outcomes as a result of the decision implementation. Figure 56 below outlines the key questions that each piece of evaluation tries to answer.

Figure 56: Evaluation Key Questions



Evaluation is a critical component of HIA for advancing the field of practice. It can provide important lessons learned or best practices, as well as establish HIA as an impactful tool for affecting public policy. The next three sections will review the Process, Impact and Outcome evaluations for the Winona County Active Living Plan HIA.

Process Evaluation

Process evaluation assesses the design and execution of the HIA in light of its intended purpose, plan of action and applicable standards. Process evaluations can range from an internal assessment that reflects on aspects of the HIA that are relatively simple to describe, track, or measure – such as the methods used, degree of certainty of predictions, and approach to stakeholder engagement – to a more comprehensive case study that seeks to evaluate the HIA process holistically. The Lincoln Park SAP HIA process evaluation takes a combined approach that includes both self-assessment and a discussion with participants and stakeholders. The process evaluation assessed whether the HIA met the Goals established during Scoping; input from participants and stakeholders on their experience being involved in the HIA, including what they learned during the process, their satisfaction with the process, and any barriers or challenges they see with this HIA or others in the future; and additional lessons learned identified by the HIA project staff during the HIA process.

HIA Goal Assessment

One of the key aspects to evaluate is whether the HIA achieved the goals set out from beginning. This section will review each of the goals of the Lincoln Park SAP HIA and whether or not they were achieved.

Goal 1: Complete HIA Scope of Work. This goal included five sub-goals: 1) Conduct screening, 2) Develop scope, 3) Assess SAP recommendations for health impacts, 4) Incorporate findings into final SAP, and 5) Develop a monitoring plan and conduct evaluation of health in all policies/HIA process. With the culmination of this document, the scope of work for the Lincoln Park SAP HIA will be complete and this goal achieved.

Goal 2: Explicitly address health in the development of the SAP. This goal included two sub-goals: 1) address health implications of SAP recommendations throughout process, and 2) incorporate HIA findings into final SAP. Both of these sub-goals are completed. Because of the integrated health in all policies approach to this HIA, HIA staff was present at all Advisory Committee meetings to talk about health, as well as additional planning meetings with SAP staff to discuss how to incorporate the HIA information into the SAP. The final SAP will include a description of the HIA process, baseline health data along with the usual community demographics, a summary of the health impacts of each set of SAP recommendations (e.g., Housing, Transportation, etc.), and the HIA recommendations will be subsumed into the SAP recommendations.

Goal 3: Engage and involve constituents/community members in the HIA. This goal included two sub-goals: 1) hold SAP meetings with affected stakeholders, interested parties, and decision makers, and 2) empower affected stakeholders by addressing their issues, concerns and priorities in the SAP, particularly those related to promoting positive health outcomes. The HIA and SAP staff made efforts to accomplish both of these sub-goals. The Stakeholder Engagement Summary describes how stakeholders and affected community members were recruited and participated in the SAP/HIA process, including through an Advisory Committee, public meetings, and one-on-one interviews. With more staff time and resources, more residents could have been engaged. There was very little representation of Lincoln Park residents on the Advisory Committee – they were mostly staff from community based organizations and local agencies. The stakeholders who were involved in the process had their issues, concerns and priorities address in the HIA and for the most part that input was incorporated into the SAP. Without strong community/resident involvement, it would be difficult to say that the HIA or SAP made much headway in empowering the community.

Goal 4: Seek consensus around the proposal and its health impacts. There were three sub-goals for Goal 4, including: 1) effectively communicate HIA findings and recommendations, engage in dialogue about health impacts (including trade-offs) of the proposal, and be available to answer questions from decision-makers and stakeholders; 2) promote project alternatives and recommendations that will maximize health benefits and mitigate negative health impacts; and 3) promote the continued use of this HIA. Sub-goal #2 is completed. The HIA findings and recommendations proposed actions that will maximize health benefits and mitigate negative health impacts of the SAP recommendations. Sub-goals #1 and #3 are in-progress. Over the course of the HIA, the process has fostered conversations on health impacts of the Small Area Plan and provided information to stakeholders and decision-makers. This work will continue through the Reporting step of the HIA, and through the implementation of the Small Area Plan and ongoing HIA monitoring, which also will ensure the continued use of the HIA as noted in sub-goal #3.

Goal 5: Build capacity for Health in All Policies and Health Impact Assessment. There were two sub-goals for Goal 5: 1) make HiAP and HIA methodology accessible to planners and community members so that they may recreate the process, and 2) identify barriers to addressing health in future planning projects and strategies to overcome barriers. Regarding the first sub-goal, the HIA staff tried to make the process of addressing health as clear as possible, by describing each step of the HIA to the SAP staff and Advisory Committee as they worked through it, presenting the information in a non-technical manner at public Open House meetings, and providing a half-day training at the beginning of the SAP/HIA for participants who wanted a more in-depth look at the HIA process. Barriers to addressing health in future planning were discussed at the final SAP/HIA meeting on April 29, 2015 and in previous meetings with City staff. City staff are very interested in incorporating health into the City's comprehensive plan update, which will start in 2016, but were concerned with how to go about that process – for example, if an HIA would be necessary and who would coordinate it? To overcome barriers, City staff will partner with county public health staff and regional agency staff who have gained HIA experience by participating in the Gary/New Duluth and Lincoln Park HIAs, as well as other health and planning projects, to develop a plan for incorporating health into the comprehensive plan update. Additionally, City and County staff may partner on developing a health resolution that would go through City Council encouraging planning and policy initiatives to be reviewed with a health lens, either using HIA or a health in all policies approach.

Input from Participants and Stakeholders

A series of questions was posed to gather input from participants and stakeholders on being involved in the Lincoln Park Small Area Plan HIA, including what was learned during the process, satisfaction with the process, and any barriers or challenges with this HIA or others in the future. Results are summarized below

Awareness

1. What was your level of knowledge of HIA prior to this project? (check one)

1 (none)	2	3	4	5 (expert)
	X			

2. How would you rate your level of knowledge of HIA now that you have participated in this project? (check one)

1 (none)	2	3	4	5 (expert)
			X	

3. What did you learn during the process?

There are many dimensions to creating a healthy neighborhood, including physical conditions, regulatory impact, housing, transportation access, community activity, economic activity, etc.

Overall HIA Process

4. How much time did you spend on the Small Area Plan and HIA (including meetings, reviewing materials, etc.)? How does that compare to what you expected?

Perhaps 20 hours or so? It's about what I expected including the series of meetings and time spent reviewing materials before and following meetings.

5. Do you think HIA was an effective tool for this project? Why or why not?

Yes I do. I think it's an important component of a comprehensive small-area planning process that helps to establish objectives and identify opportunities to create a healthy neighborhood and living environment.

6. How satisfied were you with the process?

1 (very <u>uns</u> satisfied)	2	3	4	5 (very satisfied)
				X

7. What changes would you make if you were to lead or participate in an HIA?

None- I thought it was well covered, and helpful in the overall planning process.

8. What barriers or challenges do you see with this HIA or others in the future?

Attentiveness to following through on plan objectives for implementation, and continuously reflecting on progress toward goals and potentially changing needs over time.

9. What benefits did you gain from participating in this HIA? (e.g., partnerships, understanding how to incorporate health into other policies, etc.)

Developed a much better understanding about the importance of factoring health issues into plan priorities and objectives and the inter-relatedness of such issues with many other planning aspects; and how to go about setting and accomplishing goals

10. Will you have an opportunity to utilize what you learned through this process in your work? (Yes/No/Not Sure) If so, how?

Yes, plan to work to see that HIA issues continue to be evaluated and work toward ensuring progress

Communication

11. Was the HIA decision-making process transparent and inclusive? If so, how? If not, what do you recommend to ensure transparency and inclusivity?

Yes - very well staffed. Kelly was thorough and professional and a very well-organized presenter and facilitator of discussion, always ensuring inclusivity and completeness of discussion.

Lessons Learned

Overall, taking a more integrated approach to the HIA was a very positive experience, including ease of organizing meetings, receiving timely information, and effectively influencing the content of the Lincoln Park SAP. The HIA coordinator received information about the SAP as soon as it was available. In previous projects that information may not have been shared until after it had been presented to the SAP Advisory Committee. The HIA coordinator was present to ensure health was discussed while SAP recommendations were formed, instead of reacting to a list of draft recommendations that had been crafted and honed and were more resistant to changes. The Advisory Committee benefited by learning about the health process and reduced redundancy in meetings, especially for past participants in both SAP and HIA Advisory Committee meetings. It is possible that HIA/health had more influence because it was discussed at almost every meeting and always on the forefront of participants' minds. The recommendations are more likely to be implemented because there aren't two sets and two separate documents to refer to.

The only challenge to the more integrated approach was that the HIA coordinator had less control over stakeholder engagement process. For example, in the Gary/New Duluth HIA the HIA coordinator worked with community members to administer a community survey that heavily influenced the Scope of the HIA. While a community survey was developed by SAP staff for the Lincoln Park HIA, there was no targeted dissemination strategy, the survey received limited responses, and no one saw the final results. The HIA coordinator did have input into the type, time, and content of public meetings/open houses, but most of the logistics were determined by SAP staff.

The other challenge for the HIA coordinator was facing the same issues of capacity and distance to do community engagement experienced in all HIAs conducted in Greater Minnesota but facilitated by state agency staff. Fortunately, in the case of the Lincoln Park HIA, St. Louis County Public Health staff was a great asset in this endeavor. St. Louis County Public Health staff facilitated all of the one-on-one conversations with local residents, educated local organizations about the SAP/HIA project, and recruited participants to attend the public Open House meetings. The St. Louis County Public Health representative was a critical asset in the community engagement outcome for this HIA.

Impact Evaluation

Impact evaluation attempts to judge to what degree the recommendations were adopted and implemented and how the HIA influenced the decision-making process. It can also assess whether the HIA had other important effects, such as building new collaborations among agencies, ensuring that stakeholder perspectives were considered, and increasing awareness of previously unrecognized health considerations. In most cases, influencing decisions to protect or promote health is a central objective but by no means the sole outcome of

value (National Research Council, 2011). The impact of the HIA on the Lincoln Park Small Area Plan and on the decision making process is outlined in this section.

Impact on the Lincoln Park Small Area Plan

The SAP and HIA recommendations were prepared by the Steering Committee for the SAP and the City of Duluth. The SAP and HIA were both unanimously approved by the Planning Commission and City Council in 2015. Each of the focus areas of the HIA (Land Use, Economic Development, Transportation, and Housing) are specifically addressed in the recommendations developed by the City. Health determinants for each focus area are presented, followed by an assessment of the impacts (positive or negative) of the recommendations. Therefore the HIA has had a direct impact on the development of SAP recommendations. The final recommendations were approved by the SAP and HIA Steering Committee, which has 30 members and includes a City Councilor, City Planning Commission member, School Board Member, residents, local business representative and non-profit organizations.

Impact on the Decision Making Process

The HIA has had a significant impact on the decision making process for the Lincoln Park SAP. The HIA and SAP recommendations worked together to ensure that health was a factor in the overall planning and implementation process. The HIA and SAP were presented to the Duluth Planning Commission on May 12, 2015, which recommended unanimously for the City Council to approve both documents. Duluth city staff then presented to the Duluth City Council Committee of the Whole on August 24, 2015 to give an overview of the HIA process, background on the nature and scope of health considerations, and presented final recommendations. The Duluth City Council subsequently approved the SAP and HIA unanimously and by resolution on August 31, 2015. Duluth City Staff and partnering agencies are in the process of implementing the recommendations.

Outcome Evaluation

Outcome evaluation assesses whether the implementation of a decision has actual effects on health or health determinants. Evaluation of whether a decision has changed specific health outcomes may often be difficult or impossible because of the wide variety of factors that impact health outcomes, the inability to accurately track what factors may have influenced a particular health outcome, the length of time from implementation of a decision to observable changes in health indicators, and the lack of suitable comparison groups. There are no examples of HIAs in the United States that include outcome evaluation as described here (National Research Council, 2011).

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Appendix A: Impact of Zoning Changes on Permitted Uses

I-G to F-5

Allowed under F-5 but not I-G (gain) ²⁵	Allowed under F-5 and I-G (no change)	Not Allowed under F-5 but allowed under I-G (loss)
Dwelling, multi-family, live-work, one- and two-family (upper story only)	Data center	Adult entertainment
Residential care facility/assisted living	Funeral home or crematorium	Adult book store
Rooming house	Automobile and light vehicle repair and service	Automobile and light vehicle sales, rental or storage
Bus or rail transit station	Filling station	Mini-storage facility
Club or lodge (private)	Parking lot or parking structure (primary use)	Truck or heavy vehicle sales, rental, or storage
Museum, library or art gallery	Manufacturing, light	Contractor's shop and storage yard
Park, playground or forest reserve	Government building or public safety facility	Dry cleaning or laundry plant
Religious assembly, small and large	Electric power transmission line or substation	Research laboratories
Business, art or vocational school	Major utility or wireless telecommunication facility	Industrial services
School, elementary, middle or high	Water or sewer pumping stations/reservoirs	Manufacturing, heavy
University or college	Wholesaling	Airport and related facilities
Medical or dental clinic		Railroad yard or shipyard and related facilities
Veterinary or animal hospital		Truck freight or transfer terminal
Convention or event center		Electric power or heat generation plant
Indoor entertainment facility		Solar, geothermal, or biomass
Restaurant		Water or sewer treatment facilities
Theater		Wind power facility (primary use)
Hotel or motel		Recycling collection point (primary use)
Bed and breakfast		Storage wholesaling
Bank		Bulk storage no listed elsewhere
Office		Manufacturing, hazardous or special
Preschool		Mining, extraction and storage
Day care facility		Radio or television broadcasting tower
Personal service and repair (small only)		Personal service and repair (large only)
Garden material sales		Junk and salvation services
Grocery store, small		Solid waste disposal or processing facility
Retail store not listed		

²⁵ Includes special or interim uses

I-G to MU-B

Allowed under MU-B but not I-G (gain) ²⁶	Allowed under MU-B and I-G (no change)	Not Allowed under MU-B but allowed under I-G (loss)
Bus or rail transit station	Government building or public safety facility	Adult entertainment establishment
Business, art or vocational school	Data center	Adult book store
Cemetery or mausoleum	Funeral home or crematorium	Manufacturing, heavy
Museum, library or art gallery	Mini storage facility	Manufacturing, hazardous or special
Religious assembly (small & large)	Personal service and repair, large	Mining, extraction and storage
Medical or dental clinic	Automobile and light vehicle repair and service	Airport and related facilities
Kennel	Automobile and light vehicle sales, rental, or storage	Railroad yard or shipyard and related facilities
Veterinarian or animal hospital	Filling station	Electric power or heat generation plant
Convention or event center	Parking lot or parking structure (primary use)	Water or sewer treatment facilities
Indoor entertainment facility	Truck or heavy vehicle sales, rental, repair or storage	Junk and salvage services
Restaurant (small, large, and drive-in or drive-through)	Contractor's shop and storage yard	Bulk storage not listed elsewhere
Hotel or motel	Dry cleaning or laundry plant	
Bed and breakfast	Research laboratories	
Bank	Industrial services	
Office	Manufacturing, light	
Other outdoor entertainment or recreation use not listed	Truck freight or transfer terminal	
Business park support activities	Electric power transmission line or substation	
Personal service and retail, small	Major utility or wireless telecommunication facility	
Building materials sales	Radio or television broadcasting tower	
	Solar, geothermal, or biomass power facility (primary use)	
	Water or sewer pumping stations/reservoirs	
	Wind power facility (primary use)	
	Recycling collection point (primary use)	
	Solid waste disposal or processing facility	
	Storage warehouse	
	Wholesaling	

²⁶ Includes special or interim uses

I-G to MU-C

Allowed under MU-C but not I-G (gain) ²⁷	Allowed under MU-C and I-G (no change)	Not Allowed under MU-C but allowed under I-G (loss)
Dwelling, multi-family	Government building or public safety facility	Adult entertainment establishment
Dwelling, live-work	Data center	Multi-storage facility
Residential care facility/assisted living (7 or more)	Funeral home or crematorium	Adult book store
Rooming house	Personal service and repair, large	Truck or heavy vehicle sales, rental or storage
Bus or rail transit station	Automobile and light vehicle repair and service	Contractor's shop and storage yard
Cemetery or mausoleum	Automobile and light vehicle sales, rental or storage	Dry cleaning or laundry plant
Club or lodge (private)	Filling station	Research laboratories
Museum, library, or art gallery	Parking lot or parking structure	Industrial services
Park, playground, or forest reserve	Electric power transmission line or substation	Manufacturing (light and heavy)
Religious assembly (small and large)	Major utility or wireless telecommunication facility	Manufacturing, hazardous or special
Business, art or vocational school	Solar, geothermal, or biomass power facility (primary use)	Mining, extraction and storage
School (elementary, middle or high)	Water or sewer pumping stations/reservoirs	Airport and related facilities
Medical or dental clinic	Recycling collection point (primary use)	Railroad yard or shipyard and related facilities
Nursing home		Truck freight or transfer terminal
Kennel		Electric power or heat generation plant
Veterinarian or animal hospital		Radio or television broadcasting tower
Convention or entertainment center		Water or sewer treatment facilities
Indoor entertainment facility		Wind power facility (primary use)
Restaurant (small, large, drive-in and drive-through)		Junk and salvage services
Theater		Solid waste disposal or processing facility
Hotel or motel		Storage warehouse
Bed and breakfast		Wholesaling
Bank		Bulk storage not listed elsewhere
Office		
Other outdoor entertainment or recreation use not listed		
Preschool		
Day care facility (small and large)		
Personal service and repair, small		
Building/Garden materials sales		
Grocery store, small and large		
Retail store not listed, small and large		

²⁷ Includes special or interim uses

MU-B to F-5

Allowed under F-5 but not MU-B (gain) ²⁸	Allowed under F-5 and MU-B (no change)	Not Allowed under F-5 but allowed under MU-B (loss)
Dwelling (one- and two-family; upper story only)	Bus or rail transit station	Cemetery or mausoleum
Dwelling, multi-family	Government building or public safety facility	Kennel
Dwelling, live-work	Museum, library, or art gallery	Restaurant, with drive-in/drive-through
Residential care facility/assisted living (any size)	Religious assembly (small and large)	Bed and breakfast
Rooming home	Business, art or vocational school	Other outdoor entertainment or recreation use not listed
Club or lodge (private)	Medical or dental clinic	Business park support activities
Park, playground, or forest reserve	Veterinary or animal hospital	Funeral home or crematorium
School (elementary, middle or high)	Convention or event center	Mini-storage facility
University or college	Indoor entertainment facility	Personal service and repair, large
Theater	Restaurant (small and large, no drive-in or drive-through)	Building materials sales
Vacation dwelling unit	Hotel or motel	Automobile and light vehicle sales, rental or storage
Preschool	Bank	Truck or heavy vehicle sales, rental, repair or storage
Day care facility (small and large)	Office	Dry cleaning or laundry plant
Grocery store, small	Data center	Research laboratories
Retail store not listed (small and large)	Personal service and repair, small	Industrial services
	Automobile and light vehicle repair and services	Truck freight or transfer terminal
	Filling station	Radio or television broadcasting tower
	Parking lot or parking structure (primary use)	Solar, geothermal, or biomass power facility (primary use)
	Contractor's shop and storage yard	Wind power facility (primary use)
	Manufacturing, light	Recycling collection point (primary use)
	Electric power transmission line or substation	Solid waste disposal or processing facility
	Major utility or wireless telecommunication facility	
	Water or sewer pumping stations/reservoirs	
	Storage warehouse	
	Wholesaling	

²⁸ Includes special or interim uses

MU-B to MU-C

Allowed under MU-C but not MU-B (gain) ²⁹	Allowed under MU-C and MU-B (no change)	Not Allowed under MU-C but allowed under MU-B (loss)
Dwelling, multi-family	Bus or rail transit station	Business park support activities
Dwelling, live-work	Cemetery or mausoleum	Mini-storage facility
Residential care facility/assisted living (7 or more)	Government building or public safety facility	Truck or heavy vehicle sales, rental, repair or storage
Rooming house	Museum, library, or art gallery	Contractor's shop and storage yard
Club or lodge (private)	Religious assembly (small and large)	Dry cleaning or laundry plant
Park, playground or forest reserve	Business, art or vocational school	Research laboratories
School (elementary, middle or high)	Medical or dental clinic	Industrial services
Nursing home	Kennel	Manufacturing, light
Theater	Veterinary or animal hospital	Truck freight or transfer terminal
Preschool	Convention or event center	Radio or television broadcasting tower
Day care (small and large)	Indoor entertainment facility	Wind power facility (primary use)
Garden material sales	Restaurant (small, large, with or without drive-in/drive-through)	Solid waste disposal or processing facility
Grocery store (small and large)	Hotel or motel	Storage warehouse
Retail store not listed (small and large)	Bed and breakfast	Wholesaling
	Bank	
	Office	
	Data center	
	Other outdoor entertainment or recreation use not listed	
	Funeral home or crematorium	
	Personal service and repair, small and large	
	Building materials sales	
	Automobile and light vehicle repair and service	
	Automobile and light vehicle sales, rental or storage	
	Filling station	
	Parking lot or parking structure (primary use)	
	Electric power transmission line or substation	
	Major utility or wireless telecommunication facility	
	Water or sewer pumping stations/reservoirs	
	Solar, geothermal, or biomass power facility (primary use)	
	Recycling collection point	

²⁹ Includes special or interim uses

MU-B to MU-N

Allowed under MU-N but not MU-B (gain) ³⁰	Allowed under MU-N and MU-B (no change)	Not Allowed under MU-N but allowed under MU-B (loss)
Dwelling (one- and two-family)	Bus or rail transit station	Kennel
Dwelling, townhouse	Cemetery or mausoleum	Convention or event center
Dwelling, multi-family	Government building or public safety facility	Indoor entertainment facility
Dwelling, live-work	Museum, library, or art gallery	Restaurant (large, with or without drive-in/drive-through)
Co-housing facility	Religious assembly (small and large)	Business park support activities
Residential care facility/assisted living (all sizes)	Business, art or vocational school	Mini-storage facility
Rooming house	Medical or dental clinic	Building materials sales
Club or lodge (private)	Veterinary or animal hospital	Automobile and light vehicle sales, rental and storage
Park, playground, or forest reserve	Restaurant (small, no drive-in/drive-through)	Parking lot or parking structure (primary use)
School (elementary, middle or high)	Hotel or motel	Truck or heavy vehicle sales, rental, repair or storage
Nursing home	Bed and breakfast	Contractor's shop and storage yard
Theater	Bank	Dry cleaning or laundry plant
Vacation dwelling unit	Office	Research laboratories
Preschool	Data center	Industrial services
Day care facility (small and large)	Funeral home or crematorium	Manufacturing, light
Grocery store, small	Personal service and repair, small and large	Truck freight or transfer terminal
Retail store not listed, small	Automobile and light vehicle repair and service	Radio or television broadcasting tower
Agriculture, urban	Filling station	Solar, geothermal, or biomass power facility (primary use)
	Electric power transmission line or substation	Wind power facility (primary use)
	Major utility or wireless telecommunication facility	Recycling collection point (primary use)
	Water or sewer pumping stations/reservoirs	Solid waste disposal or processing facility
		Storage warehouse
		Wholesaling

³⁰ Includes special or interim uses

MU-N to F-5

Allowed under F-5 but not MU-N (gain) ³¹	Allowed under F-5 and MU-N (no change)	Not Allowed under F-5 but allowed under MU-N (loss)
Storage warehouse	Electric power transmission line or substation	Funeral home or crematorium
Wholesaling	Major utility or wireless telecommunication facility	Personal service and repair, large
Retail store not listed, large	Water or sewer pumping stations/reservoirs	Bed and breakfast
Parking lot or parking structure (primary use)	Grocery store, small	Nursing home
Contractor's shop and storage yard	Retail store not listed, small	Dwelling unit, townhouse
Manufacturing, light	Automobile and light vehicle repair and service	Co-housing facility
Convention or event center	Filling station	Cemetery or mausoleum
Indoor entertainment facility	Office	Agriculture, urban
Restaurant, large, no drive-in or drive-through	Data center	
University or college	Preschool	
	Day care facility, small or large	
	Personal service and repair, small	
	Veterinarian or animal hospital	
	Restaurant, small, no drive-in or drive-through	
	Theater	
	Hotel or motel	
	Vacation dwelling unit	
	Bank	
	Government building or public safety facility	
	Museum, library or art gallery	
	Park, playground or forest reserve	
	Religious assembly, small or large	
	Business, art or vocational school	
	School	
	Medical and dental clinic	
	Dwelling unit, one- or two-family	
	Dwelling unit, multi-family	
	Dwelling unit, live-work	
	Residential facility/assisted living, all sizes	
	Rooming house	
	Bus or rail transit station	
	Club or lodge (private)	

³¹ Includes special or interim uses

MU-N to MU-B

Allowed under MU-B but not MU-N (gain) ³²	Allowed under MU-B and MU-N (no change)	Not Allowed under MU-B but allowed under MU-N (loss)
Kennel	Bus or rail transit station	Dwelling (one- and two-family)
Convention or event center	Cemetery or mausoleum	Dwelling, townhouse
Indoor entertainment facility	Government building or public safety facility	Dwelling, multi-family
Restaurant (large, with or without drive-in/drive-through)	Museum, library, or art gallery	Dwelling, live-work
Business park support activities	Religious assembly (small and large)	Co-housing facility
Mini-storage facility	Business, art or vocational school	Residential care facility/assisted living (all sizes)
Building materials sales	Medical or dental clinic	Rooming house
Automobile and light vehicle sales, rental and storage	Veterinary or animal hospital	Club or lodge (private)
Parking lot or parking structure (primary use)	Restaurant (small, no drive-in/drive-through)	Park, playground, or forest reserve
Truck or heavy vehicle sales, rental, repair or storage	Hotel or motel	School (elementary, middle or high)
Contractor's shop and storage yard	Bed and breakfast	Nursing home
Dry cleaning or laundry plant	Bank	Theater
Research laboratories	Office	Vacation dwelling unit
Industrial services	Data center	Preschool
Manufacturing, light	Funeral home or crematorium	Day care facility (small and large)
Truck freight or transfer terminal	Personal service and repair, small and large	Grocery store, small
Radio or television broadcasting tower	Automobile and light vehicle repair and service	Retail store not listed, small
Solar, geothermal, or biomass power facility (primary use)	Filling station	Agriculture, urban
Wind power facility (primary use)	Electric power transmission line or substation	
Recycling collection point (primary use)	Major utility or wireless telecommunication facility	
Solid waste disposal or processing facility	Water or sewer pumping stations/reservoirs	
Storage warehouse		
Wholesaling		

³² Includes special or interim uses

R-1 to MU-N

Allowed under MU-N but not R-1 (gain) ³³	Allowed under MU-N and R-1 (no change)	Not Allowed under MU-N but allowed under R-1 (loss)
Dwelling, multi-family	Dwelling, one-family	
Dwelling, live-work	Dwelling, two-family	
Rooming house	Dwelling, townhouse	
Bus or rail transit station	Co-housing facility	
Club or lodge (private)	Residential care facility/assisted living (any size)	
Business, art or vocational school	Cemetery or mausoleum	
Medical or dental clinic	Government building or public safety facility	
Nursing home	Museum, library, or art gallery	
Veterinarian or animal hospital	Park, playground, or forest reserve	
Restaurant, small, no drive-in/drive-through	Religious assembly (small or large)	
Theater	School (elementary, middle or high)	
Hotel or motel	Bed and breakfast	
Bank	Vacation dwelling unit	
Office	Preschool	
Data center	Day care facility (small or large)	
Personal service and repair, small or large	Funeral home or crematorium	
Grocery store, small	Electric power transmission line or substation	
Retail store not listed, small	Major utility or wireless telecommunication facility	
Automobile and light vehicle repair and service	Water or sewer pumping stations/reservoirs	
Filling station	Agriculture, urban	

R-1 to P-1

This zoning change was not fully analyzed because it is merely an administrative amendment, changing existing parkland zoning from R-1 to P-1.

³³ Includes special or interim uses

R-2 to MU-B

Allowed under MU-B but not R-2 (gain) ³⁴	Allowed under MU-B and R-2 (no change)	Not Allowed under MU-B but allowed under R-2 (loss)
Bus or rail transit station	Cemetery or mausoleum	Dwelling unit, one- and two-family
Business, art or vocational school	Government building or public safety facility	Dwelling unit, townhouse
Kennel	Museum, library or art gallery	Dwelling unit, multi-family
Convention or event center	Religious assembly, small or large	Co-housing facility
Indoor entertainment facility	Medical or dental clinic	Residential care facility/assisted living (all sizes)
Restaurant, large (with or without drive-in/drive-through)	Veterinarian or animal hospital	Rooming house
Hotel or motel	Restaurant, small (no drive-in/drive-through)	Club or lodge (private)
Bank	Bed and breakfast	Park, playground or forest reserve
Data center	Office	School (elementary, middle or high)
Other outdoor entertainment or recreation use not listed	Funeral home or crematorium	Nursing home
Business park support activities	Parking lot or parking structure (primary use)	Agriculture, urban
Mini-storage facility	Electric power transmission line or substation	Vacation dwelling unit
Personal service and repair, small or large	Major utility or wireless telecommunication facility	Day care facility, small or large
Building materials sales	Water or sewer pumping stations/reservoirs	Retail store not listed, small
Automobile and light vehicle repair and service		
Automobile and light vehicle sales, rental or storage		
Filling station		
Truck or heavy vehicle sales, rental, repair, or storage		
Contractor's shop and storage yard		
Dry cleaning or laundry plant		
Research laboratories		
Industrial services		
Manufacturing, light		
Truck freight or transfer terminal		
Radio or television broadcasting tower		
Solar, geothermal, or biomass power facility (primary use)		
Wind power facility (primary use)		
Recycling collection point		
Solid waste processing facility		
Storage warehouse		
Wholesaling		

³⁴ Includes special or interim uses

R-2 to MU-C

Allowed under MU-C but not R-2 (gain) ³⁵	Allowed under MU-C and R-2 (no change)	Not Allowed under MU-C but allowed under R-2 (loss)
Dwelling, live-work	Dwelling, multi-family	Dwelling, one- and two-family
Bus or rail transit station	Residential care facility/assisted living, 7 or more	Dwelling, townhouse
Business, art or vocational school	Rooming house	Co-housing facility
Kennel	Cemetery or mausoleum	Residential care facility/assisted living, 6 or fewer
Convention or event center	Club or lodge (private)	Agriculture, urban
Indoor entertainment facility	Government building or public safety facility	Vacation dwelling unit
Restaurant, large, with or without drive-in/drive-through	Museum, library, or art gallery	
Theater	Park, playground, or forest reserve	
Hotel or motel	Religious assembly, small or large	
Bank	School (elementary, middle or high)	
Data center	Medical or dental clinic	
Other outdoor entertainment or recreation use not listed	Nursing home	
Personal service and repair, small or large	Veterinarian or animal hospital	
Building materials sales	Restaurant, small, no drive-in/drive-through	
Garden material sales	Bed and breakfast	
Grocery store, small or large	Office	
Retail store not listed, large	Preschool	
Automobile and light vehicle repair and service	Day care facility, small or large	
Automobile and light vehicle sales, rental or storage	Funeral home or crematorium	
Parking lot or parking structure (primary use)	Retail store not listed, small	
Solar, geothermal or biomass power facility (primary use)	Filling station	
Recycling collection point (primary use)	Electric power transmission line or substation	
	Major utility or wireless telecommunication facility	
	Water or sewer pumping stations/reservoirs	

³⁵ Includes special or interim uses

R-2 to MU-N

Allowed under MU-N but not R-2 (gain) ³⁶	Allowed under MU-N and R-2 (no change)	Not Allowed under MU-N but allowed under R-2 (loss)
Dwelling, multi-family	Dwelling, one- and two-family	
Dwelling, live-work	Dwelling, townhouse	
Bus or rail transit station	Co-housing facility	
Business, art or vocational school	Residential care facility/assisted living (all sizes)	
Theater	Rooming house	
Hotel or motel	Cemetery or mausoleum	
Bank	Club or lodge (private)	
Data center	Government building or public safety facility	
Personal service and repair, small or large	Museum, library, or art gallery	
Grocery store, small	Park, playground or forest reserve	
Automobile and light vehicle repair and service	Religious assembly, small or large	
	School (elementary, middle or high)	
	Medical or dental clinic	
	Nursing home	
	Veterinarian or animal hospital	
	Restaurant, small, no drive-in/drive-through	
	Bed and breakfast	
	Vacation dwelling unit	
	Office	
	Preschool	
	Day care facility, small or large	
	Funeral home or crematorium	
	Retail store not listed, small	
	Filling station	
	Electric power transmission line or substation	
	Major utility or wireless telecommunication facility	
	Water or sewer pumping stations/reservoirs	
	Agriculture, urban	

R-2 to P-1

This zoning change was not fully analyzed because it is merely an administrative amendment, changing existing parkland zoning from R-2 to P-1.

³⁶ Includes special or interim uses

Appendix B: Building Area Per Employee by Business Type

Top industries for employment in the study area are highlighted in blue. The right-most column is an average or estimate of the number of square feet per employee used for the HIA calculations.

Figure 13: Square Feet per Employee by Industry

Industry	St Paul – West Midway Estimate ⁺	USGBC (2008) ⁺⁺	Snohomish Co, WA (2007) ⁺⁺⁺	Average/ Estimate
Administrative & Waste Services	142			150
Business Services	231		400	315
Healthcare & Social Assistance	248			250
Information Technology	253			250
Construction	278			275
Educational Services	286		300	275
Finance, Insurance, and Real Estate (FIRE)	379 (Financial Services)		350	350
Government (Public Administration)	432		300	350
Production Technology	451			450
Printing & Publishing	580			575
Manufacturing	1,025 (Metal Manf.)	535	500	675
Distribution Services	1,188			1,200
Wholesale, Transportation, and Utilities	1,553 (Goods-related Transportation)		1,000	1,250
Medical Devices	2,056			2,050
Retail		544	700	615
Food Services		99	200	150
Mini-storage			20,000	20,000
Warehousing		781		800

+ Source: West Midway industry-specific job density, <http://www.stpaul.gov/DocumentCenter/Home/View/14574>

++ Source: Building Area per Employee by Business Type, <http://www.usgbc.org/Docs/Archive/General/Docs4111.pdf>

+++ Source: Snohomish County 2007 Buildable Lands Project, <http://snohomishcountywa.gov/DocumentCenter/View/7660>

Appendix C: Mobile Markets, Food Hubs, and Farmers' Markets

MOBILE MARKETS, FOOD HUBS AND FARMERS' MARKETS

Mobile Markets: "Mobile markets operate from a truck, van, trailer, or other mobile device. Similar to farmers' markets, mobile markets can serve various communities on a scheduled or rotating basis. However, given their ability to change locations at a moment's notice, mobile markets can serve multiple communities in a short span of time. Mobile markets have gained popularity particularly in rural communities, where access to healthy food is limited and residents must travel long distances to access grocery stores that sell fresh food."

Source: [Healthy Food Access Portal – Mobile Markets](#)

Food Hub: "Milwaukee-based food activist and farmer [Will Allen](#) has created what he describes as a "Food Hub," which distributes fresh produce weekly to neighborhood institutions that in turn sell the produce to families with limited access to grocery stores. These food hubs work with local farms in and outside of the region to provide residents of Milwaukee with fresh, healthy food in a sustainable way on a weekly basis. This food distribution program requires planning for important details. For instance, this plan requires a space that is up to code for processing fresh vegetables and repackaging them for distribution. In addition, a program like this would also need to have a small grocery store attached to it that could be run and managed in a manner similar to Minneapolis's Midtown Global Market, which rents retail stalls to local entrepreneurs. Duluth-based programs, such as Seeds of Success, Institute for Sustainable Futures, and the Sustainable Agriculture Project at the University of Minnesota Duluth are all interested in pursuing this model."

Source: Food Access In Duluth's Lincoln Park/West End Neighborhood, Pine & Bennett, 2011

Farmers' market: Farmers' markets are a recent trend on a traditional concept – bringing the produce from area farms together one day per week (or daily, depending on the size of the community) to sell directly to consumers. Farmers' markets can have a reputation for costing more than grocery stores, but in recent years, farmers' markets have increased access to fresh produce and healthy food by accepting SNAP, or food stamps, Electronic Benefit Transfer (EBT)/Access cards, and Farmers' Market Nutrition Program vouchers. Duluth has one farmers' market, located at 14th Avenue E and 3rd Street, to the east of downtown Duluth. A farmers' market in Gary/New Duluth could potentially attract residents not only in Gary/New Duluth, but all of those that live west of downtown, making it a destination in the community.

Source: [Healthy Food Access Portal – Farmers' Markets](#) and Duluth's Farmers' Market, 2013