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LINCOLN MPO 2050 LONG RANGE TRANSPORTATION PLAN UPDATE







LINCOLN MPO
METROPOLITAN PLANNING ORGANIZATION

Lincoln MPO 2050 LRTP

FELSBURG HOLT & ULLEVIG





U.S.Department of Transportation
Federal Highway Administration

Required Credit / Disclaimer Statement

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List of Acronyms

ACS	American Community Survey
AFV	alternatively fueled vehicle
ASP	Agency Safety Plan
AV	automated vehicle
BIPOC	Black, Indigenous, People of Color
BRT	bus rapid transit
CMP	Congestion Management Process
CNG	compressed natural gas
CNT	Center for Neighborhood Technology
CO_2	carbon dioxide
CUFC/CRFC	Critical Urban Freight Corridor/Critical Rural Freight Corridor
DHHS	Department of Health and Human Services
E+C	Existing + Committed
EJ	environmental justice
FARS	Fatality Analysis Reporting System
FAST Act	Fixing America's Surface Transportation Act
FAT	fatality
FFPP	Federal Funds Purchase Program
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FY	fiscal year
GPTN	Great Plains Trails Network
HISP	Highway Safety Improvement Program
H+T	Housing and Transportation
INJ	injury
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITS	intelligent transportation systems
LEHD	US Census Longitudinal Employer-Household Dynamics
LOS	level of service
LOTM	Lincoln on the Move
LRTP	Long Range Transportation Plan
LTS	level of traffic stress
LTU	Lincoln Transportation and Utilities
LWCF	Land and Water Conservation Fund
MAP-21	Moving Ahead for Progress in the 21st Century
MMTC	Multimodal Transportation Center
MOVES3	US Environmental Protection Agency Motor Vehicle Emission Simulator software
MPA	Metropolitan Planning Area
MPO	Metropolitan Planning Organization
NAASQ	National Ambient Air Quality Standards
NDOT	Nebraska Department of Transportation
NHFN	National Highway Freight Network
NHPP	National Highway Performance Program
NHS	National Highway System
NOx	oxides of nitrogen
NRD	National Resources District

NSP	Federal Transit Administration National Public Transportation Safety Plan
O&LB	Omaha, Lincoln & Beatrice Railway
O&M	Operations and Maintenance
OPPD	Omaha Public Power District
PDO	property damage only
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
POPC	Project Oversight Planning Committee
RAISE	Rebuilding American Infrastructure with Sustainability and Equity
ROW	right-of-way
RTSD	Railroad Transportation Safety District
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SGR	state of good repair
SHSP	Strategic Highway Safety Plan
SOV	single occupant vehicle
STBG	Surface Transportation Block Grant Program
TAMP	Transit Asset Management Plan
TAZ	transportation analysis zone
TDM	Travel Demand Management
TDP	Transit Development Plan
TEA-21	Transportation Equity Act for the 21st Century of 1998
TERM	Transit Economic Requirements Model
TIP	Transportation Improvement Program
TMA	Transportation Management Area
TNC	Transportation Network Companies
TPM	Transportation Performance Management
ULB	useful life benchmark
UNL	University of Nebraska – Lincoln
UPRR	Union Pacific Railroad
UPWP	United Planning Work Program
USACE	U.S. Army Corps of Engineers
USDOT	US Department of Transportation
USPS	United States Postal Service
V/C	volume to capacity
VHT	vehicle hours of travel
VMT	vehicle miles of travel
VOC	volatile organic compound
VRM	vehicle revenue mile

1. Introduction

The 2050 Lincoln Metropolitan Planning Organization (MPO) Long Range Transportation Plan (LRTP) provides the blueprint for the area's transportation planning process over the next 29 years. This plan also supports the Transportation Goal, Element, and Policies of **PlanForward**, the Lincoln-Lancaster County 2050 Comprehensive Plan. The transportation planning process is a collaborative effort among the City of Lincoln, Lancaster County, Nebraska Department of Transportation (NDOT), StarTran, and other agencies. The multimodal transportation system was evaluated, and a set of recommendations were made with extensive public input. This LRTP meets all federal requirements and addresses the goals, objectives, and action steps to meet the community's vision for the future.

The LRTP update process is federally required for all MPOs every five years and provides multiple benefits. The regular update offers the community an opportunity to adjust the integration with the Comprehensive Plan, to identify what challenges and opportunities may lay ahead, to reexamine values as they relate to urban travel and development patterns, and to communicate about what they think the transportation system should look like in the future.



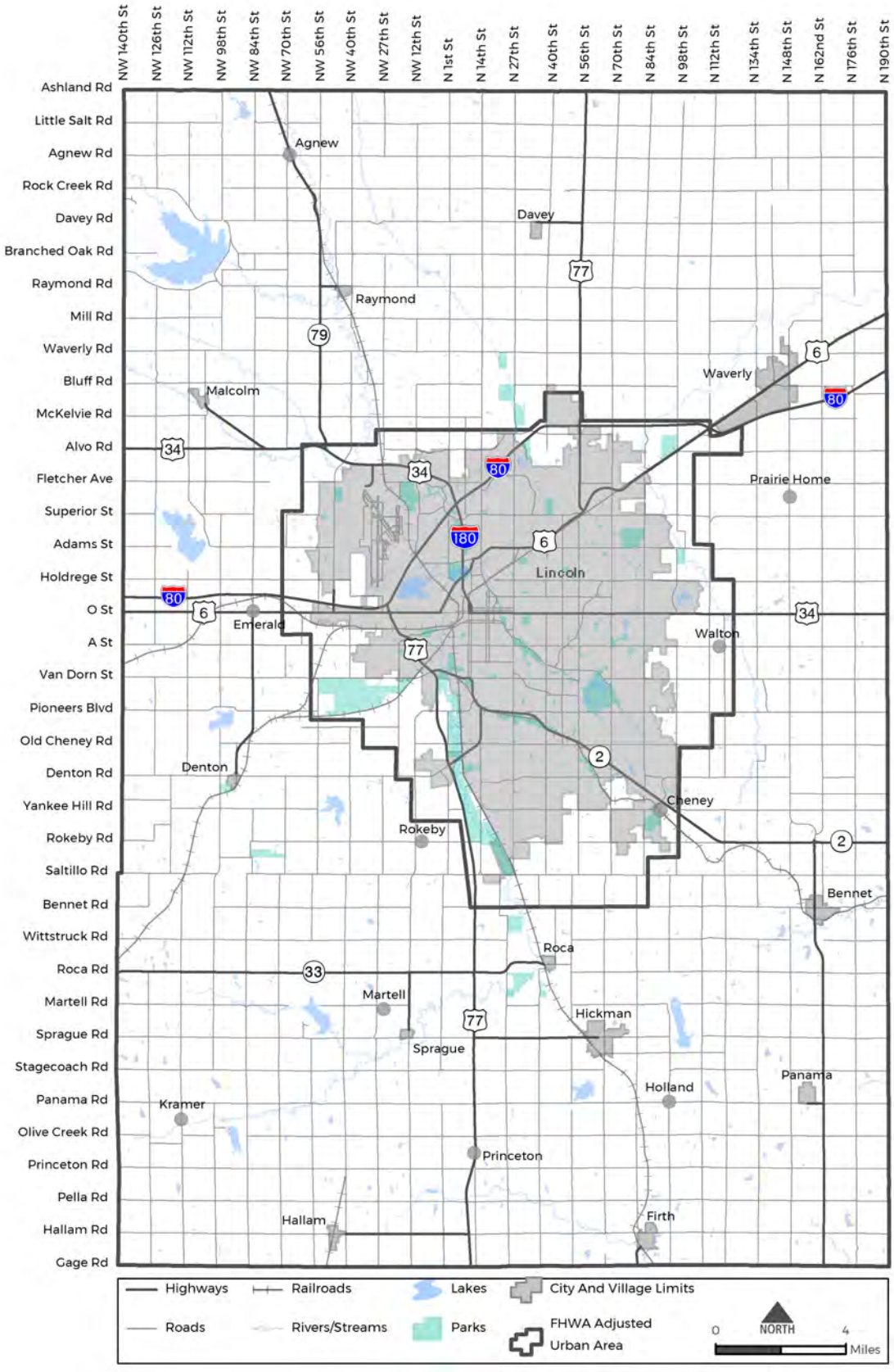
The Lincoln MPO 2050 LRTP, in accordance with federal requirements, addresses transportation system needs and provides a set of methods, strategies, and actions for developing an integrated, fiscally constrained multimodal transportation system that supports the efficient movement of people and goods.

The LRTP covers the transportation systems of the jurisdictions located within the Lincoln Metropolitan Planning Area (MPA), which encompasses all of Lancaster County, Nebraska. The LRTP considers the interdependent nature of the metropolitan area's multimodal transportation systems by addressing the region's roadway, transit, bicycle, and pedestrian modes in a combined effort.

While the LRTP covers the entire Lincoln MPA (**Figure 1.1**), it includes more detailed transportation planning for areas within the federally designated Urban Area Boundary. The Urban Area Boundary encompasses 160 square miles of area that is anticipated to maintain or develop dense development patterns that require urban services within the time horizon of the LRTP (2050).



Figure 1.1 Lincoln Metropolitan Planning Area



Metropolitan Planning Organization

The Lincoln MPO is responsible for transportation planning in Lincoln and Lancaster County. The MPO is a policy-making board of local government and transportation authority representatives who review transportation issues and develop transportation plans and programs for the metropolitan area. The MPO works to ensure the directives of federal regulations are incorporated into transportation planning and operations in the County. This organization provides the forum for cooperative decision-making and involvement of principal City and County elected officials. Although these individuals come to the table with multiple, and sometimes competing perspectives, they work together to establish local and regional priorities for the transportation improvements that are eligible to use state and federal funds.

To support the decision-making process, the MPO Officials Committee relies on other committees and staff, such as the MPO Technical Committee, as well as active participation from interested community members, concerned business representatives, interest groups and other voices in the community. The MPO is also responsible for preparing the Transportation Improvement Program (TIP) and the Unified Planning Work Program (UPWP). These two documents are short-term coordination and communication resources that help implement the goals of the LRTP.

While the Lincoln MPO plans and develops programs for all of Lancaster County, separate and defined funding sources are used to fund the respective urban and rural transportation programs. Urban sources of funding are used only within the "Urban Area Boundary," as shown on **Figure 1.1**. Rural sources of funding are generally planned to be used outside this identified boundary. The Lincoln MPO also determines the distribution of federal funding that is allocated to efficiently develop the transportation system and serve the community as it grows.

Reason for Planning

The Lincoln MPO 2050 LRTP anticipates many changes over the 29-year planning period. Changing demographics, employment patterns, and technologies will create challenges for provision of transportation services and facilities. The coordinated planning effort between the LRTP and PlanForward strengthens the connection between land use and transportation decisions. Lincoln and Lancaster County face significant financial challenges in the construction of new transportation facilities and the care and maintenance of an expanding and aging system. Technology changes and increasing demands for alternative transportation options will also present new challenges and opportunities to ensure that the transportation system equitably serves the needs of all people within the planning area.



PlanForward refreshes the outlook for growth and land use in the City and County. Increased emphasis on mixed use redevelopment and infill within the existing City will add density and concentrate it in areas along major transportation and utility corridors. While the density increases proposed in this plan are relatively modest, they are significant to the process of planning transportation infrastructure. The Plan anticipates a community of complete neighborhoods with housing options in a variety of settings and walkable, bikeable and transit access to commercial centers and entertainment. This approach leads to improved access for all transportation modes in existing neighborhoods, safe connections for all users, and construction of new neighborhoods with Complete Streets and accessible amenities over the next several decades.

As Lincoln and Lancaster County's population continues to grow, there will be greater demand for additional transportation infrastructure. With aging infrastructure and increasing construction costs to provide sustainable and resilient infrastructure, transportation funding is strained to meet the needs for repair, replacement, and growth. This is due to several factors, including vehicle fuel efficiency, gas-tax rates not increasing with inflation or vehicle technologies, project cost inflation, and other federal and state resources not raising enough funds to meet the current and future network demands.

This Plan continues to address funding issues by making the existing system more efficient, directing strategic investment in the growth of the transportation network, and providing a transportation network that encourages active transportation vehicles as a reliable and equitable form of commuting. Continued discussion about the purpose and approach to increasing transportation funding remains a community priority.

Compliance with Federal Regulations

The Lincoln LRTP has been prepared under the direction of the Lincoln MPO in accordance with federal, state, and local transportation planning guidelines and policies. The LRTP addresses both the long range transportation needs of the City of Lincoln and Lancaster County and the federal requirements for preparing a Long Range Transportation Plan as specified in the Fixing America's Surface Transportation (FAST) Act, the current federal transportation funding and policy bill.

FAST Act carries forward many of the principles and accomplishments of previous legislation and builds on and refines many existing efforts. This legislation also introduced new measures to meet the many challenges facing our transportation system, such as improving safety, reducing traffic congestion, improving efficiency in freight movement, increasing intermodal connectivity, and protecting the environment. A list of planning requirements that the Lincoln MPO follows can be found on **Page 2-4**.

The FAST Act is the most current authorization for surface transportation investment in the United States. It builds on previous national transportation bills, such as the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA); the Transportation Equity Act for the 21st Century of 1998 (TEA-21); Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU); and Moving Ahead for Progress in the 21st Century (MAP-21). Together these established a new agenda for maintaining and investing in the nation's transportation infrastructure.



Performance-Based Planning: Performance-based planning is a strategic approach to transportation planning that analyzes data to determine how effectively transportation investments are working toward achieving the identified transportation goals. The FAST Act emphasizes performance-based planning, establishes performance measures and targets, and identifies seven national goals that states and MPOs are to work toward. Agencies seeking federal funds must demonstrate their progress toward achieving regional, state, and national goals. States and MPOs that do not demonstrate adequate progress toward achieving the goals will be required to take corrective action, which may involve actions required by the MPOs. This LRTP update incorporates performance measures (detailed in **Chapter 2**) that relate to local and national goals.

Fiscally Constrained Plan: All MPO LRTPs must be fiscally constrained; that is, an LRTP must include sufficient financial information to confirm that projects in the document can be implemented using committed or available revenue sources. The Lincoln LRTP fiscally constrained plan (detailed in **Chapter 7**) uses a transparent evaluation process to consider the potential for transportation projects to contribute to the region's transportation goals and performance targets, in combination with reasonably expected revenue forecasts through 2050.

Other federal regulation emphasis areas include:

Strategic Highway Safety Plan (SHSP): NDOT published the **Strategic Highway Safety Plan, 2017-2021**. It maintains the same five Critical Emphasis Areas as the previous plan and added a new one to address crashes involving older drivers, most of which are outside the scope of an LRTP. The transportation planning process includes an ongoing traffic safety evaluation, looking at the **Crash Data Analysis** from the City of Lincoln and NDOT for the planning area. The process involved identifying high crash rate locations, considering the types of crashes, and then evaluating improvements where feasible. The crash information was used as part of the 2050 LRTP project selection process.

Existing Transportation Facilities: The LRTP must include a discussion of strategies to improve the performance of existing facilities. Many recommendations in this Plan include projects/programs focused on improving the current system and providing new connections to the existing multimodal system that will improve its performance. Furthermore, maintenance of the current system remains a key element addressed in the LRTP funding approach. Projects that would address congestion on existing roadways were identified through the Congestion Management Process included in **Appendix E**.

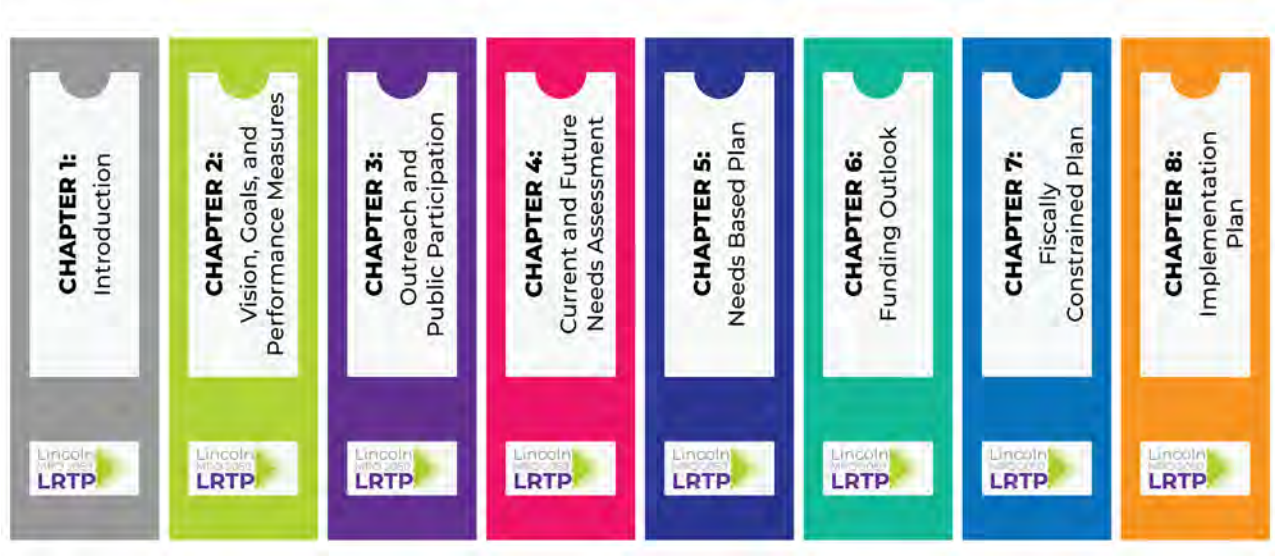
Agency Consultation and Environmental Mitigation: An MPO must document in the LRTP how agencies in the following areas are consulted with in the transportation planning process: environmental protection, wildlife management, land management, and historic preservation. A discussion of potential environmental mitigation activities must be included in consultation with federal, state and tribal wildlife, land management, and regulatory agencies. Potential environmental impacts and mitigation measures were included in the evaluation of multimodal alternatives. The process for consulting with agencies and considering environmental mitigation is described in **Chapter 8** and further discussed in **Appendix H** – Environmental Overview.

In summary, this transportation plan is to meet or exceed the principles of federal regulation planning provisions in addressing the changing transportation needs and many challenges facing the Lincoln MPA.



Plan Update Process

The LRTP update process includes an integrated sequence of tasks that produce a comprehensive and compliant transportation planning document. Project oversight from participating agencies helps to develop the foundational goals (**Chapter 2**) and deliver a purposeful public engagement process (**Chapter 3**). The existing model of current and future travel demands is updated with robust traffic counts and the recommended growth scenario (**Chapter 4**) created by the PlanForward update process. The range of multimodal transportation project needs are then updated (**Chapter 5**) using the best available data to consider future opportunities and challenges. Projected funding amounts and sources are also updated for the planning period to guide development of investment alternatives (**Chapter 6**). Public input provided throughout the planning process is used to recommend a preferred funding approach that is applied to the prioritized list of projects and to develop the fiscally constrained plan (**Chapter 7**) supported by an implementation plan (**Chapter 8**) needed to complete projects, keep the plan current, and align transportation policies with additional action steps documented in the plan.



Integration of Modal Plans

The Lincoln MPO LRTP integrates mode-specific master plans and other transportation-focused plans to fully address the pedestrian, bicycle, transit, rail, and roadway needs. Plans incorporated into the LRTP include:

- Lincoln's Vision for a Climate-Smart Future, February 2021
- Congestion Management Process, May 2020
- Lincoln School Zone Standards, April 2020
- Lincoln Bike Plan (On-Street Bicycle Facilities Plan), May 2019
- NDOT State Freight Plan, November 2017 (revised February 2021)
- Lincoln Traffic Management Master Plan, November 2015
- Lincoln Travel Options Strategy, December 2013
- Lincoln Airport Master Plan, August 2007

Contributing Agencies and Committees

The FAST Act requires that the MPO establish a cooperative planning process in consultation with other agencies, including federal, state, and local agencies; transit and human service providers; and other interested parties. In addition to outreach to the general public (as described in **Chapter 3**), this LRTP planning process has been completed in coordination with the following entities:

- Lincoln-Lancaster County Planning Department
- Lincoln Transportation and Utilities (LTU): Transportation Department, StarTran
- Lancaster County Engineer's Office
- Lincoln Parks & Recreation Department
- Lincoln-Lancaster County Health Department
- Lincoln Urban Development Department
- Nebraska Department of Transportation (NDOT)
- Federal Highway Administration (FHWA)
- Federal Transit Administration (FTA)

The contents of this LRTP have been developed over a nearly two-year process in close coordination with the LRTP Oversight Planning Committee (composed of representatives from the previously listed entities) and the Community Committee established to support the PlanForward update. The Community Committee provided review and input for both the Comprehensive Plan and LRTP update processes. At key milestones and decision points in the planning process, the LRTP was presented and discussed with the MPO Technical Committee and the MPO Officials Committee. **Appendix A** includes a complete list of committee meetings.

Completed Projects

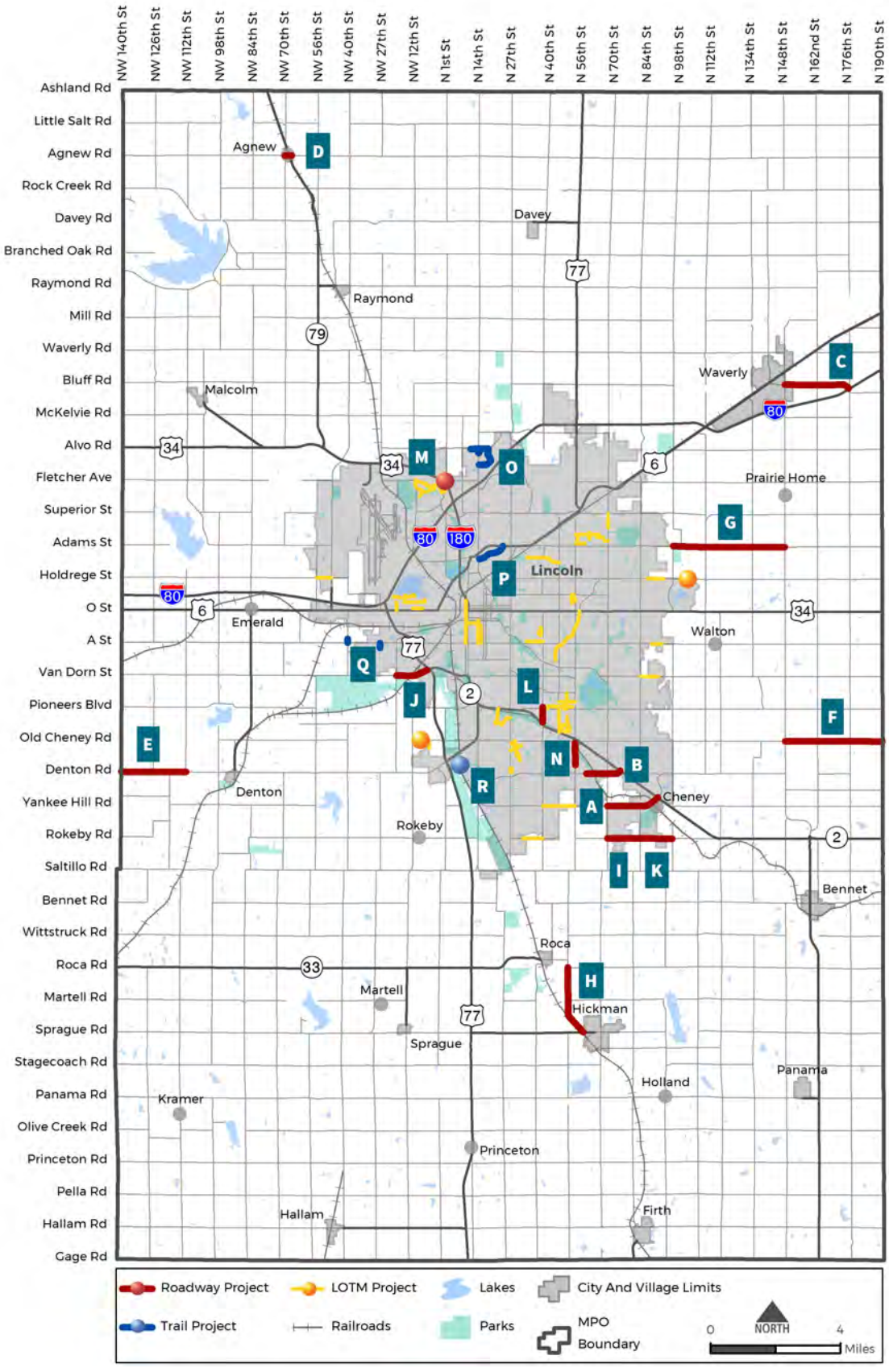
Projects from 2040 LRTP

Since 2017, multiple high priority transportation projects identified in the 2040 LRTP have been successfully funded and constructed as well. The benefits of an organized and community supported transportation planning process are seen in the initiation of multimodal project such as VanLNK, BikeLNK and ScooterLNK, as well as the completion of major projects throughout Lincoln and Lancaster County, listed in **Table 1.1** and depicted on **Figure 1.2**.

Table 1.1 Major Projects Completed Since 2017 LRTP

A	Yankee Hill Road Widening with Trail	J	Van Dorn Street Repaving + Intersection
B	Pine Lake Road Widening	K	Rokeby Road Paving + Intersection
C	Bluff Road Paving	L	S. 40th Street 2+1
D	W. Agnew Road Paving	M	Highway 34 and W. Fletcher Road Intersection
E	W. Denton Road Paving	N	S. 56th Street Widening
F	Old Cheney Road Paving	O	Stonebridge Trail
G	Adams Street Paving	P	Salt Creek Levee Trail
H	S. 54th Street Paving	Q	A Street Connectors (SW 40th St.: A St. to F St & SW 27th St.: Shane Dr. to A St.)
I	Rokeby Road Widening	R	Rock Island Connection

Figure 1.2 Major Projects Completed Since 2017 LRTP



Lincoln on the Move

Transportation planning helps the region set a vision for the transportation system and establish funding priorities. The last Lincoln MPO LRTP was adopted in January 2017. That planning process and the community conversation it included led the Citizens' Transportation Coalition to recommend a ¼ cent local sales tax to help address some of the funding gap with $33 million annually through 2025. Successful voter approval of the **Lincoln on the Move** ballot question in 2019 has enabled LTU to address three priority areas: Existing Street Improvements, Growth Projects, and one Railroad Transportation Safety District project at 33rd and Cornhusker Highway. Between October 2019 and September 2021, a total of 16 street improvement projects and 11 new growth projects will have been completed, were under construction, or were soliciting bids as a direct result of this additional funding. Ten of the 16 street improvement projects are multi-road, neighborhood projects located in different areas of Lincoln. These projects are also shown on **Figure 1.2**.

Green Light Lincoln

Green Light Lincoln, a program led by LTU, focuses on improving traffic signal system elements for intersection detection, signal displays and phasing, intelligent transportation systems (ITS), and traffic monitoring and incident management. Green Light Lincoln improves overall transportation system reliability and performance by decreasing travel delay and smoothing traffic flow. The citywide program has completed four phases of system optimization and traffic signal upgrades through 2020. These investments are helpful in providing safe roadways for all users and improving the efficiency of the transportation network. In many cases, the useful life of existing infrastructure is extended further by the signal upgrades.





2. Vision, Goals, and Performance Measures

The existing multimodal transportation system was developed and maintained through an ongoing process of intentional work necessary to realize a community vision for how transportation supports everyday life. The future vison for multimodal transportation serves as a guidepost for community leaders who must work together to make decisions that reflect the collective intentions of the many community members affected by the transportation network. The vision is reinforced through specific goals established to communicate what the community looks like when the vision is achieved. The planning process leads to successful implementation when goals have been created with broad-based, inclusive community engagement. The goals are the basis for performance measures used to track progress over time, and the transportation plan is designed to make the incremental advances needed to achieve the community's long-term vision.

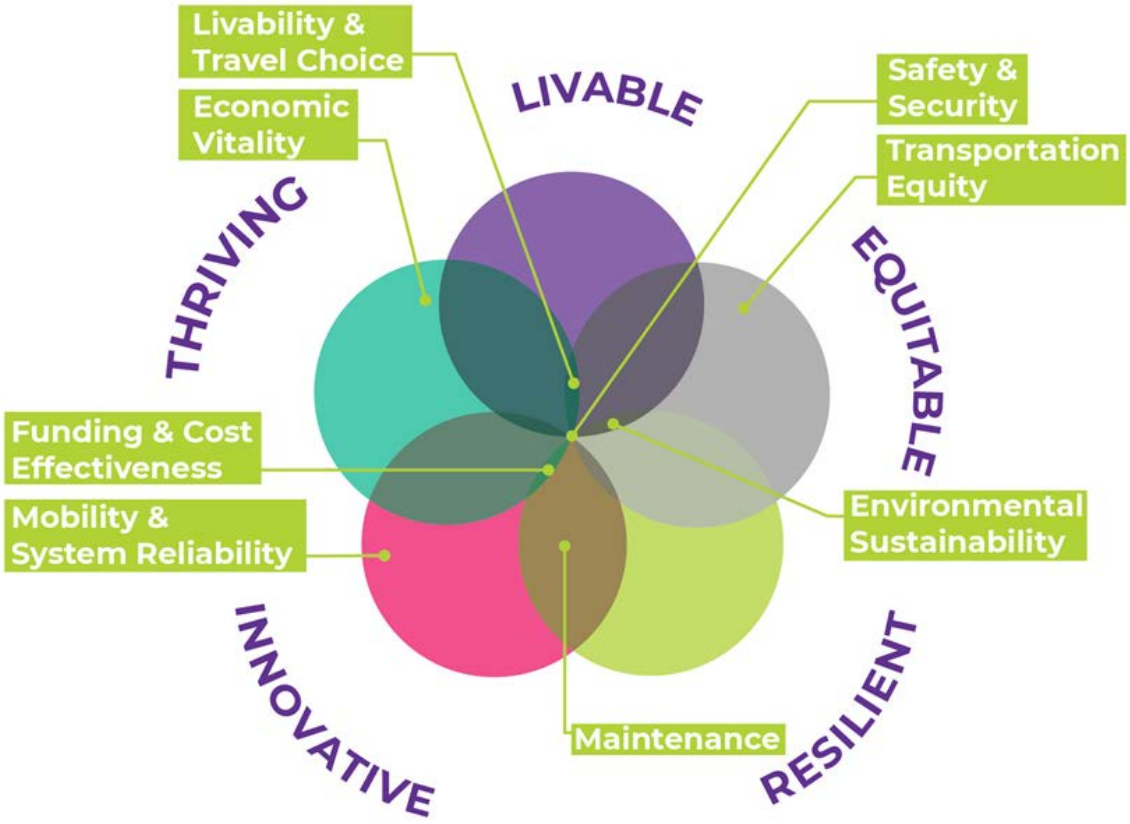
A complete transportation network is essential to supporting a complete community. Transportation serves the essential needs of the community and its members. Land use planning decisions made for Lincoln and Lancaster County are reflected in the five PlanForward themes: Livable, Equitable, Resilient, Innovative, and Thriving. Each theme is supported by the eight transportation goals of the LRTP (**Figure 2.1**). All actions, plans and policies that lead to accomplishing transportation goals, therefore, serve to address the broader community planning efforts.

Eight LRTP Goals reinforce the five PlanForward planning themes. The two plans were developed concurrently and reflect a unified vision of how transportation supports the community.

Community outreach efforts for this plan (**Chapter 3**) encouraged active participation in identifying the vision, goals, and needs of the region. To create a vision that reflects the needs and desires of the members of Lincoln and Lancaster County, the Lincoln MPO met with stakeholders across the region through internet surveys, virtual open houses, and focus groups. The City of Lincoln and Lancaster County provided opportunities for the PlanForward Community Committee to participate extensively in the development of this plan. The transit agency (StarTran), NDOT, and many community-based organizations and advocacy groups representing the diverse interests of Lincoln and Lancaster County supported the review and development of the vision and goals for the LRTP.



Figure 2.1 PlanForward Themes and LRTP Goals



Transportation Vision and Goals

The following five principles guide the plan toward that vision.

One Community: In Lincoln and Lancaster County, the unifying qualities of transportation will be emphasized. Complete neighborhoods, activity and employment centers, rural communities, and open lands should be connected by a continuous transportation network supporting all travel modes. The transportation network needs to sustain the One Community concept by linking neighborhoods and rural communities and eliminating disparities that exist for the quality of the network throughout the community.

A Balanced Transportation System: Transportation planning in Lincoln will be guided by the principle of balancing needs and expectations. It will recognize that transportation is a means to the goal of a unified, livable, and economically strong community. The system needs to move people and goods effectively around the community, while minimizing impacts on established neighborhoods, investments, and the natural environment. The concept of balance also applies to transportation modes. While the system must function well for motor vehicles, it should also promote and appropriately fund public transportation, bicycling, and walking as viable travel choices that

The vision for transportation in Lincoln and Lancaster County is a safe, efficient, and sustainable transportation system that enhances the quality of life, livability, and economic vitality of the community.

support the public health, safety, and welfare of the community.

Emphasis on Technology in Transportation: Transportation technologies continually emerge to meet the challenges of increased demand on the transportation network. Connected and autonomous vehicles, alternative fuels, traffic analytics, on-road communications, shared micromobility (such as bike and scooter share), ITS deployment, corridor signal optimization, among many other transportation technologies, offer efficient and cost-effective solutions to enhance the regional transportation systems. Technology investments and available data should be leveraged responsibly to help make the transportation system more efficient and reliable.

Transportation as a Formative System: As linked systems, transportation and land use are subject to change by growth and development. The future land use plan includes projections of future development and determines the character of the transportation plan. On the other hand, transportation has a major impact on the form of developing and redeveloping areas. Lincoln and Lancaster County will use transportation improvements to guide new growth and infill development patterns.

Planning as a Process: Transportation planning is a dynamic process, responding to factors such as community growth, development directions, social and lifestyle changes, and technological advances. Therefore, PlanForward and LRTP use an ongoing process of updates and amendments that respond to these changes. While this Plan is intended to guide future decisions regarding the development of an integrated and multimodal transportation system, it is flexible and subject to change to meet future community needs.

Goals were formulated to represent the community's vision and the desired state for Lincoln and Lancaster County's transportation system. These goals are the foundation for performance measures, performance targets, recommended policy, and project implementation actions described in later chapters of this LRTP.

The following eight goals guide the plan toward intentional transportation decision-making.



A well-maintained transportation system.



A transportation system that supports economic vitality for residents and businesses.



An efficient, reliable, and well-connected transportation system that leverages innovation and technology for moving people and freight.



A transportation system that enhances the natural, cultural, and built environment.



A multimodal system that provides travel options to support a more compact, livable urban environment.



Collaboration in funding transportation projects that maximizes user benefits.



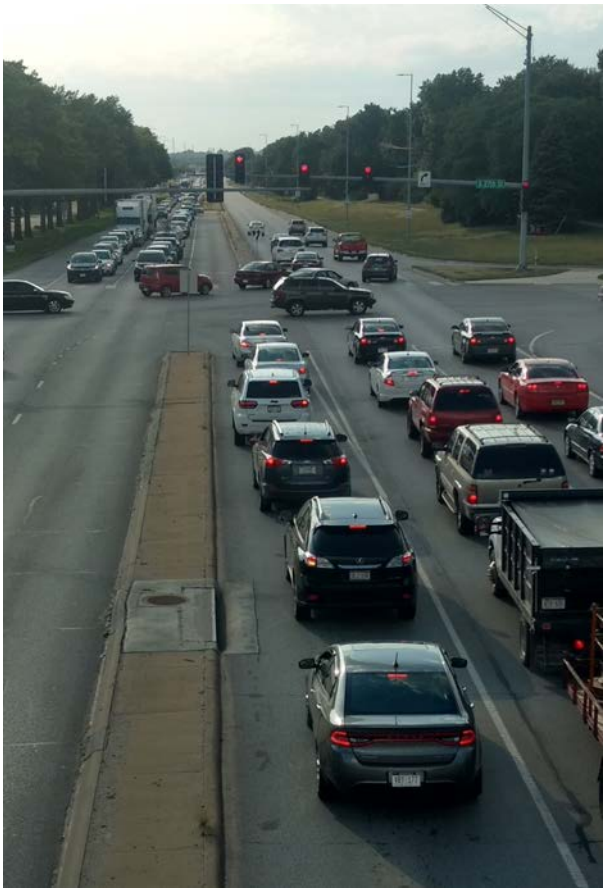
A safe and secure transportation system.



Transportation investments developed through an inclusive process that promotes equitable outcomes.

Alignment with Federal Planning Requirements

Several laws, regulations, and other federal documents affect the development of the LRTP by specifying methods to be considered in the planning process or to be contained in the plan. These include FAST Act, existing and proposed metropolitan planning regulations, management and monitoring system regulations, Executive Order 12898 on Environmental Justice, the Americans with Disabilities Act, Executive Order 13958 on Advancing Racial Equity and Support for Underserved Communities, and a variety of others.





The FAST Act contains many environmental, funding, infrastructure, modal, safety, and other transportation-related provisions. These provisions also require that the process for developing transportation plans considers all modes and is "continuing, cooperative, and comprehensive" to the degree appropriate.

The eight goals developed for the LRTP are primarily aligned with national goals and federal planning factors (**Table 2.1**). The LRTP is based on a set of goals intended to implement the vision and support the transportation needs and community values, while aligning with national goals and federal planning factors.

These goals were presented to the public for input regarding their relative importance. The LRTP Oversight Committee and the PlanForward Community Committee then used that input to develop a weighting system for the goals, which were used as a multiplier in the initial evaluation of each roadway and trail project. This process, described in **Chapter 7**, satisfies part of the FAST Act performance-based planning requirements.

Table 2.1 Relationship of LRTP Goals to FAST Act Requirements

		Lincoln MPO LRTP Transportation Goals							
		Maintenance	Mobility & System Reliability	Livability & Travel Choice	Safety & Security	Economic Vitality	Environmental Sustainability	Funding & Cost Effectiveness	Transportation Equity
FAST Act Planning Factors	Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency		✓			✓		✓	
	Increase the safety of the transportation system for motorized and nonmotorized users				✓				
	Increase the security of the transportation system for motorized and nonmotorized users				✓				
	Increase the accessibility and mobility of people and for freight		✓						✓
	Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns			✓			✓		
	Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight		✓	✓					✓
	Promote efficient system management and operation		✓					✓	✓
	Emphasize the preservation of the existing transportation system	✓							✓
	Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation		✓				✓		
	Enhance travel and tourism		✓			✓			
FAST Act Goals	**Safety:** To achieve a significant reduction in traffic fatalities and serious injuries on all public roads				✓				
	Infrastructure Condition: To maintain the highway infrastructure asset system in a state of good repair	✓							✓
	Congestion Reduction: To achieve a significant reduction in congestion on the National Highway System		✓						
	System Reliability: To improve the efficiency of the surface transportation system		✓	✓					✓
	Freight Movement and Economic Vitality: To improve the national freight network and support regional economic development		✓			✓			
	Environmental Sustainability: To enhance the performance of the transportation system while protecting and enhancing the natural environment						✓		
	Reduced Project Delivery Delays: To reduce project costs, accelerate project completion, eliminate delays in project development, and reduce regulatory burdens							✓	

Performance Measures

Performance-based planning affords a structure for this LRTP to ensure that scarce resources are used effectively and equitably. Transportation values of the community are woven into the goals, objectives, performance measures, and ultimately, evaluation criteria, used to identify high-priority transportation projects. Goals and objectives are the foundation for performance-based planning; the eight goals articulate the desired end state, and the objectives are specific, measurable statements that support the achievement of a goal.

Thirty-seven system-level performance measures are linked directly to the objectives. The Lincoln MPO 2040 LRTP introduced performance measures. Since they were introduced, federal rulemakings have been finalized for FHWA and FTA performance measures, and federal guidance has been issued for the establishment of targets for these measures. The performance measures included in the Lincoln MPO 2050 LRTP support federal requirements and local considerations that enhance the connection between the LRTP and PlanForward 2050.

FHWA defines Transportation Performance Management (TPM) as a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals. As part of the TPM, the NDOT and Lincoln MPO must adopt targets to strive for within the planning and programming process. Targets are set for a variety of performance measures related to safety, state of good repair (SGR), and system performance. Lincoln MPO adopted the NDOT performance targets in 2018.

The StarTran 2018 Transit Asset Management Plan (TAMP) set performance targets for SGR for 2018–2021. The TAMP includes an inventory of capital assets, a condition assessment of inventoried assets, a decision support tool, and a prioritization of investments. The Lincoln MPO adopted the StarTran safety performance targets in 2020. The StarTran 2020 Agency Safety Plan (ASP) documents performance targets based on the safety performance measures established in FTA's National Public Transportation Safety Plan (NSP).

Performance measures aid in planning, developing policy, prioritizing investments, and measuring progress. Several characteristics are common to good performance measures, as follows:

Available Data: Measures are often influenced by the availability of data and the ease of obtaining the data regularly.

Trackable over Time: Measures should be based on consistently tracked data that can be compared on a regular basis.

Relation to Goals: In performance-based planning, performance measures should track progress toward stated goals and objectives.

Storytelling Potential: Measures should be meaningful and help to weave a storyline around system performance. They can be an effective communication tool for requesting funds and garnering public support.

The Lincoln MPO and StarTran annually summarize **system performance and trends** for performance measures. For each performance measure, available current and historic data show the current system performance and the trajectory of historic trends, providing insight into the projects, strategies, and policies needed to achieve performance targets. Specific performance targets are maintained and a desired trend (increase, decrease, or maintain) has been identified.



Maintenance

As the transportation system ages, increased funding is required for maintenance. Naturally, street systems built in the 1950s, 60s, and 70s have aged to the point of needing reinvestment. Nebraska's climate is also hard on streets—freeze/thaw cycles and extreme temperature ranges cause continual pressure on the transportation system. There is often competition between funding for new projects and funding for the maintenance and operation of the existing system. Deferring maintenance funding in the short term can lead to higher costs in the future. Constructing new roads also adds future maintenance costs as new facilities age.

Goal: A well-maintained transportation system.

Objectives

Maintain streets, sidewalks, trails, transit fleet, and amenities to a state of good repair to maximize the value of Lincoln and Lancaster County transportation assets.

System Performance Measures ([1]- NDOT 4-year targets adopted to support state targets; 2- Annual targets may change, adopted to support StarTran targets)	Desired Trend
1. Percent of pavement Good/Poor for Interstate/non-Interstate NHS[1] **(FHWA Performance Target: ≥ 50% Good Condition and ≤ 5% Poor Condition)**	
2. Percent of NHS bridges Good/Poor[1] **(FHWA Performance Target: ≥ 40% Good Condition and ≤ 10% Poor Condition)**	
3. Percent of rolling stock (revenue vehicles) exceeding Useful Life Benchmark (ULB)[2] **(FTA Performance Target: ≤ 25% Bus and ≤ 25% Paratransit Van)**	
4. Percent of equipment (non-revenue vehicles) exceeding ULB[2] **(FTA Performance Target: ≤ 10% Automobile and 0% Other Support Vehicle)**	
5. Percent of facilities rated under 3.0 on the Transit Economic Requirements Model (TERM) scale[2] **(FTA Performance Target: 0%)**	
6. Percent streets rehabilitated **(City Performance Target: ≥ 5% Arterial and ≥ 3% Residential Annually)**	
7. Square feet of sidewalks replaced **(City Performance Target: ≥ $1 Million Annually for Sidewalk System Repair)**	
8. Age of traffic poles and signals **(City Performance Target: Replace 8-12 Annually that are ≥ 30 Years Old)**	
9. Bridge Condition Inventory by Good/Fair/Poor **(Performance Target: ≥ 42% (City) and ≥ 60% (County) Good Condition and ≤ 5% (City) and ≤ 6 % (County) Poor Condition**	



Mobility and System Reliability

An efficient system allows people to move from place to place in as direct a route as possible, reducing the amount of time spent in travel, the distance that must be traveled, and the amount of time spent in congested traffic. Innovation and technology can work to support these outcomes. A transportation system that performs well allows users to choose multiple transportation modes and to move by using those modes efficiently and reliably. Unexpected delays are less tolerable because such delays have larger consequences than those that drivers face with everyday congestion.

Goal: An efficient, reliable, and well-connected transportation system that leverages innovation and technology for moving people and freight.

Objectives

Optimize the efficiency of the transportation network.

Improve the performance and reliability of the transportation system.

System Performance Measures

([1]- NDOT 4-year targets adopted to support state targets; 2- Annual targets may change, adopted to support StarTran targets)

Desired Trend

1. Percent of person miles-traveled that are reliable for Interstate/non-Interstate NHS[1] **(FHWA Performance Target: ≥ 94.0% Interstate and ≥ 88.0% Non-Interstate)**
2. Truck Travel Time Reliability Index[1] **(FHWA Performance Target: ≤ 1.25)**
3. Congested roadways **(Model Area Performance Target: ≥ 85% Roadways Uncongested)**
4. Transit on-time performance **(City Performance Target: ≥ 85% On-Time Performance Annually)**
5. Signal detection reliability **(City Performance Target: ≥ 95% Signal Detection Reliability Annually)**



Livability and Travel Choice

Lincoln ranks high as a livable city and one of the best places to live. Mobility options, such as walking, biking, transit, and driving, are critical to maintaining or improving the quality of life and health for residents. Community members of all ages demonstrate a strong desire for walkable communities in which they can live proximate to jobs, education, shopping, and community activities. Infrastructure connectivity between a variety of locations is important to enable a seamless transition between modes. Higher land use densities that encourage alternative travel modes can also help to maximize use of existing infrastructure.

Goal: A multimodal system that provides travel options to support a more compact, livable urban environment.

Objectives

Improve the quality of alternative transportation options (transit, biking, walking).

Accommodate all travel modes of Lincoln's street network.

System Performance Measures	Desired Trend
1. Miles of trails, sidewalks, and on-street bike facilities **(City/County Performance Target: Increase miles of trails, sidewalks, and on-street bike facilities)**	
2. Annual transit ridership **(City/County Performance Target: ≥ 5% Increase Year Over Year)**	
3. Percent of transit supportive areas served **(City/County Performance Target: Provide Service to ≥ 90% of Transit Supportive Areas Annually)**	



Safety and Security

The safety and security of our transportation system for motorized and nonmotorized users are of critical importance. All transportation improvements should be designed to be safe and secure. Visibility, access control, and separation of incompatible modes, through either buffers or grade separations, are methods that can be used to decrease conflicts and increase comfort. Security devices at key facilities, such as bus stops and trailhead facilities, increase the safety and security of users. The federal government has promoted an approach to traffic safety planning to eliminate fatalities and serious injuries on the highway system—the principle of "Vision Zero" initiative is reflected in the Lincoln MPO's goal.

Goal: A safe and secure transportation system.

Objectives

Reduce fatal, injury, and total crash rates for vehicles, bicyclists, and pedestrians.

Improve personal security for transportation system users.

System Performance Measures
([1]- Annual targets may change, adopted to support NDOT statewide targets; current 12/2021; 2- MPO adopted; supports StarTran targets)

Desired Trend

1. Number and rate of fatalities[1] **(FHWA Performance Target: ≤ 249 Fatalities and ≤ 1.270 Fatalities per 100 million Vehicle Miles Traveled)**



2. Number and rate of serious injuries[1] **(FHWA Performance Target: ≤ 1,358 Serious Injuries and ≤ 6.323 Serious Injuries per 100 million Vehicle Miles Traveled)**



3. Number of non-motorized fatalities and serious injuries[1], including vulnerable road users such as pedestrians and cyclists **(FHWA Performance Target: ≤ 121.4)**



4. Total number of reportable fatalities and rate per 100,000 vehicle revenue miles (VRM)[2] **(FTA Performance Target: Fixed Route and Paratransit: 0 Fatalities and 0 Fatalities per VRM)**



5. Total number of reportable injuries and rate per 100,000 VRM[2] **(FTA Performance Target: Fixed Route: Reduce from Baseline of 2.6 Injuries and 0.16 Injuries per VRM. Paratransit: 0 Injuries and 0 Injuries per VRM)**



6. Total number of reportable events and rate per 100,000 VRM[2] **(FTA Performance Target: Fixed Route: Reduce from Baseline of 1.4 Safety Events and 0.09 Safety Events per VRM. Paratransit: 0 Safety Events and 0 Safety Events per VRM)**



7. Mean (or average) revenue miles of service between major mechanical failures[2] **(FTA Performance Target: Fixed Route: Increase from Baseline of 4,000. Paratransit: Increase from Baseline of 14,200)**





Economic Vitality

Economic vitality is realized when many characteristics in addition to transportation facilities are accessible, including a low cost of doing business, integrated and reliable technology, an educated and skilled workforce, marketable goods to move, choice of housing types, high-quality schools, low municipal and state debt, and other less tangible qualities. A good transportation system, which includes transit, vehicle, freight, air, nonmotorized, and rail modes all integrated with land use, can help contribute to these factors.

Goal: A transportation system that supports economic vitality for residents and businesses.

Objectives

Reduce the cost of transportation for system users.

Improve the economic competitiveness of the region by enhancing the transportation system.

Improve the operations of the existing freight transportation system.

System Performance Measures	Desired Trend
1. Travel time to work **(City Performance Target: ≥ 60% Commute 20 Minutes or Less)**	
2. Number of potential stops on primary truck routes **(City Performance Target: Decrease from baseline of 51)**	
3. Exposure rating of railroad at-grade crossings **(City/County Performance Target: Reduce number of crossings with ≥ exposure rating from baseline of 11)**	

Environmental Sustainability

Stewardship of the natural environment and the cultural and built environment is a priority in the FAST Act and for the Lincoln MPO. Fossil fuels are limited in supply, and consumption has many effects on the environment, including increased greenhouse gases, particulate matter, ground-level ozone (smog), and effects on global warming all of which should be addressed by moving toward a decarbonized and efficient transportation system. Transportation projects in new areas often cross waterways, disturb land, and cut through tree masses. It is important, wherever possible, to avoid these resources or to mitigate their disturbances. This is accomplished when existing neighborhood character is valued and traditionally under-represented groups are protected, including minorities and those with the lowest incomes.

Goal: A transportation system that enhances the natural, cultural, and built environment.

Objectives

Maintain compliance with national ambient air quality standards.

Reduce fossil fuel consumption by providing access to alternative modes and fuels.

Avoid, minimize, and mitigate environmental impacts of transportation projects to the extent reasonably practical.

System Performance Measures	Desired Trend
1. Percent of Non-SOV Travel **(FHWA Performance Target: Establish Benchmark in 2022)**	
2. Vehicle miles of travel (VMT) per capita, per day **(City Performance Target: Slow or reduce from baseline of 19.1 miles per day)**	
3. Mobile source emissions **(Model Area Performance Target: Slow or reduce emissions to continue attaining federal air quality standards)**	
4. Number of alternatively fueled vehicles (AFVs) in fleet **(City/County Performance Target: Increase from baseline of 93)**	
5. Miles of minimal impact projects (2+1) completed **(City/County Performance Target: Increase number of 2+1 cross section streets as resources and opportunities are developed)**	

Funding and Cost Effectiveness

Public funding for transportation infrastructure, both locally and nationally, lags behind the anticipated needs. Public and private groups have expressed the desire to see funds spent in the most efficient way possible and to identify new funding sources to expand the active transportation network. A successful transportation network is established by public, private, and nonprofit entities working together to achieve mutually beneficial goals. The Lincoln MPO pursues creative strategies to fund high-priority transportation projects and support all modes.

Goal: Collaboration in funding transportation projects that maximizes user benefits.

Objectives

Make the best use of public financial resources.

Decrease the gap between funding needed to achieve LRTP goals and currently available funding.

System Performance Measures	Desired Trend
1. Annual funding for transportation projects **(City/County Performance Target: Increase funding for transportation projects)**	



Transportation Equity

A comprehensive transportation network can support connectivity and offer accessibility to meet the mobility needs of all residents and sustain equitable outcomes. Yet, individual residents located throughout the planning area can be burdened disproportionately when the quality and availability of transportation infrastructure lag behind the rest of the region. Where underserved and overburdened communities reside, it is vital to guide infrastructure investments that ensure multimodal transportation options are reliable, convenient, safe, and cost-effective. Under some circumstances, it is necessary to prioritize investments that close the gap for infrastructure availability and quality where the underserved and overburdened communities can directly benefit.

Transportation Equity performance measures are new for the 2050 LRTP. They have not previously been documented in a Lincoln MPO Annual Performance Report. No federal standard or guidance exists to direct each of the selected performance measures or the data used to support them. They are established to consider all modes and can be evaluated based on available data.

This new goal for the 2050 LRTP also introduces new performance measures to the MPO planning process. **Chapter 4** – **Current and Future Needs Assessment** establishes the framework for evaluating equity in transportation infrastructure and services. **Figure 4.5** displays the Socioeconomic Index used to evaluate performance measures. Each performance measure is established to evaluate the disparity between where underserved and overburdened communities reside compared to other areas of the community. Criteria used to evaluate these performance measures include older adults; individuals with disabilities; individuals with limited English proficiency; single parent households; individuals with low-income; Black, Indigenous, People of Color (BIPOC); and individuals without access to a vehicle.

Goal: Transportation investments developed through an inclusive process that promotes equitable outcomes.

Objectives

Reduce disparities in transportation network availability and quality for the most underserved and overburdened populations.

System Performance Measures	Desired Trend
1. Equitable transit service frequency **(City Performance Target: Maintain equitable distribution of transit service)**	
2. Equitable access to on-street bike lanes and trails **(City Performance Target: Increase equitable distribution of on-street bike lanes and trails)**	
3. Equitable travel time to work duration **(City Performance Target: Maintain equitable travel time to work)**	
4. Equitable roadway conditions **(City Performance Target: Increase equitable distribution of roadway condition)**	

Equitable Transit Service Frequency (City)



Underserved and overburdened communities often use transit services to support their mobility needs. Public input consistently highlights the need to continue improving services for community members who depend on transit to access essential community services, support their household needs, and contribute to a thriving economy.

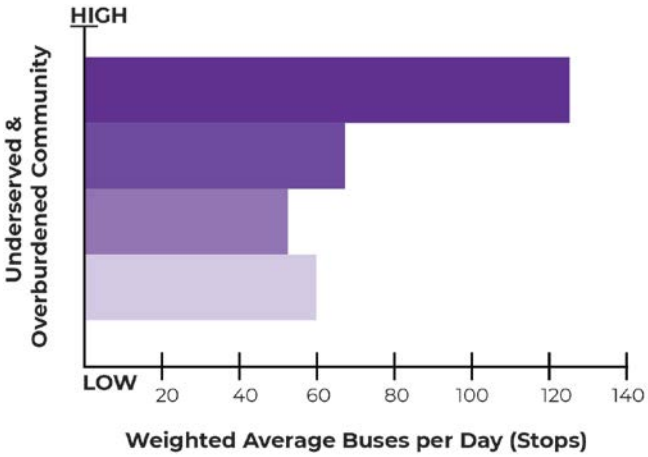
The metric compares the frequency of transit services provided to census blocks with populations ranging from a low to high proportion of underserved and overburdened communities.

Performance Measure: Transit Service Frequency is measured as the weighted average of bus trips accessible per day within census blocks. Available data for population and number of one-way route bus trips per day are used to calculate a weighted average for each socioeconomic quartile.



Baseline Condition: Understanding that individual household experiences vary, **Figure 2.2** indicates that the number of bus trips through census blocks with the highest proportion of underserved and overburdened communities is currently more than double other areas of the community.

Figure 2.2 Equity Measure of Transit Service Frequency



Desired Trend: At a minimum, continue this level of service. Other performance measures of this LRTP are helpful for evaluating the quality of the transit service provided.

Equitable Access to On-street Bike Lanes and Trails (City)



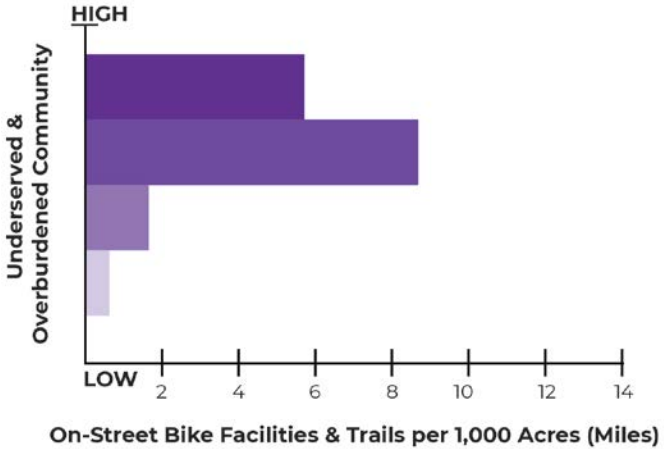
Active transportation that uses on-street bike routes and trails systems is not equitably distributed in Lincoln. A significant reason for this condition is the relatively recent development of the on-street and trails network. Older areas of the community were not designed with these facilities in mind. Although Lincoln and Lancaster County have made significant progress to expand the trail network for the past 30 years, some portions of the community have less access than others.

Transportation planning will continue to expand the on-street bike lanes and improve connections in areas where underserved and overburdened communities live. Safe and convenient access to essential services by walking and biking can make a difference for community members who lack access to a personal vehicle or are unable to drive.

Performance Measure: Access to On-street Bike Lanes and Trails is measured as density of facility miles within the census block areas.

Baseline Condition: **Figure 2.3** indicates people living in areas with higher proportions of underserved and overburdened communities have up to eight times more on-street bike lane and trail miles than people living in areas with lower proportions.

Figure 2.3 Equity Measure Access to On-Street and Trail Network



Desired Trend: At a minimum, continue this level of service. Other performance measures of this LRTP are helpful for evaluating the completeness and quality of the network, as well as connectivity and access. These investments will increase access for bicycles and the availability of electric scooters and bicycles that may share the road with automobiles.

Equitable Travel Time to Work Duration (City)



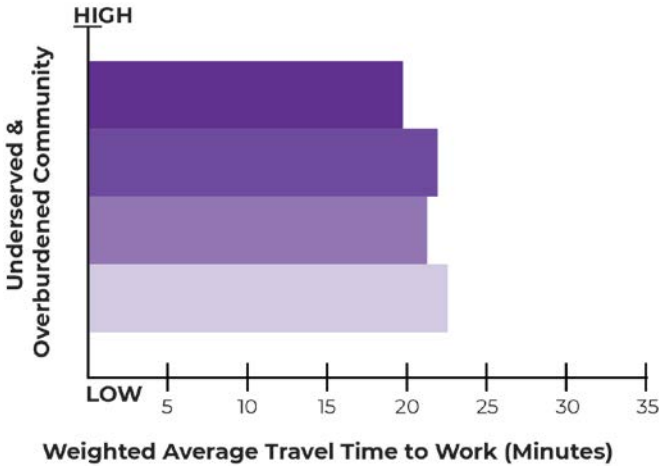
The transportation network connects people to jobs. When commuters travel to get to work, the commute time for underserved and overburdened communities should not cause an additional burden. Travel time is influenced by distance to reach a job, travel mode, and traffic conditions.

Performance Measure: Travel Time to Work duration is measured by weighted average of all employed individuals within census blocks.



Baseline Condition: **Figure 2.4** indicates Travel Time to Work is relatively consistent across various communities in Lincoln. People living in areas with low numbers of underserved and overburdened communities have roughly a two (2) minute longer commute than other areas.

Figure 2.4 Equity Measure of Travel Time to Work



Desired Trend: Continue to make transportation and land use decisions that increase jobs and improve access near underserved and overburdened communities to minimize commute times, which can reduce potential household cost related to transportation.

Equitable Roadway Conditions (City)



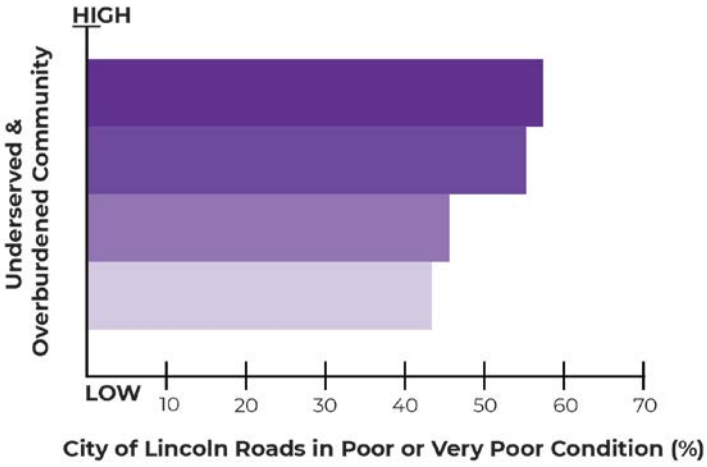
Lincoln and Lancaster County work to use available transportation funding to maintain existing roadways to the extent possible. New funding available through the "Lincoln on the Move" sales tax has allowed a significant amount of deferred maintenance to be completed or planned. Although this funding is available for a limited time, much of the planned maintenance will support poor and very poor roadway conditions that serve underserved and overburdened communities.

All community members need equitable access to well-maintained roadways. The City will monitor the disparity of roadway conditions that serve different areas of the community.

Performance Measure: Roadway Condition is measured by percent of all lane miles within census block areas measured as poor or very poor condition. Available data for roadway condition within Lincoln are overlaid to calculate the proportion of each roadway condition for each socioeconomic quartile.

Baseline Condition: **Figure 2.5** indicates roads in areas where more underserved and overburdened communities live that have worse conditions than roads in other areas.

Figure 2.5 Equity Measure of Road Conditions



Desired Trend: Baseline conditions do not reflect data from recent "Lincoln on the Move" maintenance projects. Reduce and eliminate, if possible, the overall disparity of poor and very poor road conditions disproportionately affecting underserved and overburdened communities.

3. Outreach and Public Participation

Public engagement is an essential component of creating an LRTP that reflects the community's values. Community involvement helps to validate that the planning process is comprehensive and that the outcomes reflect the diverse ideas about how to improve the transportation system.

The project team developed and documented a public engagement strategy early in the planning process. The LRTP Public Engagement Plan was guided by and consistent with the adopted Lincoln MPO **Public Participation Plan**, with special notes regarding COVID-19. The Lincoln MPO committed to abiding by all local and state Directed Health Measures in place for the duration of the project. This decision would impact the proposed methods of content delivery and input gathering.

To accommodate social distancing at meetings, modified approaches and the use of virtual meetings were anticipated and accomplished. During the planning period, most individuals involved with the project, as well as most community members, did participate through remote working environments. Virtual meeting resources became essential to everyday activities and civic processes. **Appendix B** summarizes public engagement materials and input. The planning process proceeded and was successful because of the willingness of public participants to shift their participation to these essential online resources.

Public Engagement Process

The public engagement process for the 2050 LRTP included three phases of community outreach. As the planning process progressed, community members were invited to share input focused on themes relevant to each phase referenced on **Figure 3.1**.

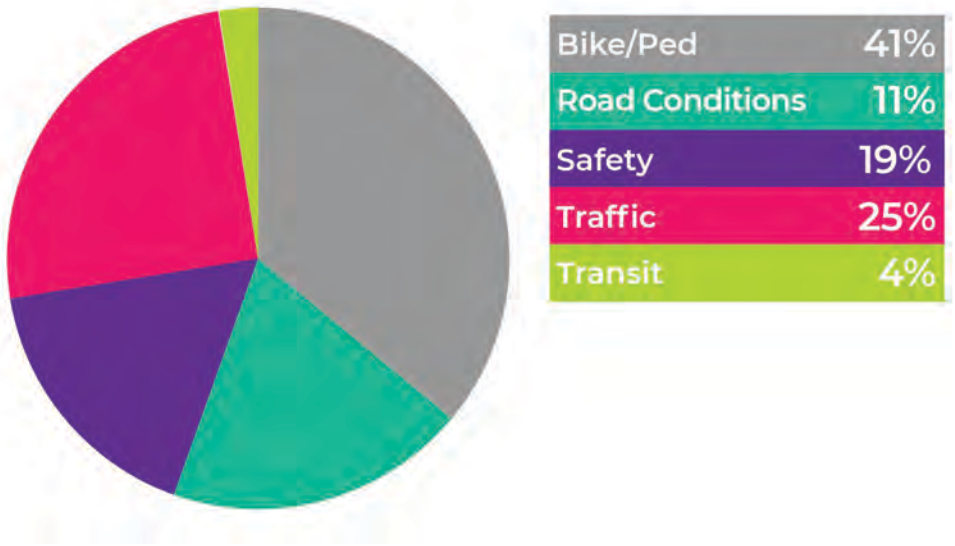
Phase 1: Needs

Completed between September and October 2020, Phase 1 Public Outreach focused on listening to community members discuss their transportation values, the transportation issues they encounter, and relevant trends that will influence future transportation decisions. The project website was launched with information about how the planning process leads to important outcomes. Initially, the project team requested input about general transportation topics and locations to address through a comment wall and pin map. **Figure 3.2** shows the type and proportion of comments that were provided.

Figure 3.1 Phases of LRTP Public Engagement Strategy

	We needed to know ...	How we found out ...	How input was used ...
Phase 1 Outreach is focused on listening to the community. Our project team would like to understand the community values, experienced issues and relevant trends.	Values Issues Trends	· Virtual Meeting #1 · Focus Groups · Stakeholder Presentations · Website Survey Tools	· Inform Goals · Inform Network Consideration · Inform Land Use Scenarios
Phase 2 Outreach is focused on balancing tradeoffs. Our project team will educate and engage the public in the tradeoff decision-making process to gain consensus.	Tradeoffs Strategies Priorities	· Stakeholder Scenario Planning · Virtual Meeting #2 · Focus Groups · Website Survey Tools	· Scenario Implementation Plan · Strategy and Funding Preferences · Project/Programming Prioritization
Phase 3 Outreach will wrap up by confirming with community members that the plan reflects what we heard from the community.	Outcome Validation	· Draft LRTP On-line Comments · Public Meeting (In-Person) · Virtual Meeting #3 · County Board · City Council	· Summary of public comments in LRTP

Figure 3.2 Distribution of Comments by Transportation Topic



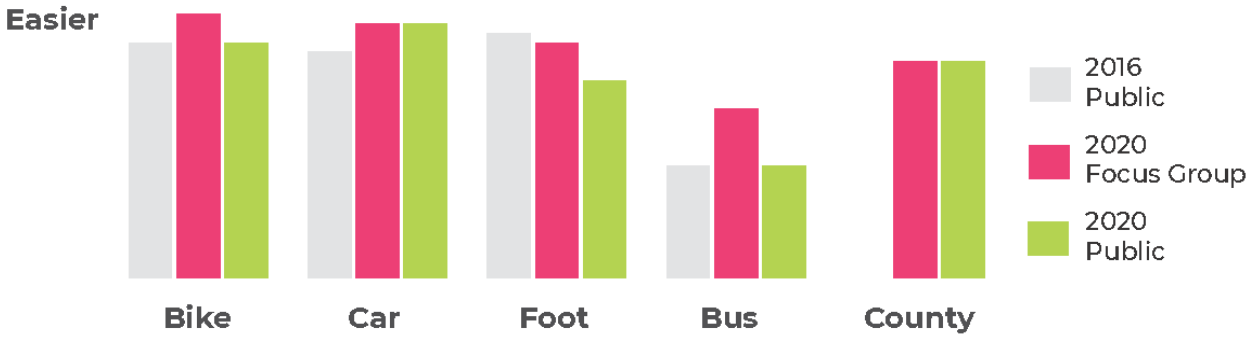
A virtual presentation with audio file and closed captions was recorded and shared online with supplemental information that community members could review. The virtual presentation provided helpful background to the transportation planning processes and the transportation needs within the region. The presentation also directed viewers to the public survey about the proposed goals, perceptions of transportation modes, and transportation challenges that the Lincoln MPO must address through this plan.

Community members were directed to the website content and survey through social media postings, Facebook advertising, a press release, bilingual fact sheet, e-blast to 569 recipients (47% open rate) and encouragement from the Community Committee and focus group participants. Multiple presentations were also made to community stakeholder groups interested in the transportation planning process. Each presentation ended with a demonstration of the public survey and a request to help get more surveys completed. The Phase 1 Public Survey was completed by 236 community members and was made available in English and Spanish.

Public input was generally favorable toward the draft goals when asked to rate them and to rank them in order of priority. The public ranked Maintenance of the highest importance, with Mobility and System Reliability second. Focus groups also ranked these two highest but in the reverse order. The average rating support for the goals described in **Chapter 2** was 4.03 out of a possible 5, which represented the community "very well."

Public input was also provided about the relative ease of transportation by mode. The same evaluation was completed with the 2016 public surveys when the 2040 LRTP was developed and again with this LRTP Update process as shown on **Figure 3.3**. This evaluation offers a relative means to assess the changes in perceptions over time as shown on the figure. Travel by car is perceived to be the easiest mode of transportation, while travel by bus continues to lag other modes. Many participants indicated that they did not travel in the County enough to adequately answer the question about ease of travel outside the City. The perception of all modes, except for pedestrians, was that travel is as easy or easier than it was in 2016.

Figure 3.3 Perception of Ease of Travel by Mode 2016 and 2020

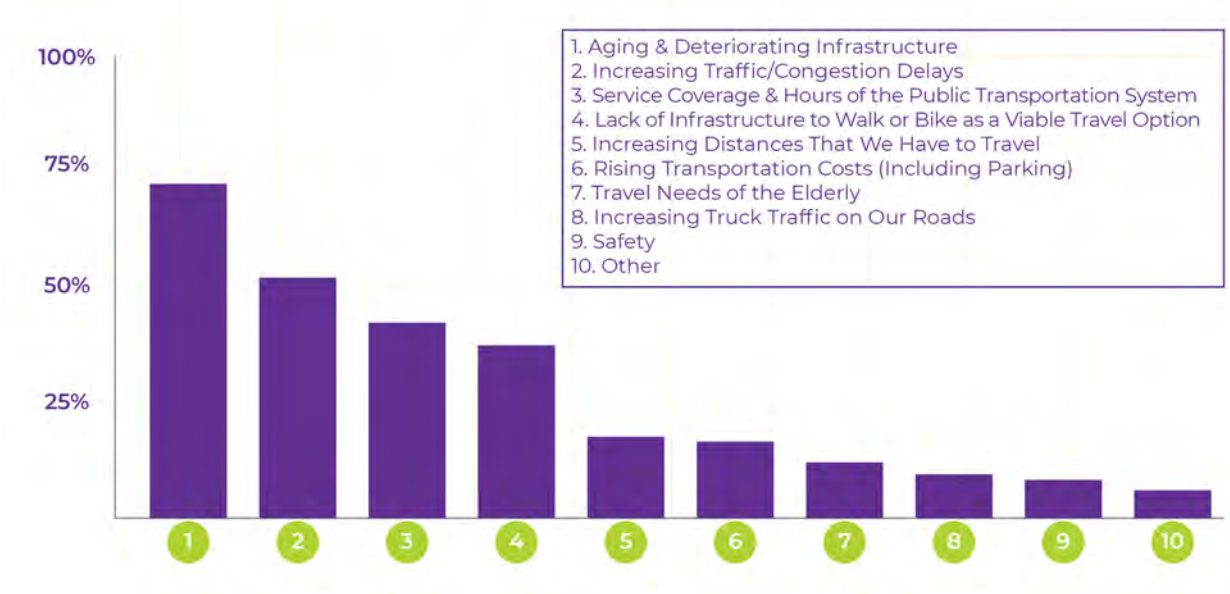


The Phase 1 Public Survey also gave community members the opportunity to share their top three most pressing transportation challenges that the LRTP can work to address (**Figure 3.4**). Aging and deteriorating infrastructure was included in the responses of almost 75 percent of survey responses. Increasing traffic/congestion delays was included approximately 50 percent of the time. These responses were consistent with focus group responses, but service coverage and hours of operation for the public transportation system (third most frequently selected) were much more common than with focus group participants.

Phase 2: Priorities

Completed between March and April 2021, Phase 2 Public Outreach focused on balancing the tradeoffs that exist when there are more projects to complete than funding available. Similar to the diverse views toward the LRTP goals, community members also have diverse views about how funds should be allocated to different project needs. The project team used support for the goals and funding and project information to raise awareness about how transportation funds are distributed. Public input helped the planning team build consensus for a decision-making process that would lead to a fiscally constrained plan of projects through 2050.

Figure 3.4 Public Input about the Most Pressing Transportation Challenges

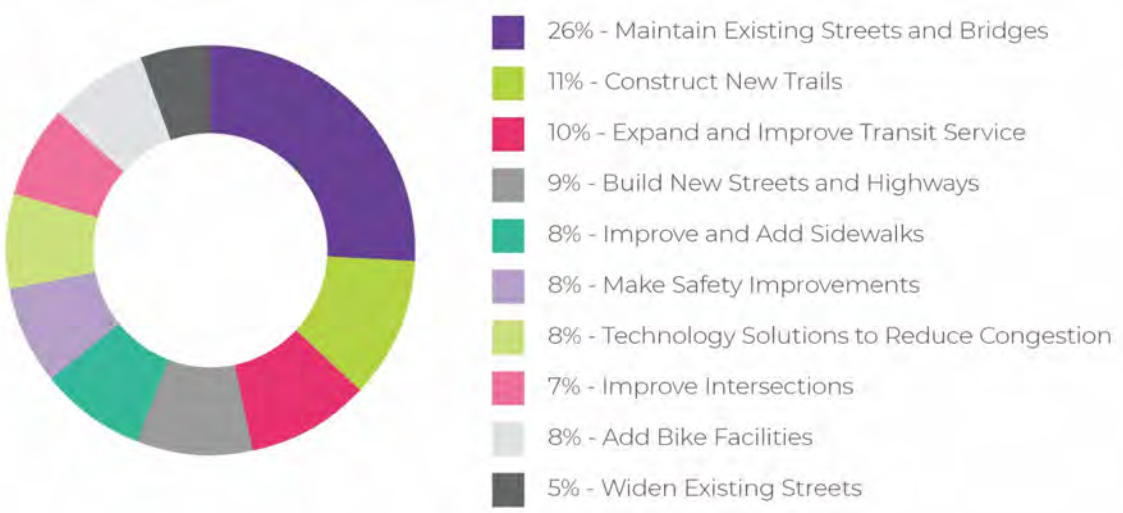


The project website was refreshed for Phase 2 Outreach with current information about the process required to organize the list of transportation projects. A second virtual presentation with audio file and closed captions was recorded to summarize the process of creating project lists, how projects are evaluated through a data-driven process, anticipated revenue and planning level cost estimates. The presentation also demonstrated how to complete the Phase 2 Public Survey, which was made available in English and Spanish.

The website contained English and Spanish public information packets to download with figures and tables of the City of Lincoln Roadway Projects, Lancaster County Roadway Projects, and Trail Projects. The Phase 2 Public Survey asked how community members would distribute limited transportation funds (**Figure 3.5**).

Respondents also selected their five most important projects from each of the three categories (City Roadway, County Roadway, and Trails) and shared why those projects were important to them. Community members were again directed to the website content and survey through social media postings, a press release, e-blast to 4,516 recipients (35% open rate), and encouragement from the Community Committee and focus group participants. The Phase 2 Public Survey was completed by 203 community members.

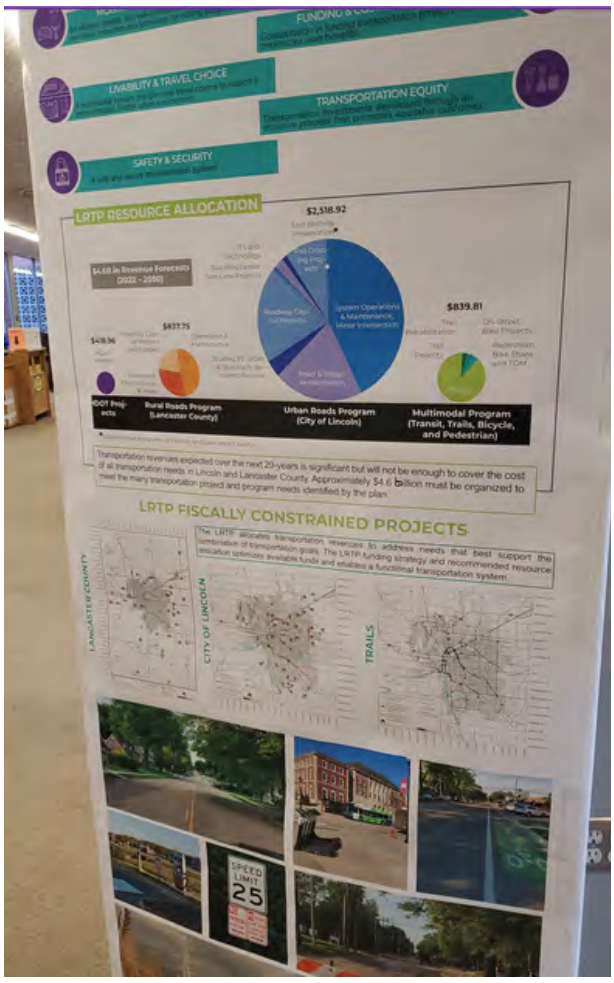
Figure 3.5 Public Survey and Focus Group Distribution of Transportation Funding



Phase 3: Validation

The third and final phase of public input included three open house events and a virtual public meeting which were all coordinated with PlanForward public outreach. The draft Comprehensive Plan and LRTP documents were completed and hosted on a shared virtual meeting website for community members to review and confirm that the proposed plans reflect what was heard from the community. Lincoln LRTP website content was also updated and included a forwarding link to the virtual meeting website. The meeting dates, location and times were advertised in the Lincoln Journal Star and on the City of Lincoln Government social media. Kiosk information was shared at five libraries within the City.

The virtual public meeting was viewed 1,260 times. The three in-person open house events were attended by 34 community members who viewed, discussed with planning staff, and provided written comments about the draft plans. The community conversation that occurred on social media generated approximately 210 Facebook and Twitter comments. All comments and responses as well as Agency review comments are summarized in **Appendix B** for reference.



Social Media Community Conversation

- Continue to prioritize maintenance operations.
- Continue to prioritize efficient north-south and east-west corridors.
- Continue to prioritize efficient north-south and east-west corridors.
- Continue to prioritize planning for the East Beltway.
- Spend sales tax funding wisely and according to designed purpose.

Open House and Virtual Meeting Comments

- Maintaining the transportation system while trying to find additional funding to do more projects was encouraged.
- More advance work on major arterials in new developments was recommended to minimize disruption once development occurs.
- A roundabout was encouraged to be considered at NW 1st and Fletcher Road.
- The Lincoln on the Move sales tax funding was positively recognized and the idea of continuing it or expanding it beyond 2025 was suggested.
- A comment suggested the next major southern east-west trail ling should be along Saltillo Road when it is upgraded from two lanes.
- A suggestion was made by a commenter for the City to pave or change maintenance practice of unpaved roads inside the City limits.
- A suggestion was made to find more funding to implement more projects, especially alternative mode projects.
- A comment was made about the lack of 4-lane continuity north-south should be resolved along 27th Street.
- A concern was raised about emergency response times for fire and ambulance vehicles during congested traffic conditions.
- A concern about East O Street was raised.
- A concern about StarTran operating days and hours was provided.
- A recommendation was made to raise the priority of the South 68th Street Projects between Norris school campus and the City of Hickman.
- A grouping of concerned comments was made about projects in northwest Lincoln, their justification, and the potential to encourage leapfrog residential development.
- A comment was made to continue increasing mode-choice options such as bike, bus and autonomous electric shuttle.
- The Transportation Element of the draft Comprehensive Plan received public comments with various recommendations.

Virtual Meeting Survey Questions

The public was asked to:

- Rate how well the Vision, Goals and Policies reflect the transportation needs and outlook of the community, and
- Rate how well the funding strategy reflect input provided by the community.

Both questions received too few responses (four and seven respectively) to make any specific conclusions. No responses indicated that enough transportation funding was available. Funding is a concern and some perceive that additional funding is required, not just recommended.

Public Engagement Stakeholders

Community Committee

The PlanForward Community Committee supplemented direct input received from the public. Presentations and discussions were coordinated with the Community Committee approximately every other month. Their participation recognizes and upholds the important link between the Comprehensive Plan and transportation planning. The Community Committee was asked to represent the general public's interests. All content included with the LRTP was presented and discussed with the Community Committee, and their input is reflected in the plan recommendations. Presentations were made to the Community Committee on the following dates:

- March 26, 2020
- April 30, 2020
- August 27, 2020
- December 10, 2020
- April 29, 2021
- May 20, 2021
- August 26, 2021

Focus Groups

Invitations were sent to 138 community members to participate in one of 10 focus groups organized for September 2020 to reflect the diversity of community interests, disciplines, and needs. Participants were encouraged to consider the needs of the groups they represented when answering questions about the transportation goals, challenges, and opportunities. Through interactive presentation and survey resources, the 10 focus group sessions generated thoughtful discussion and keen insight that reflected a diversity of thoughts and values within the community. The following list represents those who participated in the focus groups:

- Development community
- Bicycle/pedestrian groups
- Freight interests
- Neighborhood associations
- Downtown interests
- Transit/human services
- Institutions (medical and academic)
- Business community
- Healthy living & environmental
- Multicultural and diversity

Focus group participants were from homogonous groups, reflecting participants with similar interests. Though differences among individuals are inherent, the way the focus groups rated goals helps to understand influence and driving initiatives found within the community. **Figure 3.6** is useful to share how these rankings differ and how the average of all focus group responses cannot fully reflect all the diverse views and interests of those impacted by the LRTP. Focus group participants also offered substantial input used to develop the Policies and Action Steps described in **Chapter 8**.

Focus group participants were invited to a second set of meetings in March 2021. Participants signed up for one of six time slots to allow individuals from different interest group areas to be comingled for these discussions. A summary of Phase 1 public input prompted discussion about the different community perspectives. The LRTP project identification and evaluation was also shared with specific attention to how priority projects identified through the public survey would be integrated into project scoring. The focus groups then discussed potential action steps proposed to support the LRTP goals and transportation policies being developed for PlanForward. Discussion was helpful to clarify action steps described in **Chapter 8**.

Figure 3.6 Goals Ranked by Focus Groups and the Public

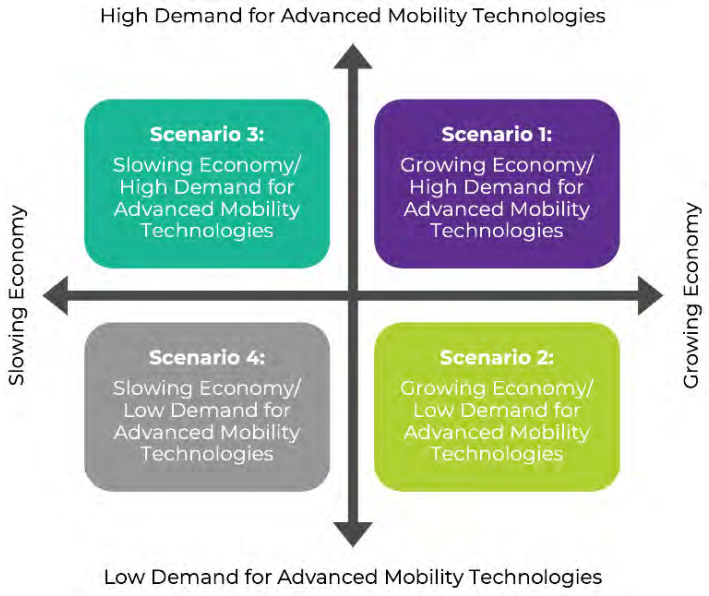


Scenario Planning

A scenario planning workshop was facilitated for 25 planning team members and a selection of individuals from the Community Committee and focus groups. This workshop was designed to gain input about the potential impact of, and certainty associated with, mobility as a service, transportation electrification, driverless cars, demographic shifts, policy implications, mode choices, land use, work from home, delivery economy, and funding and the economy. A summary of the workshop is included as **Appendix B, Attachment B-4**.

Participants considered a planning horizon of 2050 and a range of potential futures based on (1) health of the economy and (2) demand for advanced mobility technologies, including connected, automated, shared and electric forms of moving goods and people. This exercise resulted in the four future scenarios shown on **Figure 3.7**. Common themes identified during breakout discussions were documented to support the eight goals and a variety of action steps included in **Chapter 8**.

Figure 3.7 Four Future Workshop Scenarios for 2050



After a discussion about the range of influential forces that may impact transportation and mobility in Lincoln and Lancaster County, participants were distributed to breakout rooms to discuss

opportunities and implications of the scenario they were tasked to consider. The input was used to compare against LRTP goals. After discussing the input from each scenario, participants were sent back to breakout rooms to discuss strategies and policies to address the opportunities and implications they identified. The strategies and policies were used to inform the action steps in **Chapter 8**.

Key Themes of Public Input

Substantial input was provided by community members who invested their time to learn about the planning process and to answer questions that would help the Lincoln MPO establish priorities, policies, and ultimately investment strategies for transportation. The key themes listed below highlight some continued and some new themes relevant to the 2050 LRTP Update:

- **Technology** is a continued theme that generates both excitement and some concern. Intelligent transportation that supports vehicle-to-vehicle and vehicle-to-system communication is developing rapidly and will modify travel demands. Technology should improve travel efficiency. Technology advances must also improve safety for all users, not just cars, and should be trialed for implementation where feasible.
- **Growth** is a continued theme and opportunities to capitalize on more infill along existing corridors while still meeting the needs of edge growth are recognized. To meet the needs of all residents, a variety of affordable housing options throughout the community must be supported by safe and accessible transportation options, not just personal vehicles.
- **Maintenance** of existing roads and bridges is a consistent theme shared by the public comment, the Community Committee, the focus groups, and scenario planning. Ongoing maintenance and completing deferred maintenance will continue to remain a top priority for the public. Communication about maintenance projects will need to be emphasized with the community.
- **Environmental** awareness is an integral part of transportation planning, but its emergence as a new key theme of public input stems from the recent work to establish the Lincoln Climate Action Plan. Development of that plan engaged a broad group of stakeholders who catalyzed strategies to reduce greenhouse gas emissions. Many strategies, such as electrification of fleets and reduction of single occupancy vehicle trips by providing active transportation and transit options, reflect the focus needed for transportation investments.
- **Equity** is a desired focus for guiding transportation planning. A national discussion about equitable transportation has begun to shape local conversations. All LRTP goals should strive to achieve equitable outcomes and support a thriving community. Access to a supportive transit system and safe Complete Streets (see below) is specifically important for underserved and overburdened community members, which aligns with the new Transportation Equity Goal.

- **Funding** is a continued theme necessary to construct and maintain the multimodal transportation system. Public input about funding continues to encourage investments necessary to improve existing roadway conditions and be more proactive with maintenance. Infrastructure that supports edge growth is becoming more expensive and should be coordinated efficiently. This includes a future East Beltway. Funding alternatives to the gas tax will soon be more necessary for the community, and options should be communicated.



- **Complete Streets** is an emerging theme that is encouraged to expand and support more active transportation, specifically the on-street bicycle network and trail system. Most community members desire a street system that supports the mobility needs of all people and neighborhoods. Other community members highlight the challenge of identifying funding to support these improvements without eroding roadway construction and maintenance funding.
- **Travel Patterns** experienced a significant change during the COVID-19 pandemic. Work and education from home requirements created once in lifetime changes to trips for work, shopping, and services. Explosive growth in delivery on-demand and freight delivery also introduced new variables for travel demand. These changes were not perceived to be permanent, but some aspects are anticipated to continue. Planning for future travel demands should reflect these shifting behaviors.



4. Current and Future Needs Assessment

An inventory of the existing transportation system offers a snapshot of how transportation supports Lincoln and Lancaster County today. Current conditions of the multimodal transportation system and the future conditions presented are based on the anticipated growth in the Lincoln Metropolitan Planning Area shown on **Figure 4.1**. An assessment of the current and future roadway, bicycle, pedestrian, transit, freight, and rail systems is summarized.

Land Use and Demographics

Land use and demographics are key components to understanding the transportation system, identifying travel patterns, and anticipating where new or improved facilities may be needed. Housing and employment are the two land use categories used in forecasting travel demand. Demographic information (age, income, ability, etc.) helps to understand and address the transportation needs of different cohorts in the region.

Household and Employment Growth

The number of people living and working in the region affects the transportation needs, and where people choose to live and work greatly influences the demand for transportation infrastructure and services. Understanding the region's existing and future housing and employment trends can help to inform and guide transportation investment decisions. Today's decisions must consider the changing population and align with their future transportation needs.

The US Census estimates a 2019 population of 289,102 in Lincoln and 319,090 in Lancaster County, both representing an 11.5 percent increase over the 2010 populations. The 2019 base year travel demand model for Lincoln includes 122,634 households. According to PlanForward land use forecasts, the number of local households is expected to increase approximately 52,060 over the next 30 years (almost 42.5 percent). **Figure 4.2** shows the distribution of household growth within the model area ("Cordon Area") by transportation analysis zone (TAZ). Darker colors represent higher levels of household growth; most high-growth areas are on the periphery of the future service limit, with infill development growth targeted within a portion of Lincoln.

Average density of new dwelling units, combined with increased focus on infill development strategies, will influence the amount of land required to accommodate the additional residences and transportation infrastructure needed to support the growth. Infill development opportunities can introduce several benefits for a resilient and sustainable community. Infill enables the use of existing infrastructure to a larger extent while maintenance costs remain consistent. Edge growth requires new infrastructure and adds maintenance costs. Balanced in the preferred growth scenario, these tradeoffs reflect that escalating costs to build and maintain new edge growth infrastructure at historic rates are less sustainable for the community.

The Lincoln MPO 2050 LRTP was completed during the COVID-19 pandemic. This Chapter presents pre-COVID data that do not reflect changes that occurred to travel demand and patterns experienced during the pandemic. Travel behaviors have been significantly changed during the pandemic, and the long-term impact is uncertain at this time.

A TAZ is an area used with planning modes. Area sizes vary but commonly include approximately 3,000 people based on census block information with important socio-economic data such as automobiles per household, household income, and employment which helps understand anticipated trips.

Figure 4.1 Lincoln Metropolitan Planning Areas

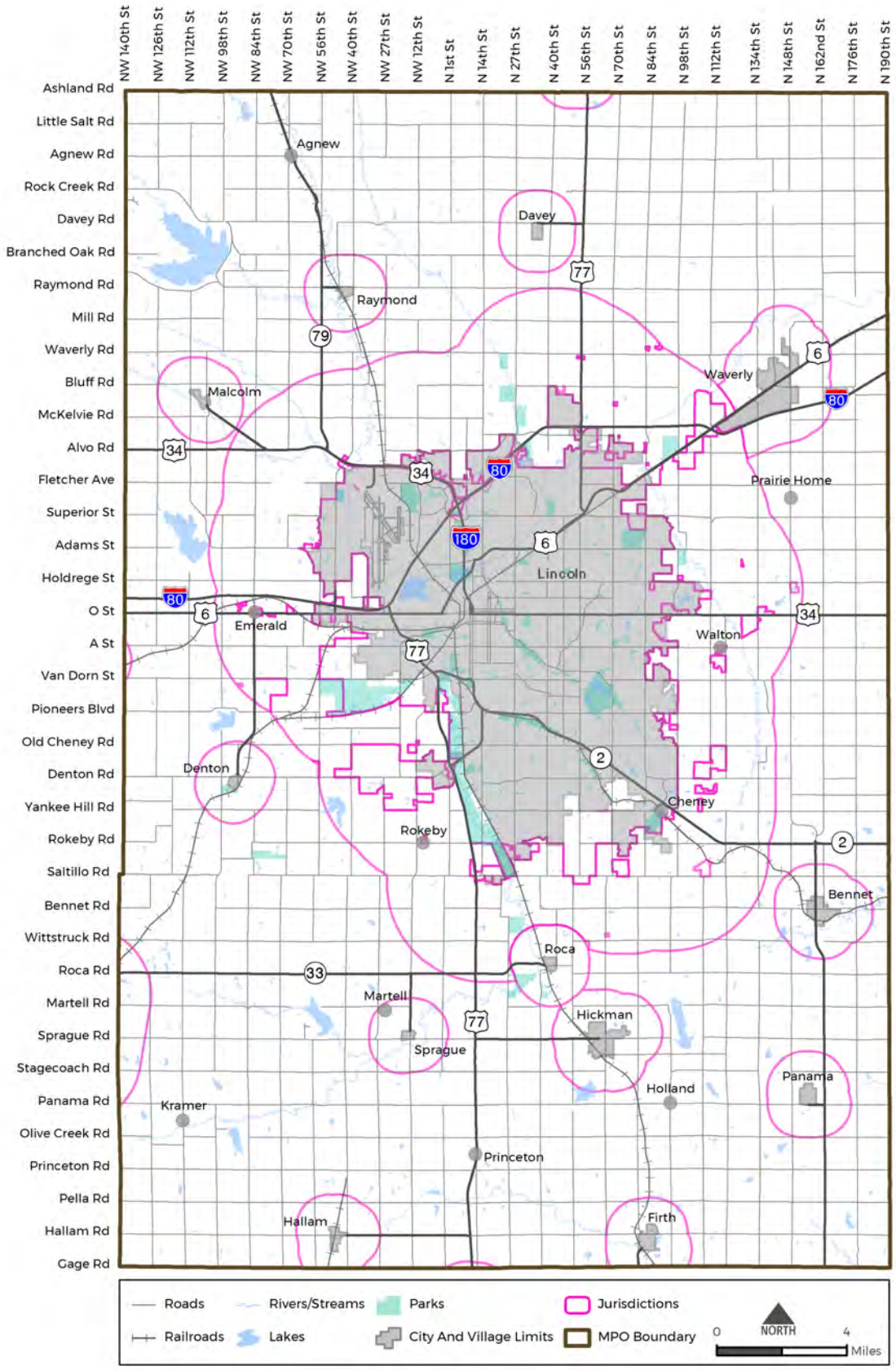
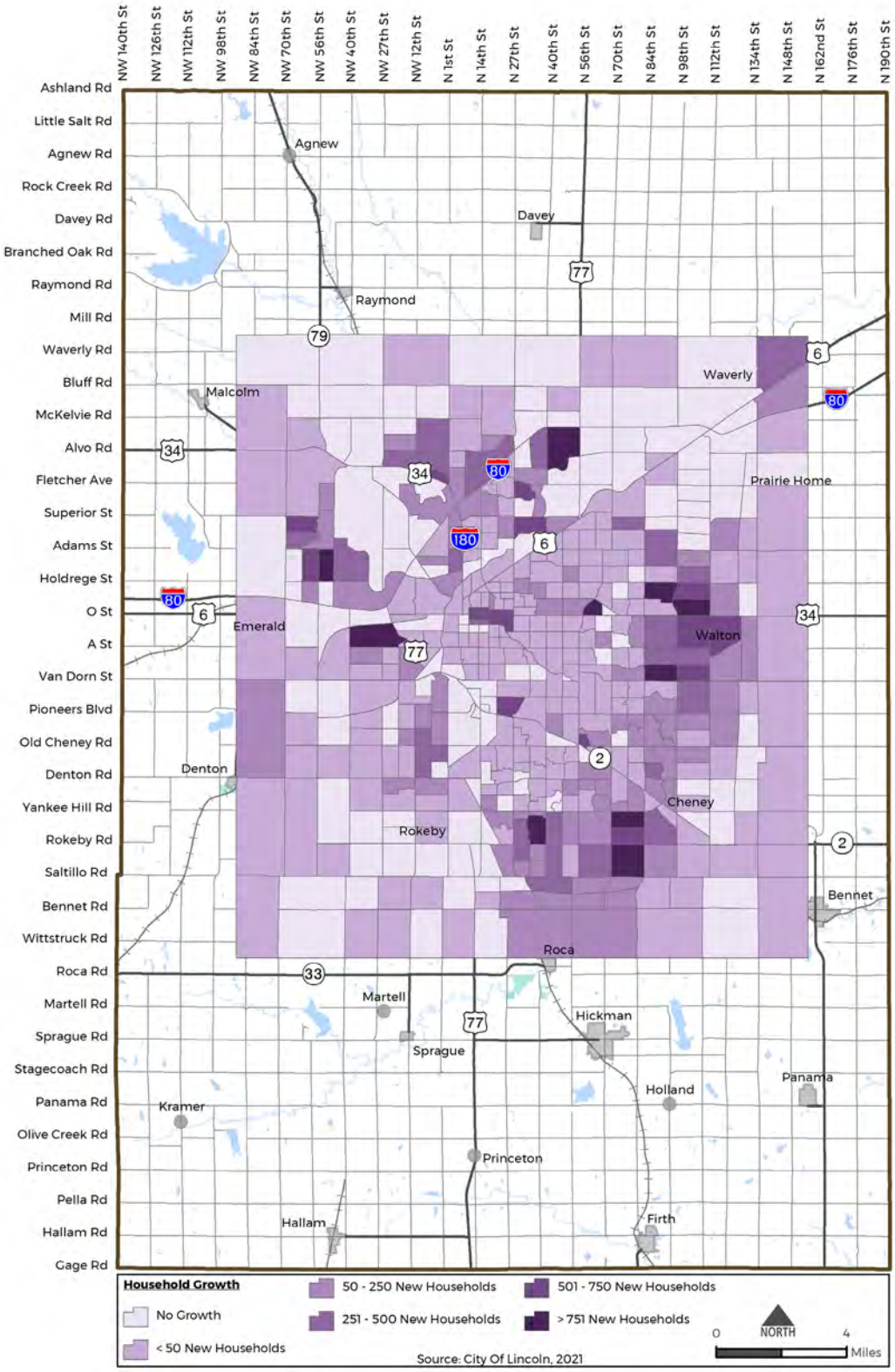


Figure 4.2 Household Growth



Increased emphasis on infill development also supports urban densities, reduced overall vehicle miles, and increased use of bicycling, walking, and transit. Higher density edge growth reduces burdens on emergency services while placing more housing close to jobs and services. The combination of infill and greater edge density also protects the rural character and agricultural economy of Lancaster County.

Similarly, **Figure 4.3** and **Figure 4.4** depict the commercial and industrial employment growth, respectively, by TAZ. Commercial employment is expected to increase by approximately 43 percent, and Industrial employment is expected to increase by approximately 37 percent.

Table 4.1 shows the 2019 base year, 2035, and 2050 household and employment forecasts within the model area. **Appendix C** documents the detailed land use forecasts by TAZ.

Consideration of overburdened and underserved communities is a core component of the development of the LRTP. The LRTP includes consideration for federally protected community members (**Chapter 7**), including people with low incomes and minority populations. Ultimately the goal of the Lincoln MPO is to provide transportation and mobility benefits to all community members, especially the underserved and overburdened communities; therefore, the LRTP goes beyond the minimum environmental justice (EJ) requirements to identify and address disparities in the transportation system.

Table 4.1 Household and Employment Growth[1]

	2019	2035	2050	16-Year Growth (2019–2035)	31-Year Growth (2019–2050)
Households	122,634	149,850	174,694	27,216	52,060
Commercial Space (KSF)	61,683	74,458	86,058	12,775	24,375
Industrial Space (Acres)	3,347	3,970	4,586	623	1,239



[1] PlanForward recommended growth scenario applied to traffic model for 2050 LRTP.

Figure 4.3 Commercial Growth

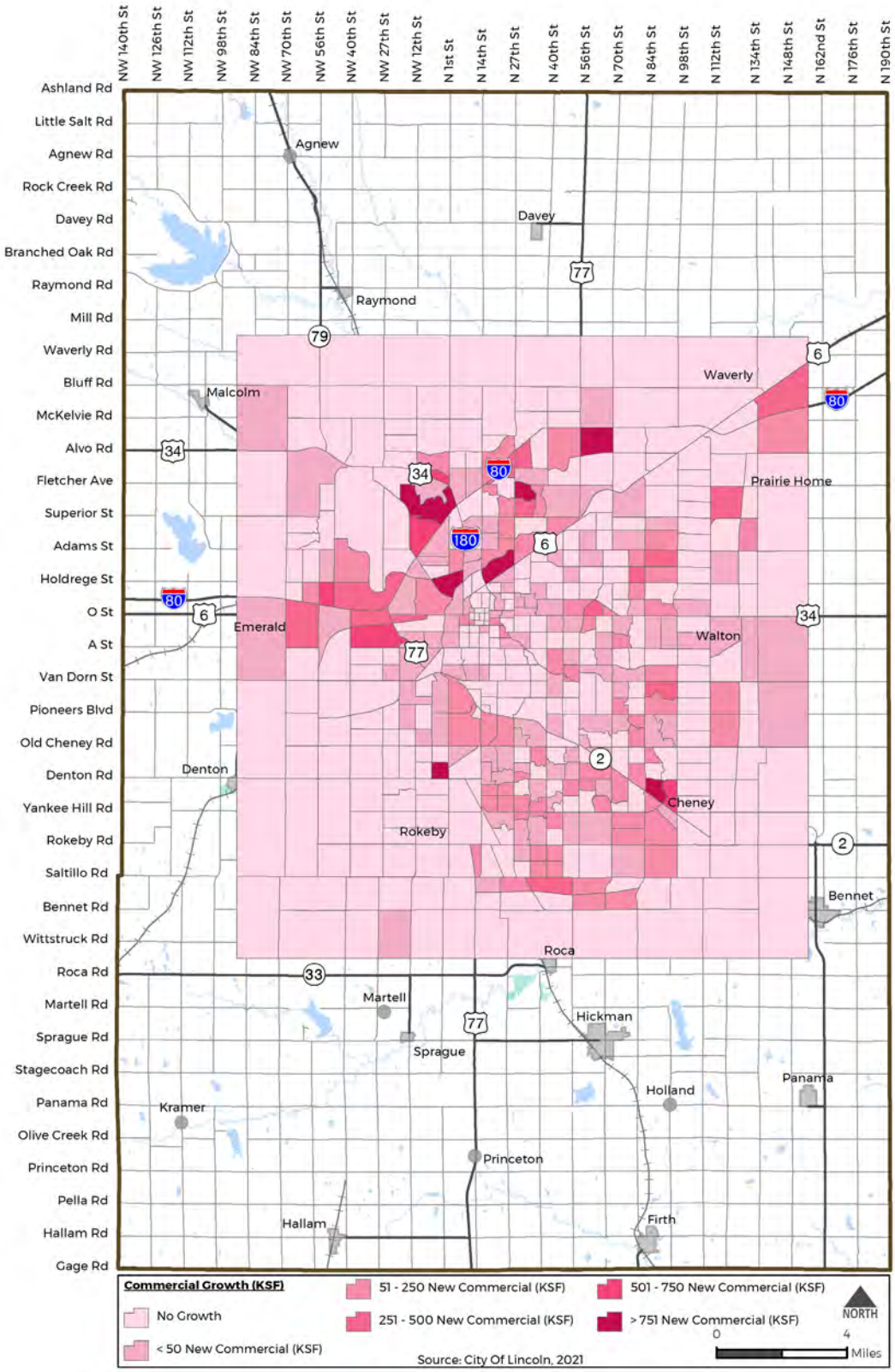
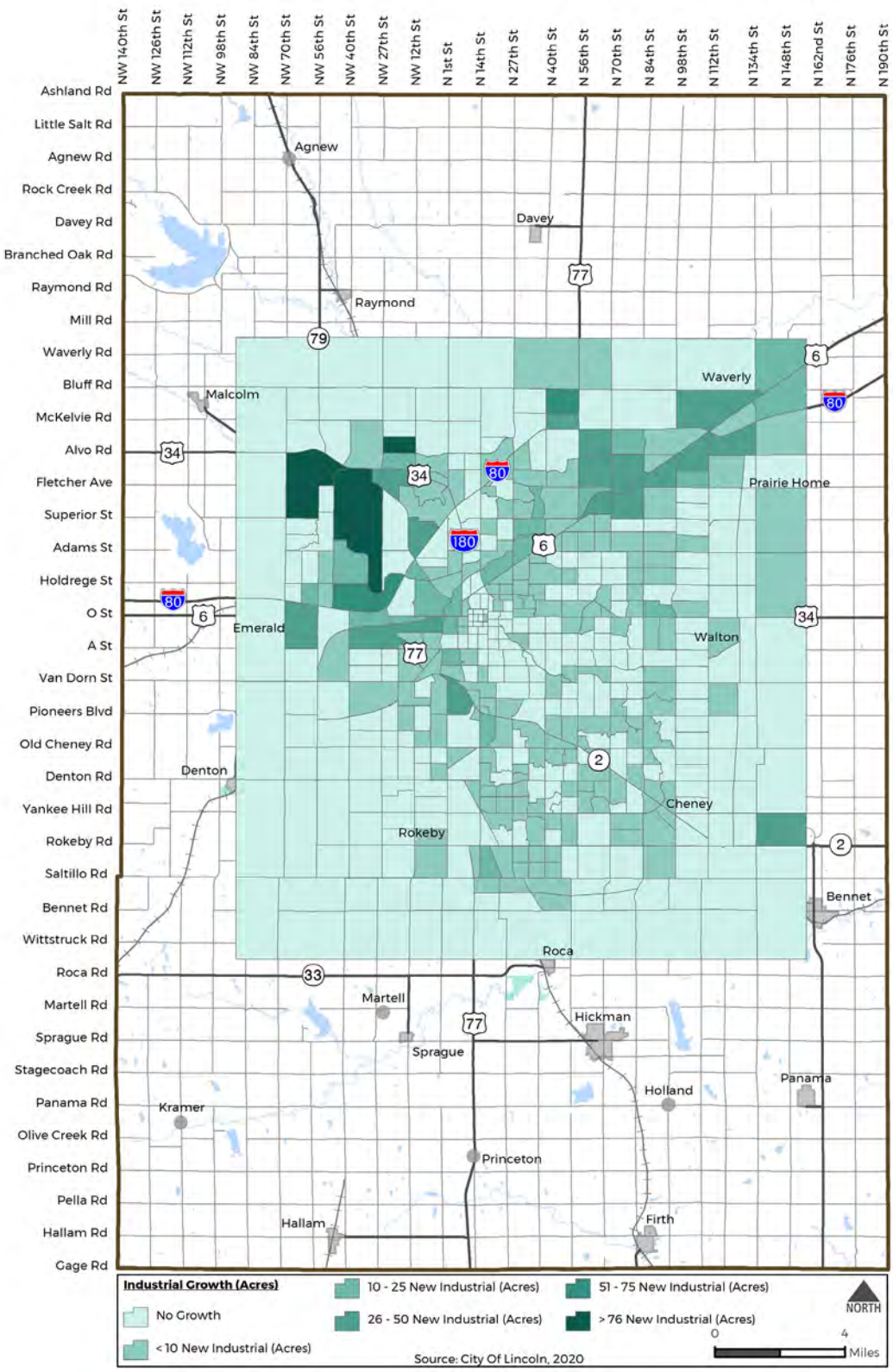


Figure 4.4 Industrial Growth



Socioeconomic Equity

Transportation planning decisions have the potential to address equity within a community and provide benefits to those with the greatest needs. Lincoln and Lancaster County have diverse population bases that reflect different socioeconomic backgrounds. To better understand the current socioeconomic attributes and needs of those who live in Lincoln and Lancaster County, data from the U.S. Census American Community Survey (ACS) were compiled (**Table 4.2**) including older adults, people with disabilities, people with limited English proficiency, BIPOC communities, people with low-income[2], single parent households, and people without access to a vehicle. Thoughtful consideration of these communities in the transportation planning process benefits the underserved and overburdened communities that experience higher than average unmet transportation needs.



To visually display the locations where underserved and overburdened communities live, a Transportation Equity Index map (**Figure 4.5**) was created. The Equity Index map combines all of the socioeconomic factors identified in **Table 4.2** to create a composite snapshot that highlights areas with the highest aggregate of historically underserved and overburdened communities. Areas with the highest numbers of these criteria present (darkest purple) require special consideration during the planning process. Transportation projects proposed in these areas must be implemented in a manner that avoids creating new or further inequities in the transportation network that may harm or burden these community members.





The term BIPOC is used to acknowledge that not all people of color face equal levels of injustice and that Black and Indigenous people are severely impacted by systemic racial injustice. Making transportation decisions to direct infrastructure investments that expand opportunities for BIPOC mobility in combination with PlanForward policies can help address this challenge.

[2] FHWA Order 6640.23A defines low-income as a person whose median household income is at or below Department of Health and Human Services (DHHS) poverty guidelines. Census data is used for transportation planning and quantifying the socioeconomic equity criteria quartiles as described in **Appendix H**.

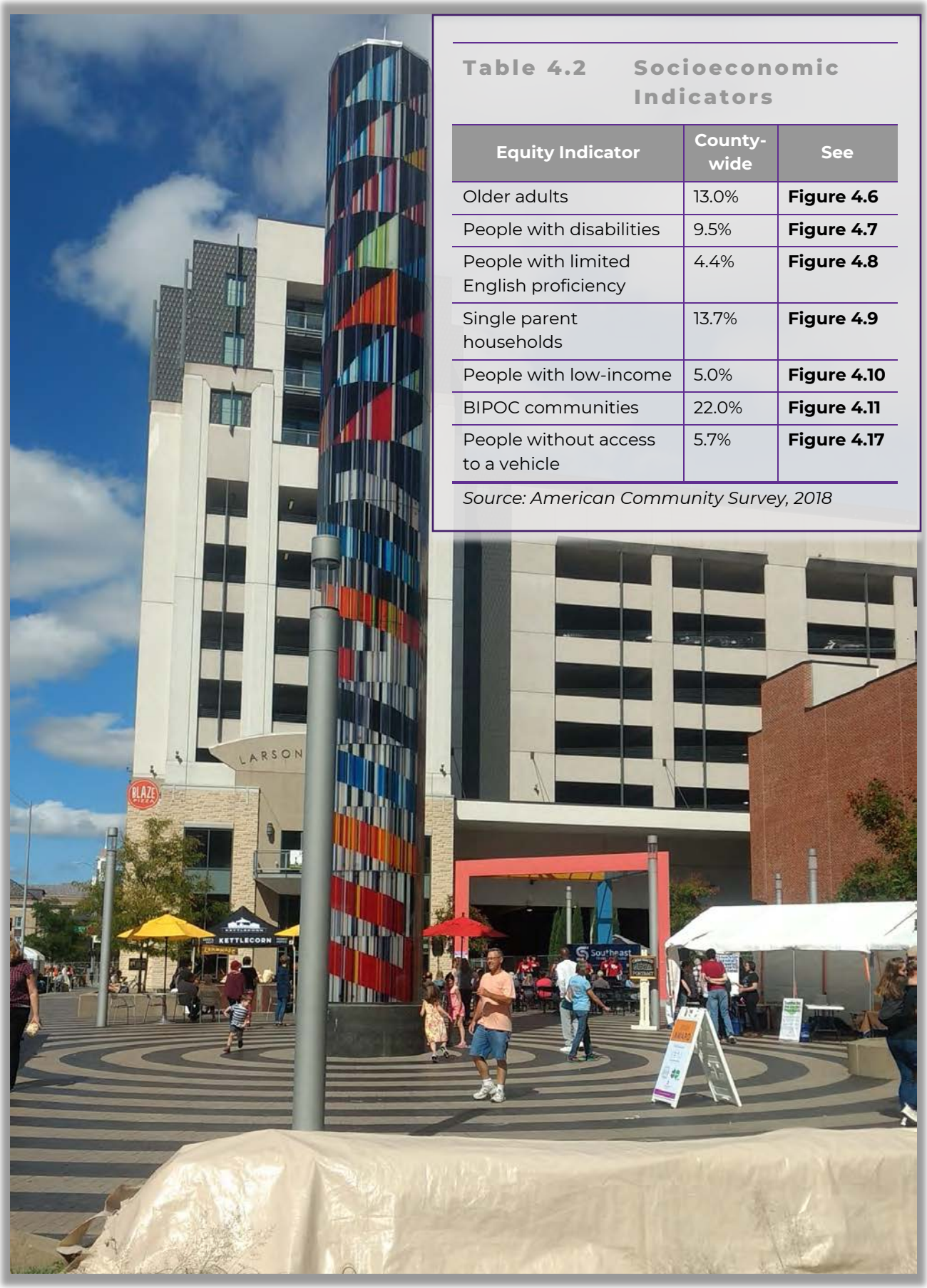


Table 4.2 Socioeconomic Indicators

Equity Indicator	County-wide	See
Older adults	13.0%	**Figure 4.6**
People with disabilities	9.5%	**Figure 4.7**
People with limited English proficiency	4.4%	**Figure 4.8**
Single parent households	13.7%	**Figure 4.9**
People with low-income	5.0%	**Figure 4.10**
BIPOC communities	22.0%	**Figure 4.11**
People without access to a vehicle	5.7%	**Figure 4.17**

Source: American Community Survey, 2018

Figure 4.5 Equity Index

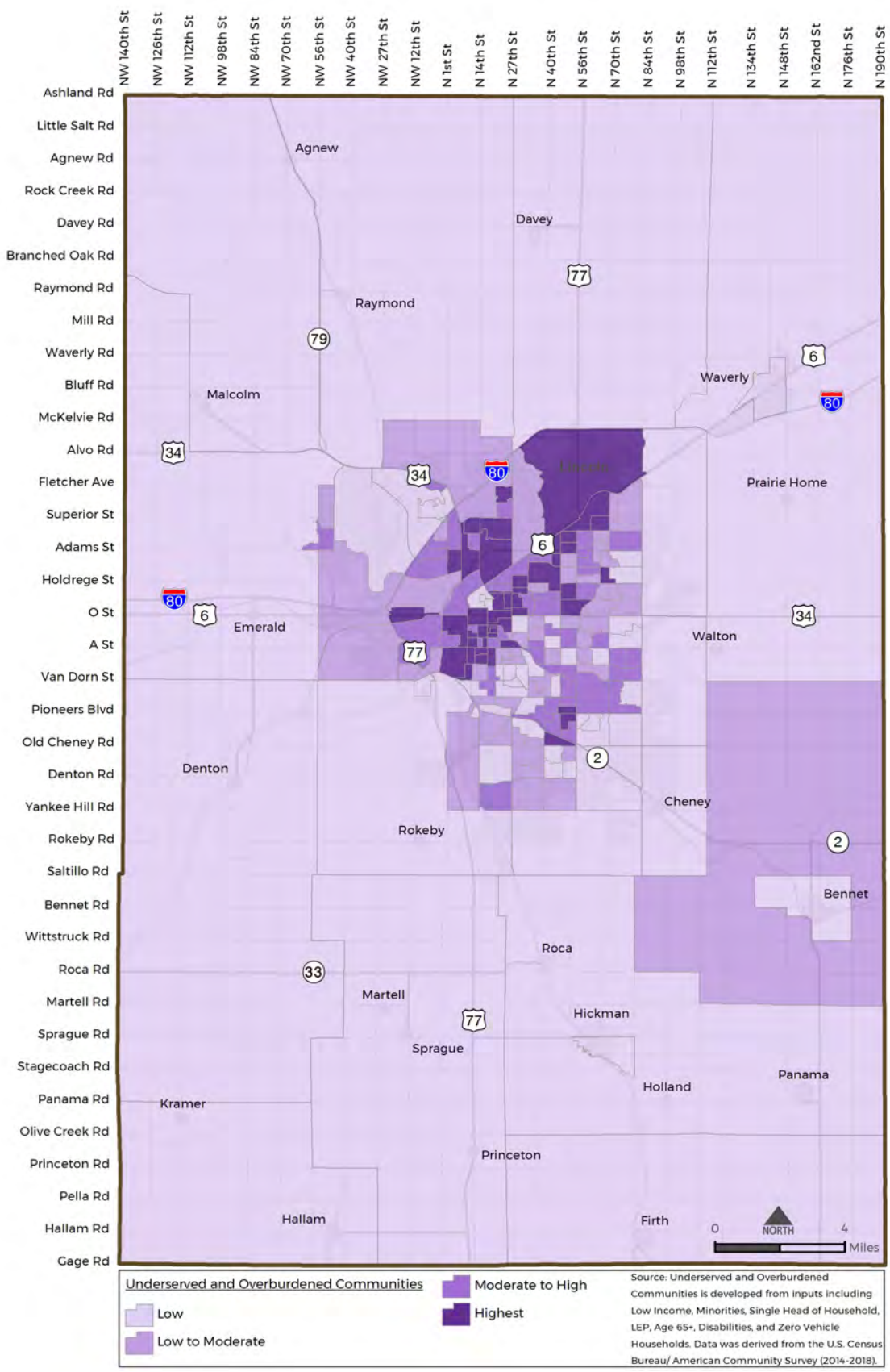


Figure 4.6 Older Adults

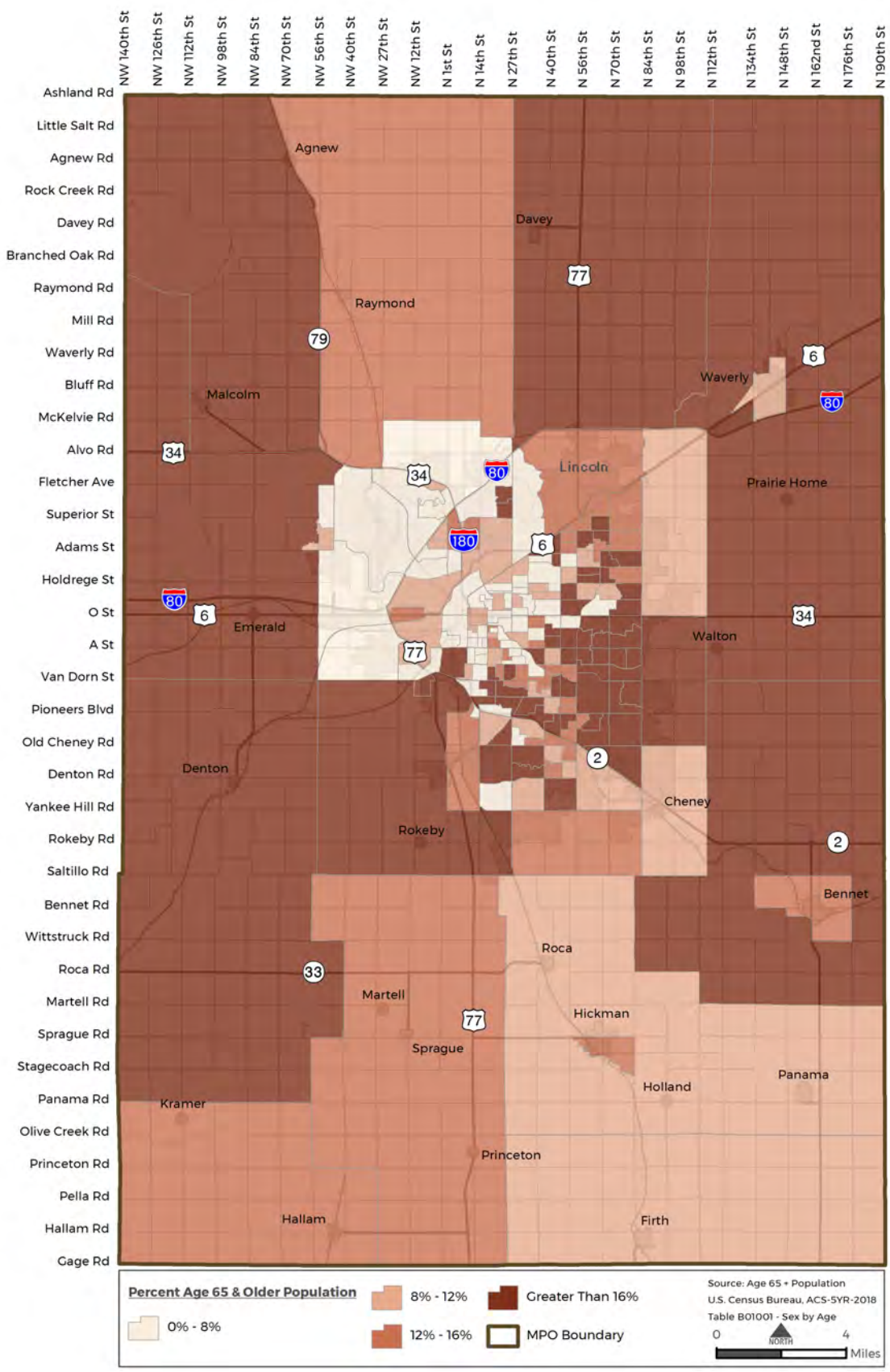


Figure 4.7 People with Disabilities

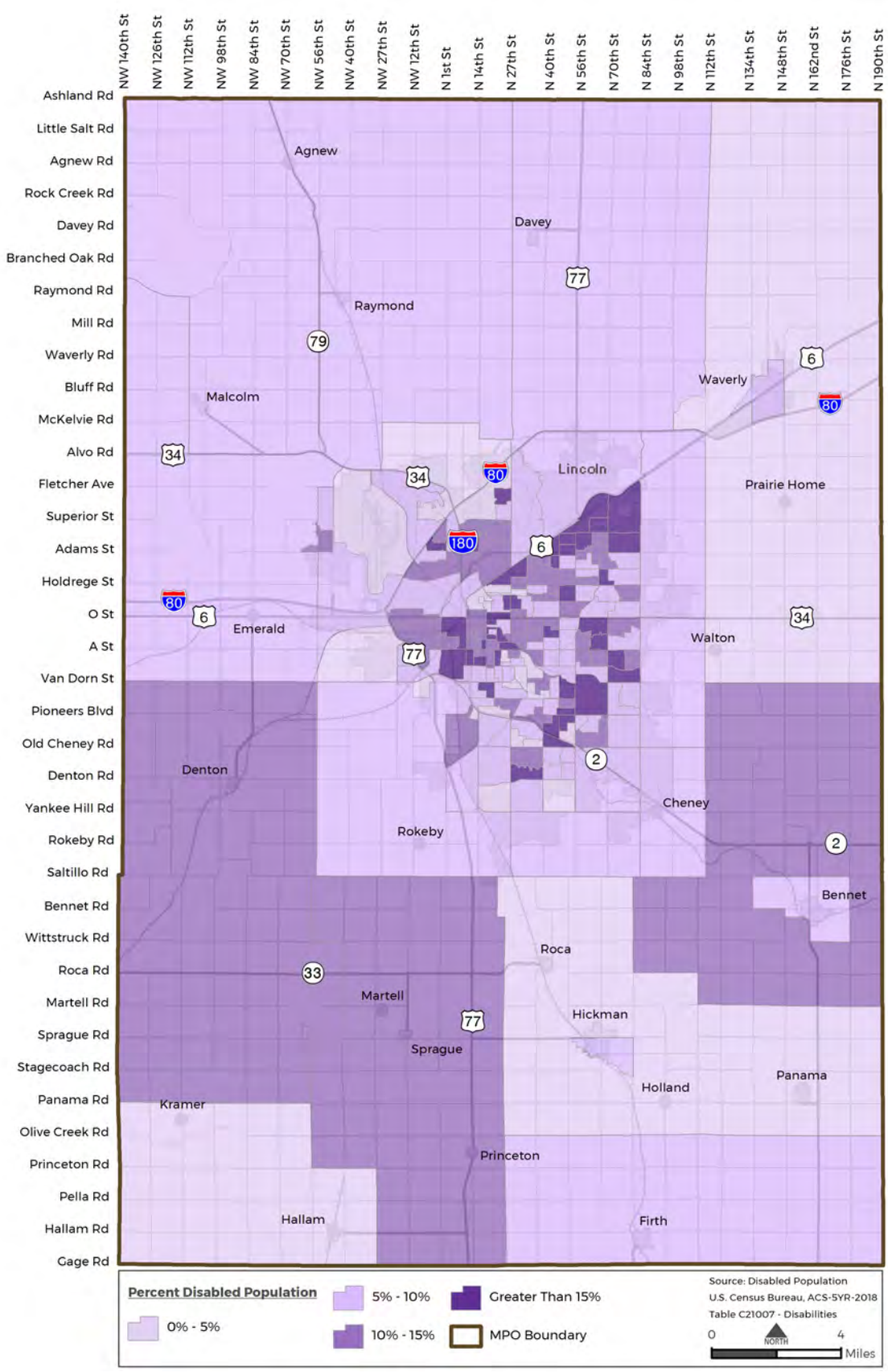


Figure 4.8 People with Limited English Proficiency

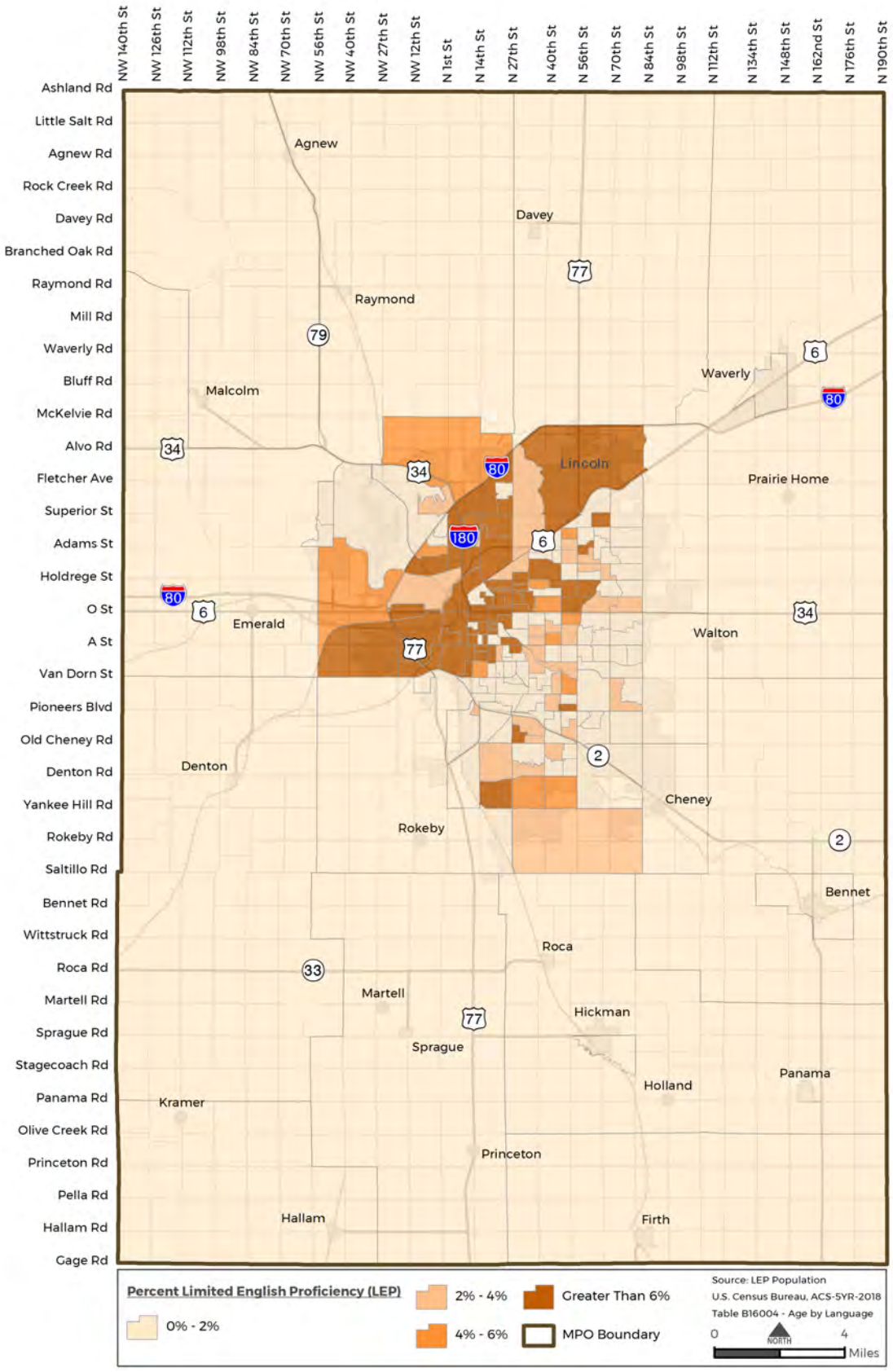


Figure 4.9 Single Parent Households

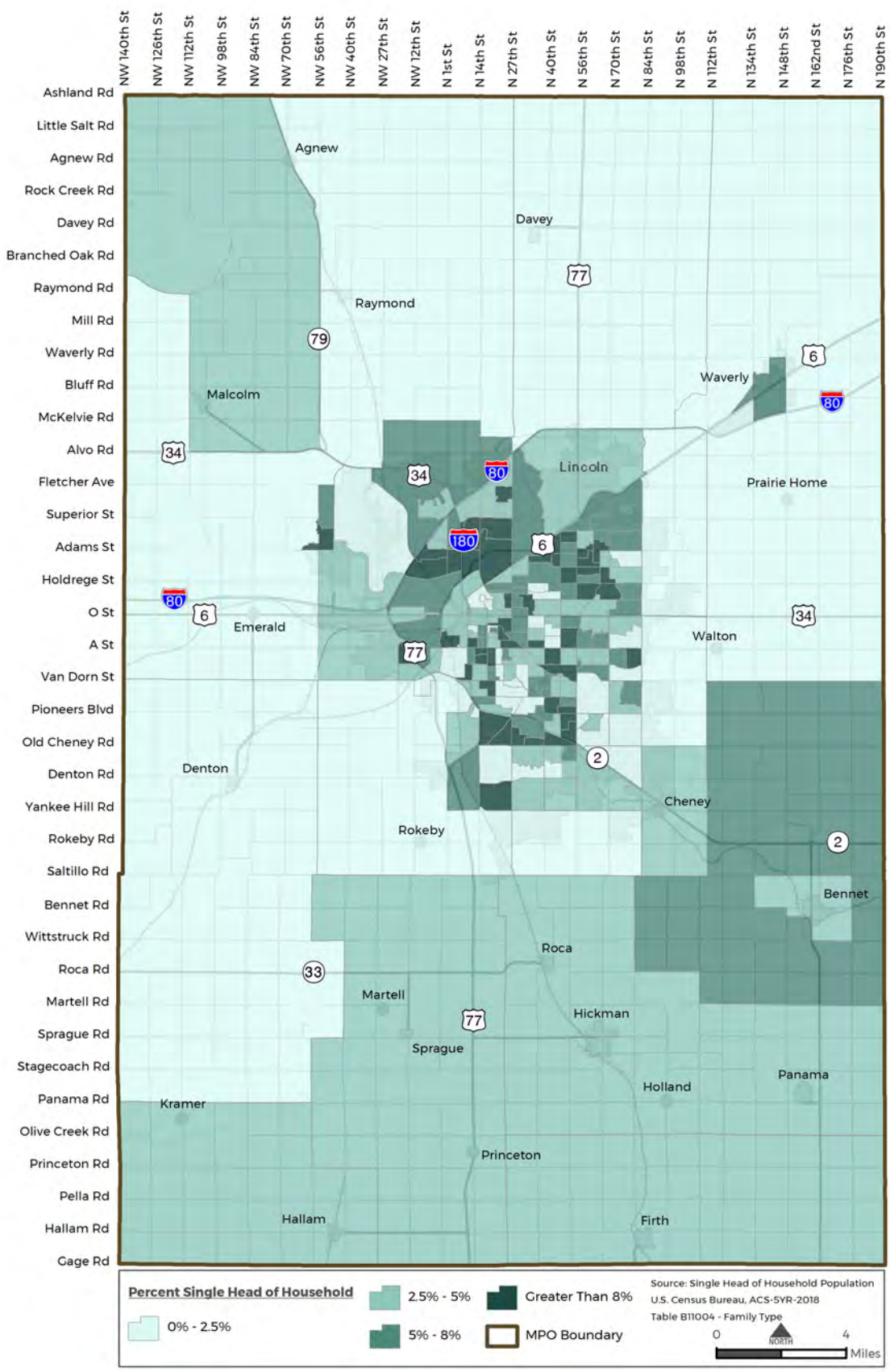


Figure 4.10 People with Low Income

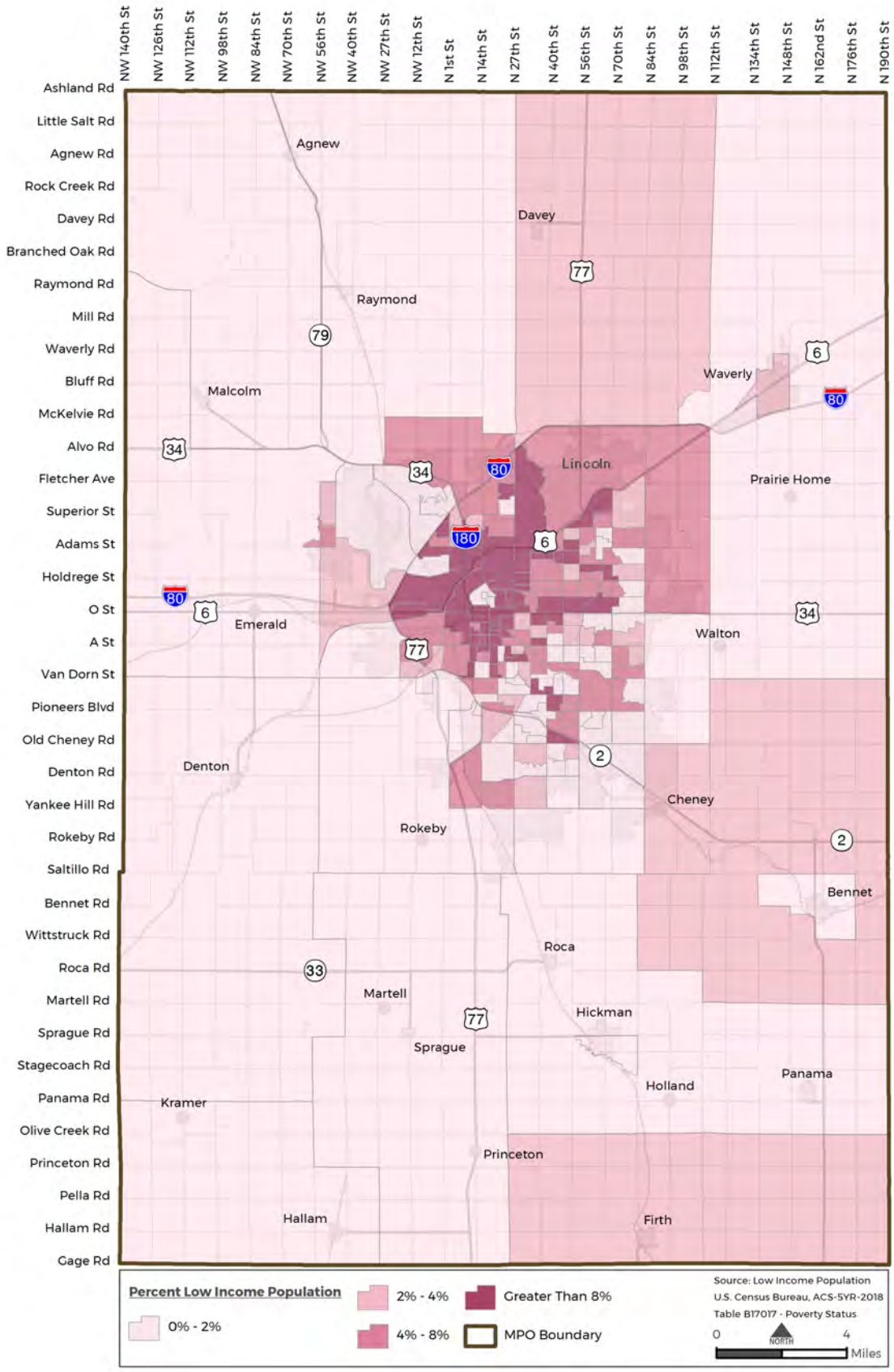
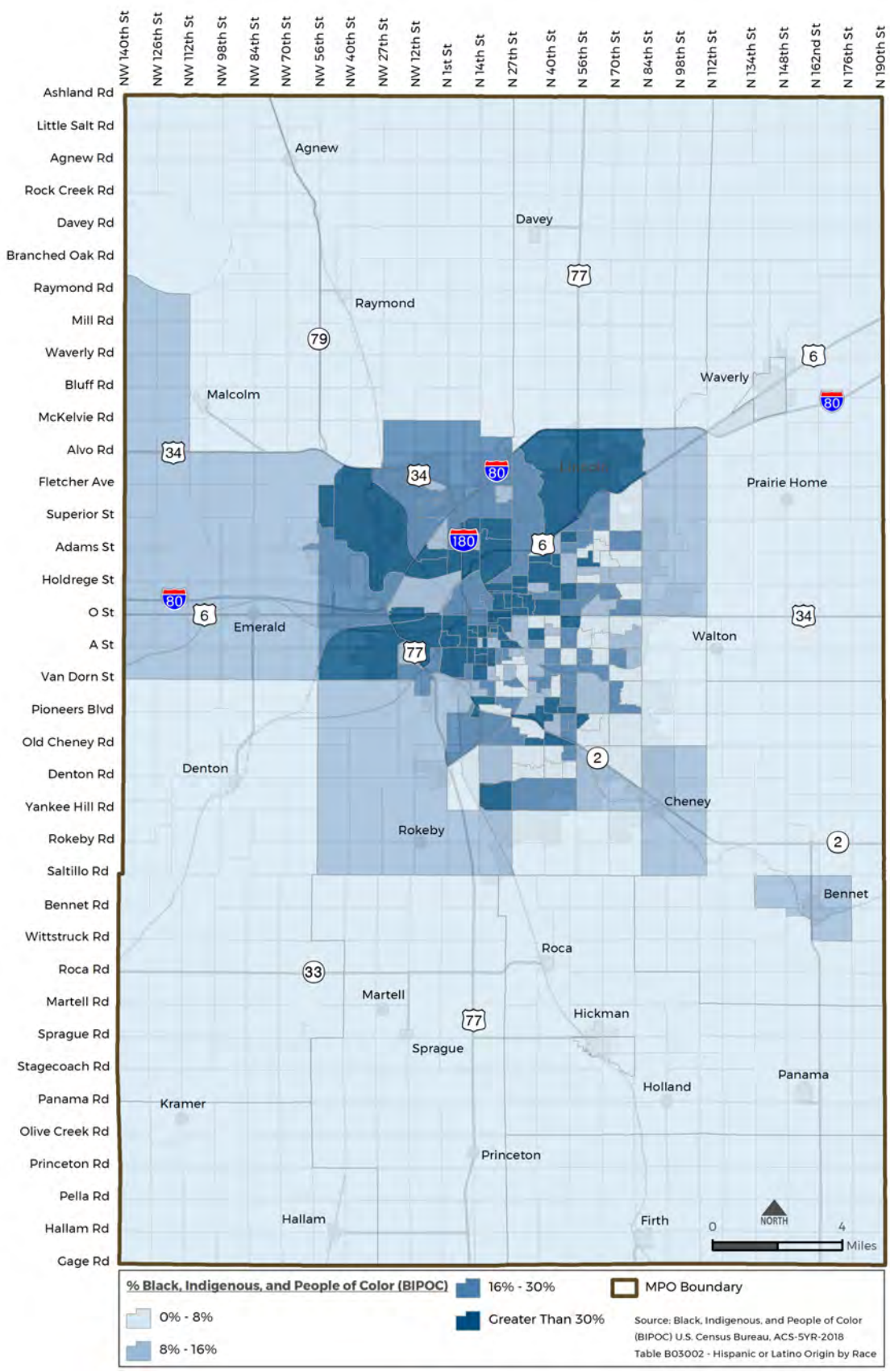


Figure 4.11 BIPOC Communities



Travel Patterns and Trends

The following section provides an overview of transportation and commuting patterns in Lincoln and Lancaster County.

Commuting Patterns

Each day, almost 47,000 people travel to work in Lancaster County from outside the county, while approximately 25,500 County residents travel to work elsewhere (as shown on **Figure 4.12**). Roughly 127,500 residents both live and work within Lancaster County. That is, there is a net inflow of more than 20,000 workers into the County. Around 83.3 percent of employed Lincoln and Lancaster County residents commute to work within the County, a number that is mostly unchanged from 2010.

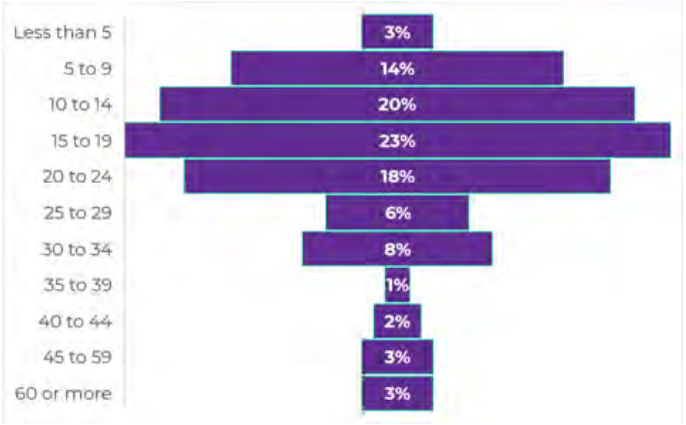
Figure 4.12 Workflows



Source: US Census Longitudinal Employer-Household Dynamics (LEHD) Employment for Lancaster County, 2017

The average travel time to work for Lincoln residents is 18.7 minutes (19.1 minutes for all of Lancaster County). Residents' commute time is almost 8 minutes less than the average for all US residents. When compared to local travel times in 2010, commuters spent slightly more than a minute longer getting to work in 2018. Between 2018 and 2020, the Green Light Lincoln initiative upgraded traffic signal equipment and timing at more than 400 intersections, which has reduced the total number of vehicle stops and delay associated with commuting. The values in **Figure 4.13** reflect a five-year average between 2014 and 2018 and indicate approximately three out of four Lancaster County residents arrived at their place of work in less than 25 minutes. Four out of five residents arrived to work within a 35-minute commute. The remaining residents traveled longer than 35 minutes to work, with only 3 percent of trips taking more than an hour.

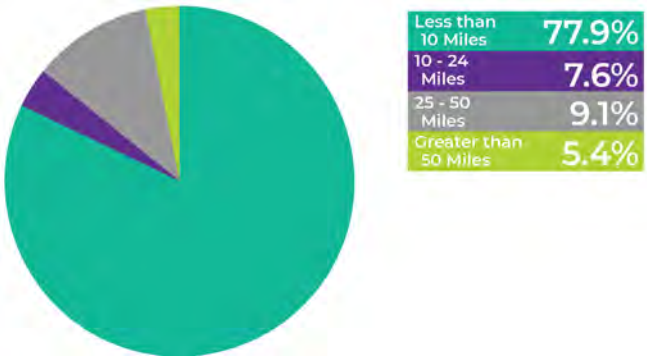
Figure 4.13 Travel Time to Work



Source: American Community Survey – 2018 5-Year Average Table B08303

Three factors strongly influence travel time to work: travel distance between home and work, travel mode used, and the level of congestion experienced during a commute trip. In 2017, approximately 77 percent of Lancaster County residents traveled to jobs located less than 10 miles from their homes. Since 2010, this proportion has increased by almost 0.7 percent, while the percentage of workers living between 10 and 24 miles from work decreased by a similar amount. Workers traveling 25 miles or more to get to work represent approximately 14.5 percent of all commuters. **Figure 4.14** shows the breakdown of Lancaster County work commute travel by miles.

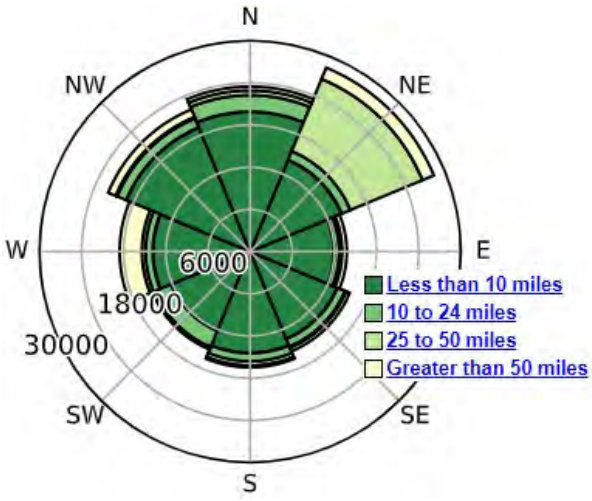
Figure 4.14 Distance from Home to Work



Source: US Census Longitudinal Employer-Household Dynamics (LEHD) Employment for Lancaster County, 2017

Most employees traveling between 25 and 50 miles are traveling in a northeastern direction, toward Omaha. The largest portion of employees traveling greater than 50 miles for work travel west toward Grand Island, Hastings, and Kearney. **Figure 4.15** shows the total distance and direction of commute travel.

Figure 4.15 Distance and Direction from Home to Work



Source: US Census Longitudinal Employer-Household Dynamics (LEHD) Employment for Lancaster County, 2017

Mode Split

The ACS asks respondents to identify their primary means of transportation to work. Driving alone, referred to as Single Occupant Vehicles (SOV), is by far the most common mode of transportation in Lancaster County. Over 90 percent of residents drive alone to work (81 percent within the City of Lincoln).

Table 4.3 displays the percentage of workers who use each mode to travel to and from work in Lincoln and Lancaster County. National values are also shown for comparison. Commuters use transit far less in Lincoln than in the rest of the nation but demonstrate higher uses of active transportation modes such as walking and bicycling.

Table 4.3 Commuter Mode Split

Commuting to Work	Lincoln	Lancaster County	National
Drove alone (SOV)	81.0%	81.3%	76.4%
Carpooled	9.1%	9.0%	9.1%
Public Transportation (excluding taxicab)	1.4%	1.3%	5.0%
Walked	3.3%	3.2%	2.7%
Bicycled	1.3%	1.2%	0.6%
Other	0.6%	0.6%	1.2%
Worked at Home	3.3%	3.6%	4.9%

Source: American Community Survey – 2018 5-Year Average Table S0801

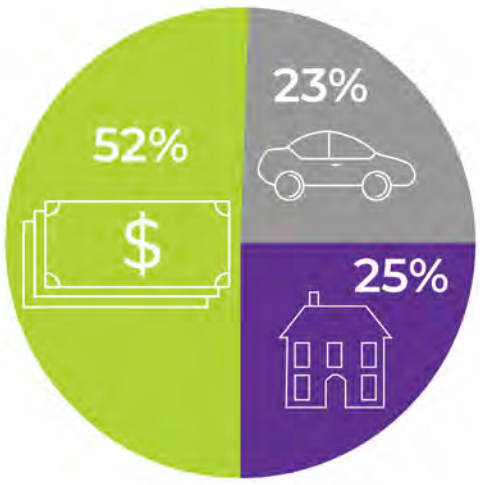
Data presented in **Table 4.3** may be broken down further by gender to identify some trends that influence mobility options. For example, in Lincoln, Census data from 2018 indicate that males are seven times more likely than females to commute to work by bicycle. Gender also plays a role in transit use as females who commute to work use transit approximately 20 percent less frequently than males—indicating that transportation mobility and access equity can be improved. Further, historical statistics for those who work from home may also face significant changes as the business disruptions caused by COVID-19 continue to play out beyond 2021. Flexible work policies and technology available to support working from home full- or part-time may have long-term impacts on communing patterns, traffic congestion, and quality of life. It is too soon to know how these fundamental changes will impact where people choose to live and how flexibility will affect their commute patterns.

Housing and Transportation Affordability

The Department of Housing and Urban Development considers housing to be affordable when consuming less than 30 percent of a household's income. The Housing and Transportation (H+T) index expands this traditional measure to include transportation costs, usually a household's second largest expense. The H+T index offers an expanded view of affordability, one that combines housing and transportation costs and sets the benchmark at no more than 45 percent of household income. By considering the combined costs of housing and transportation, the H+T index provides a more complete understanding of affordability and shows that location-efficient places can be more livable and affordable.

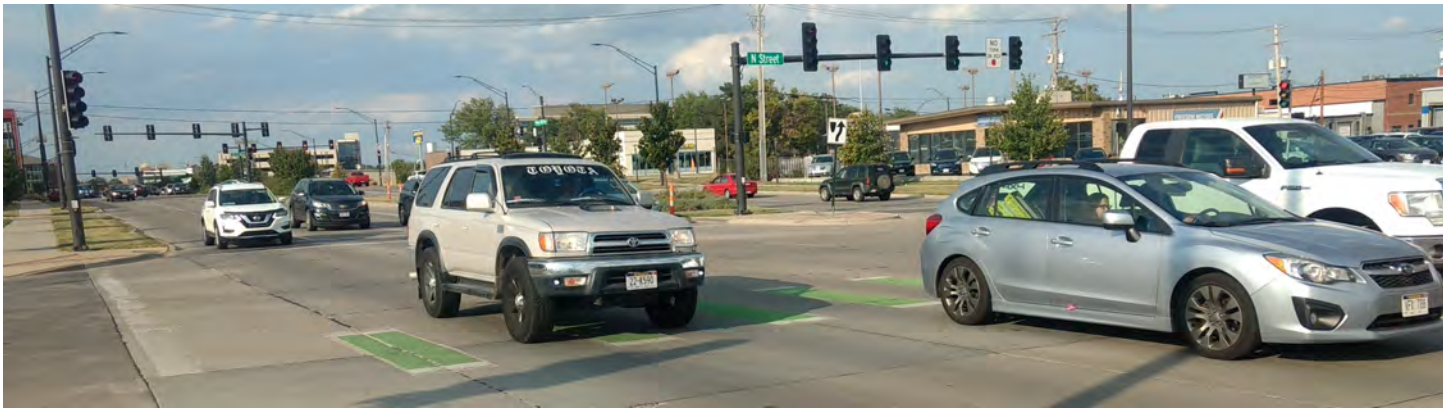
The average household's housing expense in Lancaster County is considered affordable, accounting for approximately 25 percent of total average income. Interestingly, transportation expenses account for approximately 23 percent of total average income, exceeding the value that could be considered affordable by 8 percent. Combined, the cost of housing and transportation in Lancaster County is 48 percent of the average household income (**Figure 4.16**), which is slightly higher than the Center for Neighborhood Technology (CNT) benchmark of 45 percent.

Figure 4.16 Housing + Transportation Index



Source: Center for Neighborhood Technology (CNT); Average housing and transportation costs as a percent of total household income for Lancaster County, based on 2018 American Community Survey 5-Year Estimates

The City of Lincoln 2020 Affordable Housing Coordinated Action Plan is an important reference for geographic context and distribution of housing costs. The proportion of owner and renter households that pay more than 30 percent of their income for housing is not equally distributed. In some block groups, up to 47 percent of homeowners and 72 percent of renters expend more than 30 percent of their household income on housing.





These cost-burdened households are increasingly dependent on transportation options other than personal vehicle ownership and on jobs accessible by transit.

Owning a personal vehicle is the single biggest transportation cost factor for households, followed by insurance and repairs. Complete neighborhoods that are compact, mixed use communities with a balance of housing, density of jobs, and stores, as well as easy access to transit, generally have lower household transportation costs. In such situations, residents may access daily needs with fewer cars and car trips, potentially reducing household transportation costs. Lower income households generally pay a larger portion of their expenditures on transportation because the cost of personal vehicle ownership and maintenance is relatively high. As household incomes grow, smaller portions are required for transportation.

The way in which many cities have grown in the last half century has impacted American households. Individuals who buy homes farther from jobs often pay more in the form of higher transportation costs. These same households are most sensitive to fuel price and maintenance costs because they drive longer distances. The community also experiences negative impacts overall. Longer travel distances and more SOVs serving outward growth mean more congestion on city streets, time spent commuting, and GHG emissions.

Vehicle Availability

Access to a personal vehicle provides many residents with a common mode of transportation and increases the range of access to work opportunities, commerce, health care, education, and recreation. Although the most common form of commuting in Lancaster County is by SOV, an estimated 7,033 households (5.7 percent) in 2018 had no access to a personal vehicle. This can result from being unable to drive, an inability to afford a vehicle, or a personal choice to forego vehicle ownership. In 2015, this same measure reflected 6.4 percent of the County population, demonstrating the number and proportion of individuals with access to a personal vehicle has increased in recent years. In households of two or more persons of driving age, approximately 18.5 percent of households have one vehicle or less, indicating that access to a personal vehicle may be limited within a significant number of County households.





Households without access or limited access to personal vehicles more heavily depend on reliable transit services, connected multimodal facilities, and complete streets that are safe to travel by alternative modes.

Figure 4.17 shows the geographic distribution of zero vehicle households throughout the county. There is a higher concentration of zero vehicle households (darkest green color) in the downtown area and along Highway 6 although pockets of zero-vehicle households are found throughout the MPO.

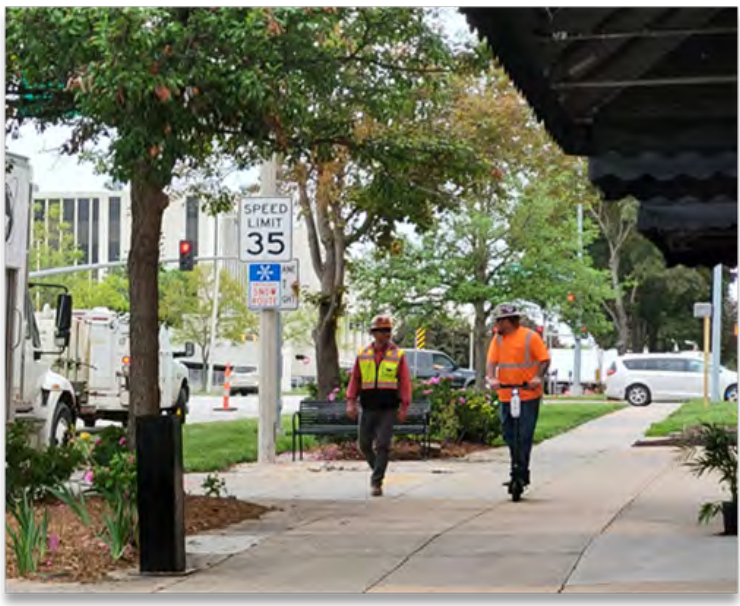
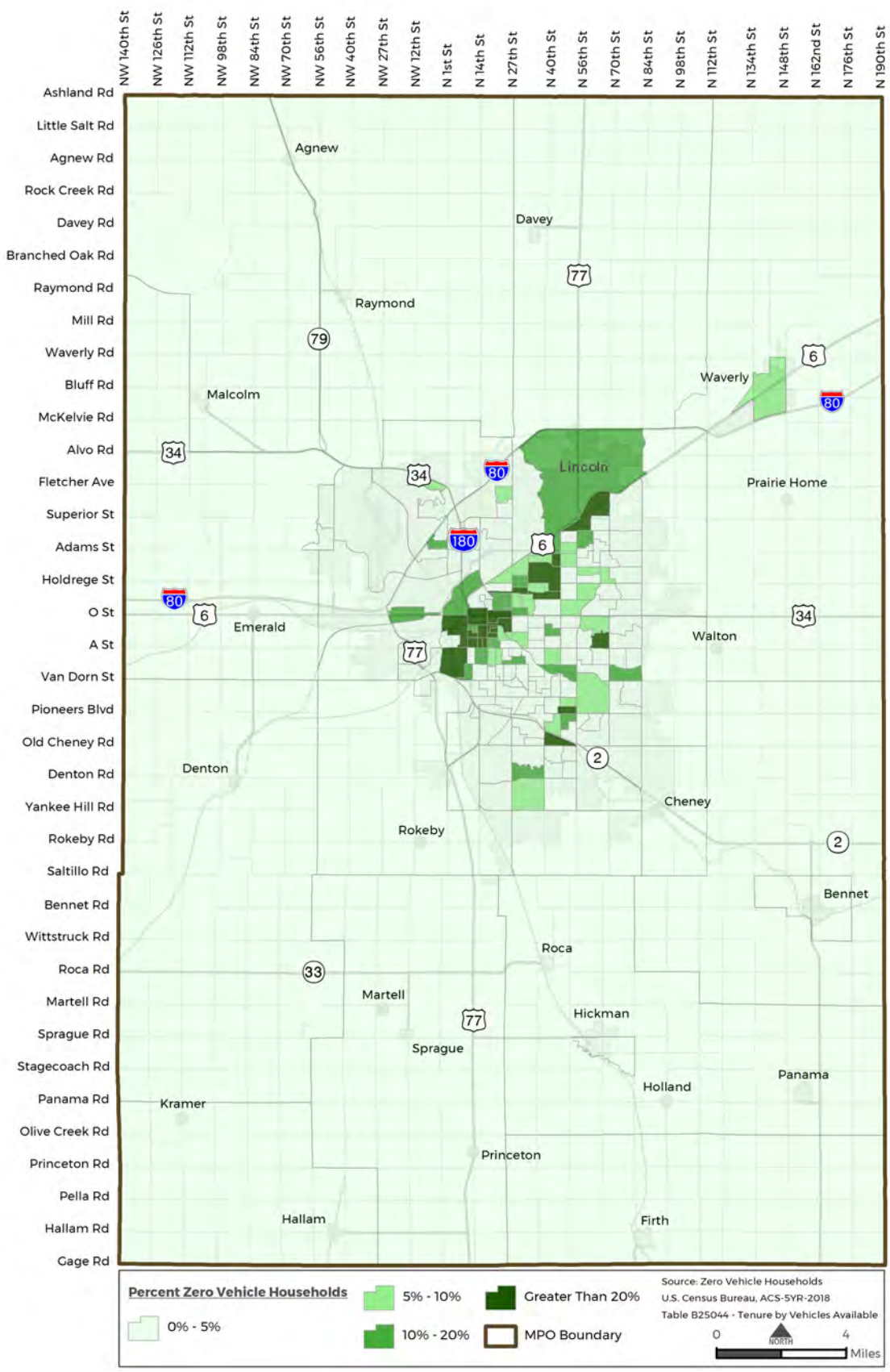


Figure 4.17 Zero Vehicle Households



Roads and Bridges

An extensive system of streets and highways serve the Lincoln MPO today. This system ranges from roads capable of safely carrying thousands of vehicles each hour, down to local residential streets that help form the character of neighborhoods. The street system further plays a vital role in commerce by carrying products to all portions of the city and county. The rural road network also links bedroom communities while the agricultural community accesses key transportation centers, allowing their commodities to be shipped around the world.

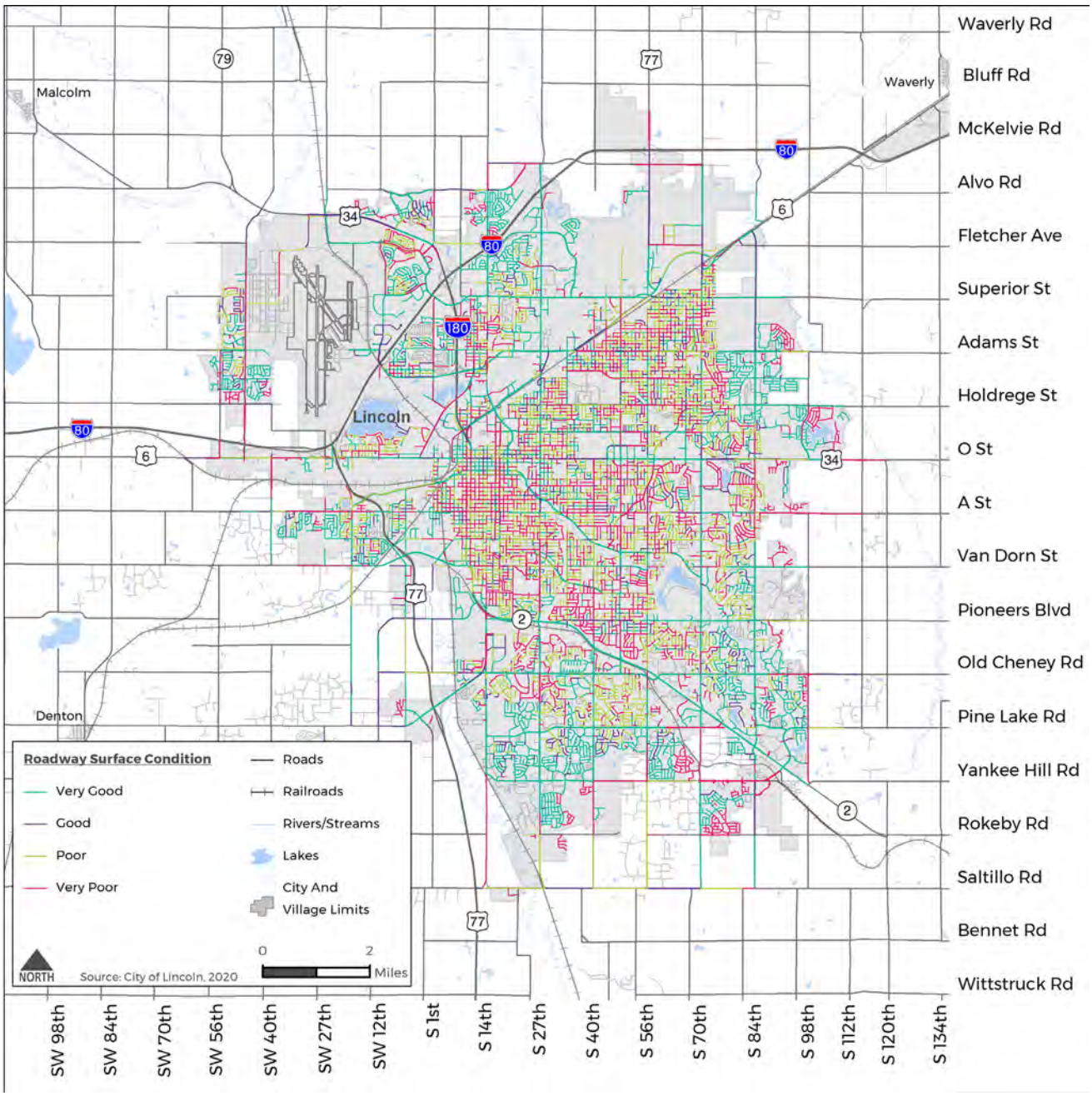


Surface Conditions

The City of Lincoln and Lancaster County are investing in streets to ensure a better tomorrow. Upkeep and maintenance of street infrastructure has become an increasingly critical need. The City of Lincoln monitors the pavement condition of the arterial street network every other year and the residential street network every fourth year. To conduct a pavement condition survey, a specially equipped van collects high-quality digital images of the pavement surface and measures the number and extent of defects. The van also records the extent of roughness and rutting along each street surface. The information is entered into a pavement management software program designed to take into account the type of paving materials. The 2020 MPO Annual Report summarized pavement surface condition assessments as recent as 2017 (**Figure 4.18**).

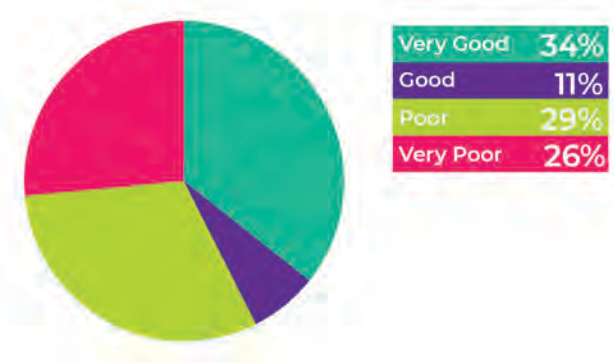


Figure 4.18 Roadway Surface Conditions (2017)



The City of Lincoln roadway network consists of almost 200 million square feet of paved surfaces. Effective maintenance of these roadways requires ongoing prioritization and management. Approximately 45 percent of the roadway surface areas in the city are rated as Very Good (**Figure 4.19**). The city prioritizes funding to keep these roadway surfaces in this condition for as long as possible. Approximately 55 percent of the roadway surface area has fallen into the lowest categories of Poor and Very Poor. Maintenance of these surfaces is more complex and expensive to complete. Preventing roadway surfaces from degrading to these conditions is more cost effective than repairing them.

Figure 4.19 Roadway Surface Conditions by Percent (2018)



Source: Lincoln Transportation & Utilities, 2018

Measurable improvements in the condition scores have been seen following one-time funding increases for arterials in 2012 (ARRA funding) and 2015 (Antelope Valley), as well as for residential in 2014 (increased gas tax collections) and 2019 (quarter cent sales tax). Not reflected in 2018 data illustrated by **Figure 4.19**, the City invested over $10 million in street rehabilitation in 2017–18, providing rehabilitation of 23 miles of arterial streets and 588 blocks of residential streets.

The 2017–18 residential rehabilitation (**Figure 4.20**) exceeded the total centerline miles of rehabilitation completed between 2011–16. The City's increased focus on preventative maintenance has had a positive impact on the pavement condition, though challenges remain to address the Poor and Very Poor surface maintenance needs.

According to the 2018 Lancaster County Transportation Strategy, Lancaster County crews continually work on pavement preservation countywide throughout the year. The County currently does not specify performance measures for roadway condition. Crews are on the roadways with personnel and equipment evaluating existing roads and bridges for upgraded treatments as needed. The prioritization of street resurfacing work focuses on preventative maintenance with an emphasis on more heavily traveled roads, which is a requirement for the County to be eligible to receive State funding for street resurfacing work. Therefore, a moderately weathered and cracked arterial road might receive a relatively inexpensive slurry seal treatment or thin overlay before a badly deteriorated cul-de-sac is reconstructed. The rationale is that significantly more preventative maintenance treatment, such as slurry seal, can be applied for the cost of having to totally reconstruct pavement.

The State also maintains pavement condition ratings for the National Highway System (NHS). Federal pavement condition ratings of Good, Fair, or Poor for pavement section is based on combined values for International Roughness Index, cracking, rutting, and faulting. Throughout the Lincoln Metropolitan Planning Area, as of 2019, 88 percent of the Interstate segments were rated Good, while 12 percent rated Fair. The Non-Interstate portions of the NHS were rated 34, 65, and 1 percent as Good, Fair, and Poor, respectively.

Figure 4.20 City of Lincoln Surface Maintenance Activity



Source: Lincoln MPO LRTP Annual Report, 2018

Bridge Conditions

The City of Lincoln, Lancaster County, and Nebraska Department of Transportation (NDOT) report bridges in Good, Fair, and Poor condition based on the National Bridge Inspection program data (**Table 4.4**). Bridges are inspected at least once every 24 months. Bridges are considered to be in Good condition if all major National Bridge Inspection components (bridge deck, bridge superstructure and bridge substructure or culvert) are in good condition or better (9, 8, 7). Bridges are considered to be in Poor condition if one or more of the major components is in Poor condition or worse (4 or less). Bridges that do not meet the criteria for Good or Poor condition are considered to be in Fair condition (5 or 6).

The previous LRTP referred to the term "Structural Deficiency," which is equivalent to "Poor" condition in the current rating method. **Figure 4.21** shows all city, county, and state bridges according to their current structural ratings. Using structural ratings complies with federal standards and enables County bridge evaluations.

Table 4.4 Bridge Conditions

Condition Rating	City (144)	County (292)	State (181)
Good	69.4%	39.4%	72.9%
Fair	27.1%	50.3%	24.9%
Poor	3.5%	10.3%	0.2%

Source: LTU, Lancaster County, NDOT, 2019-20

National Highway System

The US Department of Transportation (USDOT), in cooperation with the states, local officials, and MPOs, developed the NHS to identify the core road network considered critical to the nation's economy, defense, and mobility. The US Congress approved the NHS in 1995, with the intent that the United States would prioritize federal-aid funds appropriately to ensure that the NHS was adequately maintained. **Figure 4.22** shows the NHS routes in the Lincoln-Lancaster County region.

Figure 4.21 Bridge Ratings

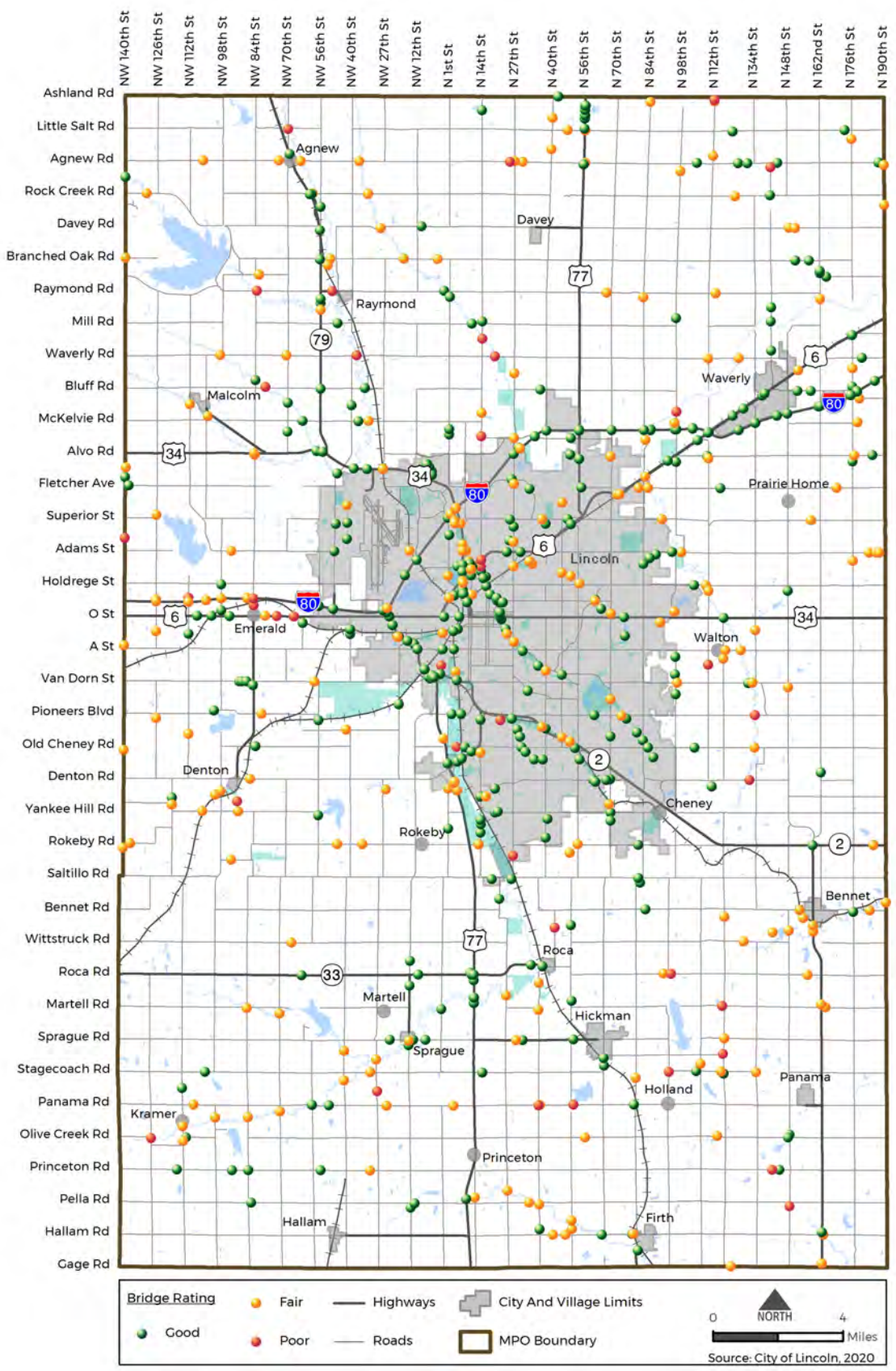
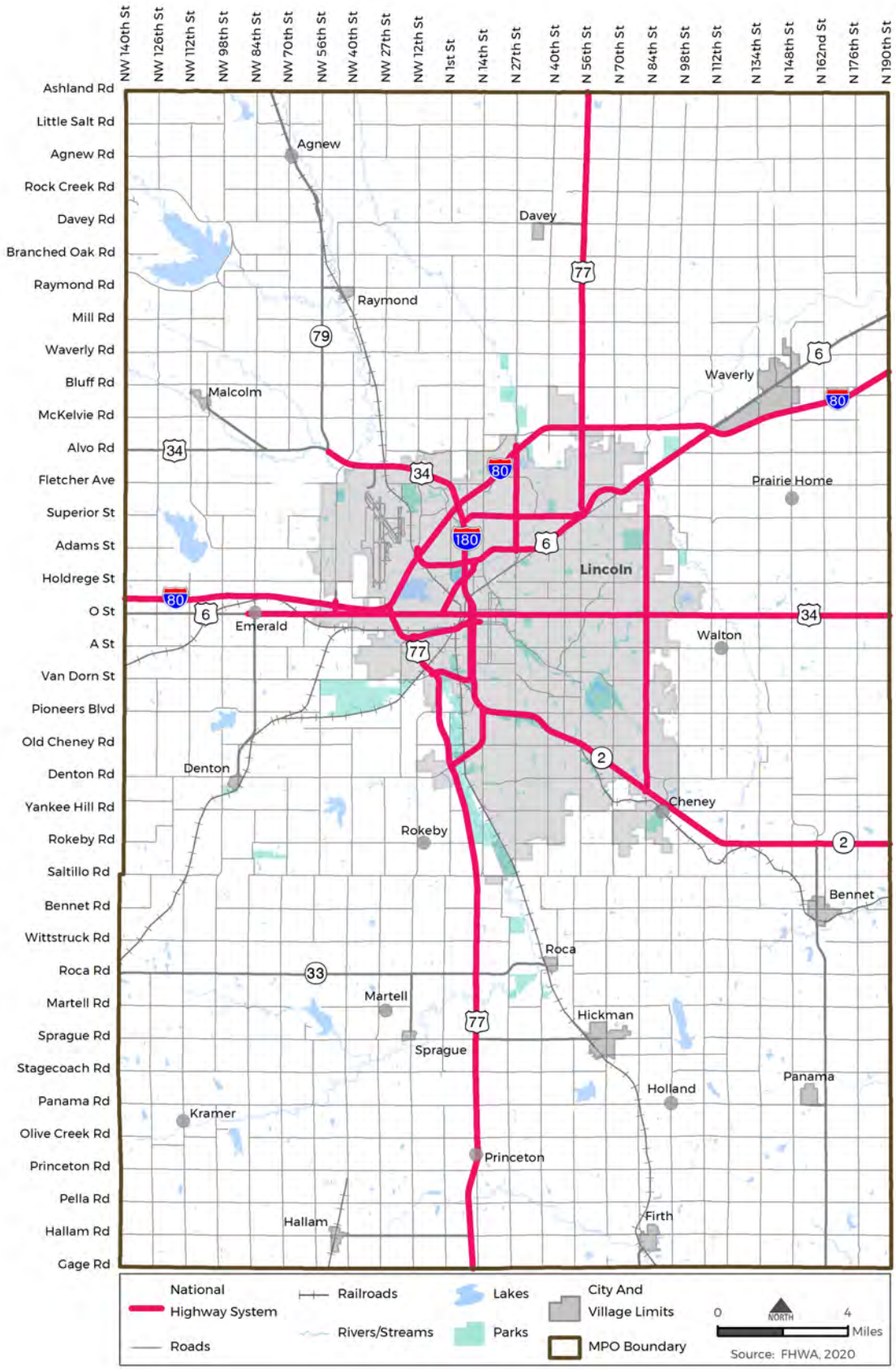


Figure 4.22 National Highway System



System Background

Section line roads form the basic layout for the city's and county's existing street system. Spaced approximately one mile apart, these roads create the underlying grid pattern found throughout the County. The United States government established this roadway pattern nearly 155 years ago. Surveyors were sent west to the Plains states to create a patchwork of one-mile squares. These squares became the building blocks upon which the earliest European settlements and agricultural communities were formed.

The section line roads are used today as Lincoln's main system of arterial streets. In the newer areas of the city, section line roads are planned to be built with four through lanes, with turning lanes added to improve safety and operations along these corridors. However, two lanes with some turn lanes or roundabouts, where needed, are often built to carry lower levels of traffic and then expanded to four lanes when growth occurs and as traffic warrants. The grid pattern has also been accentuated in the older areas of Lincoln through the use of arterial streets at the half section (or half mile) line. This has created a more extensive street grid pattern in the older areas of the community.

To aid in moving traffic through and across the community, other routes have been layered on top of the County's underlying one-mile grid pattern. From the Federal Interstates (such as I-80 and I-180), to State highways (Highway 2, 33, 43, and 79), U.S. Highways 6, 34, and 77, and to local facilities (such as Capital Parkway, Cotner Boulevard, and Sheridan Boulevard), diagonal roads have helped expand the community's street capacity. These facilities often offer more direct movement between major centers of activity than are provided by the grid system.

Bridges and overpasses have also been added over the years to make travel safer and easier. Separating cars and trains reduces the potential for crashes and the time motorists spend waiting for passing trains. Even the spanning of the region's numerous creeks and streams with permanent structures has allowed people and vehicles to move more easily.

Existing National Functional Classification

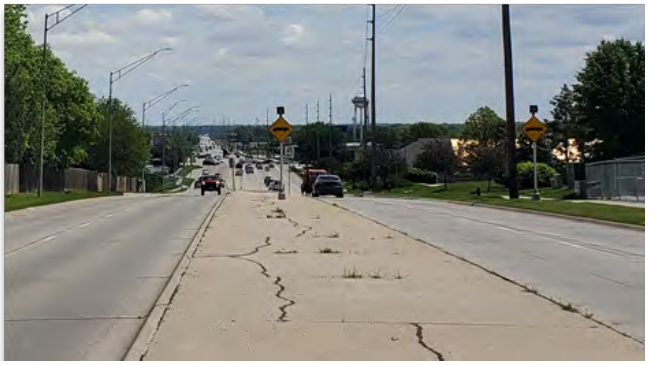
The Lincoln and Lancaster County road network consists of specific classifications that have degrees of mobility and access among neighborhoods, commercial, retail, and industrial places. From local streets within neighborhoods and the arterial streets used to travel within the city, to highways and interstates used to travel longer distances at faster speeds, each roadway shown on **Figure 4.23** has important functions to serve. Such functions influence the ability of a driver to move between locations and the places accessible along the route. **Figure 4.24** shows the number of through lanes on the current roadway network within the model area.

For vehicle operators, streets generally provide two important functions: mobility and land access. These functions conflict with each other—the carrying capacity for vehicle traffic decreases as greater access to adjacent land uses is provided. Each roadway type is specifically designed to operate with certain characteristics based on the adjoining land uses, level of continuity, and proximity and connections to other facilities. Each street's functional classification describes these characteristics.

Interstate and Expressway: These are divided, limited access facilities with no direct land access. Freeways such as I-80 do not have at-grade crossings or intersections. Expressways such as Nebraska Highway 77 are similar to freeways except that they may have cross streets that intersect at-grade and access is either fully or partially controlled. Freeways and expressways provide the highest degree of mobility typically serving

higher traffic volumes and longer trip lengths.

Principal Arterials: This functional class of street serves the major portion of inter-community and intra-community traffic movement within the urban area. Principal arterials are designed to carry high traffic volumes. Facilities within this classification such as Superior Street or 84th Street can provide direct access to adjacent land, but such access is incidental to the primary functional responsibility of moving traffic within the system.



Minor Arterials: This functional class serves trips of moderate length such as Vine Street between 17th and 70th Street or Cotner Boulevard between South and 70th Streets. Minor arterials offer a lower level of mobility than principal arterials. This class interconnects with and augments principal arterials, distributes traffic to smaller areas, and provides some direct land access. Minor arterial streets are designed to carry moderate to heavy traffic volumes and provide the largest coverage of transit routes within the city.



Collector Streets: These streets serve as a link between local streets and the arterial system. Collectors such as Calvert Street between 13th and 56th Streets provide both access and traffic circulation within residential, commercial, and industrial areas. Collector streets also provide more direct routes through neighborhoods for use by pedestrians and bicyclists. In rural settings, minor collectors provide service to smaller places, link locally important traffic generators and are spaced relative to population density to serve local roads.



Local Streets: These streets serve as conduits between abutting properties and streets of higher functional classification. Local streets provide the lowest level of mobility and are generally designed to carry low levels of traffic at the lowest posted speeds.

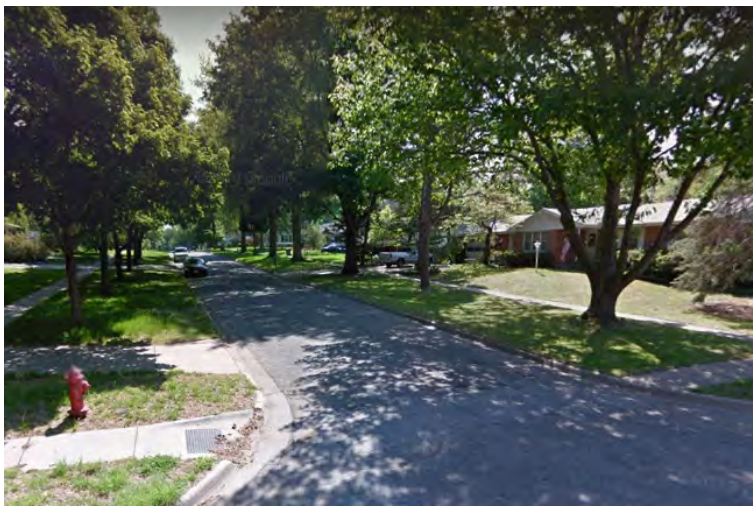


Figure 4.23 Existing Functional Classification

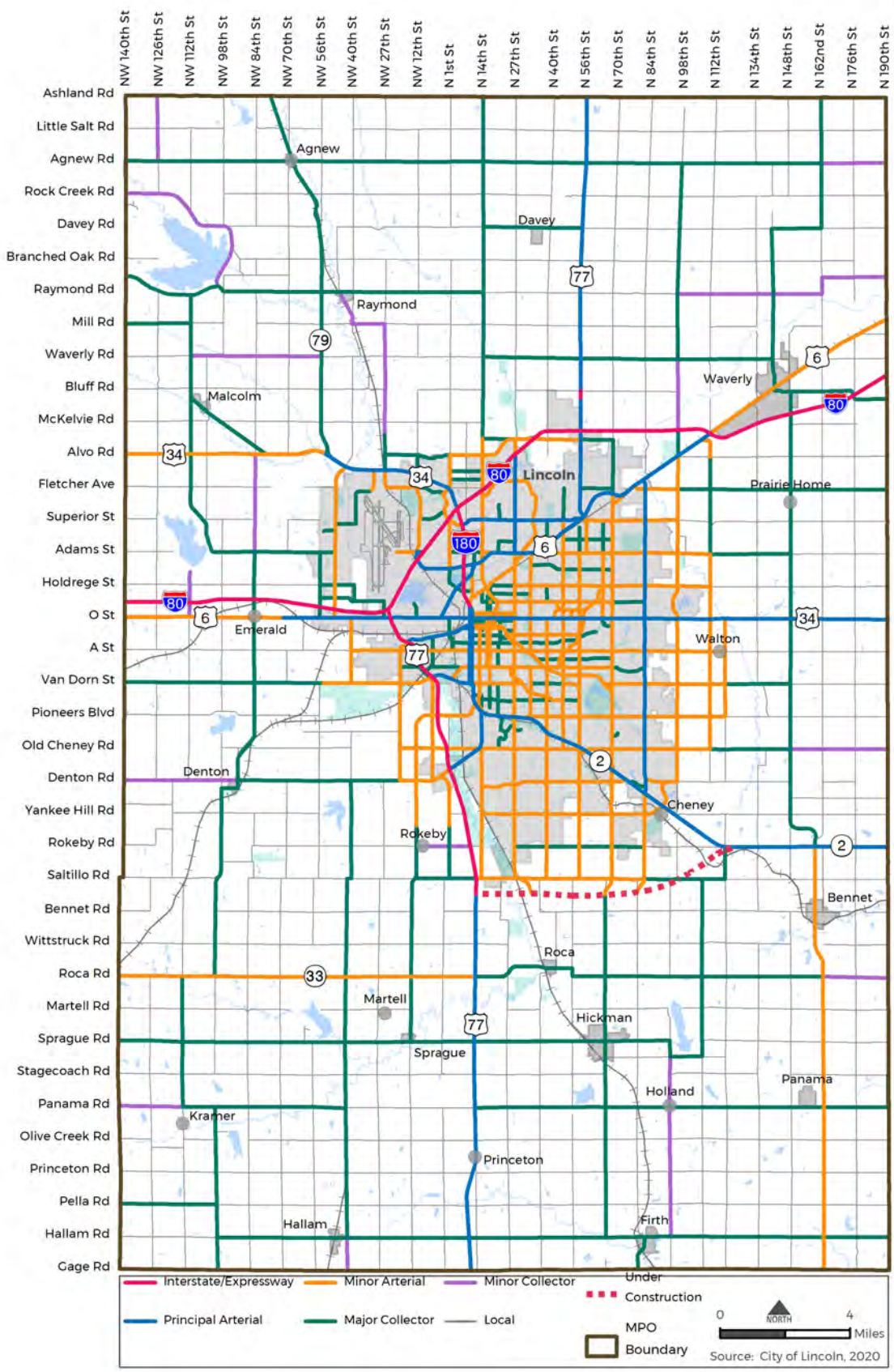
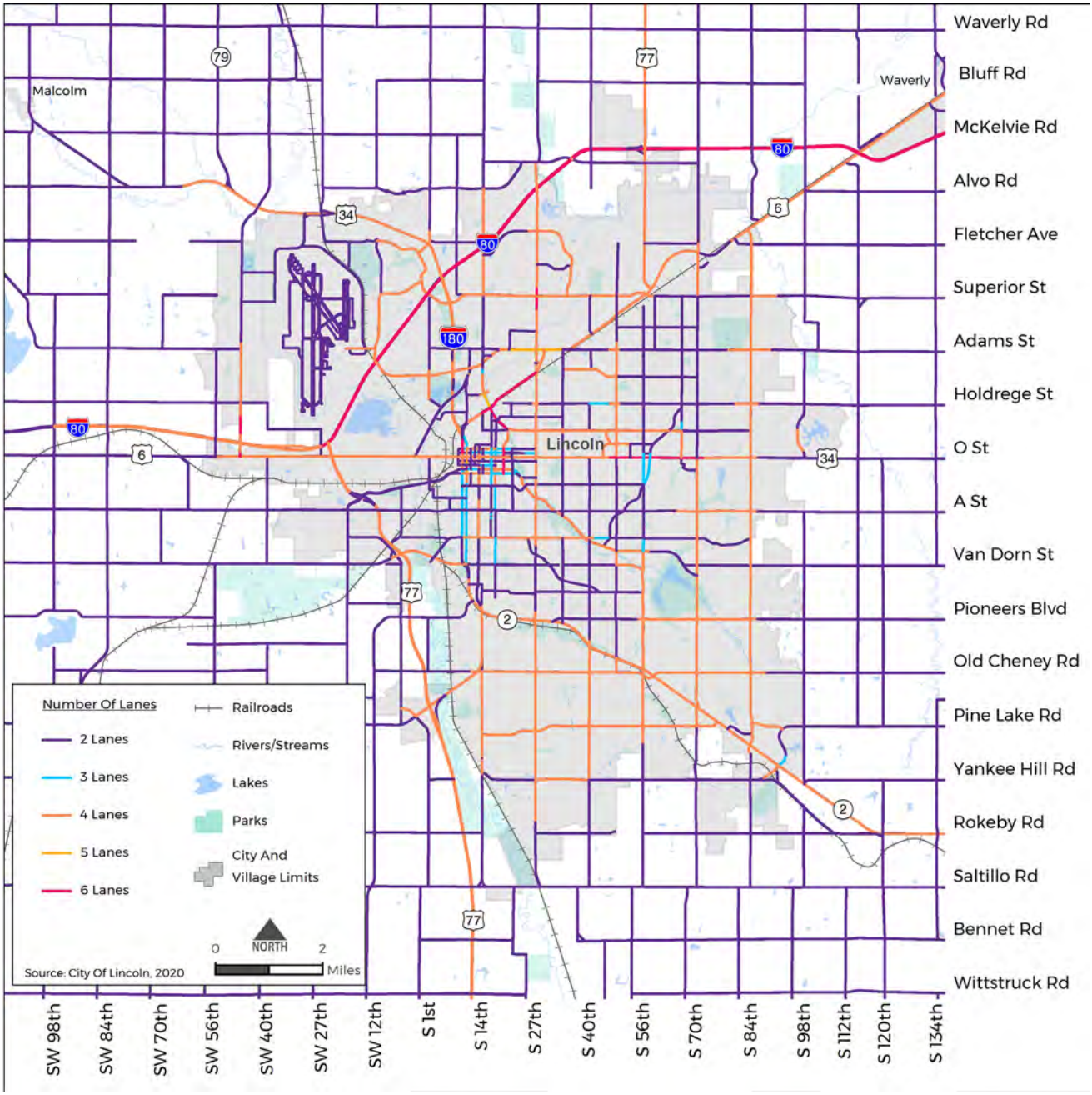


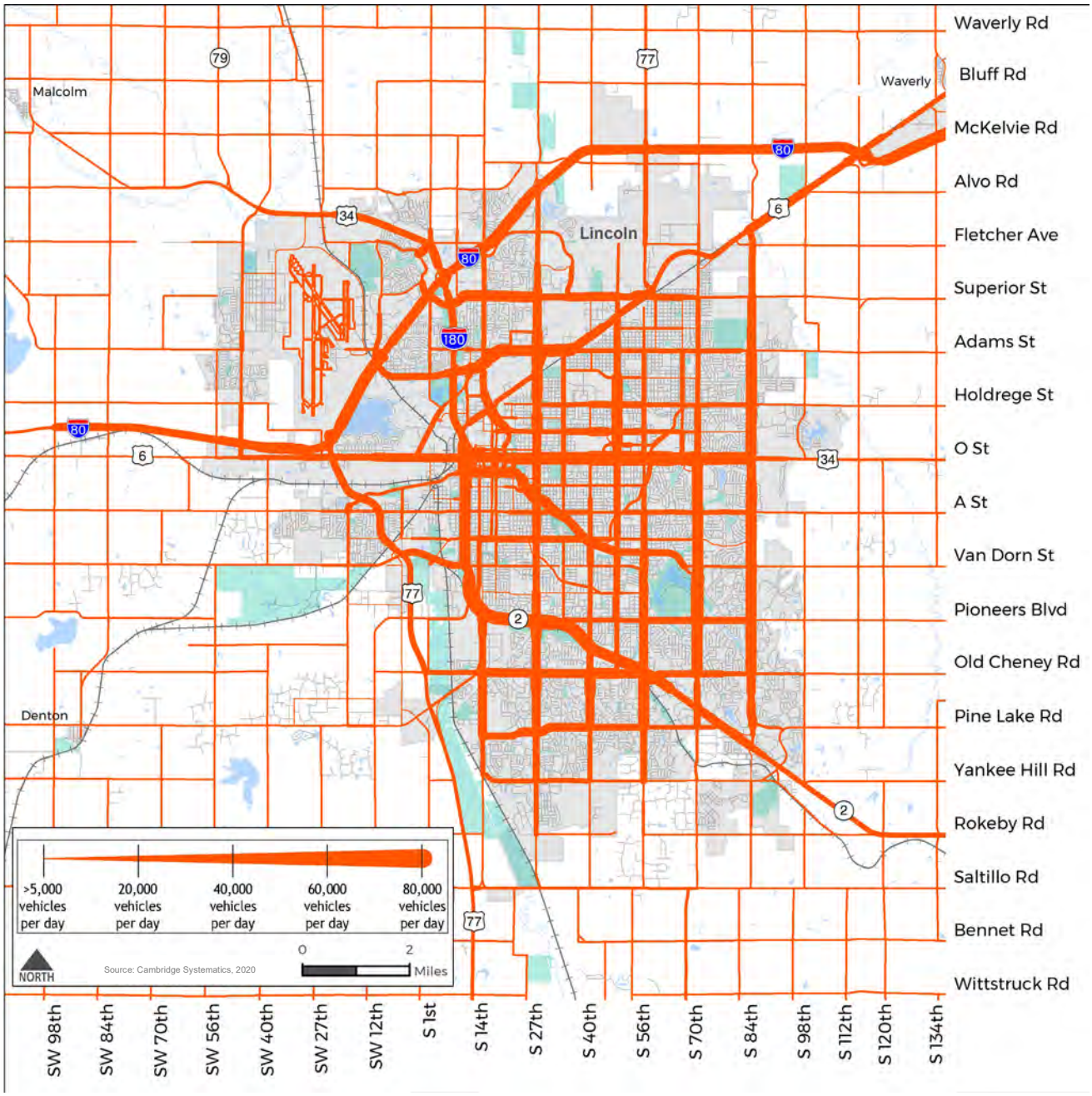
Figure 4.24 Existing Through Lanes



Current Traffic and Congestion

The City of Lincoln manages a traffic count program with volume data representing more than 1,350 locations. The city's current volume data are combined with the most current data from the County and State within the model area to assess the current conditions and as a means to calibrate the travel demand model. **Figure 4.25** depicts the current (2019) daily traffic volumes using bandwidths.

Figure 4.25 Current (2019) Daily Traffic Volumes



An important aspect of determining transportation needs is the capacity of the roadway system to meet traffic demand. Several factors influence roadway capacity, including the number of through lanes, signal timing and priority, presence of turn lanes and medians, and presence of on-street parking. The frequency of driveways and intersections can also play a role in roadway capacity by introducing friction.

The approach to capacity for long range planning purposes considers roadway facility type (e.g., principal vs. minor arterial) and area type (e.g., urban vs. suburban). A generalized level of reference for each facility type is presented in **Table 4.5**. Roadways with higher facility types are assumed to have more consistent turn lanes, less frequent driveways and intersections, and higher signal timing priority than lower facility types. Similarly, roadways in denser areas such as downtown and the surrounding urban areas are assumed to have a reduced capacity as compared to roadways in suburban and rural areas due to reduced side friction, wider lanes, and longer intersection spacing. Capacities for this plan consider hourly capacities, helping to identify facilities expected to become congested during the busiest hour of the day, typically the PM peak hour.

Comparing current daily traffic volumes with planning level capacities (volume to capacity [V/C] ratio) can help to identify levels of congestion on the roadway network. The planning level capacities used for this analysis vary depending on the street's functional classification, the area type, and the number of through lanes.

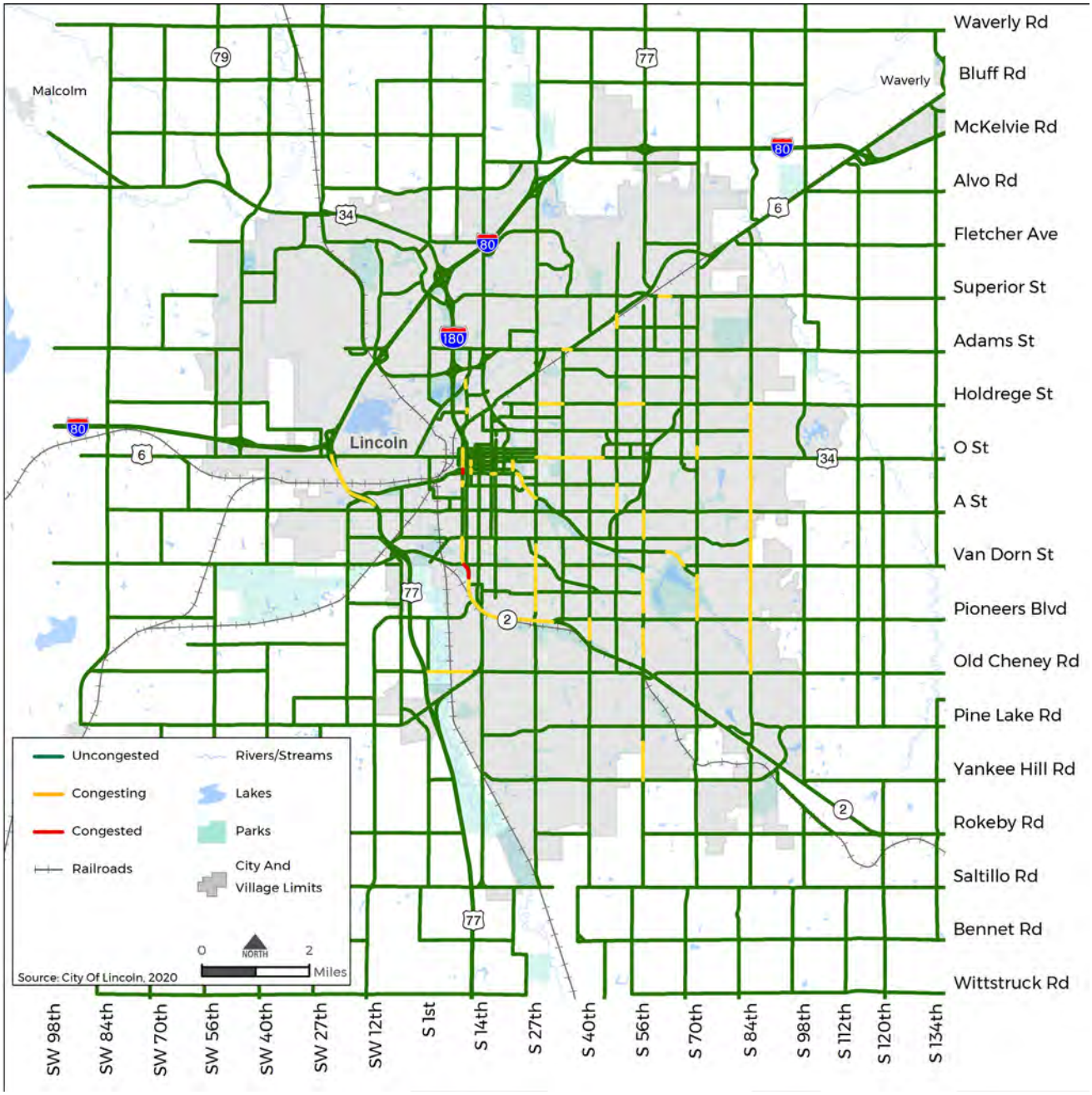
Because the V/C analysis uses planning-level capacities and daily traffic volumes, it does not explicitly account for delays or congestion that may be experienced at a particular intersection during shorter intervals of time (i.e., peak hours). The analysis provides a high-level snapshot (**Figure 4.26**) of the current congestion.

Table 4.5 Planning Level Daily Capacities (Per Through Lane)[3]

Functional Classification	Capacity
1 - Freeway	20,000
2 - Expressway	12,000
3 - Principal Arterial/Major Arterial	9,000
4 - Minor Arterial	8,000
5 - Urban Collector	6,000
6 - Major Rural Collector (State)	6,000
7 - Major Rural Collector (County)	6,000
8 - Minor Rural Collector	6,000
9 - Local/Other	6,000
10 - Ramp	9,999
11 - Freeway Ramps	9,999

[3] Lincoln MPO Travel Demand Model daily factor for calculating LOS. Methodology described in **Appendix D**.

Figure 4.26 Current Congestion Levels V/C



Future Travel Demand

The travel demand model was updated to study impacts that household and employment growth will have on congestion. The PlanForward preferred growth scenario was used to input data for each TAZ into the model. This information is used to support trip generation estimates for work, shopping and other transportation needs. The future year models (2035 and 2050) were developed using the Existing + Committed (E+C) roadway network—that is, the existing network plus those improvement projects with committed funding to begin construction over the next six years. These projects were verified in September 2020 and include roadway improvements, intersection improvements, and Priority Growth Projects. Methods and data used to complete this update including the calibration, mode choice assumptions, and validation are described in **Appendix D**.

The updated model was used to produce an estimate of total vehicle miles traveled (**Table 4.6**) for each planning year, as well as the daily traffic forecast according to 2035 (**Figure 4.28**) and 2050 (**Figure 4.29**) roadway segments. These forecasts were calibrated using existing traffic counts.

Table 4.6 Vehicle Miles Traveled

Model Scenario	Vehicle Miles Traveled
2019 (Base Year)	6.2 Million
2035 E+C	7.9 Million
2050 E+C	9.5 Million

Source: Cambridge Systematics, 2020

The 2035 (**Figure 4.31**) and 2050 (**Figure 4.32**) traffic volume forecasts have been compared with the planning-level capacities of each roadway segment to identify the future locations of congestion. The V/C ratios use the fully calibrated traffic volumes and the capacities associated with the E+C network for each future year. **Figure 4.27** provides a summary of congestion levels over time reflecting the miles of congesting and congested centerline-miles within the modeled area.

Figure 4.27 Congestion Levels Over Time

	Uncongested (v/c less than 0.8)	Congesting (v/c between 0.8 and 0.9)	Congested (v/c greater than 0.9)
2020	757 miles (98.6%)	6.1 miles (0.8%)	4.8 miles (0.6%)
2035 E+C	748 miles (95.3%)	21.1 miles (2.7%)	16.0 miles (2.0%)
2050 E+C	692 miles (87.8%)	45.0 miles (5.7%)	51.1 miles (6.5%)

Source: Lincoln MPO Travel Demand Model

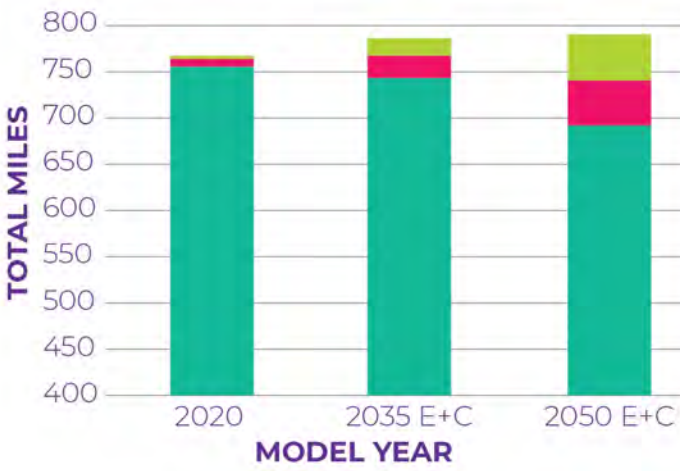


Figure 4.28 2035 Daily Traffic Forecasts E+C

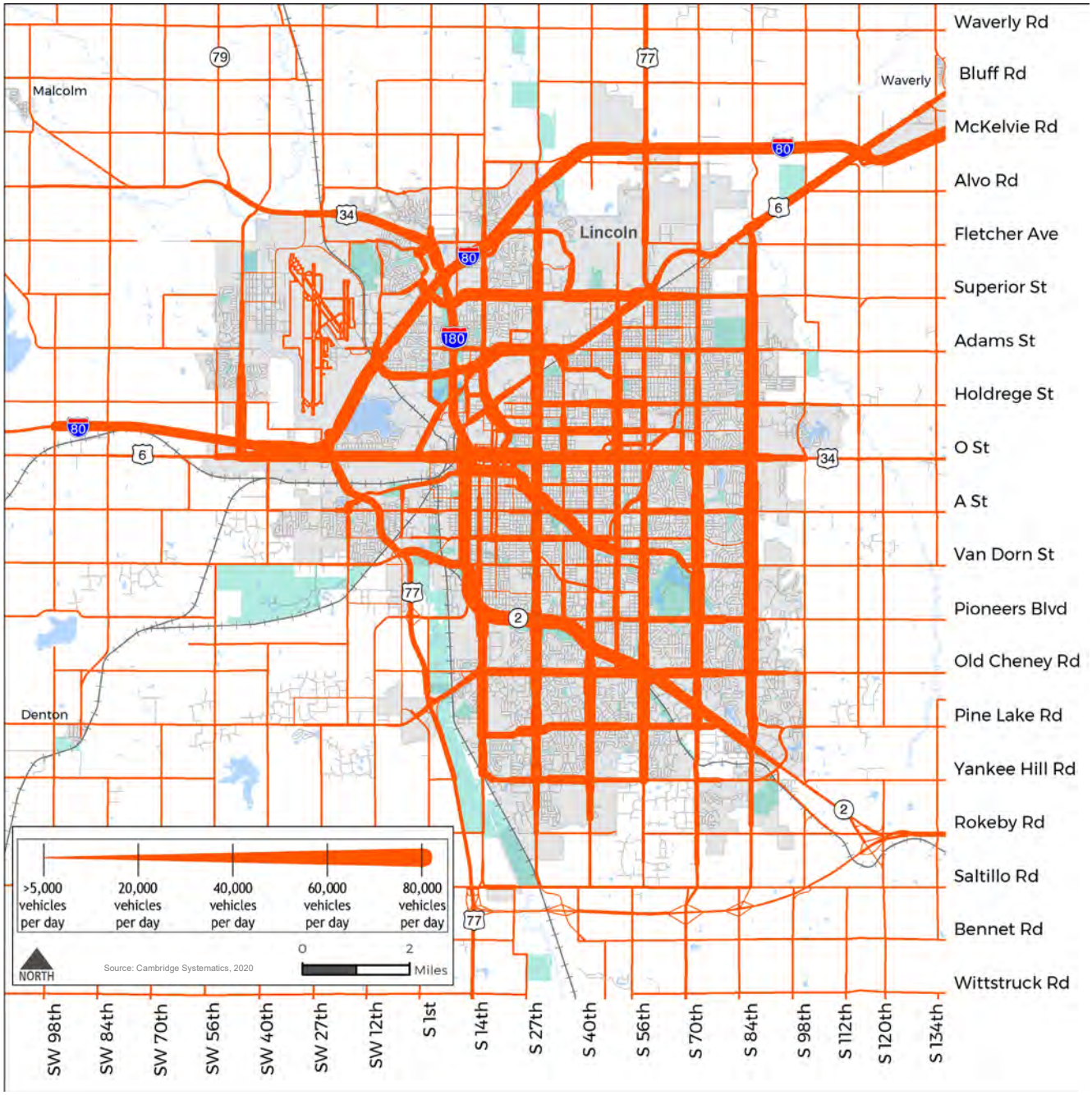


Figure 4.29 2050 Daily Traffic Forecasts E+C

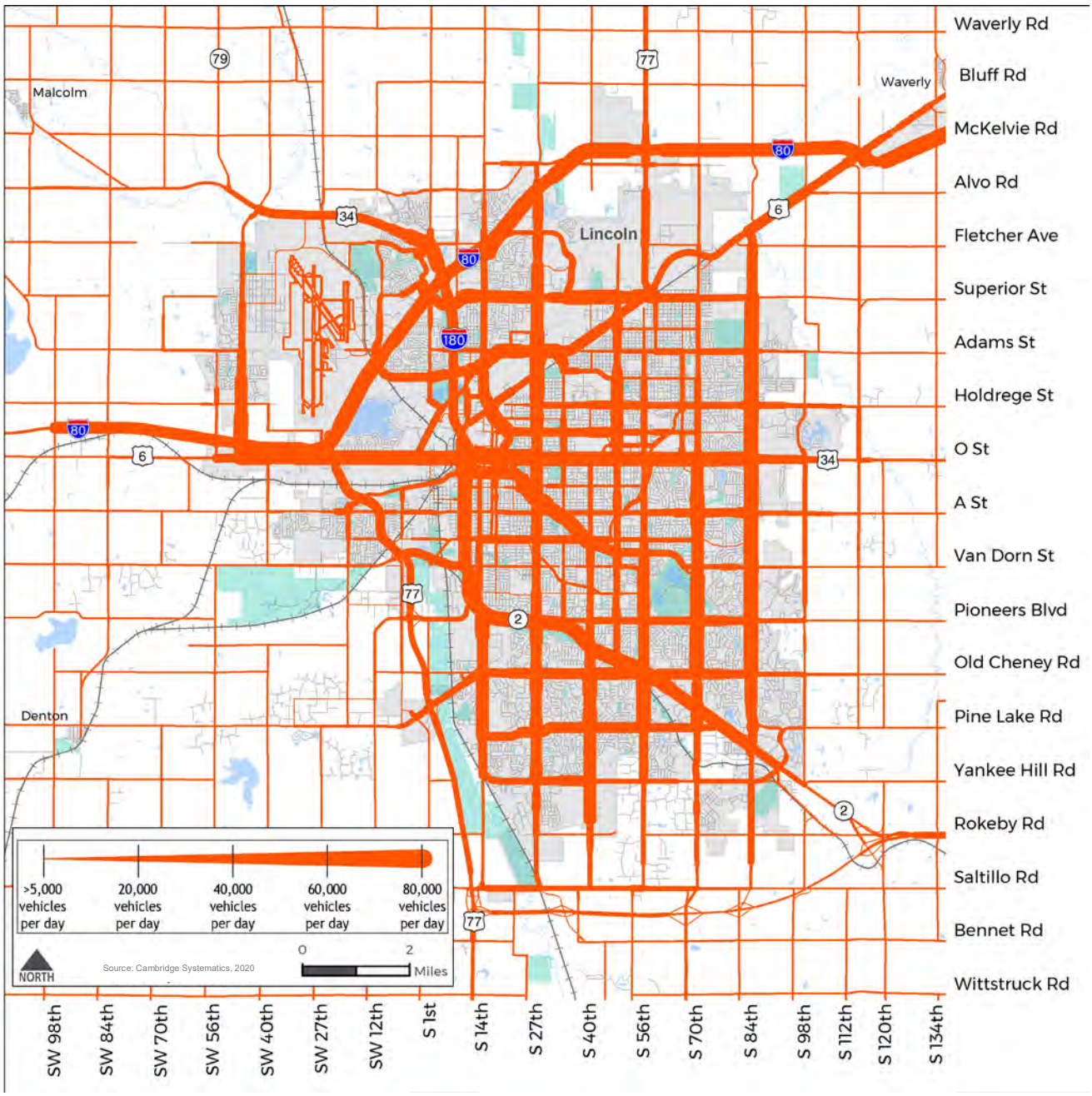


Figure 4.30 2035 Congestion Levels E+C

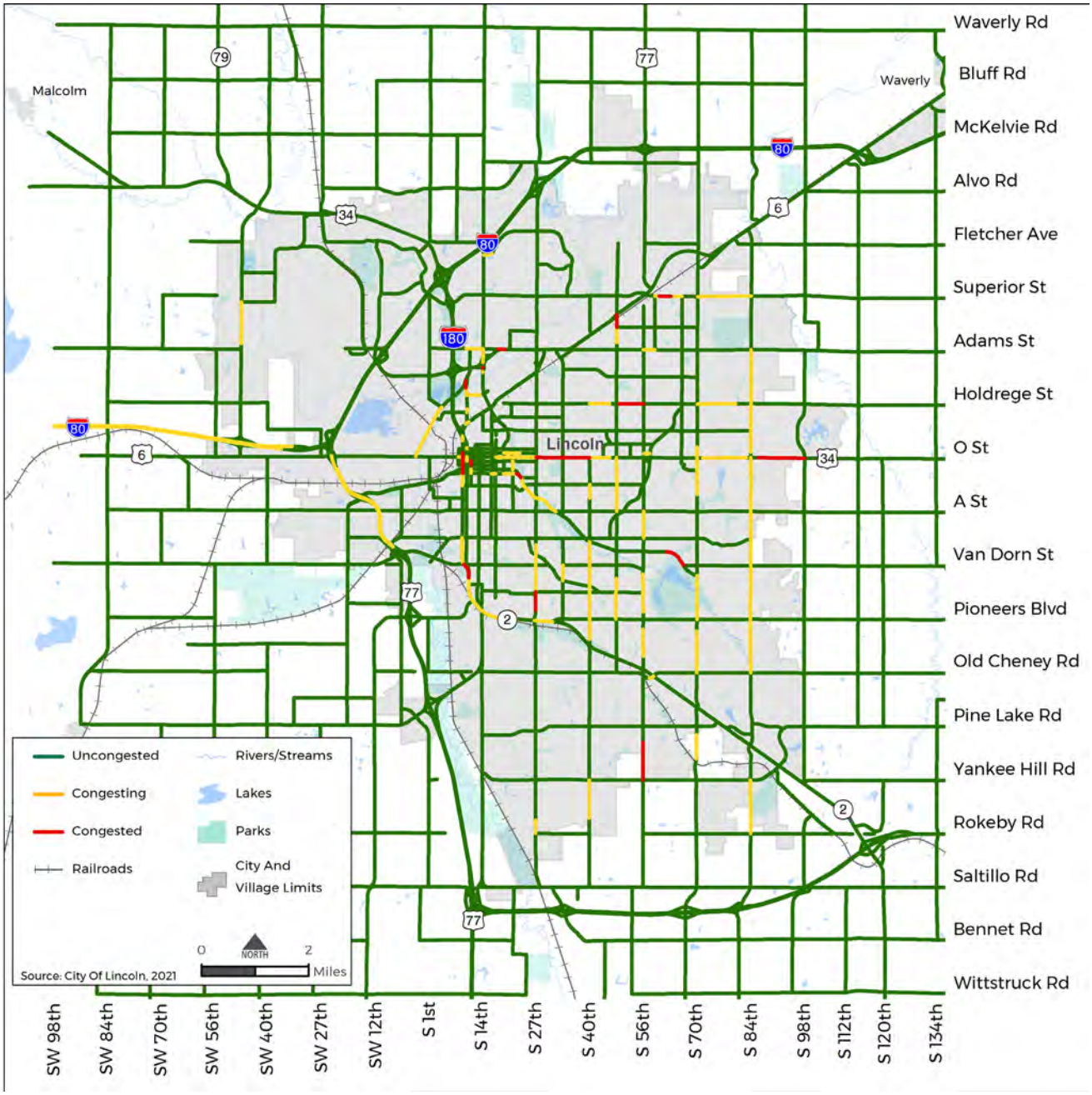
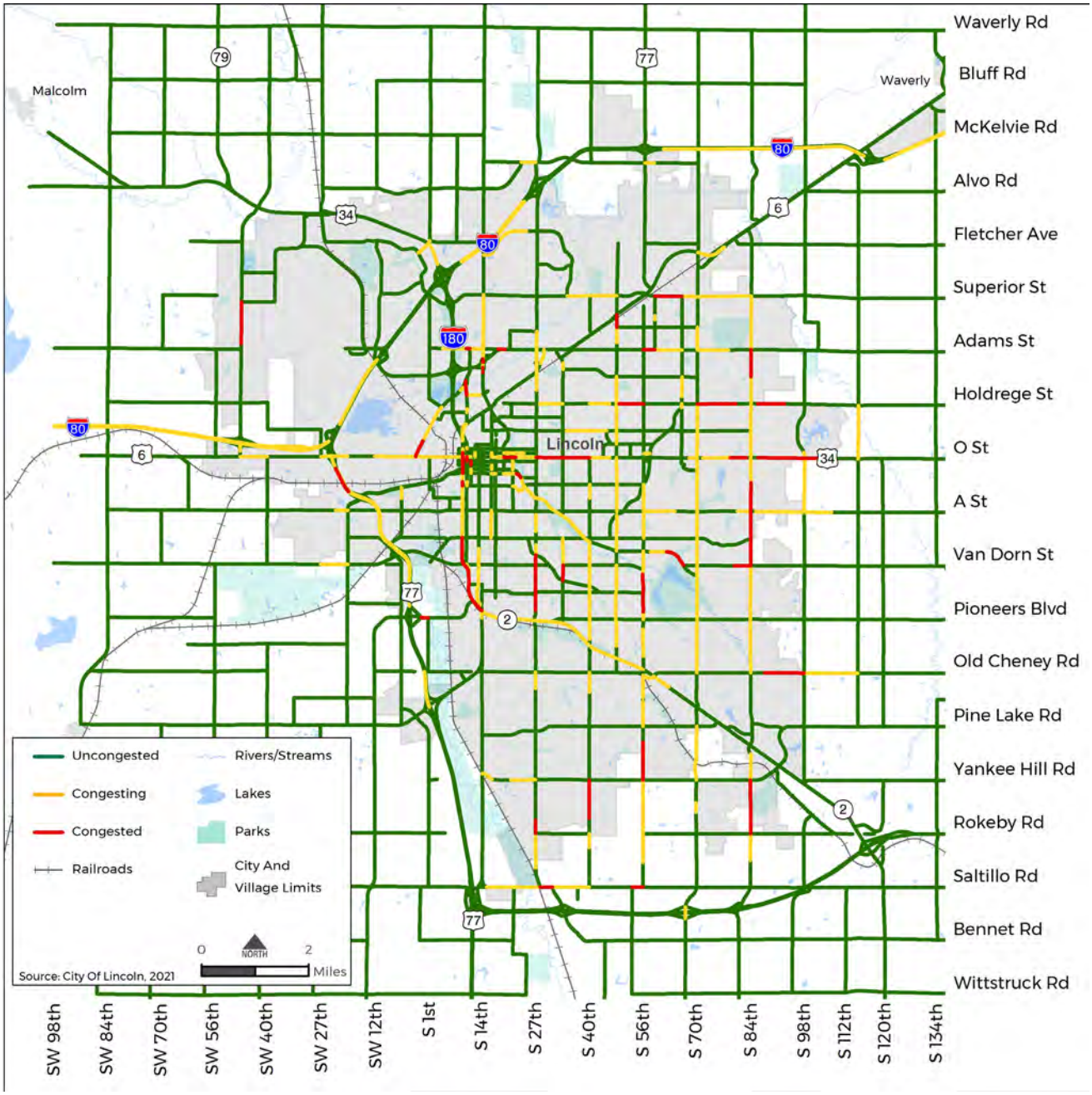


Figure 4.31 2050 Congestion Levels E+C



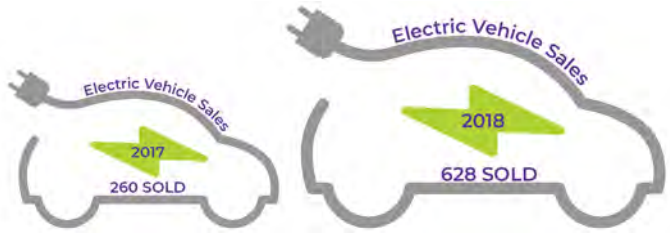
Electric Vehicles

Technological innovation in the transportation industry has been accelerating significantly in recent years. From electric and automated vehicles to "smart" infrastructure, new technologies that touch all aspects of transportation are being researched, developed, and implemented throughout the world. Vehicle technology in particular is being advanced and adopted rapidly. Understanding these innovations and their potential to benefit community and regional mobility is in the best interest of Lincoln and Lancaster County.

Adoption of personal electric vehicle technology has grown dramatically in the past decade, with fewer than 20,000 vehicle sales nationwide in 2011 increasing to over 320,000 vehicles sales in 2018. Based on research from the U.S. Department of Energy, the considerable reduction in annual emissions from an electric vehicle compared to that of a gasoline-powered vehicle is a major reason why they are becoming more popular. Nebraska ranked 37th of the 50 states in terms of total electrical vehicles sold in 2018 with 628 (**Figure 4.32**). This was a more than 140 percent increase in sales from 2017, which was the fifth largest year-to-year increase in the country. As recently as 2020, seventeen public electric charging stations were available in Lincoln according to the U.S. Department of Energy.

Compressed natural gas and electric vehicles have begun replacing older diesel engines used by the transit service fleet. StarTran electric buses increased from four to ten in 2020–21, which represents approximately 10 percent of the bus fleet. A new electric charging station was constructed in 2020 to serve the current fleet needs.

Figure 4.32 Annual Electric Vehicle Sales in Nebraska



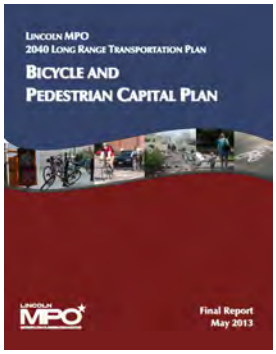
Source: Alliance of Auto Manufacturers, 2019

Advanced Vehicle Technology

Automated vehicles (AVs) are not as far along in their development and adoption as electric vehicles but offer greater possibilities and integrations for the future of transportation. Through the use of sophisticated technology, AVs can partially or entirely replace human drivers in operating and navigating a vehicle and offer substantial safety, efficiency, and mobility benefits. Most major automakers, as well as Google and Tesla, are developing and testing AV models; some that are not fully autonomous are available on the market today. A 2018 legislative bill adopted in Nebraska authorized the use of AVs for personal mobility, ride-hailing, and public transportation.

Active Transportation

Supporting active modes of transportation, such as walking and bicycling, is a crucial characteristic of a multimodal transportation system—improved public health and quality of life can be linked to communities that have enabled safe, comfortable, and convenient active transportation. The City of Lincoln and Lancaster County have taken strides in recent years to enhance the regional active transportation network with the completion of the Lincoln MPO Bicycle and Pedestrian Capital Plan (2013), followed by the Lincoln Bike Plan (2019), and ongoing implementation of project, program, and policy recommendations from each.



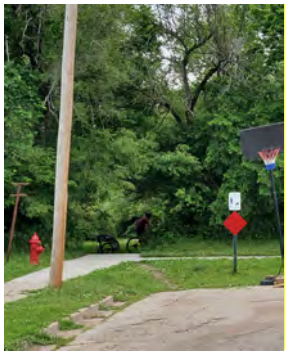


Complete Streets

The concept of Complete Streets—that a transportation system should be safe and convenient for all users, regardless of age, ability, or mode—has gained significant momentum in the past decade. The City of Lincoln officially established a Complete Streets policy in 2013 to formalize a more concerted effort to incorporate Complete Streets into local transportation planning, design, and construction projects. The policy's key component was the establishment of an interdepartmental Complete Streets Committee to be composed of representatives from Planning, LTU, StarTran, Urban Development, Building & Safety, Parks & Recreation, Health Department, and the Police Department to review select city projects to ensure Complete Streets objectives are accounted for.

The Complete Streets Committee prepared a Gap Analysis and Prioritization Strategy in 2015 to identify areas of the city with gaps in sidewalk, transit, trails, etc. where future Complete Streets project funding could be focused. Example projects included connecting residential streets to major trails, bike route signage, and bike racks. Although the Committee meets regularly and has authority to review projects, the program should be strengthened to benefit all transportation system users.





The Lincoln Bike Plan provided recommendations for strengthening Lincoln's Complete Street Policy, including giving it a more prominent location (now hosted on the **City's Complete Streets website**), adding additional web content, developing a Complete Streets Manual, and establishing a consistent approach to communicating elements of the Complete Streets program to the public. These improvements can help advance benefits of Complete Streets including increased mobility to work, school, and play, and wider opportunities for commercial demand of service and delivery. Complete Streets may help relieve congestion and degrading pavement conditions associated with the hundreds of thousands of visitors to Lincoln using personal vehicles on Lincoln's roadways.

Micromobility

Micromobility services typically consist of small vehicles such as bikes, electric-bikes (e-bike), and electric scooters (e-scooters) that are deployed as a shared fleet within a distinct geographic area by an independent operator. E-scooter programs in particular have seen a rapid and significant upswing in popularity throughout the country in recent years as cities have embraced their potential to enhance mobility, create shared mobility hubs, and reduce personal motor vehicle trips.

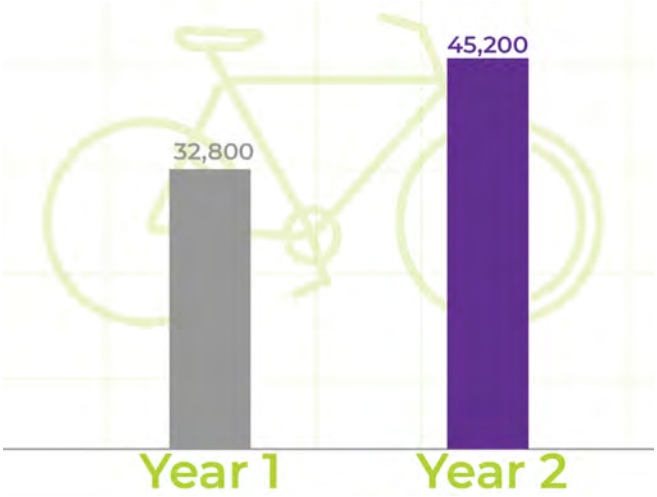




BikeLNK is a bike sharing program launched in the City of Lincoln with 19 kiosks and 100 bikes in April 2018. The fleet has expanded to 105 bicycles and 21 docking stations located in the highest demand areas of the city (**Figure 4.34**). To provide residents and visitors an option for active commuting and recreation, BikeLNK added e-bikes as a temporary pilot to the program in 2020. During the first two years of the program's operation, nearly 80,000 trips and nearly 160,000 miles have been logged.

Ridership shown on **Figure 4.33** grew nearly 40 percent between the first and second years of operation. September was the peak month for trips in both years, and the most common time for trips is weekday afternoons and evenings.

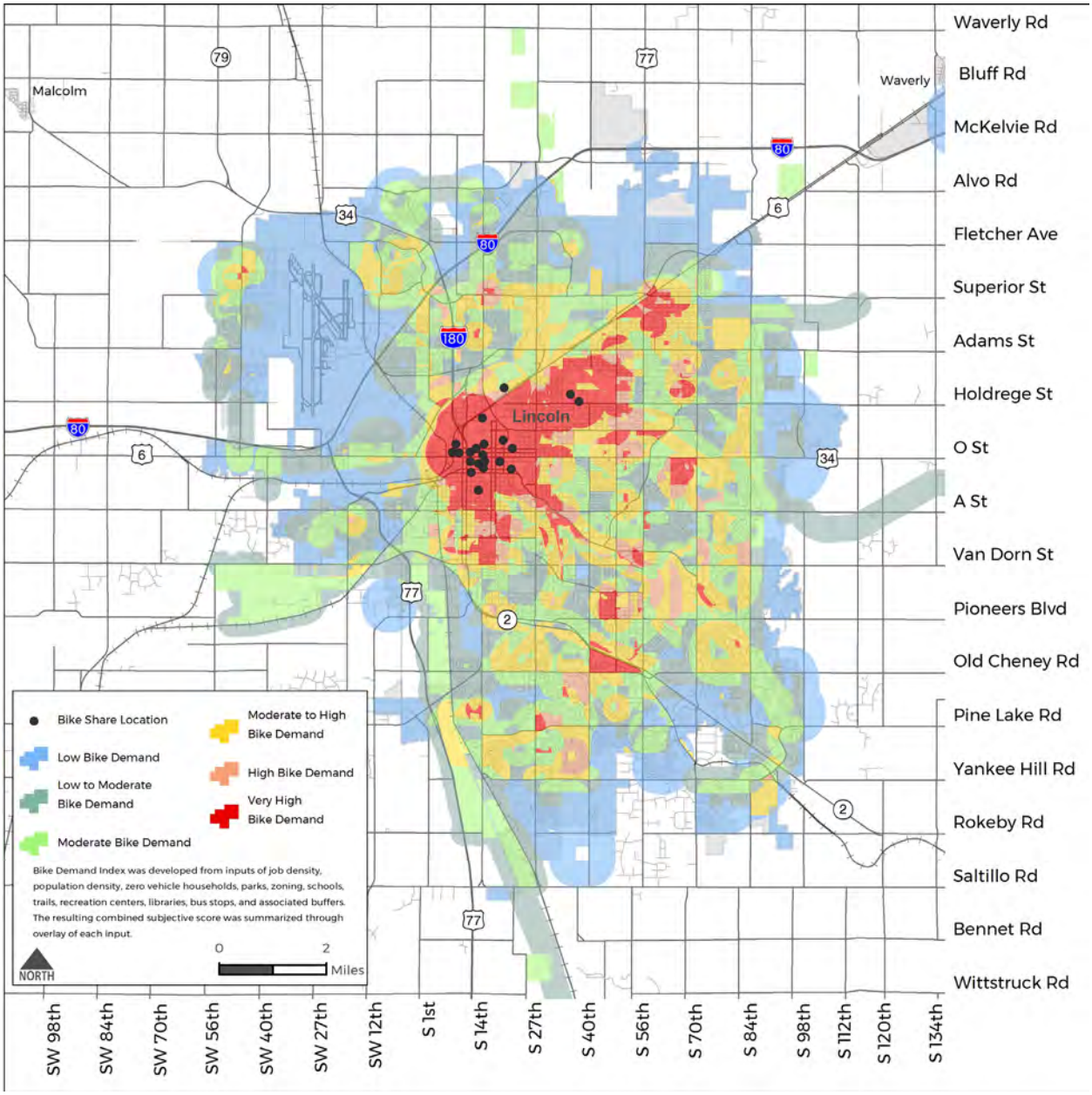
Figure 4.33 BikeLNK Ridership



Source: BCycle and City of Lincoln, 2019.

The City of Lincoln adopted an ordinance in September 2019 approving plans for a pilot program branded ScooterLNK that would allow up to three e-scooter or shared mobility providers to deploy fleets within the city for up to one year. LTU is responsible for establishing specific operating rules of the program. Launching their pilot program in September 2020, the city considered common requirements of similar programs throughout the country, such as substantial data collection and reporting requirements, access for underserved and overburdened community, and maximum fleet sizes. The maximum number of scooters allowed during the pilot program is 250 per vendor. In the first six months of operation, more than 33,000 trips were made with an average trip distance just exceeding one mile. University of Nebraska – Lincoln (UNL) currently requires bikes, scooters, and mopeds to be dismounted and walked through certain areas of campus; it is not uncommon for communities to designate areas where e-scooters may not operate.

Figure 4.34 Bike Demand and Bikeshare Locations

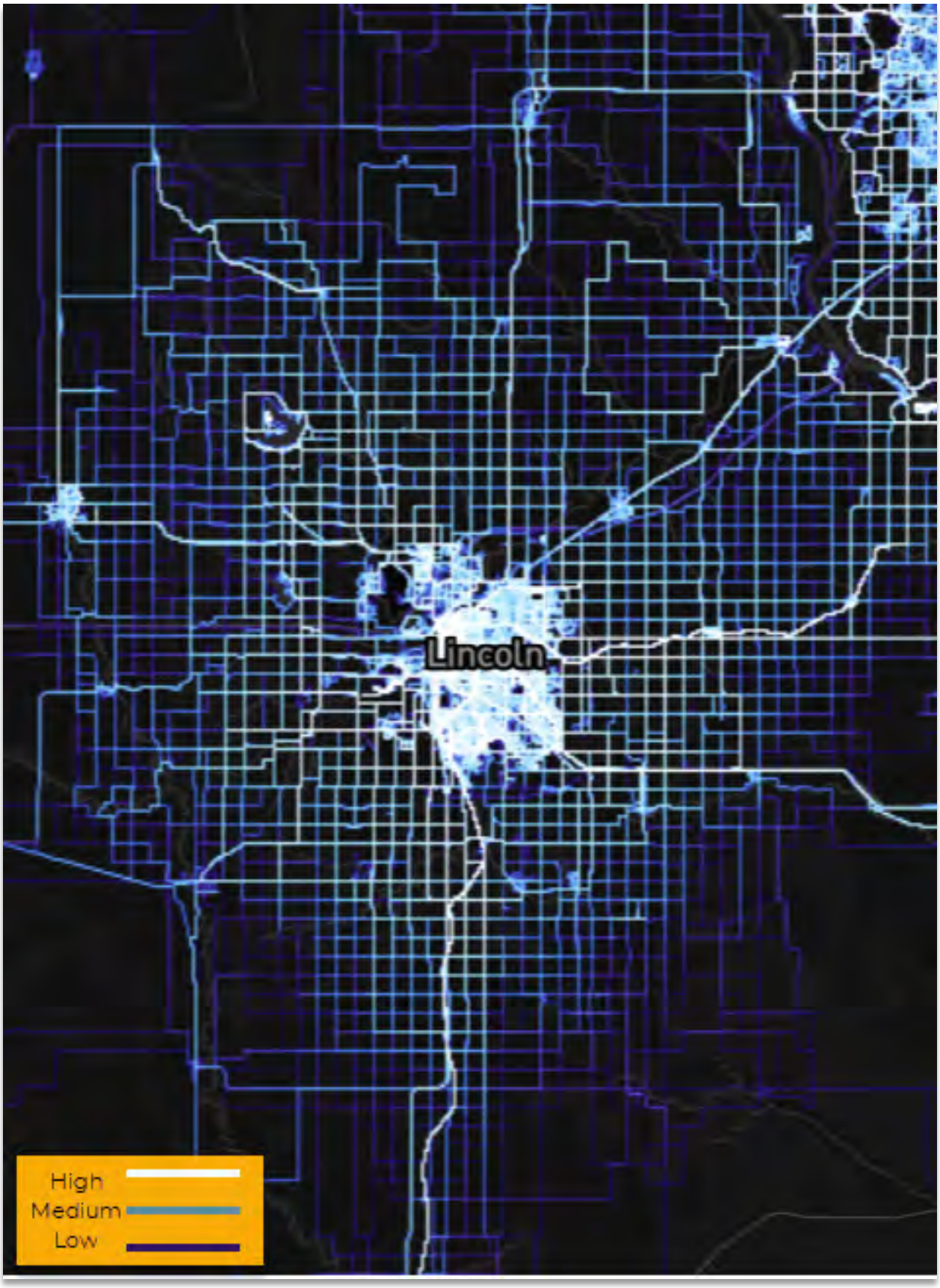


Source: Lincoln Bike Plan, 2018; BCycle and City of Lincoln, 2019

Trails and On-Street Bicycle Facilities

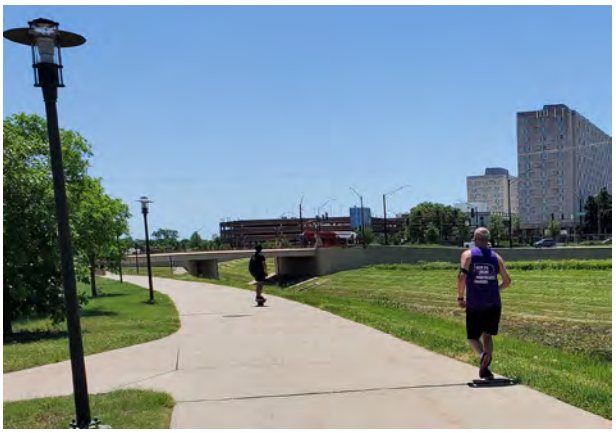
The backbone of the regional bicycle network is an extensive trail system, composed of both commuter trails and recreational trails, totaling 255 miles. At least 95 percent of all city households are within one mile of at least one multiuse trail. Approximately 145 additional miles of on-street bike routes and lanes provide connections within the City of Lincoln. Downtown Lincoln is also home to Nebraska's first separated bike lane, the N Street Cycle Track. A 2021 Strava heat map of bicycling activity also shows (**Figure 4.35**) most of the approximately 1,500 miles of County roads are also used by gravel bicyclists. Gravel roads are popular facilities for many riders in the County who prefer the lower traffic numbers and rolling terrain over road cycling with inconsistent shoulders and faster vehicle speeds. Gravel roads provide connectivity to all regional trails and many of the communities throughout the area.

Figure 4.35 Trail and On-Street Bicycle Activity



Strava relative bicycle intensity heat map (Source: Strava June 2021)

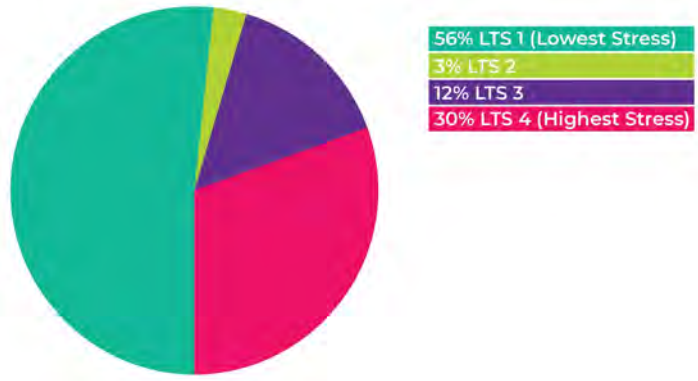
Much of the current trail system is built in the right-of-way of abandoned railroad corridors, along stream floodplains, on one side of major arterial streets, or a part of new residential development. Lincoln Parks and Recreation, LTU, and the Lower Platte South Natural Resource District are primarily responsible for the trail development in Lancaster County. Volunteer organizations also assist in maintenance and in donating significant funds for trail development.



While the existing network of bicycle routes, grade separated crossings and designed on-street facilities connect most parts of the city (**Figure 4.37**) and several of the trails extend into unincorporated Lancaster County, the system's accessibility and functionality are limited for people who are not comfortable bicycling close to motor vehicle traffic. Level of Traffic Stress (LTS) is a rating given to a road segment or crossing indicating the traffic stress it imposes on bicyclists using those facilities. A traffic stress assessment completed for the Lincoln Bike Plan found all the city's main arterials and about one-fourth of its local and collector roadways—including some designated as bike routes—to be uncomfortable for most interested bicyclists, based on their configurations, traffic volumes, and speed limits. The off-street system has a high level of comfort, but access can be challenging for people who do not live close to a trail.

High-stress streets may be suitable for some bicyclists, including those who are confident or very confident. Low-stress streets are suitable for most everyone, including children. Traffic speeds and volumes have a significant influence on the level of stress for bicyclists. **Figure 4.36** represents proportions of the transportation network in Lincoln for each level of stress. Other factors that influence bicycle stress include street width, presence of on-street parking, and number of driveway/street crossings for paths.

Figure 4.36 Citywide Network Bicycle Level of Stress



Source: Lincoln Bike Plan, 2018

Most of the existing bike routes are low-stress facilities. However, many intersect with more stressful streets with no traffic control, making crossing difficult and potentially deterring otherwise interested bicyclists. Some have also fallen into disrepair and need maintenance (missing signage, poor pavement conditions, overhanging branches etc.), further limiting bicycle mobility.

Riding bicycles is not allowed on sidewalks in some commercial areas because of the larger number of pedestrians. These areas include Downtown, Havelock, College View, and Bethany. Because these restrictions exist, the city must provide safe on-street infrastructure for bicycle and scooter traffic to provide an

accessible and connected active transportation network.

The **Lincoln Bike Plan** provides a comprehensive set of infrastructure recommendations for enhancing the comfort and convenience of the on-street bicycle system for less-confident bicyclists, including new designated facilities, intersection improvements, and wayfinding. In total, the plan proposes approximately 140 additional miles of bicycle infrastructure[4] — approximately 30 new miles of dedicated on-street facilities (mostly concentrated around downtown and UNL), 50 more miles of bike routes, and 60 more miles of sidepaths. Gradual build-out of the plan's proposed network will greatly enhance conditions for bicycling throughout Lancaster County.



The 2040 Comprehensive Plan update also advanced and prioritized a future trails network radiating in all directions from the existing trail network toward other Lancaster County communities (**Figure 4.38**).



Waverly would be linked by a trail running along Salt Creek around the north, east and southern corporate limits at approximately 84th and Havelock Streets. The Prairie Corridor on Haines Branch will connect southwest Lincoln to Denton and regional destinations such as Conestoga Lake and Spring Creek Prairie. So also, the towns of Sprague, Hickman, and Bennet can connect to the trail network on the south just as Malcom, Raymond, and Davey on the north. By capitalizing on the rising demand for active transportation, ecotourism, and accessibility of electric pedal assistance bicycles, these trails can provide a key function and support additional mode split for transportation throughout the County.



[4] Lincoln Bike Plan Table 1 and Figure 8 documented the bicycle infrastructure projects that held the highest priority and were included in the development of the LRTP Needs Based Plan described in Chapter 5.

Figure 4.37 Existing On-street Bike Network

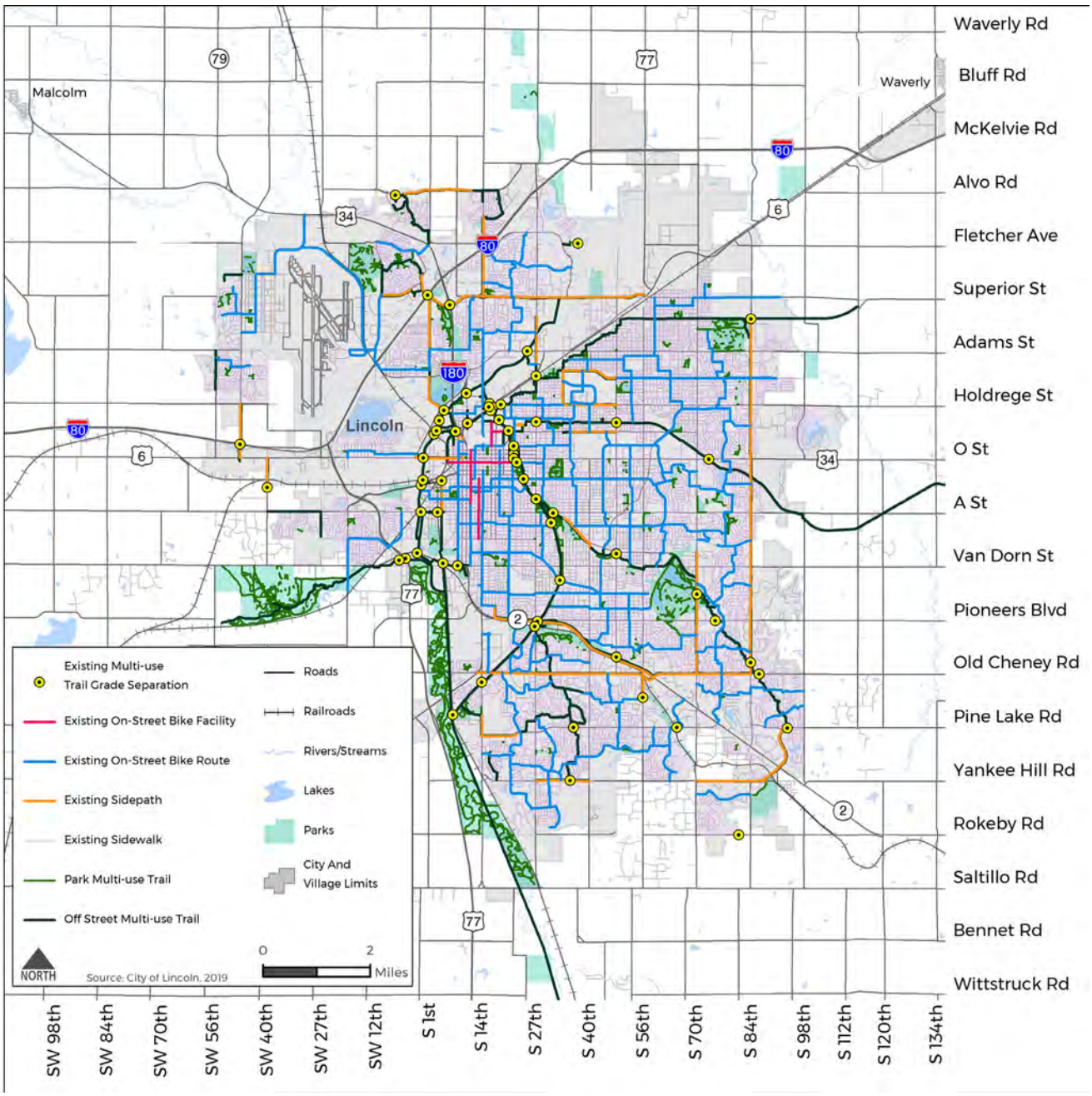
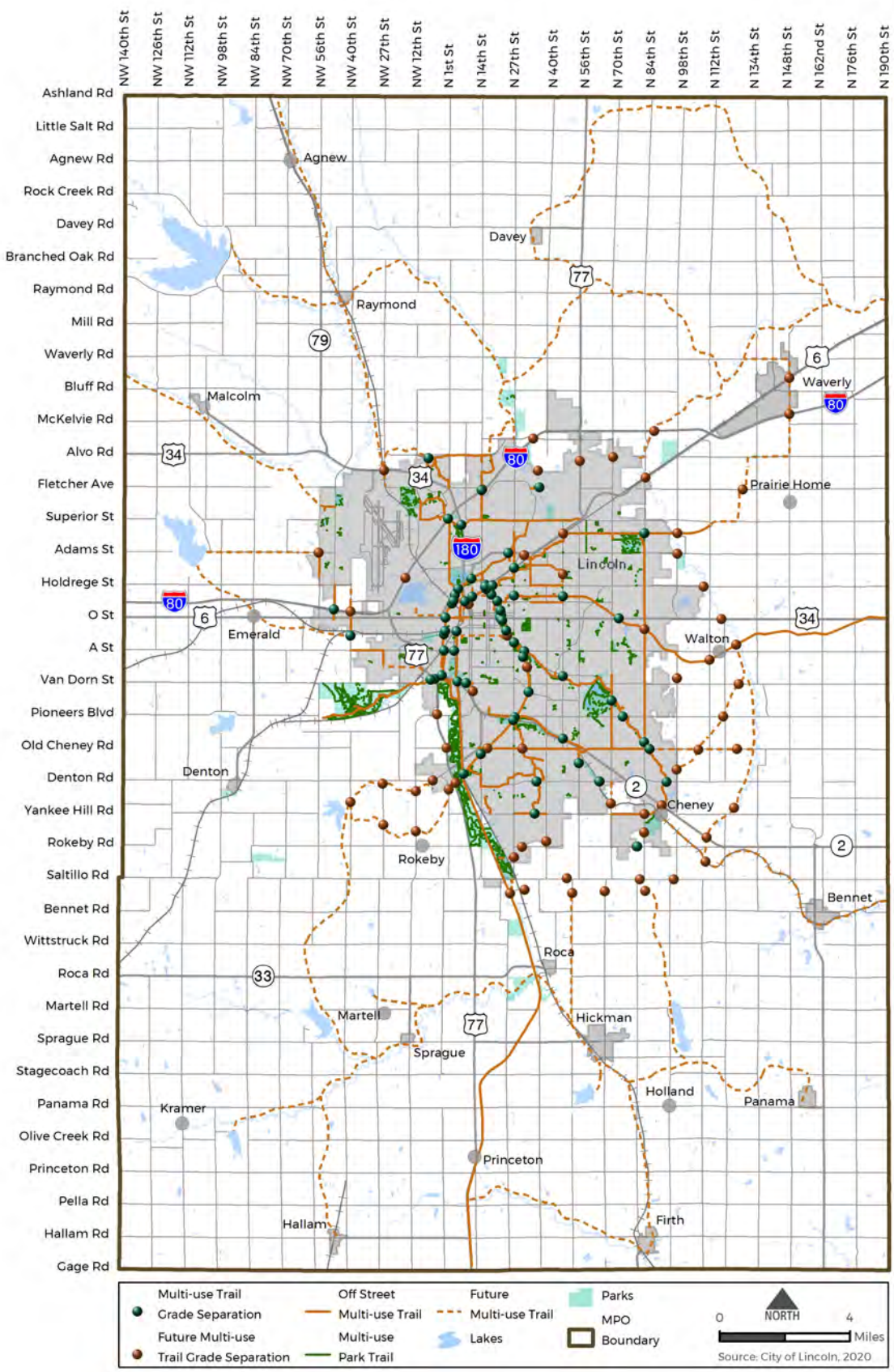


Figure 4.38 Future County Bike Trail Connections



Pedestrian Facilities

Lincoln has a comprehensive sidewalk network—approximately 1,500 miles total—that provides pedestrian access to most homes, businesses, and other destinations in the city (**Figure 4.39**). Due to a long-standing requirement that developers provide sidewalks along both sides of the streets, the vast majority of local streets, collectors, and arterials in the city have sidewalks along both sides. The trail system complements this robust network of sidewalks.

The presence of sidewalks alone is not enough to make a quality pedestrian experience. The proper and regular maintenance of sidewalks is critical. A system of sidewalks with a lot of cracks and heaving pavement limits mobility, particularly for people with disabilities, regardless of how comprehensive it is. Though most streets in Lincoln have adjacent sidewalks, maintenance issues are present; older neighborhoods in Lincoln are most prone to poor sidewalk conditions. Sidewalk widths, proximity to roadways, encroachment of tree roots, and the spacing density of curb cuts for vehicular accesses are other important determinants to the quality of the pedestrian network. Approximately $1 million is allocated annually to sidewalk repair, and many street rehabilitation projects also include sidewalk and curb ramp improvements.





As with bicycle travel, major arterials are often the most significant barriers to pedestrian travel. At intersections without traffic control, crossing safely on foot is difficult if not impossible. Several railroad crossings present safety obstacles as well. The trail network includes numerous grade-separated crossings of these barriers, but access to these trails from some areas via walking is limited.

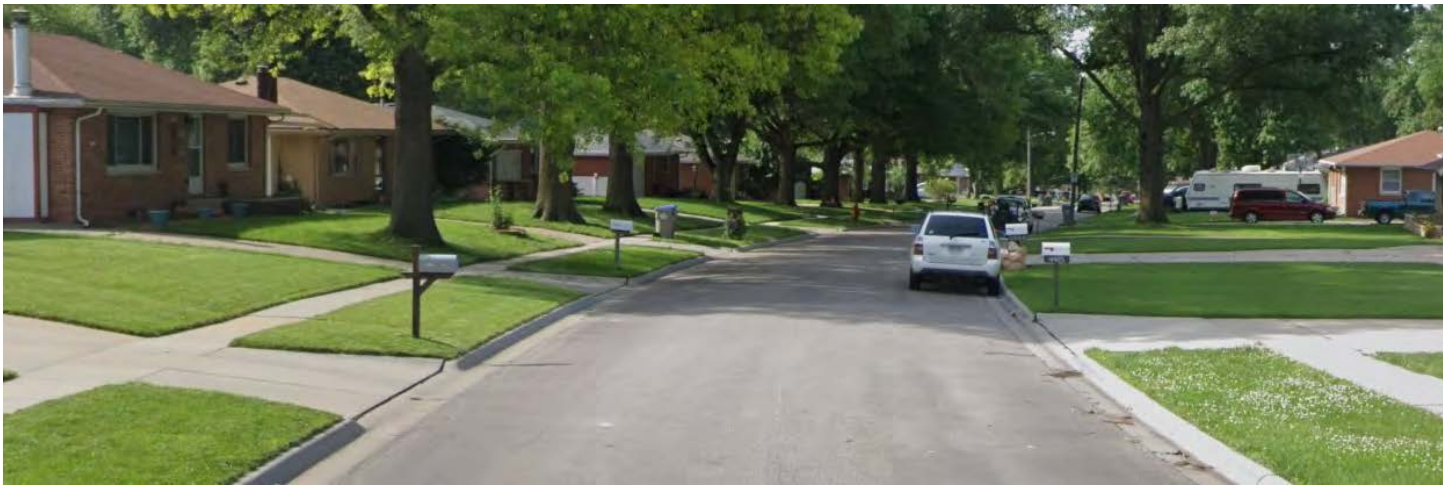
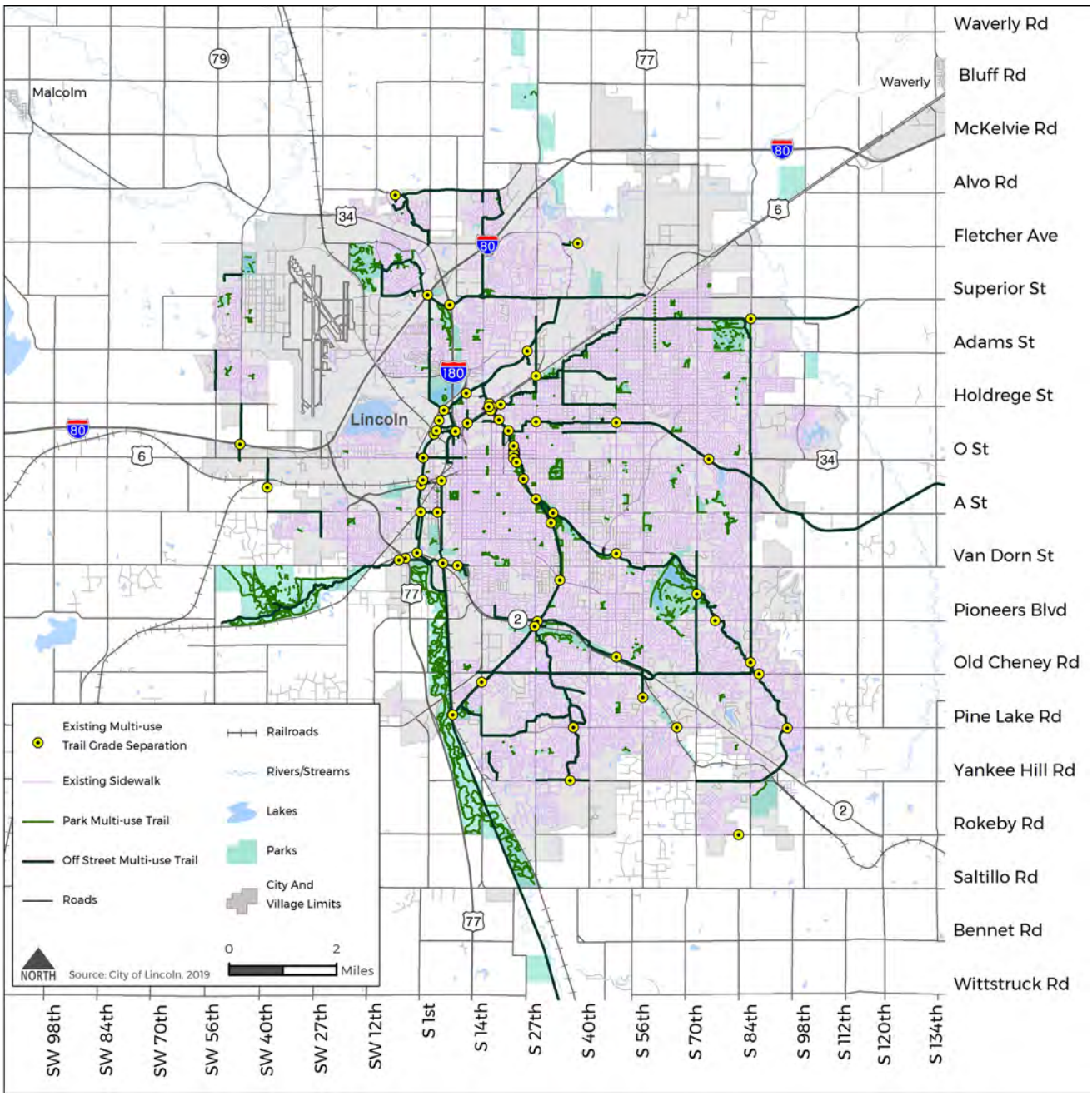


Figure 4.39 Existing Sidewalks and Trails



Transit

StarTran

StarTran, the division of the City of Lincoln responsible for public transit, operates 14 fixed bus routes within city limits. Service spans are generally between 5:40 AM and 9:50 PM on weekdays (though some routes operate earlier and/or later), with 30-minute frequencies typical for most of the routes on weekdays. Saturday service is also provided between 6:40 AM and 6:30 PM. In 2017 and 2018, StarTran reported providing service to 88 percent of transit supportive areas of Lincoln. In 2020, StarTran began operating VanLNK, the first city-run, on-demand transit service that allows riders to hail a van by smartphone app, designate their pickup location and destination for a $5 trip fee. Software is used to optimize the VanLNK route. The StarTran paratransit program is $3.50 per trip and limited to those with a disability that prevents the person from riding a regular city bus. Lancaster County Public Rural Transit offers a north and south route provided on alternating days of the week between Monday and Thursday.



The StarTran network (**Figure 4.41**) operates as a hub-and-spoke system, meaning all of the routes share a common origin point—an on-street transfer point along 11th Street in downtown. The Transit Development Plan is updated every five years. Many of the routes were realigned based on recommendations from the **Transit Development Plan** completed in 2016. That document also recommends increasing service spans and frequencies for key routes. Nationwide, public transit ridership has been broadly declining over the past several years but the 2.4 million trips served by StarTran in 2019 represent an increase of more than 8 percent from 2016 (**Figure 4.40**).

Figure 4.40 StarTran Ridership



Source: Lincoln MPO LRTP Performance Report, 2019

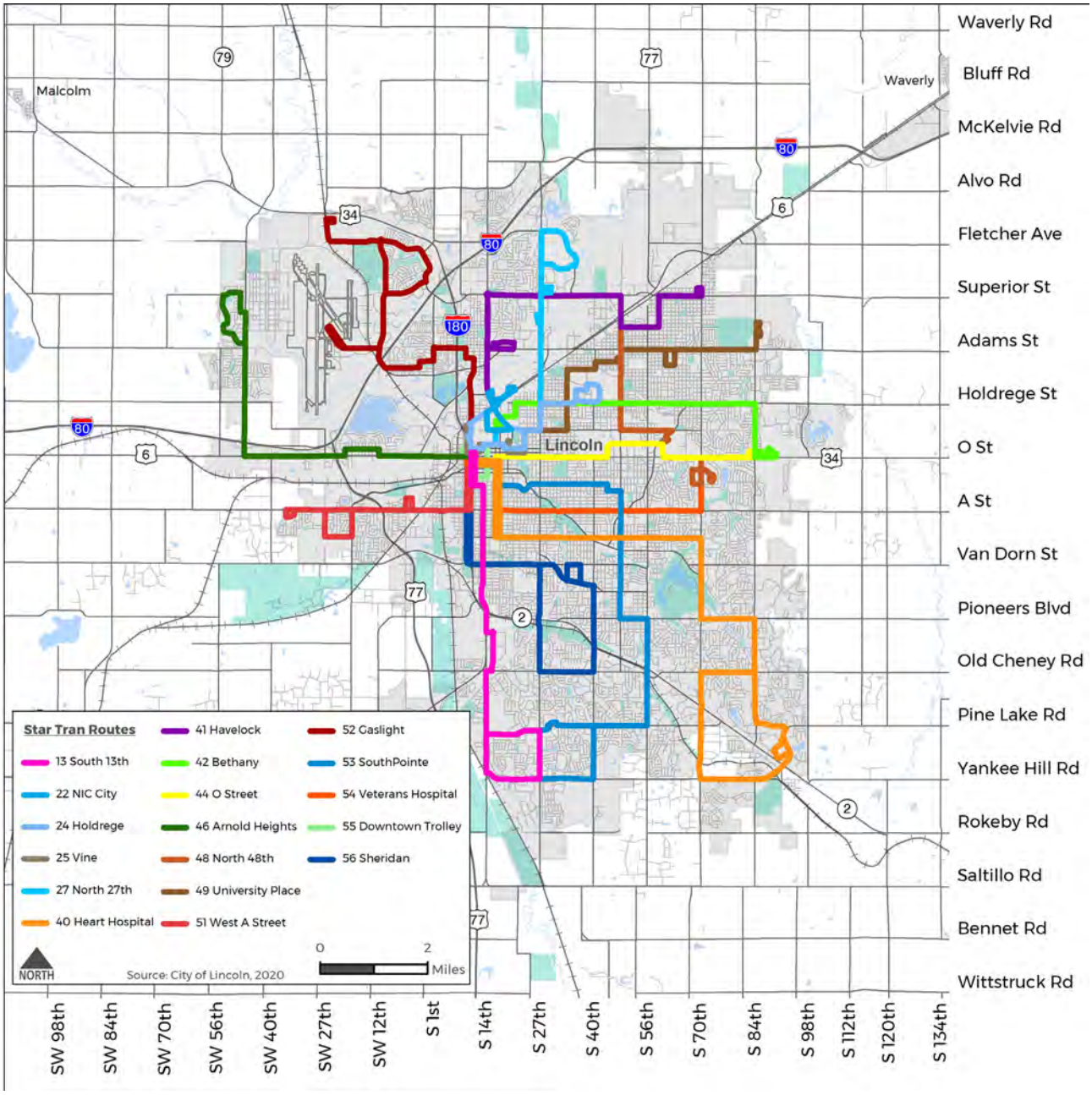
The existing downtown transfer point on 11th Street is undersized and does not have an optimal configuration for passenger transfer. StarTran initiated the **Multimodal Transit Transfer Center Feasibility and Conceptual Design Study** in 2019 to identify a location for a new central transit hub for the city that would enhance multimodal connections, provide better passenger amenities, and allow more efficient transfers. The north side of M Street between 9th Street and 10th Street has been selected as the preferred location, and a conceptual layout with designated bus bays for each of StarTran's 14 routes has been developed. The need to adjust route alignments is expected to be minimal because this facility would be located within a few blocks of the existing transfer point.

Three additional StarTran routes are primarily focused on connecting the UNL main and east campuses, as well as the Innovation Campus, and operate at 20-minute or better frequencies on school days, with reduced schedules on holidays and during vacation periods. UNL funds the operation of these routes, which are included with student fees.

They provide an important reliable service to university students and faculty.

NDOT completed the Lincoln/Omaha **Intercity Feasibility Study** in May 2020. It is aimed at identifying opportunities for future intercity bus service between Lincoln and Omaha to serve the more than 23,000 daily commute trips between them. Three route patterns have been recommended, each of which would use existing StarTran stops within the City of Lincoln. The conceptual design for the proposed downtown transit hub includes an additional bay for intercity buses.

Figure 4.41 StarTran Fixed Bus Routes

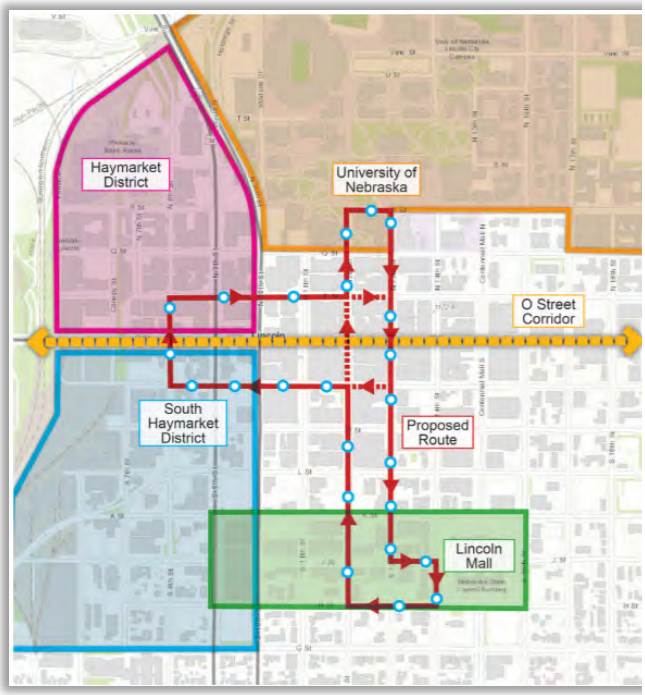


Autonomous Microtransit

Opportunities to use AVs for personal mobility, ride-hailing, and public transportation will continue to develop. Lincoln desires to be an AV flagship city offering additional mobility options for the community by leading an early expansion and adoption of a downtown transit system to facilitate the movement of people among major destinations such as the State Capital, the University of Nebraska, and the Haymarket District (**Figure 4.42**).

Recognizing that technology will be able to improve on traditional transit systems, the city is proposing to create the largest, full-service autonomous microtransit deployment in the United States. The deployment would provide on-demand service on a fixed route and may one day lessen the need for personal vehicles within downtown Lincoln.

Figure 4.42 Autonomous Microtransit: Downtown Concept



Intermodal Connections

As providing convenient transportation alternatives to driving has become a greater point of emphasis in communities throughout the country, the importance of providing a strong interface between modal networks has become apparent.

Approximately 6 percent of households in Lancaster County do not own a motor vehicle and rely on a mix of other modes to serve their transportation needs, so providing easy and reliable intermodal connections is necessary. While the proportion of zero-vehicle households has remained relatively steady in recent years, many other people who do have access a motor vehicle also choose other travel modes for some trips.

Active transportation and transit networks are often closely intertwined complements. Transit provides the means for regional mobility, while active modes are well-suited to fill the first and last miles of regional transit trips. Recent and emerging trends in transportation such as ride-hailing/ride-sharing services and autonomous vehicles can also be integrated with transit, furthering the practicality and convenience of getting around without a private motor vehicle.



As Lincoln continues to implement new transportation modes into its overall system, consideration for how best to coordinate them in a competitive (to personal vehicles) manner is crucial. A single facility where multiple transportation modes converge allowing seamless connections, a mobility hub can greatly enhance this interface. The new transit center planned for downtown Lincoln will provide the city a great opportunity for modal integration.

Rail

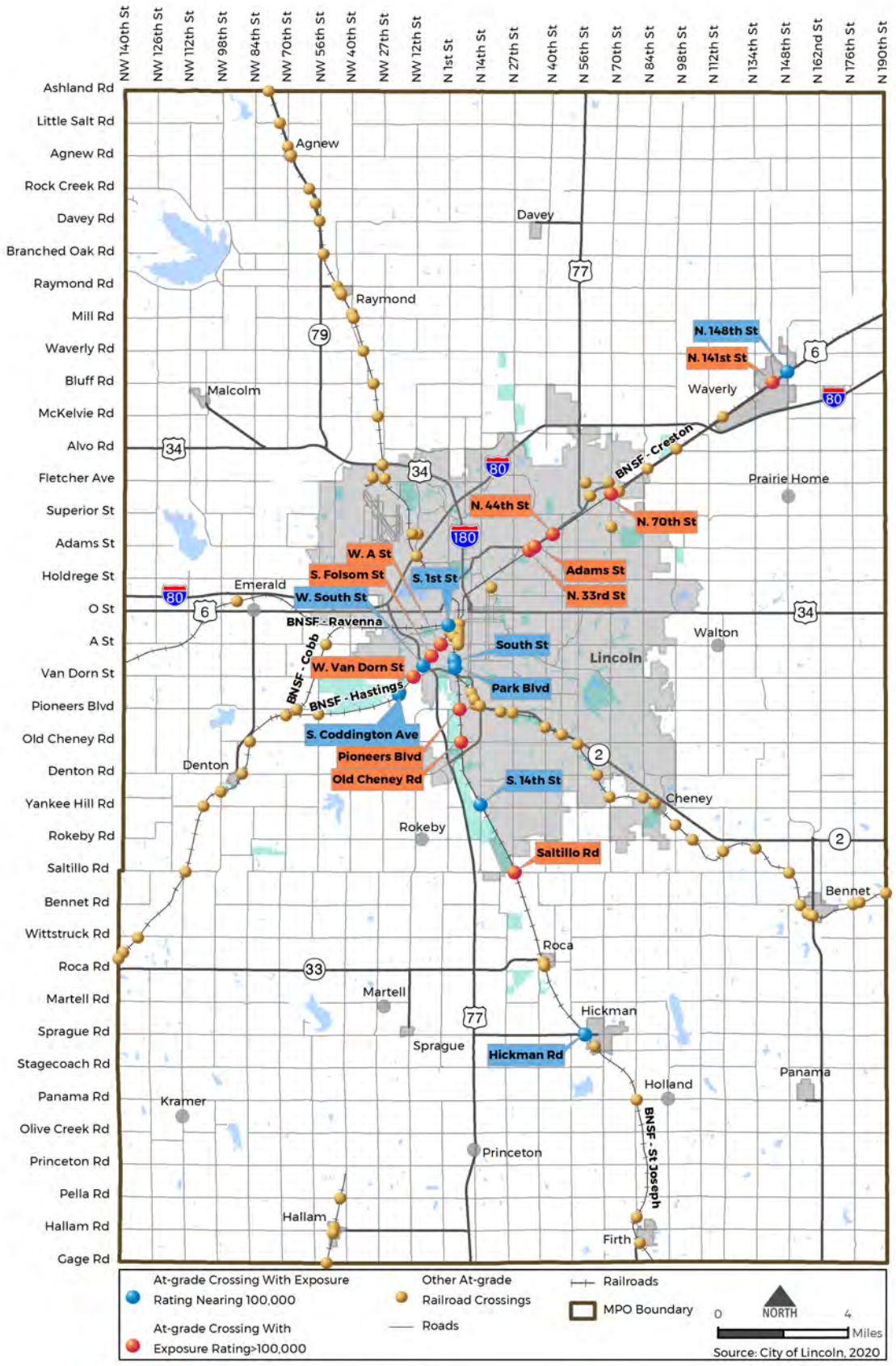
A network of tracks serving two Class I railroads and two Class III railroads extends radially from central Lincoln. Four railroad companies operate lines in Lincoln and Lancaster County: the BNSF Railway, the Union Pacific Railroad (UPRR), the OL&B Railroad, and the Omaha Public Power District (OPPD). Activity on the railroad lines ranges from 1 train per day (on the UPRR and OPPD lines) to 63 trains per day on the BNSF-Creston line. Beginning in January 2021, operation was renewed along the Highway 2 line with approximately 300 trains annually delivering freight to OPPD. Coal and agricultural products are the primary freight being moved by train through Lincoln, with some local manufacturing such as Kawasaki shipping light rail cars to the east coast.

Trains from four of BNSF's main lines (Ravenna, Cobb, St. Joseph, and Creston) cross connect through the Hobson Yard in Lincoln just west of downtown. The Hobson Yard is a vital service and support center for freight trains carrying coal and agricultural goods where inspections, maintenance, fueling, and switching all take place. The BNSF Havelock Shops in the northeast part of Lincoln are a primary freight rail car repair facility.

While the railroad lines through Lincoln and Lancaster County are critically important to the local economy, many railroad crossings with the street network are at-grade resulting in safety problems and travel delays. **Figure 4.43** shows the at-grade crossings in Lincoln and Lancaster County. Daily railroad crossing exposure rating (daily trains multiplied by the number of vehicles per day) reflects the potential for crashes between trains and motor vehicles at crossings. The BNSF rail crossing near 33rd and Highway 6 has an exposure rating of almost 491,000. The NDOT – Rail and Public Transportation Division requires a minimum exposure rating of 50,000 to qualify for possible funding for construction of a grade separation (underpass or overpass). There are 12 at-grade crossings in Lancaster County with an exposure rating above 50,000, eight of which have an exposure rating greater than 100,000.

Formed int 1971, the Lincoln/Lancaster County Railroad Transportation Safety District (RTSD) identifies railroad crossings in need of work, prioritizes projects, and conducts studies to plan future work. The RTSD's mission has been to eliminate, as much as possible, conflicts between highway traffic and railroads in Lincoln and Lancaster County. Since its inception, many projects from its early long-range plan have been completed. The number of at-grade railroad crossings of public streets in Lancaster County has been reduced from 210 in 1970 to 114 today. About half of the closed crossings were due to abandonment, while the other half were due to consolidation and grade separations.

Figure 4.43 Railroad At-grade Crossings



Existing Freight System

Lincoln and Lancaster County's economic vitality and the quality of life it offers depends on the ability of manufacturers, retailers, and distributors to efficiently transport their goods throughout the region. From package carriers to pizza deliverers, many workers in freight delivery roles rely on the transportation system to carry out their day-to-day tasks efficiently. Congestion, poor maintenance, and other street issues are particularly disruptive to their way of business. Even people without a direct connection to the freight industry benefit from it every day, further highlighting the economic necessity of smooth delivery operations. The proliferation of digital shopping and smartphone apps began well before the COVID-19 global pandemic fundamentally changed reliance on goods and services provided through online interfaces. Door-to-door pickup, as well as delivery of everything from groceries and restaurant meals to dry cleaning, is changing the freight industry considerably.

Online sales, specifically "buy online and pick up in store," have been growing at a rate of approximately 12 to 15 percent for the past five years, putting a major strain on the trucking industry and leading to heightened investment in autonomous truck research and development. The long-term impacts of modified supply chains and shipping demands caused by the COVID-19 global pandemic may provide some beneficial outcomes due to the urgent demand placed on the freight industry to respond. At the same time, anybody with a driver's license and car can now become a delivery driver for companies like DoorDash and Instacart through a simple registration process. These recent and continuing developments relating to freight delivery have implications for transportation planning and are trend worthy and notable for the MPO.

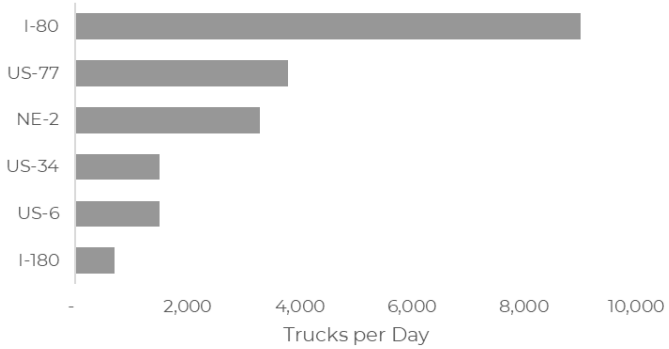
Truck Freight

Truck freight is the most visible, and most common, form of delivering goods to customers in Lincoln and Lancaster County. Activities generating high truck traffic—especially grain elevators and warehousing operations—were historically located on the periphery of the city. Many, if not most of these, have been absorbed into Lincoln as the city's corporate limits extend outward. Currently, the primary truck routes through the region include all or portions of:

- I-80
- US-6
- US-34
- US-77
- Nebraska Hwy 2
- Nebraska Hwy 79
- 14th Street/ Warlick Blvd (L55W)
- North 56th Street (L55X)
- 84th Street

Today I-80, I-180, US-34, NE-2, US-77, and US-6 all exhibit high commercial truck traffic. **Figure 4.44** shows the average trucks per day for these Major Truck Corridors, and **Figure 4.47** shows the primary and secondary truck routes, along with the major truck destinations.

Figure 4.44 Major Truck Corridors



Source: NDOT for Truck Average Daily Traffic, 2020

The Nebraska State Freight Plan designated a Critical Freight Corridor network for Nebraska. This network includes corridors on either or both the Key Freight Corridor network and Critical Urban Freight

Corridor/Critical Rural Freight Corridor (CUFC/CRFC) network. The Key Freight Corridor network includes roadways that facilitate statewide and interregional truck travel—all of Nebraska's interstate highways and specific State routes and United States Highway routes.

As part of complying with the FAST Act, every State must designate a CUFC/CRFC network as part of the National Highway Freight Network (NHFN). The purpose of the CUFC/CRFC network is to provide connectivity between important urban and rural freight generators and the NHFN. In designating this network, NDOT actively engaged MPO representatives throughout the entire process to provide their insights and to ensure that the most important routes in their respective areas were considered.

Lincoln South Beltway represents the CRFC route, while the CUFC includes portions of US-77, US-6, L55X/Old US-77, and NW 12th Street. The Key Freight Corridor routes consist of I-80, I-180, NE-2, US-6, and a portion of US-77.

Rail Freight

The majority of rail freight originating in Lancaster County is heavy, bulky agricultural product. Grain elevators and mills within Lincoln and throughout Lancaster County serve as the primary customers of railroad transportation services. The BNSF Railway serves nine grain elevators throughout Lancaster County and five in Lincoln. Much of the other freight entering or passing through the County is coal headed for power plants.

Air Freight

While the Lincoln Airport is the County's major air facility, Omaha's Eppley Airfield currently serves much of the air freight needs for Lincoln and Lancaster County. Air freight entering Lincoln Airport arrives through passenger service in small loads. United States Postal Service (USPS) mail is delivered to Lincoln through passenger service. USPS mail is not regularly shipped out of the Lincoln Airport, but rather it is trucked to Omaha's Eppley Airfield for processing. The majority of private parcel delivery service is also handled through Omaha's Eppley Airfield.

Pipeline Freight

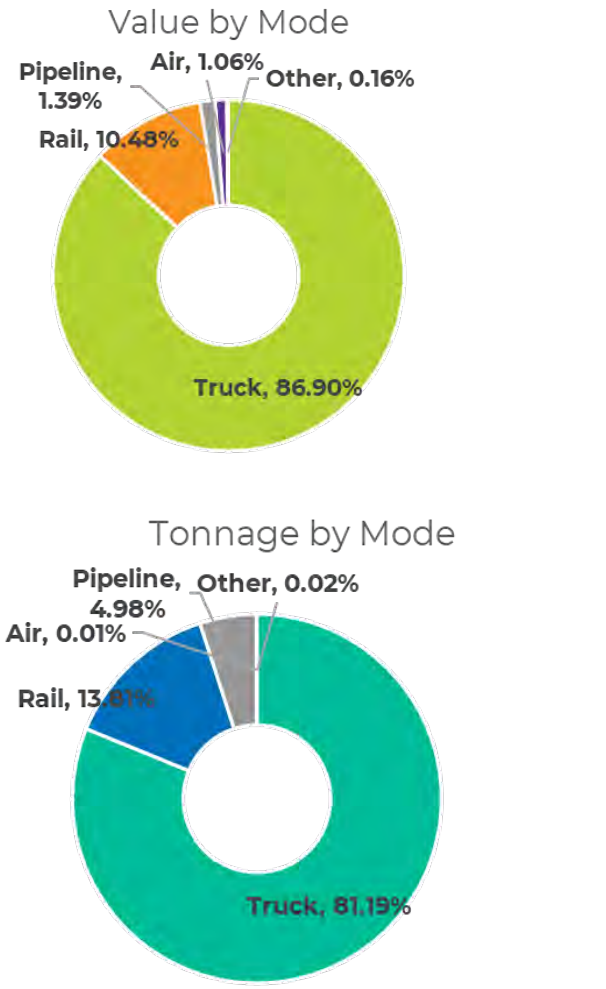
There are approximately 165 miles of gas transmission pipelines and 145 miles of hazardous liquid pipelines in Lincoln and Lancaster County. The majority transport petroleum or natural gas products. One of the lines transports anhydrous ammonia, which is a product used in agricultural production. Eight operators are responsible for the control of the commodities through these pipelines in Lancaster County.

Freight Flows

More than 24 million tons of freight, valued at $19.9 billion, move mostly over highway and rail in the metropolitan area annually. **Figure 4.45** shows the freight flows in tonnage and value by transportation mode.



Figure 4.45 Freight Movement by Tons and Value (2015)

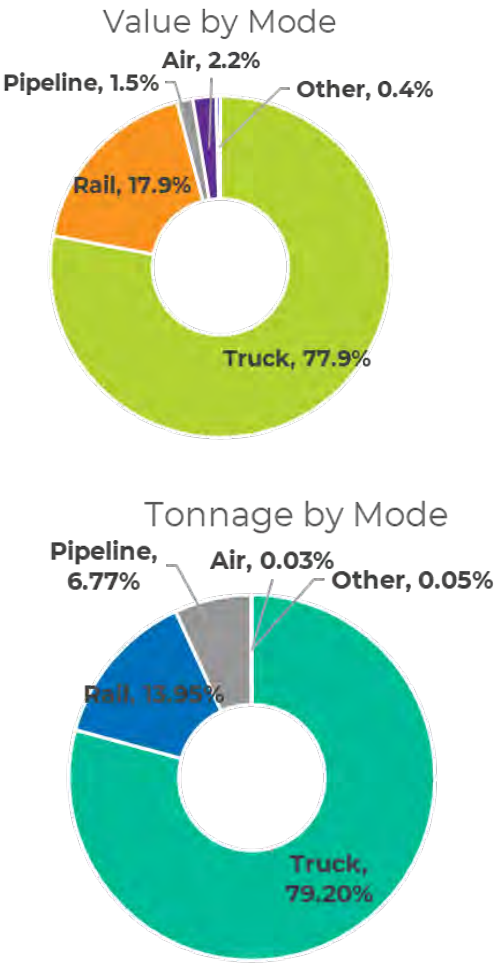


Source: FHWA Freight Analysis Framework 4.2; CS Analysis, 2017

In 2015, trucks transported the largest share of freight by weight at 81.19 percent and value at 86.90 percent. Rail accounted for the second highest modal share by weight at 13.81 percent and value at 10.48 percent. Pipeline, air, and other modes represented the remaining share by weight at 5.00 percent and value at 2.62 percent.

According to the FHWA analysis, by 2045 it is projected that the transportation system will carry more than 32.3 million tons of freight annually, valued at $33.7 billion, an increase of 34 percent by tonnage and 69 percent by value. **Figure 4.46** shows the freight flows in tonnage and value by transportation mode.

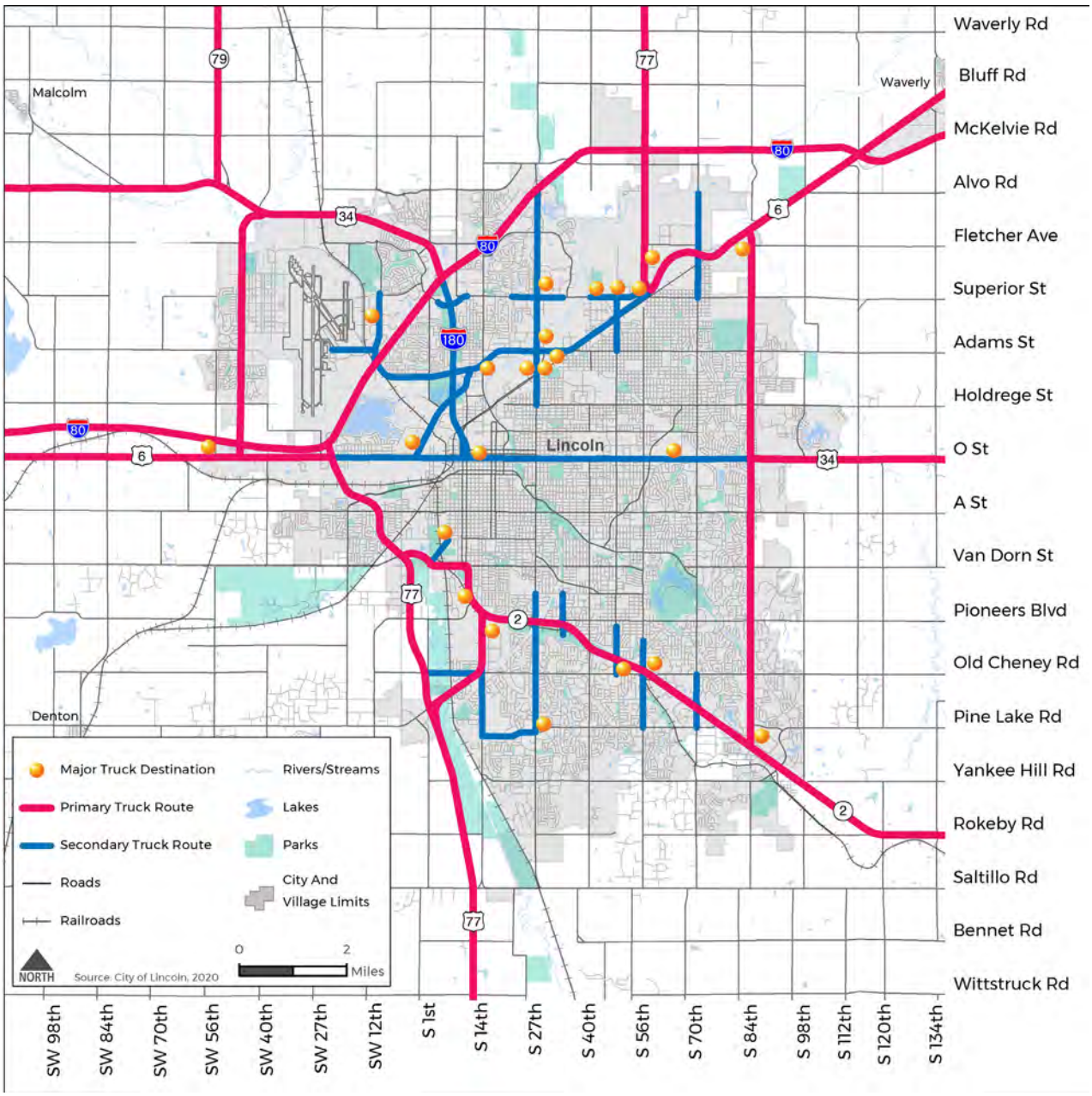
Figure 4.46 Freight Movement by Tons and Value (2045)



Source: FHWA Freight Analysis Framework 4.2; CS Analysis, 2017

Trucks are forecast to continue as the largest share of freight by weight at 79.20 percent and value at 77.94 percent. Similar to 2015, rail is projected to have the second highest modal share by weight at 13.95 percent and value at 17.94 percent, with other modes representing the remaining share by weight at 6.85 percent and value at 4.12 percent.

Figure 4.47 Truck Routes and Destinations



Existing Airports and Airfields

The Lincoln Airport is the major air facility servicing Lincoln, Lancaster County, and the region. It provides an important transportation link to national and international markets. It is located in the northwestern part of Lincoln, with access provided by Interstate and State highways.

The City of Lincoln's Airport Environs Noise District (**Figure 4.48**) and Airport Zoning Regulations have been established to ensure a balance between airport operations and the surrounding land uses. These regulations govern uses and structural characteristics compatible to the airport operations and minimize negative impacts on surrounding residents.

Smaller private airports and airfields are also located throughout the County (**Figure 4.49**). The distinction between an airport and an

airfield is generally the number of planes using the facility and who is allowed to use them. “Airfields” are limited to use by the residents of a single family home with not more than one plane. All other air facilities, including single family airfields that accommodate guest planes or house more than one plane, are termed “airports.” Within Lancaster County, airports and airfields are discouraged within close proximity to homes, schools, hospitals, or other areas potentially sensitive to noise and restricted by zoning.

Figure 4.48 Lincoln Airport Environs Noise District

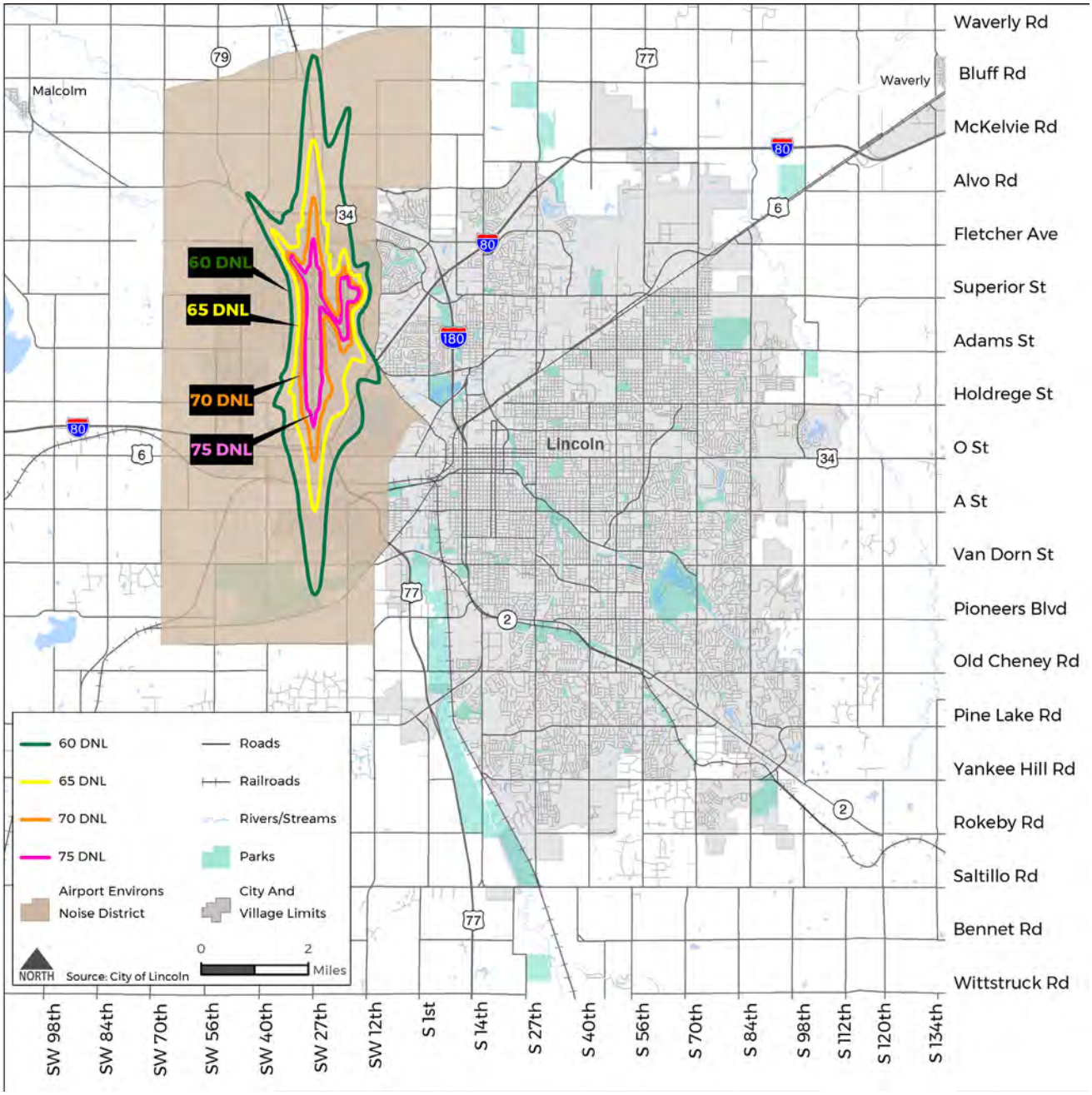
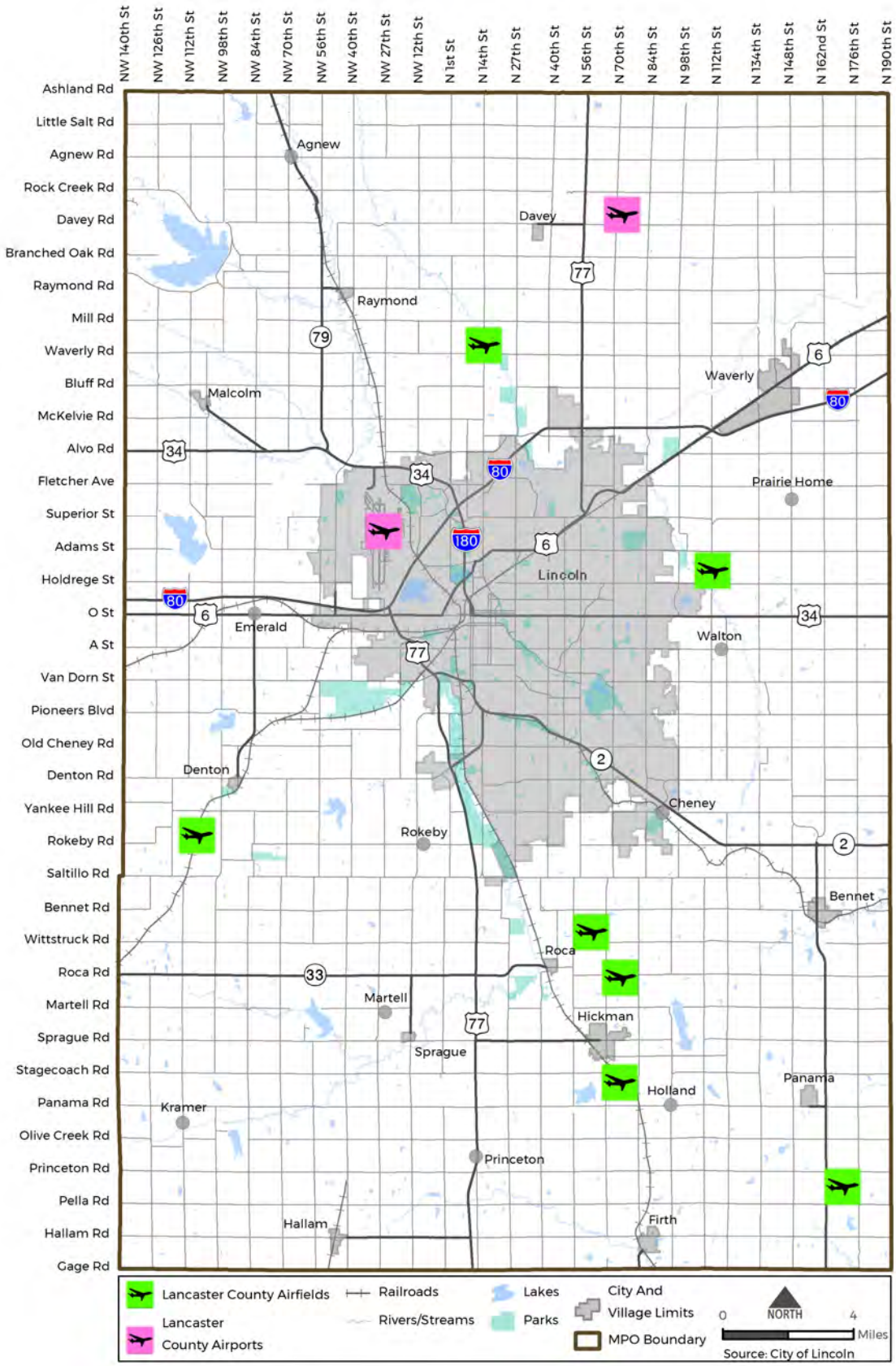


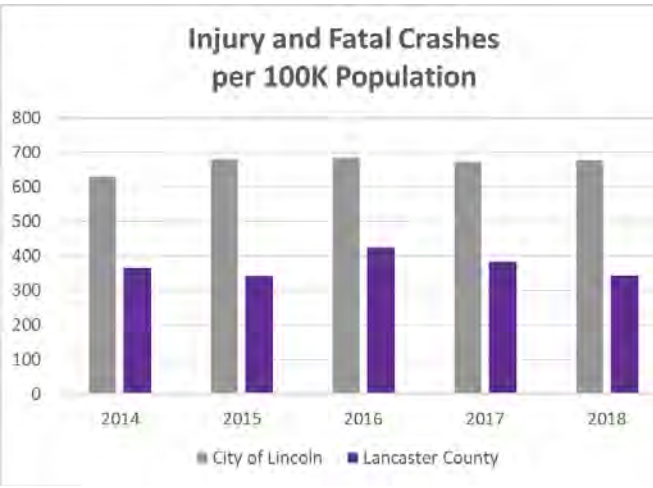
Figure 4.49 Lancaster County Airports and Airfields



Safety

Safety is a top priority not only for Lincoln and Lancaster County but also at state and federal levels. In accordance with Federal Regulations, each state is required to develop, prepare, submit and implement a comprehensive safety plan. The **Nebraska Strategic Highway Safety Plan**, developed in collaboration with public and private agencies, has identified Critical Emphasis Areas that will require the continuation of existing or implementation of new programs Understanding crash patterns that have occurred over time is important to planning safety improvements. State crash data collected over the five-year time period between 2014 and 2018 show that there were approximately 43,500 crashes in Lincoln and 1,400 in Lancaster County, an average of roughly 9,000 crashes per year. Crashes that involve injuries or fatalities are an important focus for safety study. Data represented in **Figure 4.50** indicate the average number of crashes per 100,000 population involving an injury or fatality, which was approximately 670 in Lincoln and approximately 370 in unincorporated Lancaster County per year.

Figure 4.50 Injury and Fatality Crashes per 100K Population



Source: Lincoln MPO LRTP Performance Report, 2018

Figure 4.51 shows the severity of crashes in the region over time. Between 2014 and 2018, there were 9,947 crashes resulting in injury (INJ) or fatality (FAT) – approximately 22 percent – and the remaining crashes involved property damage only (PDO). Although crash amount increases seen in 2015 have not been reduced, the Allstate Insurance 2019 "America's Best Drivers Report" ranks Lincoln in the top 10 percent of the safest driving cities in the country.

Figure 4.51 Crash Severity



Source: Lincoln MPO LRTP Performance Report, 2018

The City of Lincoln also performed **Crash Data Analysis** to further identify patterns that could be useful for screening and planning future improvements. Crash data available for 2012 to 2016 were assessed against estimated daily traffic volumes entering each intersection to establish crash rates. The approach provided a measure for rating how well each intersection performed from a safety context with reference to other similar intersections. A critical crash rate is determined by the average crash rate for similar intersections and results in a

threshold value for comparison. This method also controls against low volume intersection bias. The analysis identified that 607 of the 6,227 intersection exceed the critical crash rate threshold. **Table 4.7** presents a summary of critical crash analysis.

Table 4.7 City Intersections Above Critical Crash Rates

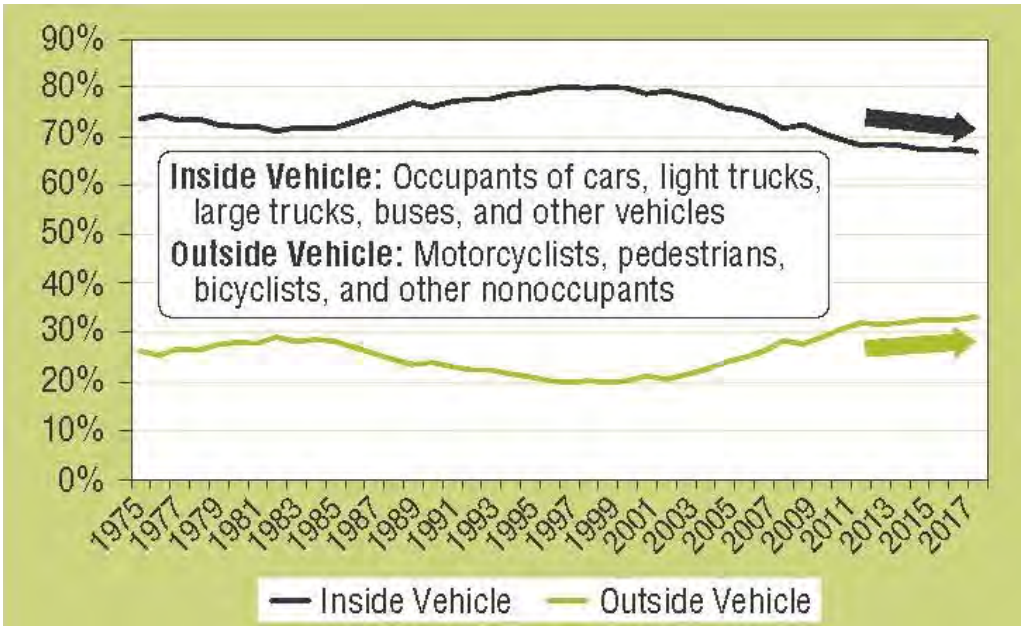
Class	Control Type	Intersections Above Critical	Percent of Intersections Above Critical
LOCAL/LOCAL	STOP SIGN	15	10%
	YIELD SIGN	8	9%
	NO CONTROLS	288	8%
	SUBTOTAL	311	8%
COLLECTOR/LOCAL	STOP SIGN	18	11%
	YIELD SIGN	2	6%
	NO CONTROLS	22	8%
	SUBTOTAL	42	9%
COLLECTOR/COLLECTOR	TRAFFIC SIGNAL	2	18%
	STOP SIGN	1	6%
	SUBTOTAL	3	5%
MAJOR/LOCAL	TRAFFIC SIGNAL	9	18%
	STOP SIGN	168	14%
	SUBTOTAL	177	14%
MAJOR/COLLECTOR	TRAFFIC SIGNAL	12	14%
	STOP SIGN	14	19%
	SUBTOTAL	26	16%
MAJOR/MAJOR	TRAFFIC SIGNAL	35	18%
	STOP SIGN	12	30%
	ROUNDABOUT	1	11%
	SUBTOTAL	48	20%
ALL INTERSECTIONS	TRAFFIC SIGNAL	58	17%
	STOP SIGN	228	13%
	YIELD SIGN	10	8%
	NO CONTROL	308	8%
	ROUNDABOUT	3	13%
	SUBTOTAL	607	10%

Vulnerable road users present additional safety considerations for the transportation network. Even though the overall crash rate by vehicle miles traveled has declined for many years, the proportion of crashes and fatalities involving pedestrians and bicyclists has steadily increased nationwide since 1996 (**Figure 4.52**). Perceived and demonstrated safety are key elements of successful bicycle and pedestrian networks. People may choose to ride or walk only if they feel safe and comfortable on the bikeway and pedestrian

networks. The National Highway Traffic Safety Administration has documented that the overall proportion of transportation fatalities associated with motorcyclists, pedestrians, bicyclists and other nonoccupants has grown nationwide by more than 10 percent since 2000 compared to travelers inside vehicles.

According to the City of Lincoln Crash Data Analysis for 2012 to 2016, crashes involving pedestrians and bicyclists accounted for 3 percent of all crashes, but 12 percent of all severe crashes, which is disproportionate for the mode choice. These vulnerable road users, similar to bicyclists, construction workers and others experience a greater risk of injury or fatality within the transportation network compared to those inside a vehicle. Pedestrian and Bike Crash frequency is one of five intersection characteristics the City of Lincoln uses to prioritize safety countermeasures.

Figure 4.52 National Proportion of Fatalities Inside/Outside Vehicle, 1997–2018



Source: National Highway Traffic Safety Administration Fatality Analysis Reporting System (FARS), 2017 Final File

5. Needs Based Plan

The Future Land Use Plan from PlanForward is the basis for transportation planning in Lancaster County. This plan defines the extent of the urban area that is expected by the year 2050, and what land uses are anticipated with the new growth area. It also defines the number of expected new dwelling units and where those units will be located. The LRTP is designed to support these land uses and provide transportation alternatives that will increase the mobility, safety, and livability of the community.

The Needs Based Plan identifies current and future programs and projects in the transportation system that would be necessary to address all the transportation needs of Lincoln and Lancaster County through 2050. Current and future needs and candidate projects for the transportation system have been compiled from various sources that include:

- 2040 LRTP
- Current planning studies
- MPO planning committees
- MPO technical tools (e.g., the 2050 Travel Demand Model, GIS analysis and engineering studies)
- Community input through Focus Group meetings, public meetings, and online surveys

Surface transportation needs cover all modes, including roadway, transit, bicycling, walking, and rail (specifically the railroad crossing needs). The current and future conditions described in **Chapter 4** help to define a Needs Based Plan for the Lincoln MPO. This includes the transportation projects that could be constructed and the programs that could be implemented to realize the transportation vision if funding limitations were not a consideration. The Needs Based Plan includes more than $1.9 billion in roadway capital projects and nearly $60 million in trail projects (in 2021 dollars), among other needs.

One primary responsibility of the Long Range Transportation Plan is the operation and maintenance of the new and existing street and roadway system. The public input process identified maintenance as the number one priority. Regular maintenance, monitoring of the functionality of the existing system, and implementation of lower cost improvements designed to alleviate congestion will expand the transportation system and functional benefits of adding new roads beyond localized improvements.

Congestion Management Process

Federal requirements state that metropolitan areas with more than 200,000 people, known as Transportation Management Areas (TMAs), must maintain a Congestion Management Process (CMP) and use it to make informed transportation planning decisions.

The Lincoln MPO views congestion management in the context of the overall transportation planning process and as a tool to ensure that existing and new transportation infrastructure is effectively managed and maintained. The CMP is implemented as a feedback process to inform and understand congestion within the TMA and the appropriate strategies to address it.

The CMP highlights an ongoing and iterative process to use strategies that span various timelines and resource demands. Lincoln MPO's current CMP (adopted in 2020) was used as a guide in identifying strategies to address existing and future congestion (as identified in **Chapter 4**). These strategies are reflected in the projects and programs of the Needs Based Plan.

Roadway

Cars and trucks will continue to be a primary mode of travel for Lincoln and Lancaster County residents throughout and beyond the planning period of this Plan. These vehicles depend on the expansion and continued maintenance of a street and road network allowing ease of mobility throughout the region. Although investment in other modes of transportation may decrease reliance on the automobile, streets and highways will continue to form the backbone of the region's transportation system. The roadway needs are divided into three primary categories: Urban Area Streets, Rural Roads, and NDOT Highways.

Urban Area Streets

This subsection details the long range program for maintaining and improving the urban area street system. This effort involves numerous programs, projects and studies taking many years and costing millions of dollars to complete. Close planning and coordination among various federal, state and local government agencies and departments will be needed.

The planned future urban area street system consists of the following elements:

- Operations & maintenance
- Road & bridge rehabilitation
- Capital projects (including development related projects)
- Two plus center turn lane projects
- Intelligent Transportation Systems (ITS) and technology
- Rail crossing projects
- East Beltway preservation

Operations & Maintenance

The Operations program meets the day-to-day requirements of the urban street system. The street maintenance program includes services and functions like street sweeping, snow removal, stormwater, mowing, crack sealing, and pothole repair. Monitoring system performance is an important part of the Operations program. Data are gathered regularly to monitor traffic flow, crash rates, and intersection functionality. This program also conducts engineering studies to identify future alignments, intersection design, and minor intersection improvements. Continuation of the current Operations and Maintenance program is estimated to cost $1.08 billion through 2050.



LTU's Operations and Maintenance program is challenging by inflating costs associated with materials and employee wages and healthcare costs.

Road & Bridge Rehabilitation

The Rehabilitation program includes the repair of arterial and residential roads when the pavement conditions deteriorate to an unacceptable level. A pavement condition rating system determines which road surfaces are in most need of repair. Also included in the Rehabilitation program is bridge rehabilitation and signal replacements. It is important to note that money invested today in the ongoing maintenance and repair of the street system saves a significant amount of money in the future by avoiding the costs associated with full reconstruction of roadways. The City's target is to rehabilitate 5 percent of the arterial street system each year and 3 percent of the residential street system. That is, each arterial street would be rehabilitated once every 20 years, and each residential street would be rehabilitated every 33 years. The costs associated with achieving this goal will increase as the system ages, as the community grows and adds miles of streets to be maintained, and as construction costs increase over time.

This program is challenged in many ways. Inflation of project costs over the last several years has outpaced the growth in revenue available. The lane-miles of roadway have been increasing much faster than the budget. State gas taxes, a major source of revenue, have not been growing to keep pace as people react to higher gas prices by reducing trips and purchasing more fuel efficient vehicles.

Capital Projects

More than $1.07 billion (in 2021 dollars) in candidate roadway capital projects displayed on **Figure 5.1** are listed in **Table 5.1**. These capital projects include major widening projects, new/reconstructed interchange and major intersection projects, construction of the East Beltway, urban improvement projects (bringing rural roads to two lane urban standards), and other corridor improvements. These projects cumulatively would address the most future congestion problems identified in **Chapter 4**. As described in **Chapter 7**, some of these projects have funding commitments and are anticipated to be constructed within the next four years.

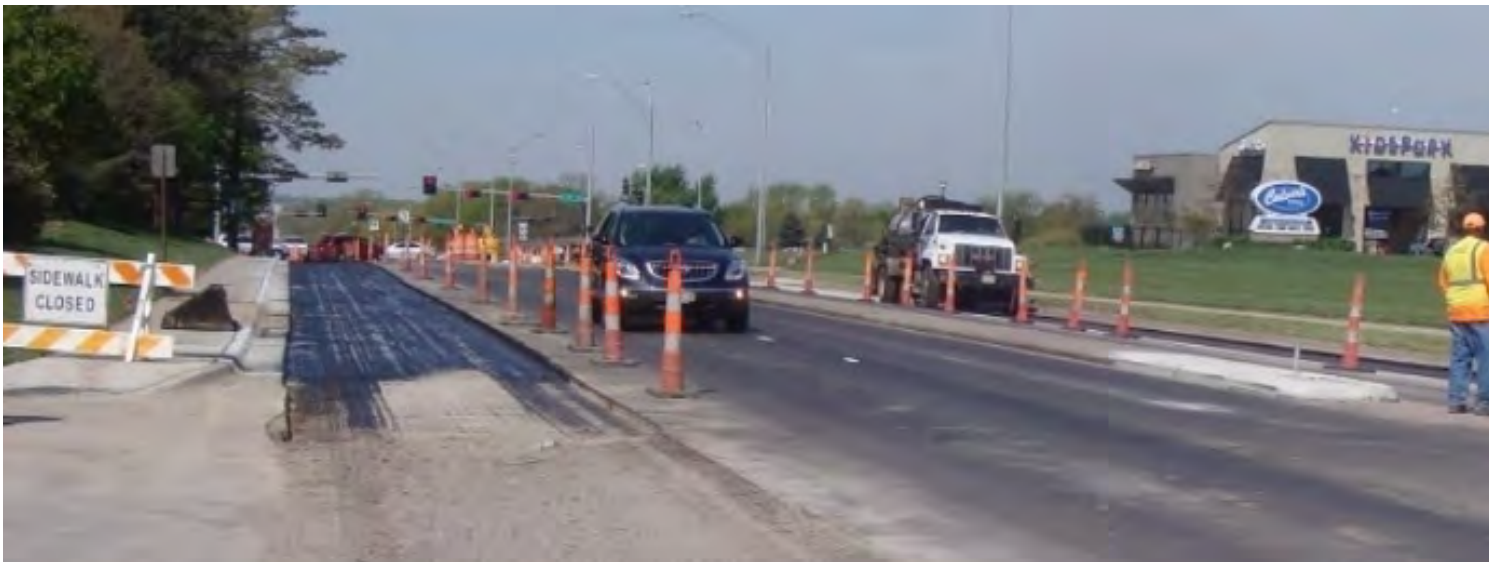


Figure 5.1 Urban Area Roadway Capital Projects

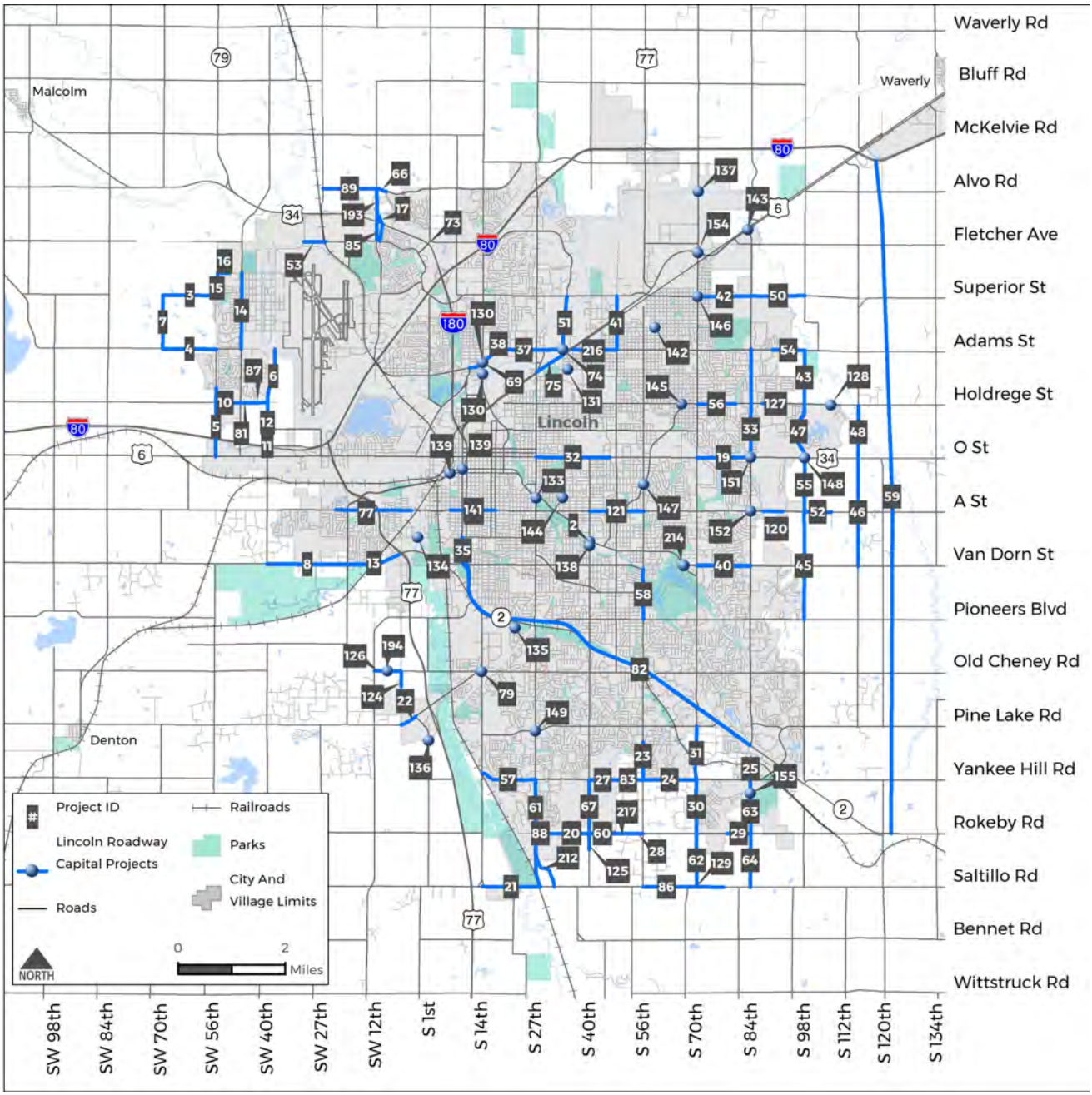


Table 5.1 Urban Area Roadway Capital Projects

ID	Street Name	Limits	Description	Project Cost (2021$)
2	S 40th Street	Normal Blvd and South Street	Major intersection area work	$10,000,000
3	W Superior Street	NW 70th Street to NW 56th Street	2 lanes + intersection improvements	$7,000,000
4	W Adams Street	NW 70th Street to NW 56th Street	2 lanes + intersection improvements	$7,000,000
5	NW 56th Street	W Partridge Lane to W "O" Street	2 lanes + intersection improvements	$9,000,000
6	NW 38th Street	W Adams Street to W Holdrege Street	2 lanes + intersection improvements	$7,200,000
7	NW 70th Street	W Superior Street to W Adams Street	2 lanes + intersection improvements	$7,000,000
8	W Van Dorn Street	SW 40th Street to Coddington Avenue	2 lanes + intersection improvements	$10,500,000
10	W Holdrege Street	NW 56th Street to NW 48th Street	2 lanes + intersection improvements	$5,445,000
11	NW 40th Street	W Vine Street to US-6, including I-80 Overpass	Overpass	$11,250,000
12	NW 40th Street	W Holdrege Street to W Vine Street	2 lanes + intersection improvements	$3,500,000
13	W Van Dorn Street	Coddington Avenue to US-77	2 lanes + intersection improvements	$6,900,000
14	NW 48th Street	Adams Street to Cuming Street	2 lanes + intersection improvements	$10,000,000
15	NW 56th Street	W Cuming Street to W Superior Street	2 lanes + intersection improvements	$2,900,000
16	W Cuming Street	NW 56th Street to NW 52nd Street	2 lanes + intersection improvements	$1,600,000
17	NW 12th Street	Aster Road to Missoula Road	2 lanes + turn lanes	$2,300,000
19	O Street (US-34)	Wedgewood Drive to 98th Street	Intersection Improvements	$6,080,000
20	Rokeby Road	S 31st Street to S 40th Street	2 lanes + intersection improvements	$3,000,000
21	Saltillo Road	S 14th Street to S 27th Street	2 lanes + intersection improvements, reconstruction to address flooding	$7,600,000
22	W Denton Road	Amaranth Lane to S Folsom Street	2 additional lanes	$2,200,000
23	S 56th Street	Thompson Creek Boulevard to Yankee Hill Road	4 lanes + intersection improvements	$9,800,000

ID	Street Name	Limits	Description	Project Cost (2021$)
24	Yankee Hill Road	S 56th Street to S 70th Street	2 lanes + intersection improvements	$6,900,000
25	S 84th Street	Amber Hill Road to Yankee Hill Road	4 lanes + intersection improvements	$5,700,000
27	Yankee Hill Road	S 40th Street to S 48th Street	2/4 lanes + intersection improvements	$5,700,000
28	Rokeby Road	S 48th Street to S 56th Street	2 lanes + intersection improvements	$3,500,000
29	Rokeby Road	S 77th Street to S 84th Street	2 lanes + intersection improvements	$3,500,000
30	S 70th Street	Yankee Hill Road to Rokeby Road	2 lanes + intersection improvements	$14,000,000
31	S 70th Street	Pine Lake Road to Yankee Hill Road	4 lanes + intersection improvements	$14,000,000
32	O Street (US-34)	Antelope Valley N/S Rdwy. (19th St.) to 46th Street	Intersection Improvements	$6,840,000
33	N 84th Street	O Street to Adams Street	Intersection Improvements	$15,200,000
35	S 9th Street	Van Dorn Street to South Street	3 lanes + intersection improvements	$5,300,000
37	Cornhusker Hwy (US-6)	N 20th Street to N 33rd Street	Intersection Improvements per Corridor Enhancement Plan	$1,200,000
38	Cornhusker Hwy (US-6)	N 11th Street to N 20th Street	Intersection Improvements per Corridor Enhancement Plan	$975,000
40	Van Dorn Street	S 70th Street to S 84th Street	Intersection Improvements	$4,560,000
41	N 48th Street	Adams Street to Superior Street	4 lanes + intersection improvements	$14,100,000
42	Havelock Avenue	N 70th Street to N 84th Street	2 lanes + intersection improvements	$7,000,000
43	N 98th Street	Adams Street to Holdrege Street	2 lanes + intersection improvements	$7,000,000
45	S 98th Street	A Street to Pioneers Boulevard	4 lanes + intersection improvements	$28,000,000
46	S 112th Street	US-34 to Van Dorn Street	2 lanes + intersection improvements	$14,000,000
47	N 98th Street	Holdrege Street to O Street	Additional 2 lanes	$7,500,000
48	N 112th Street	Holdrege Street to US-34	2 lanes + intersection improvements	$7,000,000

ID	Street Name	Limits	Description	Project Cost (2021$)
50	Havelock Avenue	N 84th Street to N 98th Street	2 lanes + intersection improvements	$7,000,000
51	N 33rd Street	Cornhusker Hwy to Superior Street	4 lanes + int. impr. & bridge	$20,000,000
52	A Street	S 98th Street to 105th Street	2 lanes + intersection improvements	$3,500,000
53	W Fletcher Avenue	NW 31st Street to NW 27th Street	2 lanes + intersection improvements	$2,800,000
54	Adams Street	N 90th Street to N 98th Street	2 lanes + intersection improvements	$4,300,000
55	S 98th Street	US-34 (O Street) to A St	4 lanes + intersection improvements	$14,000,000
56	Holdrege Street	N 70th Street to N 80th Street	4 lanes + intersection improvements	$10,000,000
57	Yankee Hill Road	S 14th Street to S 27th Street	Additional 2 lanes	$7,200,000
58	S 56th Street	Van Dorn Street to Pioneers Boulevard	4 lanes + intersection improvements	$13,200,000
59	East Beltway	Nebraska Hwy 2 to I-80	New 4 lane divided highway	$315,000,000
60	Rokeby Road	S 40th Street to Snapdragon Road	2 lanes + intersection improvements	$2,152,000
61	S 27th Street	Yankee Hill Road to Saltillo Road	2 lane realignment + intersection improvements	$14,100,000
62	S 70th Street	Rokeby Rd to Saltillo Rd	4 lanes + intersection improvements	$14,000,000
63	S 84th Street	Yankee Hill Road to Rokeby Road	4 lanes + intersection improvements	$14,000,000
64	S 84th Street	Rokeby Road to Saltillo Road	4 lanes + intersection improvements	$14,000,000
66	W Alvo Road	NW 12th Street to Tallgrass Parkway	2 lanes + intersection improvements	$1,300,000
67	S 40th Street	Yankee Hill Road to Rokeby Road	3 lane section with raised median and turn lanes as appropriate	$14,000,000
75	Salt Creek Roadway	State Fair Park Dr to Cornhusker Hwy	6 lanes + intersection improvements	$26,000,000
77	W A Street	SW 36th Street to SW 5th Street	2 lanes + intersection improvements	$14,000,000
79	S 14th Street/ Warlick/Old Cheney	14th/Warlick/Old Cheney	Intersection improvements and grade separation	$26,400,000

ID	Street Name	Limits	Description	Project Cost (2021$)
81	W Holdrege Street	NW 48th Street to Chitwood Lane (east 1/4 mile)	2 lanes + intersection improvements	$2,000,000
82	Nebraska Hwy 2	S 84th Street to Van Dorn Street	Corridor improvements (TBD by Corridor Study)	$50,000,000
83	Yankee Hill Road	S 48th Street to S 56th Street	2/4 lanes + intersection improvements	$2,200,000
85	NW 12th Street	Fletcher Avenue to Aster Road with Overpass of US-34	2 lanes + overpass	$9,370,000
86	Saltillo Road	S 56th Street to S 70th Street	2 lanes + intersection improvements	$7,000,000
87	W Holdrege Street	Chitwood Lane to NW 40th Street	2 lanes + intersection improvements	$1,950,000
88	Rokeby Road	S 27th Street to S 31st Street	2 lanes + intersection improvements	$2,400,000
89	W Alvo Road	NW 27th Street to NW 12th Street	2 lanes + intersection improvements	$7,100,000
120	A Street	S 89th Street to S 93rd Street	2 lanes with raised median, roundabouts at 89th St and 93rd St	$3,000,000
121	A Street	S 40th Street to S 56th Street	Intersections improvements 40th, 48th and 50th/Cotner and widening of A Street from 40th to 48th for a center turn lane	$10,500,000
124	S Folsom Street	W Old Cheney Road to 1/4 mile south	Paving one lane in each direction with raised center medians; roundabout at the future Palm Canyon Road intersection, and intersection improvements at W Old Cheney and S Folsom	$2,400,000
125	S 40th Street	Rokeby Road to 1/4 south	2 lanes with raised median and roundabout 1/4 mile south of Rokeby Rd	$3,400,000
126	W Old Cheney Road	S Folsom Street to SW12th Street	2 lanes with raised median	$3,500,000
127	Holdrege Street	87th Street to Cedar Cove	2 lanes with raised median	$2,300,000
128	Holdrege Street	N 104th Street	Roundabout	$1,600,000
129	Saltillo Road	S 70th Street to 1/2 mile east	Roadway and intersection improvements including on S 7th St from Saltillo Rd to Carger Ln	$7,095,000

ID	Street Name	Limits	Description	Project Cost (2021$)
130	N 14th Street	Cornhusker Hwy (and N Antelop Valley Pkwy and Oak Creek)	Bridge replacements	$10,000,000
131	Huntington Avenue	Dead Mans Run	Bridge replacement	$3,500,000
133	S 27th Street	SE Upper Salt Creek	Bridge replacement	$4,500,000
134	W South Street	Salt Creek	Bridge replacement	$3,200,000
135	Southwood Drive	Beal Slough	Bridge replacement	$2,200,000
136	S 1st Street	Cardwell Branch Salt Creek	Bridge replacement	$850,000
137	N 70th Street	Salt Creek	Bridge replacement	$3,000,000
138	S 40th Street	Antelope Creek	Bridge replacement	$2,500,000
139	Rosa Parks Way	K Street and L Street	Bridge rehab and preventive maintenance	$3,400,000
141	A Street	S 6th Street to S 17th Street	Intersections improvements at 13th and 17th and widening from 6th to 17th for a center turn lane	$6,586,000
142	Fremont Street	Touzalin Avenue	Remove existing traffic signal and construct roundabout	$2,700,000
143	N 84th Street	Cornhusker Hwy (US-6)	Intersection improvements	$5,500,000
144	S 33rd Street	D Street	Remove existing traffic signal and construct mini roundabout	$1,000,000
145	Cotner Boulevard	O Street to Starr Street	Intersection improvements at Starr and Holdrege and widening, pavement repair, and mill and overlay	$6,671,000
146	N 70th Street	Havelock Avenue	Remove existing traffic signal and construct roundabout	$2,000,000
147	S 56th Street	Cotner Boulevard/Randolph Street	Remove signal and evaluate roundabout or new signal	$2,750,000
148	O Street (US-34)	98th Street	Construct roundabout with S 98th Street project OR when signal otherwise warranted	$2,750,000
149	S 27th Street	Pine Lake Road	Intersection Improvement: eastbound right-turn lane	$760,000

ID	Street Name	Limits	Description	Project Cost (2021$)
151	O Street (US-34)	84th Street	Intersection Improvement: dual eastbound left-turn lanes and eastbound right-turn lane and widening to east; maybe northbound right-turn lane	$2,280,000
152	S 84th Street	A Street	Intersection Improvements: dual northbound left turn lanes and northbound right turn lane	$1,520,000
154	Cornhusker Hwy (US-6)	N 70th Street / Railroad viaduct	Intersection/viaduct reconfiguration	$10,000,000
155	S 84th Street	Yankee Woods Drive	Roundabout	$2,750,000
193	NW 12th Street	W Alvo Road to Missoula Road	2 lanes + turn lanes	$2,400,000
194	W Old Cheney Road	SW 9th Street	Roundabout	$900,000
212	27th Street Realignment	Saltillo Road to Rokeby Road	New Two Lane Road	$20,200,000
214	Normal Boulevard	Van Dorn Street	Intersection improvements	$750,000
216	Adams Street	N 36th Street to N 49th Street	Widening for a center turn lane and pavement rehabilitation	$3,010,000
217	Rokeby Road	Snapdragon Road to S 48th Street	2 lanes + intersection improvements	$10,330,000

Two Plus Center Turn Lane Projects

The Two Plus Center Turn Lane Program, or "2 + 1" program, has been a successful strategy for increasing the capacity of a two-lane roadway by approximately 50 percent and minimizing traffic congestion while improving safety and preserving the character and viability of the built environment for established neighborhoods.

The City of Lincoln has routinely been adding a center left turn lane as part of programmed street rehabilitation along two-lane minor arterials and some collectors. **Table 5.2** lists the remaining 14 miles of two plus center turn lane projects estimated to cost approximately $51 million (in 2021 dollars). The top three projects (shaded) are planned for construction in the next four years as part of federal aid projects.

Table 5.2 Two Plus Center Turn Lane Projects

Street Name	Limits	Length (miles)	Project Cost (2021$)
Adams Street	39th Street to 46th Street	0.5	$1,900,000
A Street	6th Street to 17th Street	0.85	$3,200,000
A Street	40th Street to 48th Street	0.44	$1,700,000
Havelock Avenue	60th Street to 63rd Street	0.25	$900,000
A Street	17th Street to 27th Street	0.75	$2,800,000
Van Dorn Street	11th Street to 27th Street	1.25	$4,700,000
Cotner Boulevard	48th Street to South Street	0.46	$1,700,000
S. 40th Street	L Street to C Street	0.5	$1,900,000
Fremont Street	48th Street to 70th Street	1.5	$5,600,000
S. 33rd Street	South Street to High Street	0.72	$2,700,000
Military Road	10th Street to 14th Street	0.16	$600,000
S. Folsom Street	A Street to South Street	0.5	$1,900,000
Leighton Avenue	48th Street to 70th Street	1.5	$5,600,000
Y Street	17th Street to 27th Street	0.66	$2,500,000
W. Adams Street	1st Street to 14th Street	0.9	$3,400,000
W. South Street	Coddington Avenue to Park Boulevard	1.55	$5,800,000
Calvert Street	48th Street to 56th Street	0.5	$1,900,000
N. 40th Street	Cornhusker Highway to Superior Street	0.58	$2,200,000

ITS and Technology

A goal of the Lincoln MPO is to advance the development and application of ITS technologies across the region, which will increase highway safety, mobility, security, economic health and community development, while preserving the environment.

ITS technologies are cost-effective and relatively quick to deploy. Solutions like synchronized or adaptive traffic signals, vehicle-to-infrastructure technologies, and vehicle-to-vehicle technologies are intended to avoid motor vehicle crashes and enable a wide range of other safety, mobility, and environmental benefits. Emerging applications of connected vehicles are intended to accommodate the unique needs and properties of all vehicles, operations, institutions, and travelers.

The Lincoln MPO CMP recommends deployment of ITS solutions to address congestion in the region. One example of system operations technologies implemented throughout the city is the Green Light Lincoln Program, which has resulted in significant improvements to the overall traffic signal system. Green Light Lincoln requires many upgrades to, or complete replacement of, the existing traffic signal system and equipment. Key components include:

- New signal system management software and hardware
- New intersection detection systems
- New signal displays and signal phasing alternatives
- ITS deployment
- Corridor signal optimization (re-timing) program
- Traffic monitoring and incident management capability improvements

Green Light Lincoln Performance

Green Light Lincoln includes traffic signal equipment and signal timing upgrades. The program has resulted in the following annual savings as of 2021:

- 61.4 million vehicle stops
- 1.15 million hours of delay
- 1.2 million gallons of fuel
- $22.3 million dollars
- 111,000 kilograms of emissions

Benefits include reduced travel times and driver frustration, delays and stops; lower levels of vehicle emissions; reduced fuel consumption; fewer crashes and improved traffic flow. Additional cost savings result from fewer major street widening projects.

To accomplish this, ITS technology can be used to assist in delivering and disseminating real-time data on the conditions of traffic flow that can then be shared and used by motorists and the proper authorities to effectively address changing conditions on the streets. One of the greatest benefits is the safe, secure and continuous movement of people and goods during emergencies that depends on well-coordinated system operations. Applicable ITS technologies are expected to be of enormous benefit, particularly when they are integrated with the information and communication systems of public safety agencies.

Rail Crossing Projects



The City and County are served by both freight and passenger rail service. While the railroad lines through Lincoln and Lancaster County are critically important to the local economy, many railroad crossings with the street network are at-grade, resulting in safety problems and travel delays. Continuous study and analysis of potential projects that will reduce rail/vehicular/pedestrian conflicts at street crossings should continue.

The Lincoln/Lancaster County Railroad Transportation Safety District (RTSD) identifies railroad crossings in need of work, prioritizes projects, and conducts studies to plan future work. The Needs Based Plan for railroad crossings includes the addition of crossing gates and flashers at at-grade railroad crossings (approximately $400,000 per crossing), railroad crossing surface upgrades (approximately $40,000 every 20 years for each crossing), as well as grade separations. The at-grade crossings listed in **Table 5.3** have a daily exposure (number of vehicles times number of trains per day) above 100,000. The top two projects (shaded) are planned for construction in the next four years as part of the 33rd and Cornhusker project.

Table 5.3 Candidate Railroad Grade Separated Crossing Projects

Street Crossing	Daily Exposure (Vehicles x Trains)
Adams Street	522,280
N. 33rd Street	490,820
Old Cheney Road	295,680
N. 70th Street	227,040
W. A Street	189,200
W. Pioneer Boulevard	172,320
Saltillo Road	160,296
N. 141st Street	139,260
W. Van Dorn Street	118,800
N. 44th Street	114,400
S. Folsom Street	110,440

East Beltway Preservation

The East Beltway (project 59 on **Figure 5.1**) would serve north and southbound traffic along a new roadway between Highway 2 and I-80. The design would meet the freeway, controlled access standard to provide an efficient and reliable roadway. It remains a local project at this time estimated to cost $315 million (in 2021 dollars) with no state or federal funding available to assist. At this time, the City and County should continue to fund a program for protecting the corridor where the future East Beltway is planned. However, no local funding is shown at this time for project construction. Continued evaluation of this corridor is important to identify any change in its priority and opportunities for state and federal funding.



Rural Roads

Lancaster County's roads and bridges form the backbone of the local economy. Most County roads in Lancaster County are developed along section line corridors, giving the County a general 1-mile grid pattern of roadways. These important farm-to-market and home-to-work routes connect Lancaster County's residents to economic opportunities, centers of education, and entertainment venues in the local market and to points beyond.

Close coordination between the Lancaster County Engineer's Office and MPO staff occurred during the development of the LRTP update to identify a needs based rural roads program. Safety is always a major concern. Population growth and increased recreational demands in the rural areas add to the volume of traffic. Grain trucks and other commercial vehicles are carrying heavier loads than ever before and create additional problems as roads experience greater transport weights.

These pressures lead to increased maintenance demands and the demand for improved pavement and modifications to road foundations. This is also true of the rural bridge needs. The decision to make improvements to the road surface is based on several factors including:

- Role of the road in the overall system
- Number of vehicles traveling the road daily
- Increased maintenance or decreased driver safety
- Type of traffic and weight of vehicles on the roadway
- Spacing or proximity to other paved roads

Anticipating Rural to Urban Transitions

Lincoln and Lancaster County implement public street right-of-way (ROW) and construction standards necessary to repair, maintain, and construct streets located within the 3-mile zoning jurisdiction of the City. This mutually beneficial approach produces a longer useful life for County road investments while accommodating future growth of the City. Lancaster County capital project funding should be allocated to support the agreed upon standard when paving rural principal arterial, rural minor arterial, rural major collector, and rural minor collector roads in the Lincoln – Lancaster County Comprehensive Plan. The roadway should be graded to accommodate a functional future width and paved with an alignment to accommodate two lanes of rural paving with urban culverts. This approach allows future widening and urban improvements and extends the useful life of the County's capital investment.



The rural roads program includes three program areas:

- Capital Projects
- Pavement Maintenance & Pipes
- Operations & Maintenance

Capital Projects

Rural road capital projects include paving projects, intersection improvements, major bridge rehabilitation, road rehabilitation, and two-lane widening projects to repair or rebuild currently paved roadways. In some cases, projects involve widening these roads to include wider lanes and paved shoulders. The candidate rural road capital projects displayed on **Figure 5.2** are listed in **Table 5.4**.

A total of $171 million (in 2021 dollars) in needs has been identified for the rural road capital projects. As detailed in **Chapter 7**, some of these projects have funding commitments and will be built within the next four years.

Pavement Maintenance & Pipes

The County manages 1,383 miles of rural roadways that vary greatly in width, alignment, and surface. Approximately 1,052 miles are gravel surfaced, 286 miles are paved, and 45 miles remain dirt roads. In addition, this program includes box culvert and pipe repair and maintenance, and preventative maintenance for bridges.

Due to budgetary constraints, the County cannot always perform all requested maintenance on roads, bridges, culverts, and pipes within the existing County road system. Lancaster County crews continually work on pavement preservation countywide throughout the year. Crews are on the roadways with personnel and equipment evaluating existing roads and bridges for upgraded treatments as needed.

Operations & Maintenance

Lancaster County has road and bridge staff to maintain the county's infrastructure assets within four Maintenance Districts and 20 Patrol Districts. The road and bridge crew provide services to maintain and preserve the county's roads and bridges. Services also include grading gravel roads, vegetation management, ditch and drainage maintenance, culvert maintenance, channel repairs and scouring, mowing, pothole repair, storm response, winter sanding and snow plowing, signs, and striping.

Figure 5.2 Rural Road Capital Projects

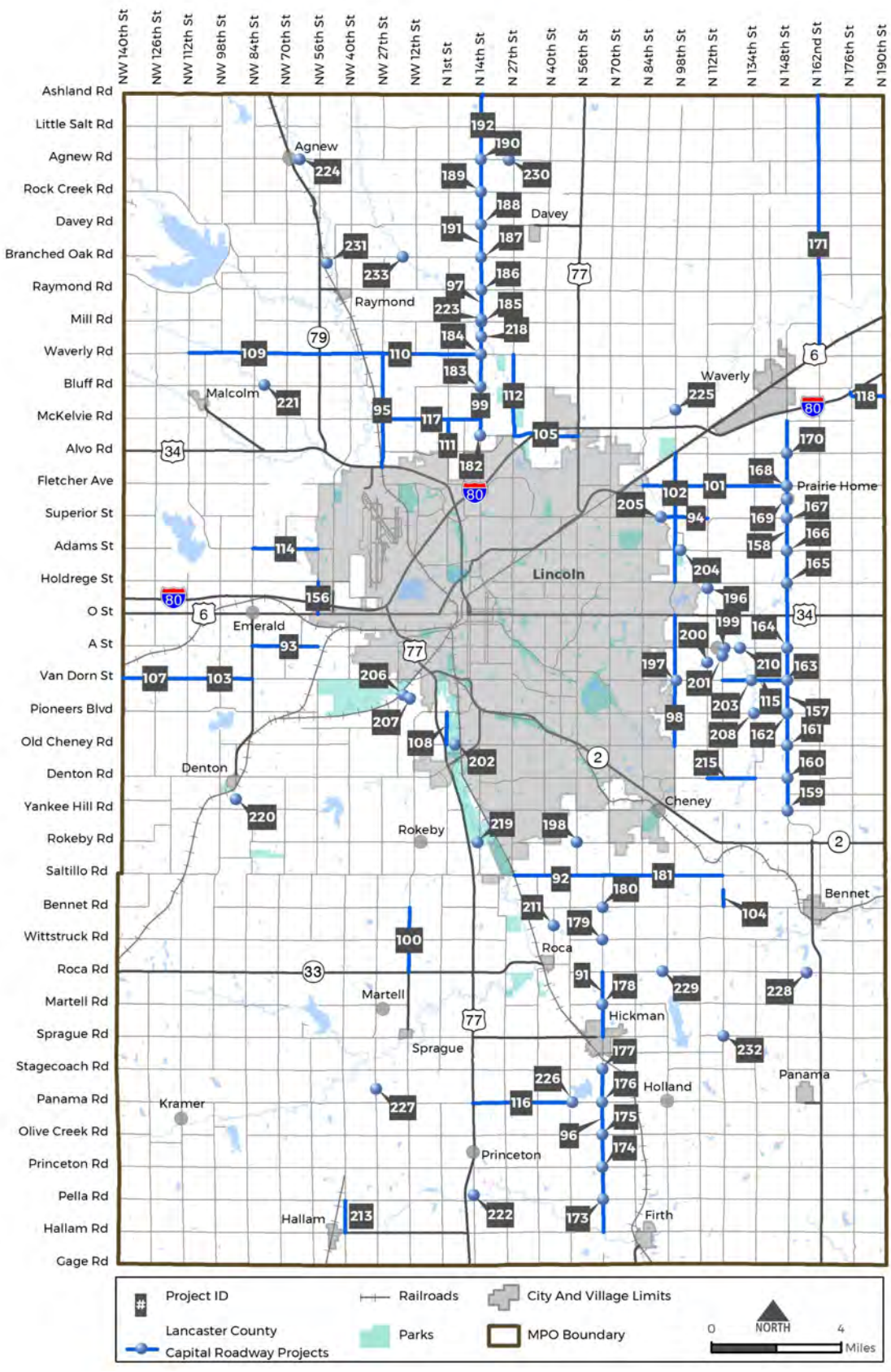


Table 5.4 Rural Road Capital Projects

ID	Street Name	Limits	Description	Project Cost (2021$)
91	S 68th Street	Hickman to Roca Road	Two lane widening with shoulders	$2,000,000
92	Saltillo Road	S 27th Street to S 68th Street	Two lane widening	$8,774,400
93	W A Street	SW 84th Street to SW 52nd Street	Programmed paving	$2,600,000
94	Havelock Avenue	Stevens Creek to N 112th Street	Potential paving	$1,820,000
95	NW 27th Street	Hwy-34 to W Waverly Road	Potential paving	$4,550,000
96	S 68th Street	Firth Road to Stagecoach Road	Two lane widening with shoulders	$5,400,000
97	N 14th Street	Waverly Road to Raymond Road	Two lane widening	$1,000,000
98	S 98th Street	Old Cheney Road to US-34	Programmed paving	$12,592,700
99	N 14th Street	Arbor Road to Waverly Road	Two lane widening	$1,250,000
100	SW 14th Street	NE-33 to W Bennet Road	Programmed paving	$1,300,000
101	Fletcher Avenue	N 84th Street to N 148th Street	Programmed Paving	$5,000,000
102	N 98th Street	Holdrege Street to US-6	Potential paving	$7,700,000
103	W Van Dorn Street	SW 112th Street to SW 84th Street	Programmed paving	$1,300,000
104	S 120th Street	Bennet Road North 0.5 Miles	Potential paving	$650,000
105	Arbor Road	N 27th Street to US-77	Paving and Bridge Replacement of Bridge F-201 near N 27th Street	$5,930,000
107	W Van Dorn Street	SW 140th Street to SW 112th Street	Potential paving	$1,300,000
108	S 1st Street	Old Cheney Road to Pioneers Boulevard	Programmed paving	$1,000,000
109	W Waverly Road	NW 112th Street to NE-79	Potential paving	$5,200,000
110	W Waverly Road	NE-79 to N 14th Street	Potential paving	$6,500,000
111	N 1st Street	Alvo Road to McKelvie Road	Potential paving	$1,300,000
112	N 27th Street	Arbor Road to Waverly Road	Potential paving	$3,250,000
114	W Adams Street	NW 84th Street to NW 56th Street	Potential paving	$2,600,000
115	Van Dorn Street	S 120th Street to S 148th Street	Potential paving	$2,600,000
116	Panama Road	US-77 to S 54th Street	Potential paving	$3,900,000
117	McKelvie Road	NW 27th Street to N 14th Street	Potential paving	$3,900,000

ID	Street Name	Limits	Description	Project Cost (2021$)
118	Bluff Road	I-80 to N 190th Street	Potential paving	$1,430,000
156	NW 56th Street	W O to W Holdrege Street	Potential paving	$1,200,000
157	S 148th Street	Yankee Hill Road to O Street	Two lane widening	$4,900,000
158	N 148th Street	O Street to McKelvie Road	Two lane widening	$4,018,000
159	S 148th Street	Yankee Hill Road	Intersection improvements	$650,000
160	S 148th Street	Pine Lake Road	Intersection improvements	$650,000
161	S 148th Street	Old Cheney Road	Intersection improvements	$650,000
162	S 148th Street	Pioneers Boulevard	Intersection improvements	$650,000
163	S 148th Street	Van Dorn Street	Intersection improvements	$650,000
164	S 148th Street	A Street	Intersection improvements	$650,000
165	N 148th Street	Holdrege Street	Intersection improvements	$703,000
166	N 148th Street	Adams Street	Intersection improvements	$650,000
167	N 148th Street	Havelock Avenue	Intersection improvements	$650,000
168	N 148th Street	Fletcher Avenue	Intersection improvements	$650,000
169	N 148th Street	Prairie Home	Intersection improvements	$1,300,000
170	N 148th Street	Alvo Road	Intersection improvements	$650,000
171	N 162nd Street	US-6 to Ashland Road	Potential paving	$5,530,000
173	S 68th Street	Pella Road	Intersection improvements	$650,000
174	S 68th Street	Princeton Road	Intersection improvements	$650,000
175	S 68th Street	Olive Creek Road	Intersection improvements	$650,000
176	S 68th Street	Panama Road	Intersection improvements	$650,000
177	S 68th Street	Stagecoach Road	Intersection improvements	$650,000
178	S 68th Street	Martel Road	Intersection improvements	$650,000
179	S 68th Street	Wittstruck Road	Intersection improvements	$650,000
180	S 68th Street	Bennett Road	Intersection improvements	$650,000
181	Saltillo Road	S 68th Street to S 120th Street	Two lane widening	$2,450,000
182	N 14th Street	Arbor Road	Intersection improvements	$650,000
183	N 14th Street	Bluff Road	Intersection improvements	$650,000
184	N 14th Street	Waverly Road	Intersection improvements	$650,000
185	N 14th Street	Mill Road	Intersection improvements	$650,000
186	N 14th Street	Raymond Road	Intersection improvements	$650,000
187	N 14th Street	Branched Oak Road	Intersection improvements	$650,000

ID	Street Name	Limits	Description	Project Cost (2021$)
188	N 14th Street	Davey Road	Intersection improvements	$650,000
189	N 14th Street	Rock Creek Road	Intersection improvements	$650,000
190	N 14th Street	Agnew Road	Intersection improvements	$650,000
191	N 14th Street	Raymond Road to Agnew Road	Two lane widening	$2,000,000
192	N 14th Street	Agnew Road to Ashland Rd	Two lane widening	$1,000,000
196	N 112th Street	Bridge J-126 near Holdrege Street	Bridge replacement	$1,571,000
197	Van Dorn Street	Bridge K-37 near S 98th Street	Replace CBC	$652,000
198	S 56th Street	Bridge P-92 near Rokeby Road	Replace with CBC	$1,460,000
199	A Street	Bridge J-47 near S 120th Street	Replace with CCS	$739,000
200	S 112th Street	Bridge J-135 near A Street	Replace with CBC	$612,000
201	S 120th Street	Bridge J-138 near A Street	Replace with CBC	$612,000
202	Old Cheney Road	Bridge O-37 near S 1st Street	Bridge replacement	$3,465,000
203	Van Dorn Street	Bridge J-22 near S 134th Street	Bridge replacement	$1,060,000
204	Adams Street	Bridge K-123 near N 102nd Street	Bridge replacement	$1,940,000
205	Havelock Avenue	Bridge K-144 near N 98th Street	Bridge replacement	$2,079,000
206	SW 16th Street	Bridge O-1 near W Calvert Street	Replace CB	$168,000
207	SW 15th Street	Bridge O-140 near W Stockwell Street	Replace CB	$168,000
208	Pioneers Blvd	Bridge Q-72 near S 138th Street	Bridge replacement	$1,188,000
209	Pine Lake Road	Bridge Q-110 near S 134th Street	Bridge replacement	$1,188,000
210	A Street	Bridge J-46 near S 134th Street	Bridge replacement	$1,237,000
211	S 46th Street	Bridge S-59 near Bennet Road	Replace CB	$925,000
213	SW 42nd Street	W Hallam Road to W Pella Road	Concrete construction	$920,000
215	Pine Lake Road	S 11th Street to S 134th Street	Grading and pavement	$2,000,000
218	N 14th Street	Bridge F-88, Oak W-12, 18-15	Concrete Slab Bridge	$1,175,000
219	Rokeby Road	Bridge O-44, Yankee Hill S-26, 21-44	Drainage Structure Replacement	$65,000
220	SW 91st Street	Bridge N-114, Denton IN-22, 18-02	Bridge Replacement	$475,000

ID	Street Name	Limits	Description	Project Cost (2021$)
221	W Bluff Road	Bridge E-171, Elk S-14	Concrete Box Culvert	$550,000
222	S 12th Street	Bridge W-104, Buda W-24	Concrete Box Culvert	$275,000
223	N 14th Street	Bridge F-91, Oak W-1	Concrete Box Culvert	$275,000
224	W Agnew Road	Bridge D-88, West Oak S-12 21-40, East of Nebraska Hwy 79	Concrete Slab Bridge	$2,255,000
225	N 98th Street	Bridge G-222, North Bluff W-24 21-41, North of I-80	Bridge Replacement	$2,560,000
226	Panama Road	Bridge X-129, South Pass S-4 21-43, East of S 54th St	Concrete Slab Bridge	$1,800,000
227	SW 29th Street	Bridge W-50 Buda W-4 21045, South of W Stagecoach Rd	Bridge Replacement	$620,000
228	Roca Road	Bridge R-184, Nemaha S 15, East of S 148th Street	Bridge Replacement	$580,000
229	Roca Road	Bridge S-180, Saltillo S 14, East of S 82nd Street	Bridge Replacement	$870,000
230	Agnew Road	Bridge C-284, Little Salt S-12	Concrete Box Culvert	$430,000
231	NW 19th Street	Bridge C-262, Little Salt IN-28	Bridge Replacement	$650,000
232	Hickman Road	Bridge R-213, Nemaha S-20	Concrete Box Culvert	$430,000
233	W Branched Oak Road	Bridge C-253, Little Salt S-28	Bridge Replacement	$620,000

NDOT Highways

As shown on **Figure 5.3** and listed in **Table 5.5**, NDOT has identified 10 capital projects within the Lincoln MPO, totaling nearly $648 million in needs (in 2021 dollars). The South Beltway (Project ID 78) has committed funding and is currently under construction.

Figure 5.3 NDOT Highway Projects

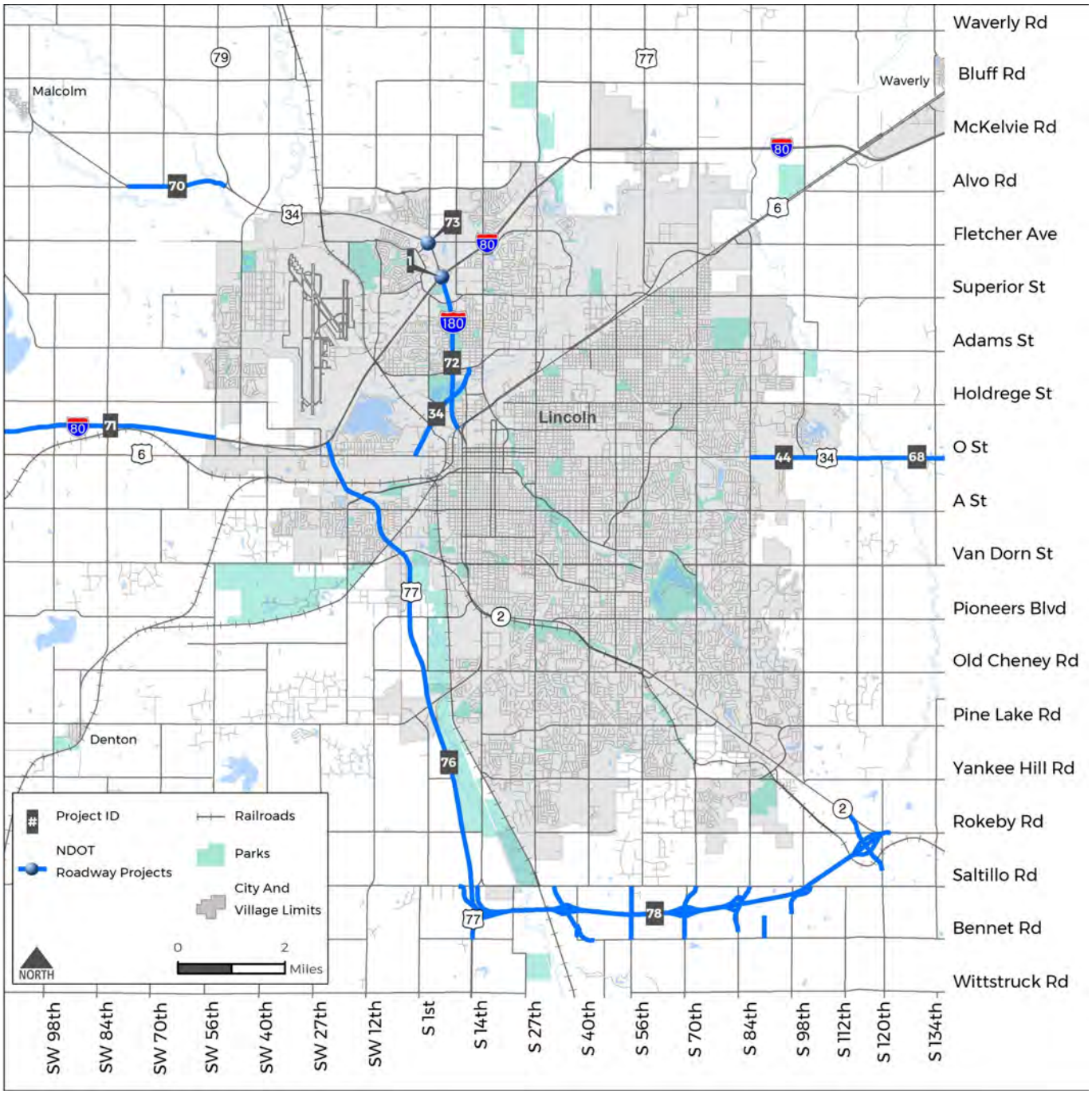


Table 5.5 NDOT Highway Projects

ID	Street Name	Limits	Description	Project Cost (2021$)
1	I-80	I-80 and I-180	Major interchange work	$52,300,000
34	US-6 (Sun Valley)	Cornhusker Hwy (US-6) to WO St.(US-6)	4 lanes + turn lanes	$20,400,000
44	O Street (US-34)	84th Street to 120th Street	4 lanes + intersection improvements	$17,900,000
68	O Street (US-34)	120th Street to east county line	4 lanes + intersection improvements	$37,000,000
70	US-34	NE-79 to Malcolm Spur	4 lanes + intersection improvements	$15,300,000
71	I-80	Pleasant Dale to NW 56th Street	6 lanes + bridges	$129,207,000
72	I-180	I-80 to US-6	Reconstruction + bridges	$51,200,000
73	US-34	US-34 and Fletcher Avenue	New interchange	$31,900,000
76	West Beltway (US 77)	I-80 to Saltillo Road	Freeway with new interchanges	$38,200,000
78	South Beltway	US-77 to Nebraska Hwy 2	4 lane freeway	$255,000,000

Goods and Freight Movement

Air, rail and trucking are essential local economy components and play a key role in the Lincoln Metropolitan Area and Lancaster County transportation system. Coordination efforts with the freight community to further integrate freight interests into the transportation planning process should continue. Specific activities that are beneficial to the freight industry include ongoing information dissemination and dialogue through the MPO's Freight Carriers Working Group and enhanced efforts to inform the freight industry of upcoming projects and related impacts on detours and routing. Other activities include moving forward with projects involving intersection improvements and improvements along major freight routes like Highway 2.

Freight considerations, including the locations of identified truck routes in the region, were part of the project selection process for the 2050 needs assessment. Future freight corridor improvements should be coordinated with NDOT and the recommendations of the State Freight Plan.



Airports and Airfields

The Lincoln Airport will continue to be the principal airport facility serving the Lincoln Metropolitan Area, Lancaster County, and a significant portion of the region in the southeast area of the State. As a member of the Lincoln MPO Technical Committee, the Lincoln Airport Authority is an integral part of the metropolitan area transportation planning process. Specific strategies include ensuring that future developments are aware of their proximity to the airport and that noise issues are appropriately addressed through the Airport Environs Noise District ordinance and the recommendations of the Airport Noise Compatibility Study. An Airport Master Plan for the Lincoln Airport is currently underway.



Other future considerations include redevelopment of Lincoln Airpark West for various uses such as developing sites for rail-accessible warehousing and seeking opportunities for air-rail-truck freight operations. While these potential developments can make the airport into an intermodal transportation hub, attention will need to be focused on mitigating conflicts among the different freight operations.



Bicycle

The City of Lincoln has a strong tradition of supporting bicycle travel, not only for recreation but as a means of transportation. Lincoln has successfully built an extensive network that includes nearly 250 miles of trails. The Lincoln Bike Plan, adopted in February 2019, identifies an on-street bike network that builds on the City's trail network and provides safe and low-stress bicycle commuting and recreational opportunities. The plan depicts a comprehensive system of off-street and on-street facilities to safely connect neighborhoods and destinations and encourage bicycle travel. Many of the projects identified in the Bike Plan could be added cost-effectively by budling them with roadway paving or capital projects. To complement the bike network recommendations, the Bike Plan recommends programmatic initiatives pertaining to education, enforcement, and encouragement and policy changes to further Lincoln's bicycle-friendly culture.



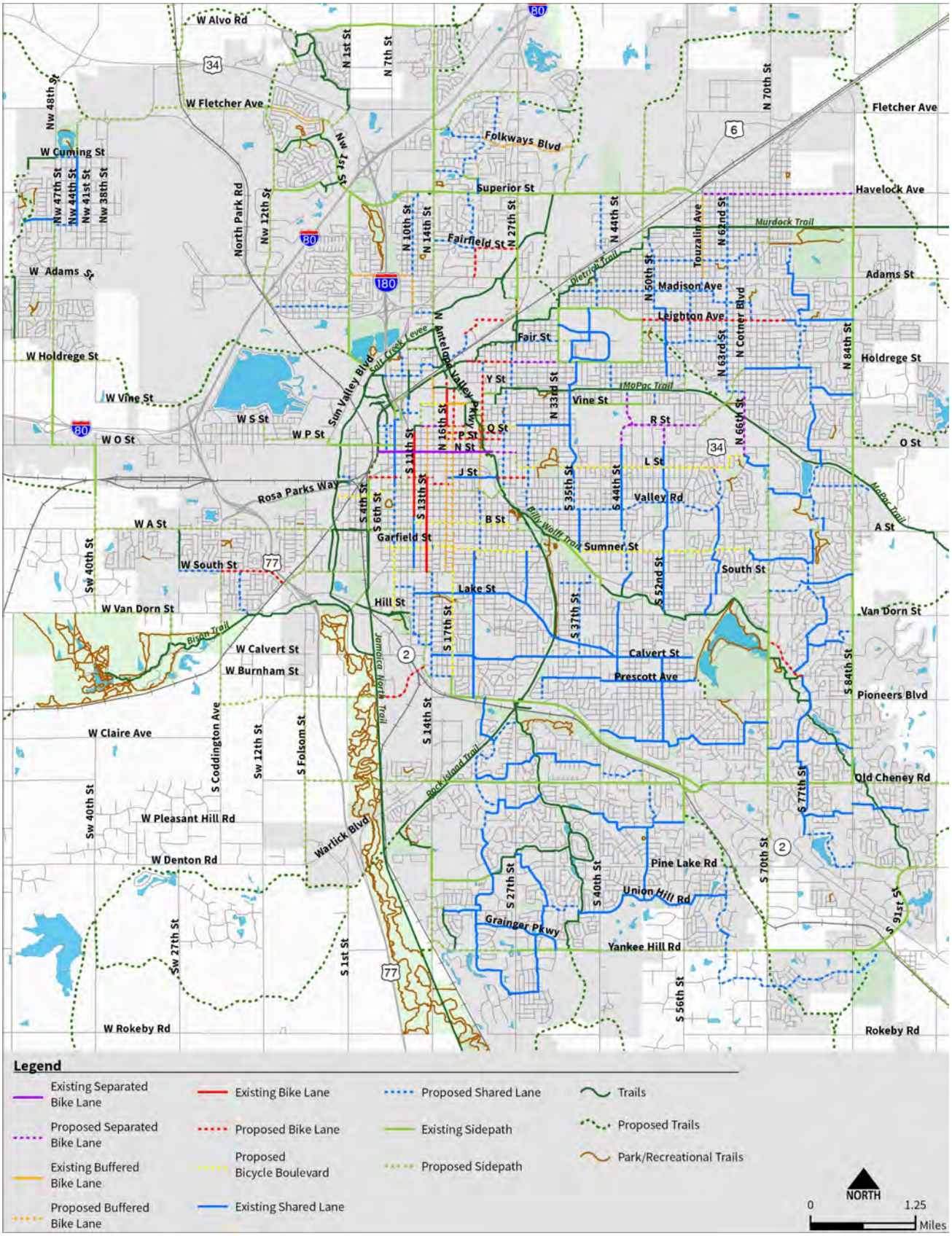
The recommended bike network, shown on **Figure 5.4**, was developed to accommodate "Interested But Concerned" bicyclists by providing a connected system of low-stress bikeways. A network for this group will be safe and comfortable for most people riding bicycles.

The network builds from the existing trail network and on-street bike facilities, including the N Street Cycle Track and bike lanes in the downtown area. It connects on-street bikeways and trails and will ultimately connect people riding bikes to key destinations like bus stops, schools, libraries, employment centers, and social destinations.

The network has roughly three-block spacing in the downtown area and gradually becomes less dense toward the city's edge with roughly one-mile spacing between routes.



Figure 5.4 Recommended Bike Network



Pedestrian

Lincoln currently has a well-developed sidewalk system, and the requirement of sidewalks on both sides of all streets should continue. However, this system needs rehabilitation in many areas. Ideally, the sidewalk rehabilitation program should be funded at a level to replace a minimum of three (3) miles of sidewalk, or one percent of the sidewalk system annually. Pedestrian crossing signals should be updated and installed when warranted at appropriate sites, along with other visual cues to alert drivers to pedestrian crossing points and to increase the safety and security of pedestrians.

Some policies that should remain in place to support pedestrian facilities include the policy stating sidewalks should not be placed adjacent to the curb but separated by a landscaped parkway consistent with the City's Design Standards for street trees, parking screening, and landscaping. This policy, in conjunction with others, will benefit the pedestrian environment.

Other pedestrian improvements should be made, such as completing missing gaps and increasing pedestrian amenities at and around transit stops. Other projects could include mid-block crossing improvements, pedestrian countdown signal heads, and a wayfinding system.



Trails

The City's first major off-street trail project, the Billy Wolff-Antelope Bikeway, was constructed in 1978 using FHWA Bikeway Demonstration Project Funds. Since the successful completion of that trail, the community has used private donations through groups, such as the Great Plains Trails Network (GPTN) and various public funds to provide the backbone network for bicycling across the City. Lincoln has taken advantage of the many miles of abandoned railroad corridors and stream banks to provide trails with fewer street crossings, flatter grades, and more pleasant travel. The current trail network includes nearly 250 miles of trails.



Trail Projects

As a part of the LRTP development process, candidate trail projects were identified, as displayed on **Figure 5.5** and listed in **Table 5.6**. The 64 candidate trail projects total nearly $60 million (in 2021 dollars). As detailed in **Chapter 7**, several of these trail projects have committed funding and are anticipated to be built within the next four years. **Figure 5.5** also shows future trail corridors that are planned for beyond the 2050 time horizon.

Trail Rehabilitation

As the trail system begins to age, rehabilitation of trails is becoming a larger issue. A rehabilitation program should be developed and funded adequately to complete projects as they are needed. Additionally, some trail segments have already begun to see more use than was originally anticipated. New trails should be built to a 10-foot width, and in some areas existing trails should be widened to 10 or 12 feet as they are rehabilitated to better accommodate the volume and mix of trail users.





Figure 5.5 Trail Projects

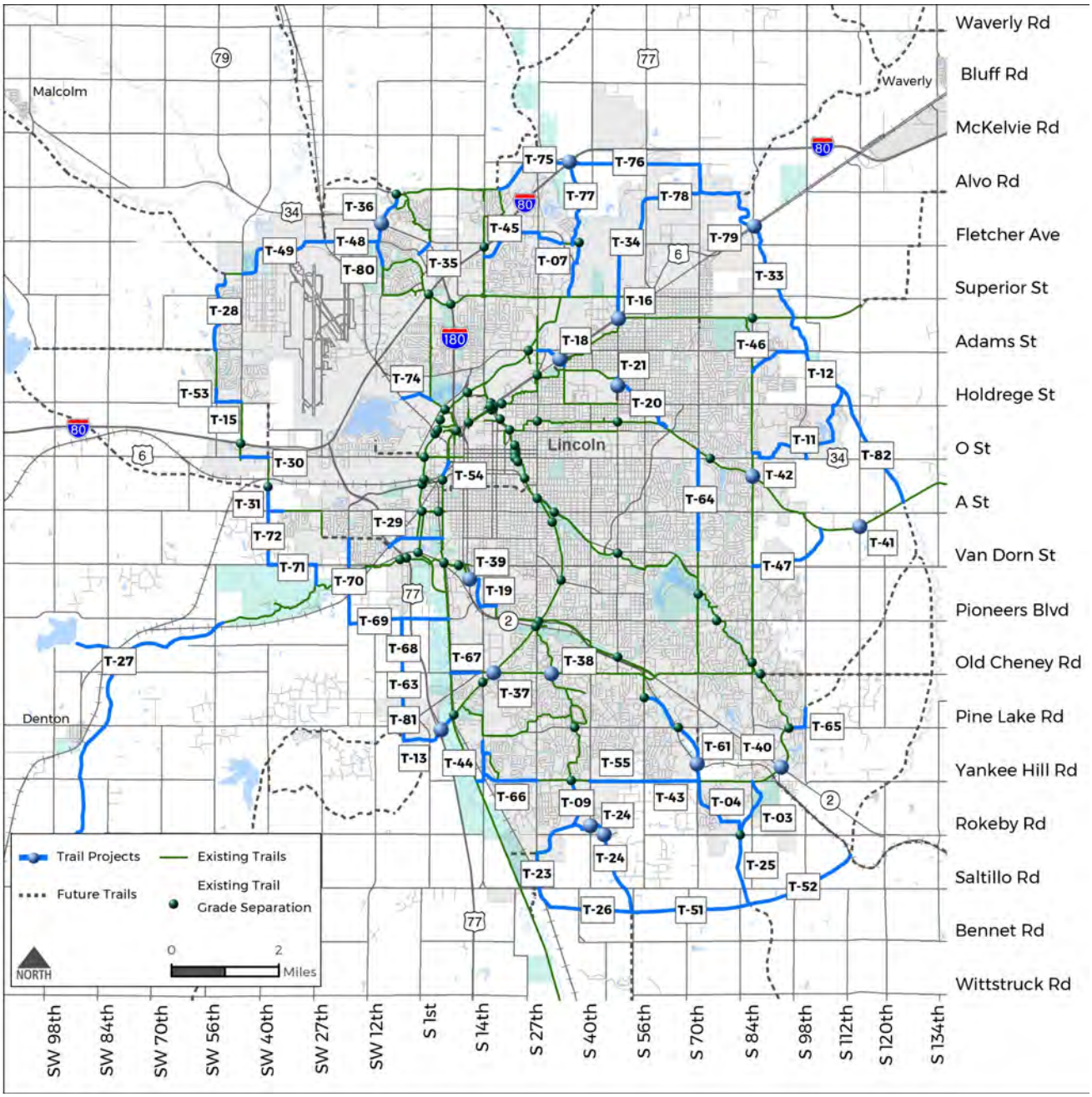


Table 5.6 Trail Projects

ID	Trail Name	Limits	Description	Project Cost (2021$)
T-03	Woodlands	Jensen Park to Rokeby Rd	New Trail	$500,000
T-04	Woodlands	Rokeby Rd to S 70th St to Yankee Hill Rd	New Trail	$950,000
T-07	Landmark Fletcher	33rd St & Superior St to 27th St	New Trail; Sidepath	$700,000
T-09	Wilderness Hills	Yankee Hill Rd to Rokeby Rd and S 40th St	New Trail	$1,200,000
T-11	Waterford	N 84th St to Stevens Creek	New Trail	$900,000
T-12	Stevens Creek	Murdock Trail to Waterford Trail	New Trail	$1,300,000
T-13	Cardwell Branch Trail	GPTN Connector to Folsom Trail	New Trail	$800,000
T-15	W Holdrege Street Trail	NW 48th St to NW 56th St	Sidepath	$250,000
T-16	N 48th Street Trail	Murdock Trail to Superior St	Sidepath	$200,000
T-18	Deadmans Run Trail	Murdock Trail to Cornhusker Hwy and Railroad grade separation	New Trail and Grade Separation	$300,000
T-19	Boosalis - Bison Connector	Van Dorn St to S 17th St/Burnam St	Sidepath	$300,000
T-20	Deadmans Run Trail	N 48th St to Mo Pac Trail	New Trail	$550,000
T-21	East Campus Trail	Leighton St to Holdrege St	New Trail	$150,000
T-23	S 27th Street Connector	Rokeby Rd to South Beltway	New Trail	$800,000
T-24	S 56th Street Connector	Rokeby Rd to South Beltway	New Trail	$1,200,000
T-25	S 84th Street Connector	Rokeby Rd to South Beltway	New Trail	$700,000
T-26	South Beltway Trail – Phase I	S 27th St to S 56th St	New Trail	$1,500,000
T-27	Greenway Corridor Trail/ Haines Branch	Pioneers Park Nature Center to Spring Creek Prairie Audubon Center	New Trail	$4,500,000
T-28	NW 56th Street Trail	W Adams St to W Superior St	New Trail	$600,000
T-29	South Street	Folsom St to Jamaica Trail	Sidepath	$750,000
T-30	W. O Street	SW 40th St to SW 48th St	Sidepath	$260,000
T-31	W A Street Connector	A Street from SW 36th to SW 40th; SW 40th from A St to F St	Sidepath	$120,000
T-33	Stevens Creek	Murdock Trail to Hwy 6	New Trail	$1,000,000
T-34	N 48th Street/Bike Park Trail	Superior St to N 56th St	New Trail; Sidepath	$900,000
T-35	N 1st Street	N 1st St crossing of Hwy 34	Sidepath	$400,000

ID	Trail Name	Limits	Description	Project Cost (2021$)
T-36	NW 12th Street	W Fletcher Ave to Aster St with US-34 grade separated crossing	Sidepath; Grade Separation	$400,000
T-37	Rock Island	Old Cheney grade separated crossing	Grade Separation	$1,200,000
T-38	Tierra Williamsburg	Old Cheney grade separated crossing	Grade Separation	$1,200,000
T-39	10th Street Trail	Hwy 2 intersection improvements	Crossing Improvements	$2,200,000
T-40	S 91st Street Trail	Hwy 2 grade separated crossing	Grade Separation	$2,200,000
T-41	Mo Pac Trail	S 112th Street grade separated crossing	Grade Separation	$1,210,000
T-42	Mo Pac Trail	S 84th Street grade separated crossing	Grade Separation	$1,700,000
T-43	Yankee Hill Rd	S 56th St to S 70th St	Sidepath	$350,000
T-44	S 14th Street & Yankee Hill Connector (w/RTSD project)	South LPS Property Line to Yankee Hill	Sidepath	$400,000
T-45	Landmark Fletcher	Fletcher Ave from N 27th St to N 14th St	Sidepath	$990,000
T-46	Prairie Village Trail	N 84th St to Stevens Creek, South of Adams	New Trail; Sidepath	$500,000
T-47	Van Dorn Trail	S 84th St and Van Dorn to S 106th and MoPac Trail	New Trail	$1,200,000
T-48	Air Park Connector - Phase I	NW 13th St to NW 27th St	Sidepath	$600,000
T-49	Air Park Connector – Phase II	NW 27th St to NW 48th St	Sidepath	$900,000
T-51	South Beltway Trail – Phase II	S 56th St to S 84th St	New Trail	$3,500,000
T-52	South Beltway Trail – Phase III	S 84th Street to Hwy 2	New Trail	$3,500,000
T-53	NW 56th Street Trail	W Holdrege to W Partridge	Sidepath	$100,000
T-54	Chris Buetler Trail - Jamaica North Connector	J Street to N Street	New Trail	$250,000
T-55	Yankee Hill Road	S 40th St to S 56th St	Sidepath	$350,000
T-61	Beal Slough Trail	S 56th St and London Rd to S 70th St and Yankee Hill	New Trail	$1,480,000
T-63	Folsom Street	W Old Cheney south 1/2 mile	Sidepath	$65,000

ID	Trail Name	Limits	Description	Project Cost (2021$)
T-64	S 70th Street Connector	Old Post Rd to MoPac Trail	Sidepath	$700,000
T-65	Pine Lake Rd/S 98th St	Billy Wolff Trail to Napa Ridge Dr	Sidepath	$300,000
T-66	Yankee Hill Road	S 14th St to S 27th St	Sidepath	$350,000
T-67	Old Cheney Rd	Warlick Blvd to Jamaica North	Sidepath	$250,000
T-68	Folsom St	Old Cheney to Pioneers Blvd	Sidepath	$350,000
T-69	Pioneers Blvd	Jamaica North Trail to Coddington Ave	Sidepath	$700,000
T-70	Coddington Ave	Pioneers Blvd to South St	Sidepath	$650,000
T-71	Van Dorn St	SW 40th St to Prairie Corridor Trail	Sidepath	$500,000
T-72	SW 40th St	Van Dorn St to W A Street	Sidepath	$350,000
T-74	Oak Creek Trail	Saline Wetlands Nature Center to N 1st St	New Trail	$300,000
T-75	Arbor Road Trail	N 14th St to I-80 with grade separation at I-80	Sidepath and Grade Separation	$600,000
T-76	Arbor Road Trail	I-80 to Salt Creek Trail	Sidepath	$2,400,000
T-77	Little Salt Creek Trail	Arbor Rd to Landmark Fletcher	New Trail	$2,000,000
T-78	Salt Creek Trail	N 56th St to Stevens Creek	New Trail	$900,000
T-79	Stevens Creek Trail	Salt Creek Trail to Cornhusker Hwy with grade separation of Cornhusker Hwy	New Trail	$1,000,000
T-80	NW 12th Street	NW 10th St to W Fletcher Ave	Sidepath	$200,000
T-81	Folsom Street Connector	1/2 mile north of W Denton Rd to Cardwell Branch Trail	Trail	$800,000
T-82	Stevens Creek	Waterford Trail to MoPac Trail	New Trail	$1,700,000

Transit

Providing efficient transit services throughout the city requires careful consideration of the number of routes, the frequency of service, and the hours of service. The Transit Development Plan (TDP) adopted in 2016 provides the framework for monitoring and modifying transit services in response to changes in development patterns and user needs. The TDP is based on adopted service standards and policies and is periodically reviewed and updated by LTU – StarTran under the guidance of the StarTran Advisory Board and the public. The TDP is the main planning document for transit services in Lincoln and is currently being updated with planned completion in 2022. Public input related to transit was also collected for the LRTP and will help support the TDP update. The PlanForward policy on Nodes and Corridors indicates that nodes should have access to public transit, and corridors represent priorities such as future public transportation enhancements.

Subsequent to adoption of the 2016 TDP, StarTran bus routes were reconfigured to enhance corridors with higher ridership by providing shorter wait times and longer service hours. Service to major employment centers has been and should continue to be considered for enhancement, as well as areas of current and future anticipated density.

To be comparable to other cities of Lincoln's size, transit funding should be increased to provide similar levels of service during evening and weekend hours. Future phases identified in the 2016 TDP should receive the necessary funding for implementation.

Areas of the city that are not along the transit corridors can be served to a more modest level. Neighborhood feeder routes that direct transit riders to the major corridors could be provided with smaller, more fuel efficient, and automated vehicles.

Continued enhancement of the bike-and-bus feature would also allow those in areas with lower service to access and use transit. Establishing park-and-ride locations along outlying areas of the community could support transit connections to Downtown and other mixed use centers. Using ITS and other emerging technologies to provide route information, fare payment systems, travel data, real-time bus location information and potentially driverless vehicle service will support those who ride by choice to participate at a higher level and riders of necessity to plan their routes and be better served.

Travel Demand Management

Travel Demand Management (TDM) is a strategy to reduce demand for single occupancy vehicle use on the transportation network. TDM can reduce congestion and traveler delay, as well as improve air quality and access to jobs, schools, and other opportunities. TDM strategies include the following:

- Flexible work schedules
- Traveler information
- Employer and campus TDM
- Auxiliary transit service
- Market and financial incentives
- Parking management
- Transit use
- Walking and cycling
- Teleworking or telecommuting
- Car and bike shares
- Van pooling
- Partnerships with Transportation Network Companies (TNC)

In comparison to road widening and other capital projects, TDM programs are inexpensive and can be effective in decreasing demand on roadways, especially during peak travel times of the day.

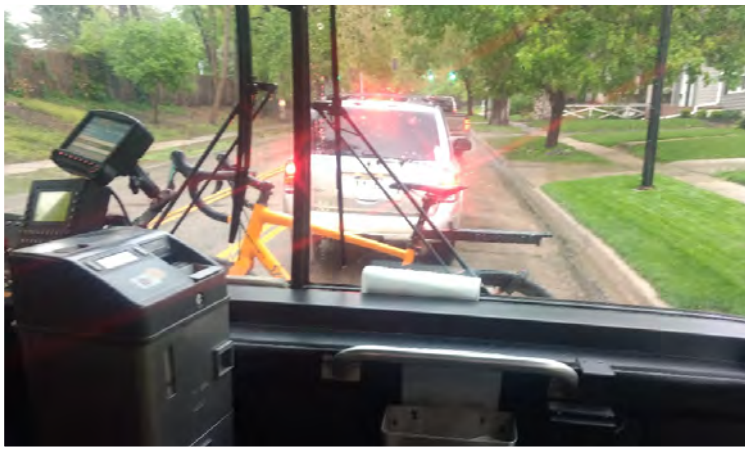
The Lincoln MPO should continue to pursue a TDM program that is coordinated among various departments and identifies and works with large employers, including the State of Nebraska, University of Nebraska-Lincoln, and various private businesses.



Effective public transportation service requires good pedestrian connections to and from transit stops, density of activities, and development designs supportive of transit riders. Pedestrian connections to transit must be direct, and the sidewalk system must have continuity. Street crossings to transit stops must be safe. Productive transit service requires higher-density land development patterns that link residential areas and employment, retail, and service centers. Development design needs to be transit-friendly, providing convenient access to transit services.

Although Lincoln may not reach the density and demand needed to justify a bus rapid transit (BRT) system within the planning period, efforts should be made to identify potential routes and to concentrate efforts to increase density along those routes. The "O" Street and N. 27th Street corridors are likely candidates for planning and identification as long-term BRT routes.

The projected increase in the 65 and over population creates challenges in service provision. This population increase will create a greater usage of demand-responsive public transportation. Based on current funding levels, such increase in usage could create funding challenges. While all fixed-route services are, and will continue to be, accessible, the need for increased complementary paratransit services will continue. Such services are expensive due to vehicle load constraints and operating policies; therefore, innovative variations of such services will be essential.



Expanded transit service within the rural areas of the county or between Lincoln and other larger cities is not currently practical. However, data should continue to be collected and analyzed to monitor travel patterns in the hopes of identifying opportunities for regional transit.

This section of the 2050 LRTP will be updated upon adoption of the TDP Update (anticipated in 2022) to incorporate the most current transit needs and priorities.

6. Funding Outlook

The transportation revenues expected over the 29-year time horizon of the LRTP will not be enough to cover the cost of the transportation needs in Lincoln and Lancaster County. Careful consideration of investment strategies is needed, along with an understanding of the associated tradeoffs. This chapter presents an overview of the revenue forecasts, describes the resource allocation process, and establishes a strategy to maintain the transportation system and to make the system function as efficiently as possible, given funding limitations.

Revenue Forecasts

Various revenue sources will be used to fund transportation projects and programs, including federal, state, local, and private resources. The following sections describe the funding sources expected to be used to implement the LRTP recommendations.

NDOT Highways Program

Funding available for NDOT's Highways Program within the Lincoln MPA is described below and detailed in **Table 6.1**.

Federal Funds

NDOT's Highways Program is funded in part by federal funds, including Surface Transportation Block Grant Program (STBG), National Highway Performance Program (NHPP), and Highway Safety Improvement Program (HSIP) funds. An estimated $419.7 million of federal funds can be expected through 2050 for the State's program.

State Funds

State funds are used for preliminary engineering and as a local match for federal funding sources used for NDOT's Highways Program. An estimated $128.5 million of state funds are anticipated through 2050, primarily for asset preservation, with an infusion in 2026 specifically for the West Beltway project.

Build Nebraska Act

In 2011, the Nebraska Legislature approved, and the Governor signed, the Build Nebraska Act, which approved the use of ¼ cent of the statewide sales tax on roadway projects. A portion of this additional revenue goes to local communities (15 percent); the State uses the remainder of the revenue (85 percent) on the State Highway system. The State uses this funding source to pay for about 80 percent of the South Beltway project costs.

Table 6.1 NDOT Highways Program Funding ($M)

Fiscal Year	Federal Funds	State Funds	Total
2022	$8.21	$2.06	$10.27
2023	$8.35	$2.09	$10.44
2024	$123.74	$16.09	$139.83
2025	$8.64	$2.16	$10.80
2026	$8.78	$40.40	$49.18
2027	$8.93	$2.24	$11.17
2028	$9.08	$2.28	$11.36
2029	$9.24	$2.31	$11.55
2030	$9.40	$2.35	$11.75
2031	$9.56	$2.39	$11.95
2032	$9.72	$2.43	$12.15
2033	$9.88	$2.48	$12.36
2034	$10.05	$2.52	$12.57
2035	$10.22	$2.56	$12.78
2036	$10.40	$2.60	$13.00
2037	$10.57	$2.65	$13.22
2038	$10.75	$2.69	$13.44
2039	$10.93	$2.74	$13.67
2040	$11.12	$2.79	$13.91
2041	$11.31	$2.83	$14.14
2042	$11.50	$2.88	$14.38
2043	$11.70	$2.93	$14.63

Fiscal Year	Federal Funds	State Funds	Total
2044	$11.90	$2.98	$14.88
2045	$12.10	$3.03	$15.13
2046	$12.30	$3.08	$15.38
2047	$12.51	$3.14	$15.65
2048	$12.73	$3.19	$15.92
2049	$12.94	$3.24	$16.18
2050	$13.16	$3.30	$16.46
TOTAL	**$419.72**	**$128.45**	**$548.16**

Rural Roads Program

The Rural Roads Program covers areas of Lancaster County outside the Lincoln city limits. Federal, state and local funding sources available for the Rural Roads Program are described below and detailed in **Table 6.2**.

Surface Transportation Block Grant Program

A federal funding source designated by formula for urbanized areas with a population of more than 200,000, the STBG provides resources for eligible transportation projects. Based on historic STBG funding levels and growth over time, the STBG revenue forecasts begin at $5.8 million in 2022 and are projected to increase 3.0 percent annually. An estimated $264 million in STBG funds can be reasonably expected through 2050. These funds can be used anywhere within the Lincoln MPA (Lancaster County).

As described in the Flexible Funds, the 2050 LRTP recommends a 70 percent (Lincoln)/ 30 percent (Lancaster County) split of STBG funds. As described in the Funding Strategy, the 2050 LRTP recommends a 70 percent (Lincoln)/ 30 percent (Lancaster County) split of STBG funds. This equates to approximately $79 million of STBG funds for the Rural Roads Program through 2050.

Highway Safety Improvement Program

The HSIP is a core federal-aid program with the purpose of reducing traffic fatalities and serious injuries on public roads, including non-State-owned roads. Lancaster County will receive approximately $1 million of HSIP funding in 2022, requiring a 10 percent local match. With a projected annual growth rate of 1.7 percent, an estimated $37 million of HSIP funds can be expected for the Rural Roads Program through 2050.

Build Nebraska Act

Highway Allocation Funds include Lancaster County's portion of the Build Nebraska Act sales tax revenue through 2050. The dedication of a ¼ cent of the statewide sales tax on roadway projects will sunset in Fiscal Year 2033. If not reinstated, Lancaster County's Highway Allocation Funding would be reduced to $305 million (compared to $313 million).

Highway Allocation Funds

A state funding formula allocates state fuel tax collections to Lancaster County. Lancaster County uses these funds for operations & maintenance. An estimated $9.1 million in annual state fuel tax funds are anticipated, with a modest 1.2 percent annual growth matching the population growth projections. The result is an estimated $313 million in Highway Allocation Funds for the Rural Roads Program through 2050.

Federal Funds Purchase Program

Nebraska Legislative Bill (LB98) established the Federal Funds Purchase Program (FFPP) to provide a way for NDOT to purchase the federal funds used by local agencies in exchange for state cash. State dollars allow local agencies to tailor projects to better meet their needs. Lancaster County uses these funds for bridges (33 percent) and highways (67 percent). An estimated $460,000 in annual FFPP funds are anticipated, with a 1.7 percent annual growth, resulting in $17 million for the Rural Roads Program through 2050.

General Revenues (Lancaster County)

Property tax, sales tax, and other sources make up the general fund, which is used for general operating functions of Lancaster County. This local funding source is used for transportation uses within the Rural Roads Program, including road and bridges, pavement maintenance & pipes, and operations & maintenance. Based on historic general fund transfers to the Rural Roads Program, an estimated $11.3 million is anticipated in 2022; with an assumed 1.2 percent annual growth, in line with anticipated population growth. The County's general revenues are estimated to contribute approximately $388 million in Rural Roads Program funding through 2050. These funds are used as the local match (25 percent) for the County's portion of the Highway Allocation Funds.

Keno Funds

Lancaster County uses a portion of the Keno lottery funds for land acquisition and preservation for the East Beltway corridor. Current Keno funding levels for the East Beltway corridor preservation are estimated at $1 million per year over the first 20 years of the plan, resulting in an estimated $20 million of Keno funds for East Beltway corridor preservation through 2050.

Table 6.2 Rural Roads Program Funding ($M)

Fiscal Year	Federal Revenue		State Revenue		Local Revenue		Total
	STBG	HSIP	Highway Allocation	FFPP	General Revenues	Keno	
2022	$1.75	$1.00	$9.10	$0.46	$11.28	$1.00	$24.59
2023	$1.80	$1.02	$9.21	$0.47	$11.41	$1.00	$24.91
2024	$1.86	$1.03	$9.32	$0.48	$11.55	$1.00	$25.24
2025	$1.91	$1.05	$9.43	$0.48	$11.69	$1.00	$25.56
2026	$1.97	$1.07	$9.54	$0.49	$11.83	$1.00	$25.90
2027	$2.03	$1.09	$9.66	$0.50	$11.97	$1.00	$26.25
2028	$2.09	$1.11	$9.78	$0.51	$12.11	$1.00	$26.60
2029	$2.15	$1.13	$9.89	$0.52	$12.26	$1.00	$26.95
2030	$2.22	$1.14	$10.01	$0.53	$12.40	$1.00	$27.30
2031	$2.28	$1.16	$10.13	$0.54	$12.55	$1.00	$27.66
2032	$2.35	$1.18	$10.25	$0.54	$12.70	$1.00	$28.02
2033	$2.42	$1.20	$10.38	$0.55	$12.86	$1.00	$28.41
2034	$2.49	$1.22	$10.50	$0.56	$13.01	$1.00	$28.78
2035	$2.57	$1.25	$10.63	$0.57	$13.17	$1.00	$29.19
2036	$2.65	$1.27	$10.75	$0.58	$13.32	$1.00	$29.57
2037	$2.72	$1.29	$10.88	$0.59	$13.48	$1.00	$29.96
2038	$2.81	$1.31	$11.01	$0.60	$13.65	$1.00	$30.38
2039	$2.89	$1.33	$11.15	$0.61	$13.81	$1.00	$30.79
2040	$2.98	$1.35	$11.28	$0.62	$13.98	$1.00	$31.21

Fiscal Year	Federal Revenue		State Revenue		Local Revenue		Total
	STBG	HSIP	Highway Allocation	FFPP	General Revenues	Keno	
2041	$3.07	$1.38	$11.41	$0.63	$14.14	$1.00	$31.63
2042	$3.16	$1.40	$11.55	$0.64	$14.31		$31.06
2043	$3.25	$1.42	$11.69	$0.66	$14.48		$31.50
2044	$3.35	$1.45	$11.83	$0.67	$14.66		$31.96
2045	$3.45	$1.47	$11.97	$0.68	$14.83		$32.40
2046	$3.56	$1.50	$12.12	$0.69	$15.01		$32.88
2047	$3.66	$1.52	$12.26	$0.70	$15.19		$33.33
2048	$3.77	$1.55	$12.41	$0.71	$15.37		$33.81
2049	$3.89	$1.58	$12.56	$0.73	$15.56		$34.32
2050	$4.00	$1.60	$12.71	$0.74	$15.75		$34.80
TOTAL	**$79.09**	**$37.09**	**$313.42**	**$17.06**	**$388.33**	**$20.00**	**$854.99**

Urban Roads Program

The Urban Roads Program covers areas of the Lincoln MPA within the urbanized area of Lincoln. Federal, state and local funding sources available for the Urban Roads Program are described below and detailed in **Table 6.3**.

Surface Transportation Block Grant Program

As described in Rural Roads Program, STBG is a federal funding source that can be used for various eligible transportation projects. Based on the recommended 70 percent (Lincoln)/ 30 percent (Lancaster County) split of STBG funds, the Urban Roads Program can expect approximately $184 million of STBG funds through 2050.

Highway Safety Improvement Program

The HSIP is a core federal-aid program with the purpose to reduce traffic fatalities and serious injuries on public roads, including non-State-owned roads. Based on historic HSIP funding levels, the HSIP revenue forecasts begin at $700,000 in 2022, and this funding requires a 10 percent local match. With a projected annual growth rate of 1.7 percent, an estimated $26 million of HSIP funds can be expected for the Urban Roads Program through 2050.

Coronavirus Response and Relief Supplemental Appropriations Act, 2021

This federal appropriations act, commonly referred to as the COVID-19 Relief Bill, infused formula distributed federal funding into local communities to address needs and funding shortfalls associated with COVID-19. The Lincoln MPO received a one-time $2.5 million allocation (reduced to $1.4 million due to partial rescission by the national debt ceiling bill passed in 2023) that will be used for specific system preservation projects.

Highway Allocation Funds

A state funding formula allocates state fuel tax collections to the City of Lincoln. This amount is distributed independently of the fuel tax allocation to the Rural Roads Program. These funds are designated for

Build Nebraska Act

The Highway Allocation Funds include Lincoln's portion of the Build Nebraska Act sales tax revenue through 2050. The dedication of a ¼ cent of the statewide sales tax on roadway projects will sunset in Fiscal Year 2033. If not reinstated, Lincoln's Highway Allocation Funding would be reduced to $934 million (compared to $956 million).

projects throughout the City to rehabilitate, construct, and improve streets, intersections, interchanges, sidewalks, bikeways and trails, safety projects, ITS infrastructure, and landscaping. These funds are also used in the study, design, and acquisition of easements or ROW to support public projects. An estimated $27.8 million in annual state fuel tax funds are anticipated, with a modest 1.2 percent annual growth matching the population growth projections. The result is an estimated $956 million in Highway Allocation Funds through 2050.

Highway Allocation Bonds

The City of Lincoln issued general obligation highway allocation bonds in the early 2000s, and again in 2021. The revenue forecasts anticipate an additional bond issuance in 2022. The two recent bond issuances will provide a total of $25.26 million in funding in years 2022–2024. The bonds are used to fund preservation ($15.26 million) and growth projects ($10 million). Annual payment on these bonds is paid with the Highway Allocation Funds. Payment of the two older bonds will be complete in 2023 and 2027, and payment of the two recent bonds will be complete in 2036 and 2037. These bond payments are removed from the available Highway Allocation Funds in 2022–2037 (as shown in **Table 6.3**).

Beginning in 2038, the full allotment of Highway Allocation Funds will be available to the Urban Roads Program. The expected Highway Allocation funding through 2050 (net of the bond funding and payments) is estimated to be $932 million.

Federal Funds Purchase Program

The FFPP allows NDOT to purchase the federal funds used by local agencies in exchange for state cash. State dollars allow local agencies to tailor projects to better



meet their needs. Lincoln uses the funds exclusively for bridge projects. An estimated $280,000 in annual FFPP funds are anticipated, with a 1.7 percent annual growth, resulting in $10.5 million for the Urban Roads Program through 2050.



City Wheel Tax

The City Wheel Tax is a revenue source generated by a City tax on all vehicles registered within corporate limits. Wheel Tax revenues must be applied to specific uses:

- **Residential Rehabilitation Fund:** A portion of the Wheel Tax (14.86 percent) is dedicated to rehabilitating existing residential streets.
- **Construction Fund:** A portion of the Wheel Tax (35.14 percent) is dedicated to funding the design, construction, and ROW acquisition of streets, roads, alleys, or public ways.
- **Residual Fund:** The remaining portion of the Wheel Tax can be used for general street improvements in the City of Lincoln. Uses include arterial rehabilitation, street maintenance operations, new construction projects, and debt service.

The history of increases in the Wheel Tax generally supports the equivalent of a $5 increase every five years. Such a regular increase in the Wheel Tax is assumed in the revenue forecasts. A modest growth in this funding source is also assumed to generally match the growth in the number of registered vehicles at 1.5 percent annually. The City Wheel Tax is estimated to contribute approximately $810 million in transportation funding through 2050.

Lincoln on the Move

Lincoln on the Move (LOTM) is a six-year initiative to improve the City's streets through a ¼ cent sales tax. Revenues from the sales tax, which was approved by voters in 2019, must be applied to specific uses:

- **Existing Arterial and Neighborhood Streets:** The largest portion of the sales tax (73.5 percent) is dedicated to rehabilitating existing arterial and neighborhood streets.
- **Growth Projects:** A portion of the sales tax (25 percent) is dedicated to funding the design, construction, and ROW acquisition of streets that support community growth.
- **RTSD:** A small portion of the sales tax (1.5 percent) is dedicated to joint projects with the Railroad Transportation Safety District.

The revenue forecasts include $13 million annually of LOTM sales tax funding in years 2022 through 2025, totaling $52 million in the first four years of the plan.

Arterial Street Impact Fees

A local funding source, impact fees are dedicated to new water, wastewater, parks, trails, and arterial streets infrastructure. The City levies an impact fee charge against new development to generate revenue to support specific public projects. A one-time, up-front charge paid by new construction only, impact fees can generally be used on public projects within the district in which it is collected. Arterial Street Impact Fees currently generate approximately $4.2 million annually and are projected to increase 1.2 percent annually, which is in line with overall population growth, resulting in an estimated $140 million in impact fee revenues for arterial streets over the life of the plan.

General Revenues (Lincoln)

Property tax, sales tax, and other sources make up the general fund, which is used for general operating functions of City departments. This local funding source represents pay-as-you-go contributions from the general fund for capital projects with or without other funding sources. General funds are used for transportation uses including the Urban Roads Program, transit operations, sidewalk and trail rehabilitation. Based on historic general fund transfers to the Urban Roads Program, an estimated $2.36 million is anticipated in 2022; with an assumed 3 percent annual growth to account for economic growth in Lincoln. The City's general revenues are estimated to contribute approximately $123 million in road program funding through 2050.



Table 6.3 Urban Roads Program Funding ($M)

Fiscal Year	Federal Revenue			State Revenue		Local Revenue				Total
	STBG	HSIP	COVID	Highway Allocation (Plus Bonds, Less Bond Payment)	FFPP	Wheel Tax	LOTM	Impact Fees	General Revenues	
2022	$4.08	$0.70		$30.32	$0.28	$19.16	$13.00	$4.20	$2.36	$74.10
2023	$4.20	$0.71	$1.44	$29.63	$0.29	$19.45	$13.00	$4.20	$2.46	$76.45
2024	$4.33	$0.72		$29.98	$0.29	$19.74	$13.00	$4.20	$2.56	$74.84
2025	$4.46	$0.74		$24.96	$0.30	$20.04	$13.00	$4.20	$2.67	$70.36
2026	$4.59	$0.75		$25.31	$0.30	$21.60		$4.25	$2.78	$59.59
2027	$4.73	$0.76		$25.66	$0.31	$21.93		$4.30	$2.90	$60.58
2028	$4.87	$0.77		$27.84	$0.31	$22.26		$4.35	$3.01	$63.42
2029	$5.02	$0.79		$28.20	$0.32	$22.59		$4.41	$3.13	$64.45
2030	$5.17	$0.80		$28.56	$0.33	$22.93		$4.46	$3.26	$65.50
2031	$5.32	$0.81		$28.93	$0.33	$24.64		$4.51	$3.38	$67.93
2032	$5.48	$0.83		$29.30	$0.34	$25.01		$4.57	$3.52	$69.04
2033	$5.65	$0.84		$29.67	$0.34	$25.39		$4.62	$3.65	$70.17
2034	$5.82	$0.86		$30.05	$0.35	$25.77		$4.68	$3.79	$71.31
2035	$5.99	$0.87		$30.44	$0.35	$26.15		$4.73	$3.93	$72.48
2036	$6.17	$0.89		$30.83	$0.36	$28.02		$4.79	$4.08	$75.14
2037	$6.36	$0.90		$32.42	$0.37	$28.44		$4.85	$4.23	$77.56
2038	$6.55	$0.92		$33.61	$0.37	$28.87		$4.90	$4.39	$79.61
2039	$6.75	$0.93		$34.01	$0.38	$29.30		$4.96	$4.55	$80.88
2040	$6.95	$0.95		$34.42	$0.38	$29.74		$5.02	$4.72	$82.18
2041	$7.16	$0.96		$34.83	$0.39	$31.77		$5.08	$4.89	$85.09
2042	$7.37	$0.98		$35.25	$0.40	$32.25		$5.14	$5.07	$86.46
2043	$7.59	$1.00		$35.68	$0.40	$32.73		$5.21	$5.25	$87.86
2044	$7.82	$1.01		$36.10	$0.41	$33.22		$5.27	$5.44	$89.28
2045	$8.05	$1.03		$36.54	$0.42	$33.72		$5.33	$5.63	$90.72
2046	$8.30	$1.05		$36.97	$0.43	$35.93		$5.40	$5.83	$93.91
2047	$8.54	$1.07		$37.42	$0.43	$36.47		$5.46	$6.04	$95.43
2048	$8.80	$1.09		$37.87	$0.44	$37.02		$5.53	$6.25	$96.99
2049	$9.07	$1.10		$38.32	$0.45	$37.58		$5.59	$6.46	$98.57
2050	$9.34	$1.12		$38.78	$0.46	$38.14		$5.66	$6.69	$100.18
TOTAL	**$184.54**	**$25.96**	**$1.44**	**$931.91**	**$10.53**	**$809.85**	**$52.00**	**$139.87**	**$122.94**	**$2,279.04**

Rail Crossing Program

Federal, state, and local revenues are available to improve railroad crossings throughout the region, as described below and detailed in **Table 6.4**.

Rail Hazard Elimination

This federal funding source (a subset of the STBG) provides resources for safety improvements on public roads, railroad crossings, public transportation facilities, bicycle and pedestrian pathways, and trails. Rail Hazard Elimination funding varies greatly year to year; the forecasts represent average anticipated revenues. A higher amount is expected in the first seven years of the plan, specifically for the 33rd and Cornhusker project. The annual revenue forecasts drop off starting in 2029. Growth in this funding source is assumed to be 1.7 percent per year. An estimated $37 million in Rail Hazard Elimination funds will be available to improve railroad crossings over the 29-year time horizon of the LRTP.

State Train Mile Tax

The state tax on rail traffic passing through the State is used for constructing, rehabilitating, relocating, or modifying railroad grade separation facilities. This funding is competitive statewide, and the RTSD often leverages their funds to pay the local share for qualifying projects. State Train Mile Tax funding is highly variable year to year; the forecast revenues represent an average over time. A higher amount is expected in the first seven years of the plan, specifically for the 33rd and Cornhusker project. The annual revenue forecasts drop off starting in 2029. Growth in this funding source is assumed to align with projected freight growth of 1.2 percent per year. An estimated $9 million in State Train Mile Tax will be available to improve railroad crossings over the 29-year time horizon of the LRTP.

Table 6.4 Rail Crossing Program Funds ($M)

Fiscal Year	Rail Hazard Elimination	State Train Mile Tax	RTSD	Total
2022	$2.72	$0.68	$4.62	$8.02
2023	$2.77	$0.69	$4.74	$8.20
2024	$2.81	$0.70	$4.86	$8.37
2025	$2.86	$0.70	$4.98	$8.54
2026	$2.91	$0.71	$5.10	$8.72
2027	$2.96	$0.72	$5.23	$8.91
2028	$3.01	$0.73	$5.36	$9.10
2029	$0.64	$0.16	$5.49	$6.29
2030	$0.65	$0.16	$5.63	$6.44
2031	$0.66	$0.16	$5.77	$6.59
2032	$0.67	$0.17	$5.91	$6.75
2033	$0.68	$0.17	$6.06	$6.91
2034	$0.70	$0.17	$6.21	$7.08
2035	$0.71	$0.17	$6.37	$7.25
2036	$0.72	$0.17	$6.52	$7.41
2037	$0.73	$0.18	$6.69	$7.60
2038	$0.74	$0.18	$6.85	$7.77
2039	$0.76	$0.18	$7.02	$7.96
2040	$0.77	$0.18	$7.20	$8.15
2041	$0.78	$0.18	$7.38	$8.34
2042	$0.80	$0.19	$7.56	$8.55
2043	$0.81	$0.19	$7.75	$8.75
2044	$0.82	$0.19	$7.94	$8.95
2045	$0.84	$0.19	$8.14	$9.17
2046	$0.85	$0.20	$8.34	$9.39
2047	$0.87	$0.20	$8.55	$9.62
2048	$0.88	$0.20	$8.76	$9.84
2049	$0.90	$0.20	$8.98	$10.08
2050	$0.91	$0.21	$9.21	$10.33
TOTAL	**$36.94**	**$8.94**	**$193.22**	**$239.10**

Railroad Transportation Safety District

This local funding source is generated by a countywide public entity, the RTSD, which has taxing authority to levy a property tax. RTSD funds are designed for projects throughout the City and County to eliminate automobile and railroad conflicts. This funding source is a countywide levy, and a portion of these revenues is projected to be used to help fund qualifying projects in the urban transportation program. RTSD annual revenues are estimated at $4.52 million for capital projects and $0.10 million for operations & maintenance, with annual growth rates of 2.5 percent and 2.0 percent, respectively, resulting in an estimated $189 million in capital funds and $4 million in operations & maintenance funds through 2050.

Transit Program

The transit funding sources are described below, with **Table 6.5** detailing the estimated year-by-year revenue forecasts.

Federal Transit Administration Funds (5307, 5309, 5337, 5339)

The FTA provides resources for transit operations and capital expenditures. A local match of 20 percent is generally required to qualify for this funding. Currently, StarTran receives approximately $4 million in FTA funding (5307, 5309, 5337, and 5339 funds) for transit capital and operations. It is assumed that these federal funding sources will continue to be available and will grow at a rate of 1.7 percent annually, consistent with historic growth in federal funding. A total of approximately $148 million in FTA funding for StarTran is expected through 2050.

FTA 5310 Funds

The Section 5310 Enhanced Mobility program provides an annual apportionment to be used within the Lincoln urban area. In 2013, the Governor of Nebraska named NDOT as the Designated Recipient to administer the Section 5310 program in the Lincoln MPO urban area. NDOT receives and reviews the applications for the Section 5310 program, and the Lincoln MPO annually amends the TIP to include the awarded projects. Currently, funding levels are approximately $236,000 per year. It is assumed that this FTA funding source will continue to be available and will grow at a rate of 1.7 percent annually for a total of nearly $9 million through 2050. These funds require a local match of 20 percent for capital projects and 50 percent for operating assistance. Typically, 5310 applicants are hospitals, non-profit organizations, and City departments such as Aging Partners and Parks and Recreation. The local match for these federal funds come from sources outside the transportation revenues identified in the LRTP.

FTA 5311 Funds

The FTA 5311 Formula Grants for Rural Areas provides capital, planning, and operating assistance to support public transportation in rural areas. Currently, funding levels are approximately $86,000 per year. It is assumed that this FTA funding source will continue to be available and will grow at a rate of 1.7 percent annually for a total of approximately $3 million through 2050. These funds require a local match of 20 percent for capital projects and 50 percent for operating assistance. Lancaster County is the typical applicant of 5311 funds, and the local match comes from sources outside the transportation revenues identified in the LRTP.



State Transit Funds

State revenues include any State subsidy received in aid of public transit operations and capital expenditures. Currently, funding levels are roughly $1.3 million per year. It is assumed that this State funding source will continue to be available and will grow at a rate of 3 percent annually for a total of nearly $59 million through 2050.

Fares, Advertising, and UNL Contract

These funds include fare revenue from use of the transit system based on current and projected ridership. The fare revenues are expected to grow based on growth in the community and on expected fare increases. Advertising and miscellaneous funding are expected to continue based on historical trends. Combined, a 4.7 percent annual increase is anticipated. The contract with the University of Nebraska provides funding to the transit system to provide transit service between the City Campus and East Campus using student fees. In total, these funding sources are forecast to contribute approximately $196 million in transit funding over the life of the plan.

General Revenues (Lincoln)

The City's general fund provides resources for general operating functions of City departments. A portion of the general fund has historically been allocated to support StarTran operations. The level of general revenues allocated to transit is assumed to remain consistent with historic levels and to grow at 3 percent per year. In total, an estimated $339 million in general funds will be available for transit through 2050.



Table 6.5 Transit Program Funds ($M)

Fiscal Year	Federal Revenue			State Revenue	Local Revenue		Total
	FTA Funds (5307, 5309, 5337, 5339)	FTA Funds (5310)	FTA Funds (5311)	State Transit Funds	Fares, Advertising, UNL Contract	General Revenues	
2022	$4.00	$0.24	$0.09	$1.30	$3.30	$7.50	$16.42
2023	$4.07	$0.24	$0.09	$1.34	$3.46	$7.73	$16.91
2024	$4.14	$0.24	$0.09	$1.38	$3.62	$7.96	$17.42
2025	$4.21	$0.25	$0.09	$1.42	$3.79	$8.20	$17.95
2026	$4.28	$0.25	$0.09	$1.46	$3.97	$8.44	$18.49
2027	$4.35	$0.26	$0.09	$1.51	$4.15	$8.69	$19.06
2028	$4.43	$0.26	$0.10	$1.55	$4.35	$8.96	$19.64
2029	$4.50	$0.27	$0.10	$1.60	$4.55	$9.22	$20.24
2030	$4.58	$0.27	$0.10	$1.65	$4.77	$9.50	$20.86
2031	$4.66	$0.28	$0.10	$1.70	$4.99	$9.79	$21.50
2032	$4.73	$0.28	$0.10	$1.75	$5.22	$10.08	$22.17
2033	$4.81	$0.28	$0.10	$1.80	$5.47	$10.38	$22.85
2034	$4.90	$0.29	$0.11	$1.85	$5.73	$10.69	$23.56
2035	$4.98	$0.29	$0.11	$1.91	$6.00	$11.01	$24.30
2036	$5.06	$0.30	$0.11	$1.97	$6.28	$11.34	$25.06
2037	$5.15	$0.30	$0.11	$2.03	$6.57	$11.68	$25.85
2038	$5.24	$0.31	$0.11	$2.09	$6.88	$12.04	$26.66
2039	$5.33	$0.31	$0.11	$2.15	$7.20	$12.40	$27.51
2040	$5.42	$0.32	$0.12	$2.21	$7.54	$12.77	$28.38
2041	$5.51	$0.33	$0.12	$2.28	$7.90	$13.15	$29.28
2042	$5.60	$0.33	$0.12	$2.35	$8.27	$13.55	$30.22
2043	$5.70	$0.34	$0.12	$2.42	$8.66	$13.95	$31.19
2044	$5.80	$0.34	$0.12	$2.49	$9.06	$14.37	$32.19
2045	$5.89	$0.35	$0.13	$2.57	$9.49	$14.80	$33.23
2046	$5.99	$0.35	$0.13	$2.64	$9.94	$15.25	$34.30
2047	$6.10	$0.36	$0.13	$2.72	$10.40	$15.70	$35.42
2048	$6.20	$0.37	$0.13	$2.80	$10.89	$16.17	$36.57
2049	$6.31	$0.37	$0.14	$2.89	$11.40	$16.66	$37.77
2050	$6.41	$0.38	$0.14	$2.97	$11.94	$17.16	$39.00
TOTAL	**$148.34**	**$8.76**	**$3.19**	**$58.78**	**$195.78**	**$339.14**	**$754.00**

Trails, Bicycle, and Pedestrian Program

The Trails, Bicycle, and Pedestrian Program funding sources are described below, with **Table 6.6** detailing the estimated year-by-year revenue forecasts.

Transportation Alternatives Set Aside

This federal funding source provides resources for transportation-related activities designed to strengthen the cultural, aesthetic, and environmental aspects of the transportation system. A 20 percent local match is typically required. The City of Lincoln receives approximately $390,000 per year. This funding source is expected to continue to be available for trails and other bicycle and pedestrian projects and is assumed to grow at 1.7 percent annually, consistent with the historic federal funding growth rate. Approximately $14 million in funding can reasonably be expected through 2050.

Carbon Reduction Program

This federal funding source provides resources for transportation-related activities designed to designed to reduce transportation emissions, defined as carbon dioxide (CO_2) emissions from on-road highway sources. A 20 percent local match is typically required. The City of Lincoln receives approximately $840,000 per year. This funding source is expected to continue to be available and is assumed to grow at 1.7 percent annually, consistent with the historic federal funding growth rate. Approximately $31 million in funding can reasonably be expected through 2050.

Lower Platte South Natural Resources District

These funds include a state subsidy received through the Lower Platte South National Resources District (NRD) to aid the construction of the local multiuse trail system related to the regional drainage system and natural areas. A 20 percent local match is typically required. The City of Lincoln's trail system regularly benefits from approximately $100,000 annually through the NRD's trails program. It is assumed that this source of funds will continue to be available and will grow at a 2.5 percent annual rate for a total of nearly $4.2 million in funding through 2050.

Trail Impact Fees

This local funding source is dedicated for trails. The City levies an impact fee charge against new development to generate revenue to support specific public projects. Impact fees, a one-time, up-front charge paid by new construction only, can generally be used on public projects within the district in which it is collected. The Trails Impact Fee generates approximately $70,000 annually and is projected to increase at 1.2 percent annually, which is in line with overall population growth. The result is an estimated $2.3 million in Trail Impact Fee revenues for trails over the life of the plan. These funds are frequently used as local match for Transportation Alternatives Set Aside.

Private Contributions

The City of Lincoln's Trails Program has historically received periodic private donations for construction of the local trail system. Based on historic contributions averaged over time, an estimated $6.9 million in private donations can reasonably be expected to support the trails program.

Keno Funds

The City of Lincoln uses a portion of the Keno lottery funds to rehabilitate local trails. Current Keno funding levels for the Trails Program are roughly $200,000 per year. With an annual growth rate of 1.2 percent (matching the overall population growth), an estimated $6.9 million in Keno funds will be available through 2050.

General Revenues (Lincoln)

The City's general fund provides resources for general operating functions of City departments. A portion of the general fund has historically been allocated to support trail rehabilitation and sidewalk rehabilitation. The level of general revenues allocated to trail rehabilitation is assumed to remain consistent with historic levels and to grow at 3 percent per year. In total, an estimated $4.5 million in general funds will be available for trail rehabilitation through 2050. The revenue forecasts also assume $1 million per year general fund transfer for sidewalk rehabilitation, resulting in $29 million in available funding for sidewalk rehabilitation.

Table 6.6 Trails, Bicycle and Pedestrian Program Funds ($M)

Fiscal Year	Transportation Alternatives	Carbon Reduction Program	Lower Platte NRD	Impact Fees	Private Contributions	Keno	General Revenues – Trail Rehab	General Revenues – Sidewalk Rehab	Total
2022	$0.39	$0.84	$0.10	$0.07	$0.20	$0.20	$0.10	$1.00	**$2.90**
2023	$0.40	$0.85	$0.10	$0.07	$0.20	$0.20	$0.10	$1.00	**$2.92**
2024	$0.40	$0.87	$0.11	$0.07	$0.20	$0.20	$0.11	$1.00	**$2.96**
2025	$0.41	$0.88	$0.11	$0.07	$0.21	$0.21	$0.11	$1.00	**$3.00**
2026	$0.42	$0.90	$0.11	$0.07	$0.21	$0.21	$0.11	$1.00	**$3.03**
2027	$0.42	$0.91	$0.11	$0.07	$0.21	$0.21	$0.12	$1.00	**$3.05**
2028	$0.43	$0.93	$0.12	$0.07	$0.21	$0.21	$0.12	$1.00	**$3.09**
2029	$0.44	$0.95	$0.12	$0.07	$0.22	$0.22	$0.12	$1.00	**$3.14**
2030	$0.45	$0.96	$0.12	$0.07	$0.22	$0.22	$0.13	$1.00	**$3.17**
2031	$0.45	$0.98	$0.12	$0.08	$0.22	$0.22	$0.13	$1.00	**$3.20**
2032	$0.46	$0.99	$0.13	$0.08	$0.23	$0.23	$0.13	$1.00	**$3.25**
2033	$0.47	$1.01	$0.13	$0.08	$0.23	$0.23	$0.14	$1.00	**$3.29**
2034	$0.48	$1.03	$0.13	$0.08	$0.23	$0.23	$0.14	$1.00	**$3.32**
2035	$0.49	$1.05	$0.14	$0.08	$0.23	$0.23	$0.15	$1.00	**$3.37**
2036	$0.49	$1.06	$0.14	$0.08	$0.24	$0.24	$0.15	$1.00	**$3.40**
2037	$0.50	$1.08	$0.14	$0.08	$0.24	$0.24	$0.16	$1.00	**$3.44**
2038	$0.51	$1.10	$0.15	$0.08	$0.24	$0.24	$0.16	$1.00	**$3.48**
2039	$0.52	$1.12	$0.15	$0.08	$0.24	$0.24	$0.17	$1.00	**$3.52**
2040	$0.53	$1.14	$0.16	$0.08	$0.25	$0.25	$0.17	$1.00	**$3.58**
2041	$0.54	$1.16	$0.16	$0.08	$0.25	$0.25	$0.18	$1.00	**$3.62**
2042	$0.55	$1.18	$0.16	$0.09	$0.25	$0.25	$0.18	$1.00	**$3.66**
2043	$0.56	$1.20	$0.17	$0.09	$0.26	$0.26	$0.19	$1.00	**$3.73**
2044	$0.57	$1.22	$0.17	$0.09	$0.26	$0.26	$0.19	$1.00	**$3.76**
2045	$0.57	$1.24	$0.18	$0.09	$0.26	$0.26	$0.20	$1.00	**$3.80**
2046	$0.58	$1.26	$0.18	$0.09	$0.27	$0.27	$0.20	$1.00	**$3.85**
2047	$0.59	$1.28	$0.19	$0.09	$0.27	$0.27	$0.21	$1.00	**$3.90**
2048	$0.60	$1.30	$0.19	$0.09	$0.27	$0.27	$0.22	$1.00	**$3.94**
2049	$0.61	$1.32	$0.19	$0.09	$0.28	$0.28	$0.22	$1.00	**$3.99**
2050	$0.63	$1.35	$0.20	$0.09	$0.28	$0.28	$0.23	$1.00	**$4.06**
TOTAL	**$14.46**	**$31.15**	**$4.19**	**$2.33**	**$6.89**	**$6.89**	**$4.52**	**$29.00**	**$99.41**

Summary of Available Revenues

In total, an estimated $4.74 billion in transportation revenues can reasonably be expected for the NDOT Highway, Rural Roads, Urban Roads, Rail Crossing, Transit, and Trails programs, as summarized in **Table 6.7**.

Table 6.7 Total Revenue Forecasts ($M)

Program	Revenue Forecasts (2022–2050)
NDOT Highways Program	$548.16
Rural Roads Program	$854.99
Urban Roads Program	$2,280.11
Rail Crossing Program	$239.10
Transit Program	$754.00
Trails, Bicycle, and Pedestrian Program	$99.41
TOTAL	**$4,775.77**

Resource Allocation

With the revenue forecasts complete, the next step in developing a fiscally constrained transportation plan is to allocate the resources to various project and program categories. Several resource allocation scenarios were considered during the development of the 2050 LRTP and are described in the following sections.

Project and Program Categories

Seventeen transportation project or program categories are currently funded and expected to be funded through the life of the LRTP. These programs can be divided into four major categories.

NDOT Highways Program

- NDOT Projects

Rural Roads Program

- Operations & Maintenance
- Pavement Maintenance & Pipes
- Roadway and Bridge Capital Projects

Urban Roads Program

- System Operations & Maintenance, Minor Intersections
- Road & Bridge Rehabilitation
- Studies, PE, ROW & Statutorily Required Records
- Roadway Capital Projects
- Two Plus Center Turn Lane Projects
- ITS and Technology
- East Beltway Preservation
- Rail Crossing Projects

Alternative Modes

- Transit
- Trail Projects
- Trail Rehabilitation
- On-Street Bike Projects
- Pedestrian, Bike Share, and TDM

Committed and Restricted Funds

A portion of the approximately $4.74 billion in transportation revenues described in the previous section is either restricted to certain project types or has already been committed to specific projects or programs. Approximately $3.21 billion (two-thirds of the total available funding) is either committed or restricted to particular program or project categories. The funding restrictions and commitments associated with each funding source are accounted for by aligning them with the associated project or program category, as shown in **Table 6.8**. All funds for

fiscal years (FY) 22 through 25 are committed through the TIP. Where commitments for the FY22-25 TIP are listed, the funding sources vary and in some cases are a combination of funding sources. These funding commitments and restrictions are shown on **Table 6.8** by project and program category.

Figure 6.1 shows the resulting funding commitments and restrictions for each project and program category.

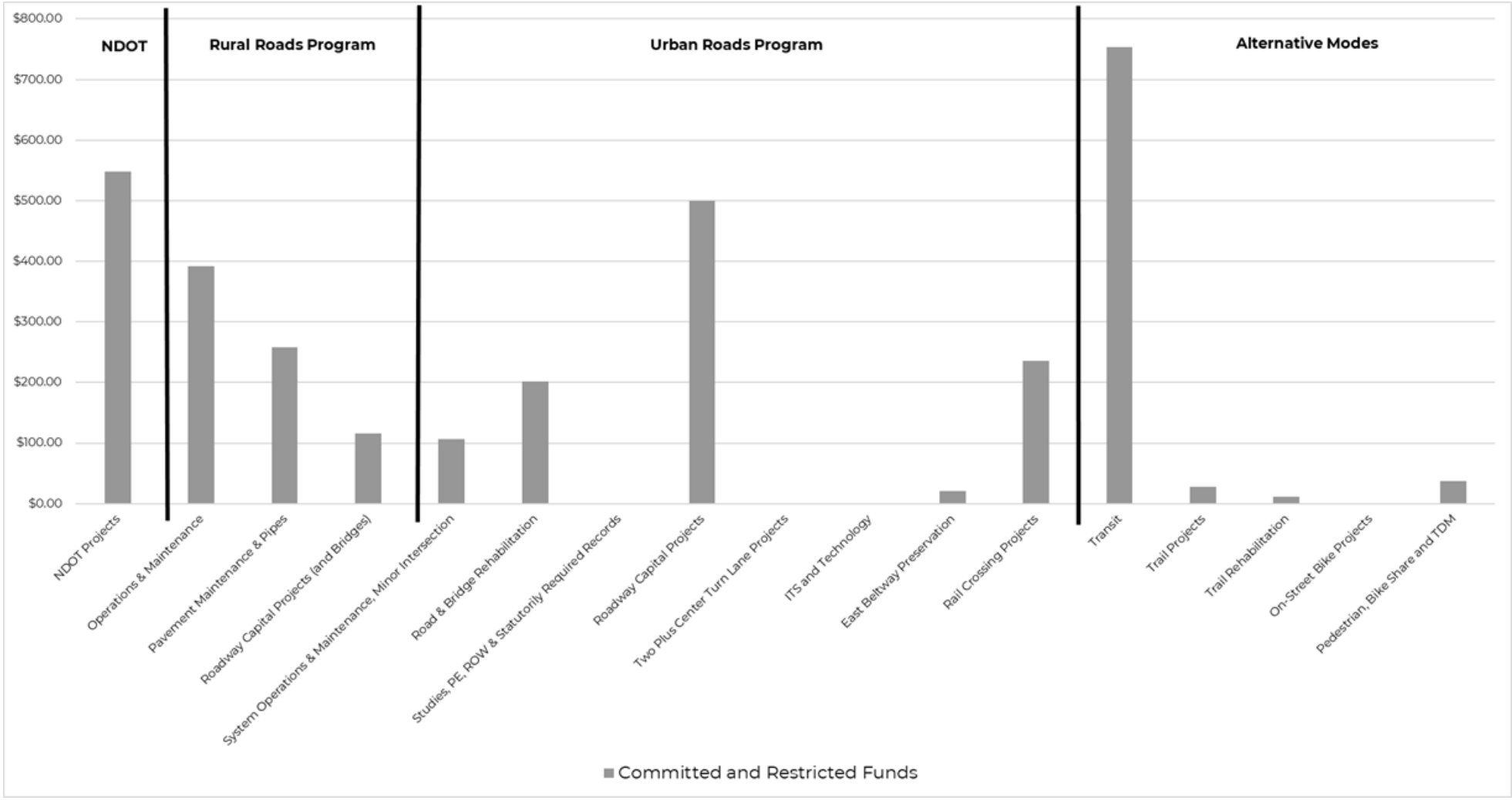
The remaining $1.53 billion in funding is considered "flexible" and could be used for various transportation-related purposes.

Table 6.8 Funding Commitments and Restrictions

Funding Source	Project or Program Category	Amount ($M)
Federal Funds for NDOT Highways Program	NDOT Projects	$548.16
State Funds for NDOT Highways Program		
FFPP (Lancaster County)	Rural Road & Bridge Capital Projects	$115.89
HSIP (Lancaster County)		
Lancaster County General Revenues – Road & Bridge		
STBG Funds for Lancaster County Projects in FY22-25 TIP		
Lancaster County General Revenues – Pavement Maintenance & Pipes	Rural Road Pavement Maintenance & Pipes	$258.31
Lancaster County General Revenues – Operations & Maintenance	Rural Road Operations & Maintenance	$391.78
Highway Allocation Funds (Lancaster County)		
RTSD O&M Funds	Urban Road Operations & Maintenance	$106.85
Transportation O&M budget in FY22-25 TIP		
COVID Relief Funds	Urban Road & Bridge Rehabilitation	$201.53
60% of Highway Allocation Bond		
73.5% of LOTM Funds		
14.86% of Wheel Tax		
STBG Funds in FY22-25 TIP		
FFPP (Lincoln)	Urban Road Capital Projects	$499.68
HSIP (Lincoln)		
40% of Highway Allocation Bond		
25% of LOTM Funds		
35.14% of Wheel Tax		
Roadway Impact Fees		
Adjustment for FY22-25 TIP		
Keno Funds (Lancaster County)	East Beltway Preservation	$21.00
Lincoln Allocation in FY22-25 TIP		
Rail Hazard Elimination Funds	Rail Crossing Projects	$235.85
State Train Mile Tax Funds		

Funding Source	Project or Program Category	Amount ($M)
RTSD Capital Funds		
1.5% of Lincoln on the Move Funds		
Federal Transit Administration Funds	Transit	$754.00
State Transit Funds		
Fares, Advertising, UNL Contract		
Lincoln General Revenues – Transit		
Transportation Alternatives Set Aside	Pedestrian/Bicycle Projects	$59.02
Carbon Reduction Program		
Lower Platte South NRD		
Trail Impact Fees		
Private Contributions		
Keno Funds (Lincoln)	Trail Rehabilitation	$11.41
Lincoln General Revenues – Trail Rehabilitation		
Lincoln General Revenues – Sidewalk Rehabilitation	Pedestrian and TDM	$37.43
Sidewalk Rehabilitation Program in FY22-25 TIP		
Total Funding Commitments and Restrictions		**$3,240.91**

Figure 6.1 Committed and Restricted Funds by Category



Flexible Funds

After accounting for the committed and restricted funds, approximately $1.53 billion in flexible funds remain. As shown in **Table 6.9**, the flexible funds consist of four funding sources. The STBG funds can be used anywhere in Lincoln or Lancaster County, while the other three flexible funding sources must be used in the City of Lincoln.

Table 6.9 Flexible Funds

Funding Source	29-Year Total ($M)
Surface Transportation Block Grant Program	$239.24
TOTAL: Full Flexibility	**$239.24**
Remaining Wheel Tax (50%)	$365.73
Remaining Lincoln General Revenues	$112.88
Highway Allocation Fund (Lincoln)	$817.02
TOTAL: Must be used in Lincoln	**$1,295.63**

Surface Transportation Block Grant Program

A portion of the flexible funds (approximately $239 million) can be used in Lincoln or Lancaster County. The LRTP recommends a 70 percent (Lincoln)/30 percent (Lancaster County) split for these funds. Of the 30 percent allocation to Lancaster County, 20 percent shall be used within the 3-mile area surrounding the City of Lincoln to prepare roads in the urbanizing area for future annexation into the City of Lincoln. The remaining 10 percent can be used outside the 3-mile area, anywhere in Lancaster County. Allocations may vary annually but achieve the 70/30 percent split during the planning period.

This results in approximately $71.8 million in STBG funds for Lancaster County and $167.5 million in STBG funds for Lincoln. This brings the total amount of flexible funds that must be used in Lincoln to $1.46 billion.

Community Funding Priorities

Resource allocation is the process that establishes how the Lincoln MPO intends to distribute the available funding for the transportation system improvements to best achieve the vision and goals of this plan.

During the second phase of community outreach ("Balancing Tradeoffs"), community members were asked, "If you had $100 to fund transportation improvements in Lincoln, how would you spend it?" The funding category options provided to the public were simplified to be more easily understood. With a total of 203 responses to the online survey and from the focus group meetings, the top choice of the community was to maintain existing streets and bridges (refer to **Figure 6.2**). The results of the community's responses, however, reinforce the need for a balanced approach to funding transportation in Lincoln and Lancaster County; many participants expressed that all categories are important.

Figure 6.2 Community Input on Funding Priorities



Urban Area Resource Allocation Scenarios

After accounting for funding restrictions and commitments and the allocation of 30 percent of STBG funds to Lancaster County, the remaining $1.46 billion of flexible funds could be applied to the urban area project or program categories in different ways to achieve the LRTP goals. Six resource allocation scenarios were developed by a subset of the Project Oversight Planning Committee (POPC) with input from the full Oversight Planning Committee, the Community Committee, and with strong consideration for the community input on funding priorities.

Four initial scenarios were developed, and two hybrid scenarios were subsequently considered:

- **Scenario 1: Base Scenario:** Scenario 1 uses an approach consistent with the 2040 LRTP. That is, the allocation of flexible funds to each project and program category aligns with the previous LRTP allocation. Scenario 1 represents a baseline for comparison purposes.
- **Scenario 2: Multimodal Rehabilitation:** Scenario 2 responds to the community's priority of maintaining existing streets and bridges by focusing on rehabilitation of multimodal transportation infrastructure. Using the Base Scenario as a starting point, Scenario 2 includes an increased allocation to Road & Bridge Rehabilitation, Trail Rehabilitation, and Sidewalk Rehabilitation (Pedestrian, Bike Share, and TDM Program). The result is a decrease in the available funds for Roadway Capital Projects.
- **Scenario 3: Multimodal Focus:** Scenario 3 responds to the community's second and third funding priorities of expanding trails and enhancing transit service. It supports the Lincoln Climate Action Plan and the goal of reducing GHG emissions by 80 percent by 2050 by encouraging alternatives modes of travel. It also supports the infill development component of PlanForward by providing enhanced bicycle and pedestrian infrastructure and enhanced transit service. Again, Scenario 3 builds on the Base Scenario. Additional funds are allocated to Transit (e.g., for enhanced transit service such as bus rapid transit), Trail Projects, On-Street Bike Projects, and the Pedestrian, Bike Share, and TDM

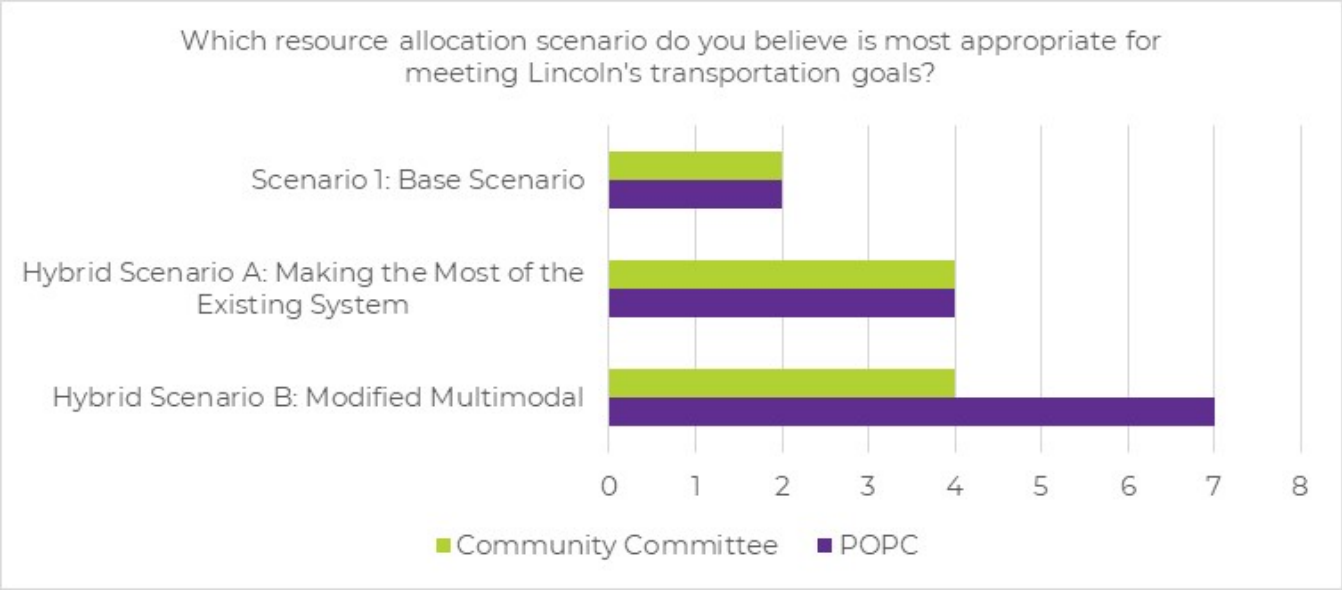
Program. The allocation to Roadway Capital Projects would be reduced as a result.

- **Scenario 4: Innovation and Technology:** Scenario 4 is intended to support the Lincoln Climate Action Plan through technology advancements; the electrification focus of this scenario supports the Community Committee's strong emphasis on environmental sustainability. Beginning with the Base Scenario, Scenario 4 allocates additional funds to ITS & Technology (e.g., for adaptive signals, future proofing streets, micromobility, installation of EV charging stations), the Pedestrian, Bike Share, and TDM Program (specifically for technology and infrastructure for employers to support remote working) and Transit (e.g., for automated shuttle service, electrification of fleet, on-demand transit services to leverage electrification and new technology platforms). This scenario would result in an equivalent reduction in the Roadway Capital Projects allocation.
- **Hybrid Scenario A: Making the Most of the Existing System:** Hybrid Scenario A uses the Base Scenario as a starting point and includes elements of both Scenario 2 and Scenario 4. It includes an increased allocation to Road & Bridge Rehabilitation, Trail Rehabilitation, and ITS & Technology. The result is an increased emphasis on maintaining the existing system and improving the efficiency of that system.
- **Hybrid Scenario B: Modified Multimodal:** Again, Hybrid Scenario B uses the Base Scenario as a starting point and a portion of the flexible funds for increased allocation to Transit, On-Street Bike Projects, Trail Rehabilitation, and Sidewalk Rehabilitation (elements of Scenarios 2 and 3), but compared to these scenarios, it preserves some flexible funds for Roadway Capital Projects, particularly growth projects that support the edge growth component of PlanForward.

The Base Scenario and Hybrid Scenarios A and B were presented and discussed with the POPC and the Community Committee. Both Committees were asked which resource allocation scenario they believe is most appropriate for meeting Lincoln's transportation goals. As shown on **Figure 6.3** the Community Committee was split in their preference for Hybrid A and Hybrid B, while the POPC had a preference for Hybrid B.

Figure 6.4 shows a comparison of the total resource allocation (2022–2050) for each scenario by project or program category. The recommended resource allocation is described on page 6-24.

Figure 6.3 Project Oversight Planning Committee and Community Committee Input on Resource Allocation Scenarios



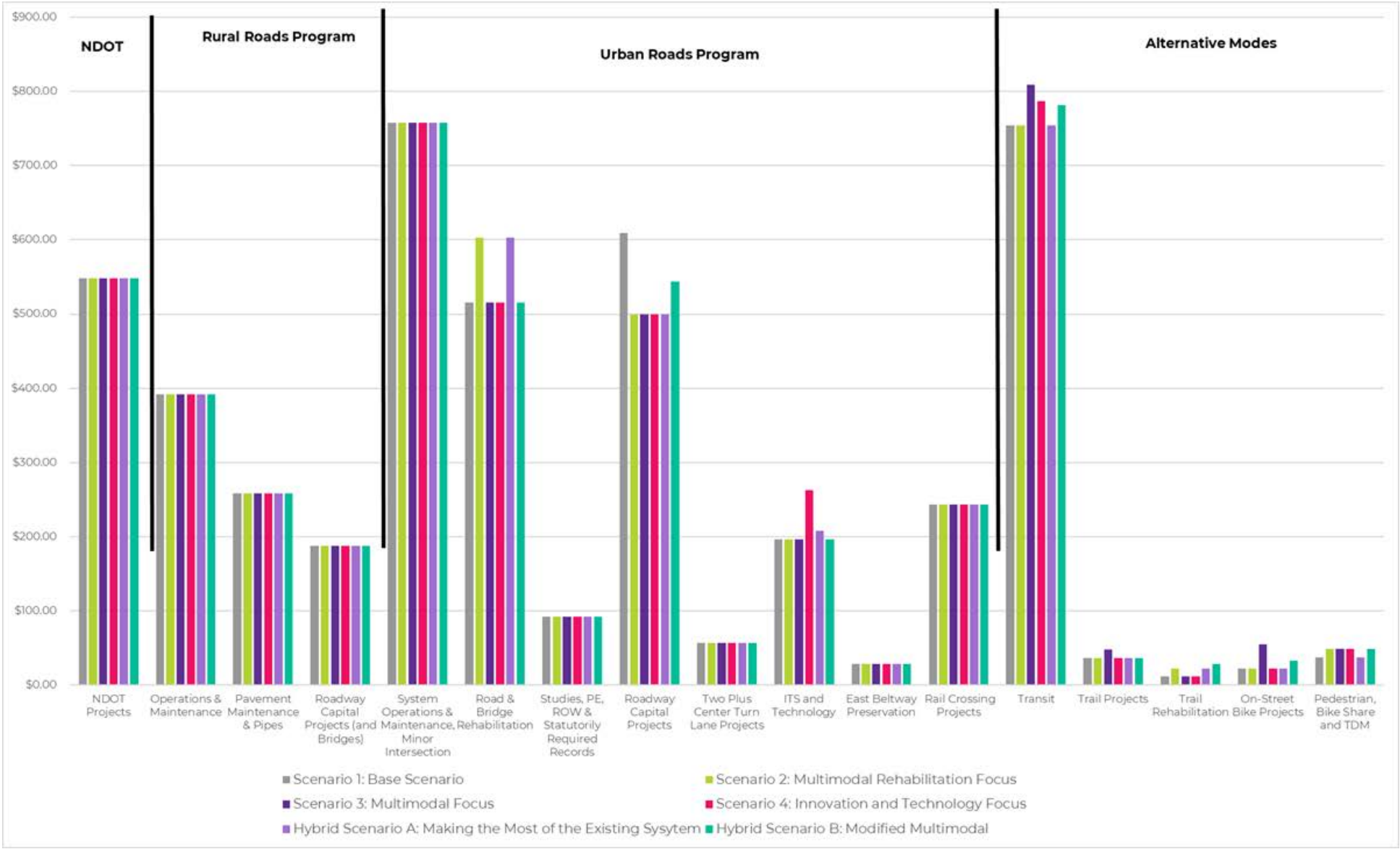
Funding Strategy

LTU Operations & Maintenance Program

Through the process of developing the revenue forecasts and resource allocation scenarios, it became apparent that funding needs for LTU's Operations & Maintenance (O&M) Program exceed the funding projections included in the 2040 LRTP. The 2040 LRTP established O&M needs using a base year (2017) annual estimate of $17.70 million, with an annual inflation rate of 2.5 percent. This equated to a funding need of $20.51 million in 2022.

The current budget includes $24.77 million for the O&M program in 2022, a $4.26 million increase over what was previously projected. In addition to an increase in the base year program cost, LTU estimates an annual inflation rate of 2.75 percent based on increasing costs over the past five years. Specifically, the cost of materials, wages and healthcare for employees has increased, resulting in a higher annual inflation on the cost to complete the essential functions associated with the O&M Program.

Figure 6.4 Comparison of Resource Allocation Scenarios



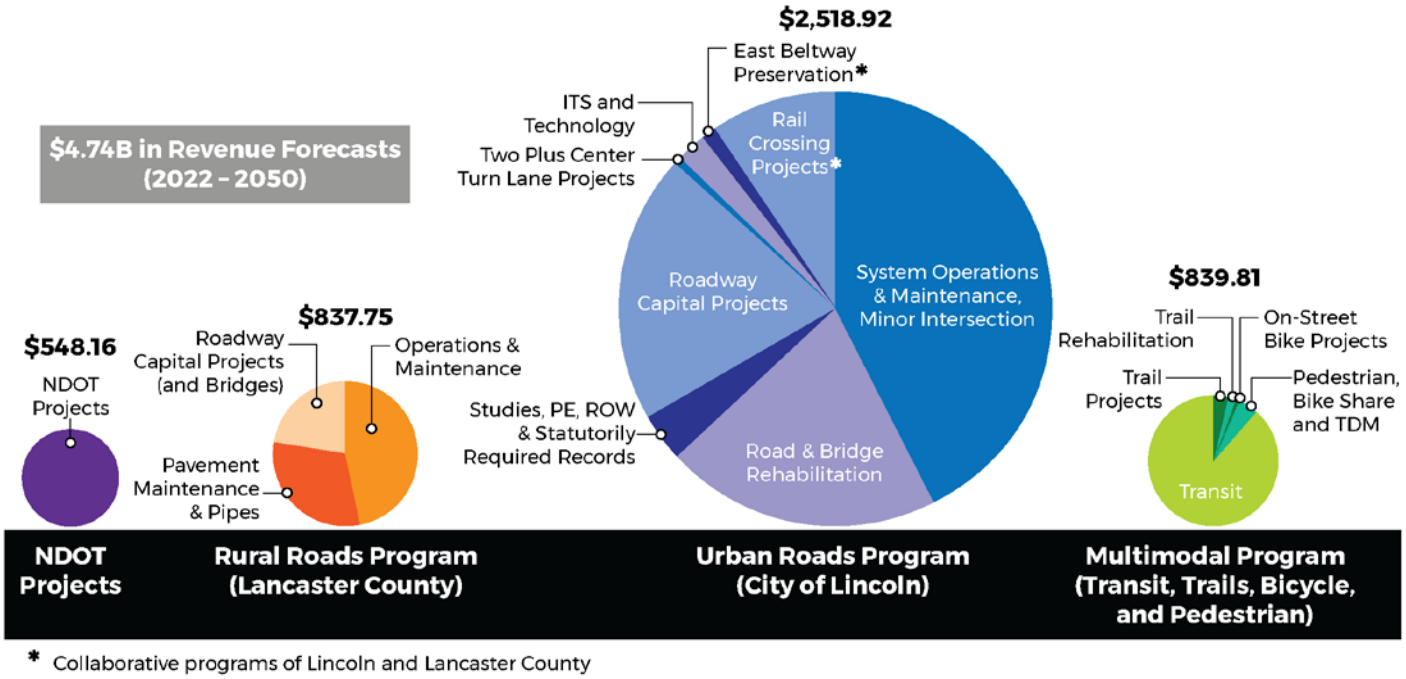
The combined effect of a higher base year cost and a higher annual inflation rate is a greater overall cost to fund the O&M Program than was previously anticipated. The total need over the 29-year period would be $858 million (with an annual average of $29.6 million) using the 2040 LRTP assumptions versus $1.077 billion (with an annual average of $37.15 million) using the 2050 LRTP assumptions. The 2050 LRTP O&M needs represent a 25 percent increase over those identified in the 2040 LRTP.

Recommended Resource Allocation

The revenue forecasts are not enough to address all the transportation needs in Lincoln and Lancaster County. Through previous and recent public input, the community has consistently expressed that maintaining existing streets and bridges is the top priority. The LRTP recommends prioritizing funding to take care of the existing transportation system and includes fully funding LTU's O&M Program, which requires 33 percent of the total funding available to the City of Lincoln. The recommended resource allocation is shown on **Figure 6.5** and is detailed in the Fiscally Constrained Plan, as documented in **Chapter 7**.

The recommended resource allocation represents a deviation from the six scenarios described in the previous section, primarily due to the need to fully fund LTU's O&M Program. The scenarios and community input on those scenarios should be referenced and considered if/when additional revenue sources are contemplated to address the transportation funding gap.

Figure 6.5 Recommended Resource Allocation ($M)



* Collaborative programs of Lincoln and Lancaster County

Future Funding Considerations

The following sections describe future funding considerations that are not explicitly accounted for in the 2050 LRTP revenue forecasts. These considerations should be monitored regularly to optimize funding opportunities for transportation.

Continue a ¼ Cent Sales Tax

The revenue forecasts described in the previous sections do not account for the continuation of the ¼ cent LOTM sales tax. Recognizing the transportation funding shortfall, a "what-if" scenario was evaluated to understand what could be accomplished if the ¼ cent sales tax were continued beyond 2025. A continuation of the ¼ cent sales tax (assuming a growth rate of 1.2 percent per year, representative of the community's expected population growth rate) would result in $380 million of additional revenue, which could be used to construct an estimated 30 additional roadway capital projects, rehabilitate an additional 210 lane miles of roadway, or provide more adequate funding to address transit, pedestrian, or bicycle needs.

Increase to ½ Cent Sales Tax

If the LOTM sales tax were increased to a ½ cent, an additional $760 million in funding could be expected (over the baseline assumptions), which equates to approximately 60 projects or 420 lane miles of roadway rehabilitation. Other new funding sources should be considered in addition to the continuation of the sales tax to address the transportation needs of Lincoln and Lancaster County.

Competitive Grant Opportunities

The revenue sources included in the LRTP revenue forecasts for 2022–2050 represent funding that can reasonably be expected based on historic funding levels. In addition to these regular and ongoing funding sources, the Lincoln MPO and its member agencies should continue to pursue other transportation funds, including competitive grants such as Federal Recreational Trails and the portion of the federal Transportation Alternatives Set Aside that is distributed by NDOT through a project-specific competitive process. In addition, there are a variety of federal and non-profit grant programs such as Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grants that should be pursued to supplement the transportation funding for the Lincoln MPO.

Highway Allocation Funds

The current allocation of highway funding is based on revenues generated by gas taxes. These revenues have remained stagnant, and no significant change has been made to state tax on fuel consumption. In fact, the rate decreased from 33.2 cents a gallon to 28.7 cents a gallon in 2021 although the portion of the rate that is considered Fixed Tax has remained unchanged at 16.3 cents per gallon. Funding the transportation system with gas tax revenues will become unsustainable over time as vehicles become more fuel efficient and more vehicles are converted to electric power. The Lincoln MPO will monitor changes to the Highway Allocation Funds that address these systematic changes.

7. Fiscally Constrained Plan

Transportation needs and opportunities in Lincoln and Lancaster County are significant. **Chapter 5** presents a compilation of current and future programs and projects to improve the region's transportation system. The revenue forecasts established in **Chapter 6** for the 29-year planning horizon are not adequate to achieve the LRTP goals and meet all the region's transportation needs.

The LRTP strongly encourages the pursuit of additional revenues to fund the transportation improvements that are vital to a thriving community. The LRTP funding strategy recognizes the limited funding availability and strives to optimize the use of the reasonably expected funds based on input from the LRTP Committees and the community, in combination with technical analysis. The LRTP funding strategy focuses on taking care of the existing system—fully funding LTU's O&M Program and prioritizing rehabilitation of critical roads and bridges. The plan recognizes the importance of making the system function as efficiently as possible while supporting the community growth envisioned in PlanForward.

The Urban Area funding strategy includes:

- Focusing operations and maintenance, road and bridge rehabilitation, as well as trail and sidewalk rehabilitation
- Encouraging flexible and performance-based geometric designs that effectively address congestion within funding limitations and ROW constraints
- Placing emphasis on addressing congestion at intersection bottlenecks and leveraging technology to improve the efficiency of major corridors
- Supporting community growth through public-private partnerships
- Supporting both infill development and Lincoln's Climate Action Plan through the continuation of funding for transit service and bicycle and pedestrian infrastructure

This chapter builds from the funding strategy and forms the basis for decisions about how to prioritize and phase transportation improvement projects and programs. The resource allocation used to develop the Fiscally Constrained Plan is detailed in **Table 7.1**.

Table 7.1 Resource Allocation

Project or Program Category	Funding in $M (FY22–50)
NDOT Highways Program	
NDOT Projects	$548.16
Rural Roads Program (Lancaster County)	
Operations & Maintenance	$391.78
Pavement Maintenance & Pipes	$258.31
Roadway Capital Projects (and Bridges)	$187.66
Urban Roads Program (Lincoln)	
System Operations & Maintenance, Minor Intersections	$1,077.46
Road & Bridge Rehabilitation	$515.12
Studies, PE, ROW & Statutorily Required Records	$91.47
Roadway Capital Projects	$499.69
Two Plus One Projects	$16.92
ITS & Technology	$59.36
East Beltway Preservation	$23.04

Rail Crossing Projects	$235.85
Multimodal Program	
Transit	$754.00
Trail Projects	$37.99
Trail Rehabilitation	$19.03
On-Street Bike Projects	$8.93
Pedestrian, Bike Share, and TDM	$51.02
Total	**$4,775.77**

Federal Requirements

The financial analysis presented in this chapter meets the requirements stated in federal transportation regulations. This detailed information should be referenced to guide project implementation for all modes of travel. The project costs and potential funding are estimates and will be revisited several times before the years they represent come to pass. The intent of the Fiscally Constrained Plan is to prepare an approximate, but realistic, estimate of both the total funds available and the total program cost by year of expenditure.

The Code of Federal Regulations describes the elements of a Transportation Financial Plan. The requirements of FAST Act (2015) state that the plan must include the revenues and costs to operate and maintain the roads and associated systems (signals, signage, snow removal, etc.) to allow MPOs to estimate future transportation conditions and promote good stewardship of available funds by using existing infrastructure to the fullest. The Fiscally Constrained Transportation Plan provided in this chapter does serve the MPO Planning Area as best as possible over the next 29 years and is based on the prioritization process of the LRTP planning effort.

Another requirement of federal transportation regulations is to use "year of expenditure" dollars for planning purposes. This requirement accents the reduction in the buying power of the transportation revenues that had not been previously accounted for during the preparation of long range transportation plans.

Project Prioritization Process

Although the LRTP addresses funding for various project types, only Roadway Capital Projects and Trail Projects are prioritized within the LRTP. All other project categories, including Transit, On-Street Bike, Rail Crossings, Road and Bridge Rehabilitation, etc., are prioritized outside the LRTP. These other programs are funded through a "pool" of funding as established in the Resource Allocation step (**Chapter 6**). The Fiscally Constrained Plan includes the top ranked Roadway Capital Projects (for the NDOT Highways Program, the Rural Roads Program, and the Urban Roads Program), Trail Projects, and a pool of funding for the various other transportation programs and project categories.

With limited funding available, the process of prioritizing projects must be comprehensive and strive to identify those projects that will most effectively move the region's transportation system toward fulfilling the vision and achieving the transportation goals. In compliance with federal requirements for performance-based planning, the project prioritization process is structured to identify those projects that will provide the greatest contribution toward meeting the eight transportation goals and associated performance targets. The evaluation criteria

used to compare projects are directly related to the goals.

Project Evaluation Committees

The Roadway Capital Projects and Trails Projects were evaluated with oversight by the Roadway and Trails Evaluation Committees, respectively, both of which are a subset of the POPC.

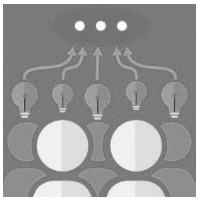
The Roadway Evaluation Subcommittee included representatives from the Lincoln Planning Department, Lancaster County Engineering, and LTU. The roadway projects were evaluated through a data-driven scoring process, and the Roadway Evaluation Subcommittee was responsible for guiding the process, providing relevant data and project information, and reviewing evaluation results.

The Trails Evaluation Subcommittee included representatives from the Lincoln Planning Department, the Lincoln Parks and Recreation Department, and LTU. Because the data for trail projects are not as robust as those for roadway projects, Trail Evaluation Subcommittee members scored the projects independently, and project scores were averaged. The committee met to discuss the scoring results and presented their recommended scores to the POPC.

Roadway Project Scoring

The Lincoln and Lancaster County Roadway Capital Projects were evaluated and prioritized separately in recognition of the unique transportation needs and priorities in the urban versus rural context. The eight LRTP goals (plus community support) were used as the basis for the data-driven project evaluation for both urban and rural projects.

The evaluation criteria are listed in **Table 7.2,** and details about the data and specific metrics used for each criterion are provided in **Appendix F**. Scores for each goal area/criterion are on a 0–1 scale, with 0 being the least favorable and 1 being the most favorable.



During the second phase of community outreach, the public was asked which Urban Roadway Projects (in the City of Lincoln) and which Rural Roadway Projects (in Lancaster County) are of most importance. The results from 203 individual responses were used as the "Community Input" score. NDOT projects within the Lincoln MPO Planning Area boundary were included with the urban roadway projects to simplify the online survey. **Appendix B** includes a summary of the public input on high-priority Roadway Projects, and **Appendix G** includes the scoring results for the Roadway Projects.

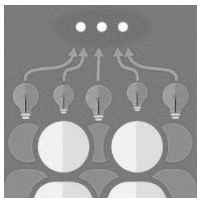
Table 7.2 Roadway Project Evaluation Criteria

Goal Area	Evaluation Criteria
Maintenance	Is the project located on a road that is in poor condition and would therefore serve dual functions of rehabilitating and improving the road?
Mobility and System Reliability	Is the project located on a road that is currently congested or expected to experience congestion in the future?
Livability and Travel Choice	Does the project include multimodal elements?
Safety and Security	Will the project alleviate a known safety problem?
Economic Vitality	Will the project improve access to and/or add value to surrounding land uses? Will the project improve travel on a designated truck route and/or the National Highway System (NHS)?
Environmental Sustainability	Will the project impact the natural, cultural, or built environment?
Transportation Equity	Is the project located in an area with underserved and overburdened communities?
Funding and Cost Effectiveness	How does the cost of the project compare to the benefits?
Community Support	Does the project have strong community support?

Trail Project Scoring

Each Trail Project was given a score ranging from 0 to 1 for each goal. A score of 0 is the least favorable, and a score of 1 is the most favorable rating.

Table 7.3 summarizes the evaluation criteria. Trail Evaluation Subcommittee members were provided with a packet of information to assist with the scoring process, including detailed scoring guidelines for consistency (**Appendix F**).



During the second phase of community outreach, the public was asked which Trail Projects are of most importance. The results from 203 individual responses were used as the "Community Input" score.

Appendix B includes a summary of the public input on high-priority Trail Projects, and **Appendix G** includes the scoring results for the Trail Projects.

Table 7.3 Trail Projects Evaluation Criteria

Goal Area		Evaluation Criteria
	**Maintenance**	Will the project improve the condition of the existing facility?
	**Mobility and System Reliability**	Will the project complete a gap in the trail system?
	**Livability and Travel Choice**	Will the project encourage the use of alternative modes of transportation?
	**Safety and Security**	Will the project alleviate a known safety problem?
	**Economic Vitality**	Will the project improve access to and/or add value to surrounding land uses?
	**Environmental Sustainability**	Will the project protect the natural, cultural, and built environment?
	**Transportation Equity**	Is the project located in an area with underserved and overburdened communities?
	**Funding and Cost Effectiveness**	How does the cost of the project compare to the benefits?
	**Community Support**	Does the project have strong community support?

Evaluation Criteria Weights

The relative importance of the eight goals (plus community input) varies; therefore, weights are assigned to each goal category and corresponding evaluation criteria. Because the relative importance of the goals differs for Urban Roadway Projects, Rural Roadway Projects, and Trail Projects, separate weights are established for the three project categories.

The weights shown in **Table 7.4** were developed using the combined input from the POPC and the Community Committee. The project score (0–1) for each goal was multiplied by the corresponding weight, resulting in a total project score ranging from 0 to 100.

Table 7.4 Weights by Goal Area and Project Category

Goal Area	Rural Area Roadway Projects (Lancaster County)	Urban Area Roadway Projects (Lincoln)	Trail Projects
Maintenance	22.1	17.8	13.0
Mobility and System Reliability	12.1	12.4	12.2
Livability and Travel Choice	5.8	11.0	13.7
Safety and Security	13.8	13.5	13.1
Economic Vitality	8.9	7.5	5.8
Environmental Sustainability	12.2	12.8	12.4
Transportation Equity	6.7	10.0	12.1
Funding and Cost Effectiveness	13.4	10.0	7.7
Community Support	5.0	5.0	10.0
Total	**100.0**	**100.0**	**100.0**

Fiscally Constrained Plan Elements

The following sections provide information on what can reasonably be funded over the 29-year time horizon of the LRTP within the Fiscally Constrained Plan.

NDOT Highways Program

NDOT has identified 10 capital projects within the Lincoln MPO, totaling over $616 million in needs (2021 dollars). The $548.16 million in state and federal revenues dedicated to the NDOT Highways Program will primarily address asset preservation needs and the I-80-Pleasant Dale to NW 56th Street and West Beltway projects. There is not adequate funding to complete all 10 projects, particularly since the construction cost of the projects will increase over time and the revenue growth is not anticipated to keep pace with the construction cost increases.

The Fiscally Constrained Plan includes three NDOT projects with committed funding:

- South Beltway (under construction) – Project ID 78 ($255 million)
- West Beltway (US 77) from W. Calvert Street to Rokeby Road – Project ID 76 ($51.0 million)
- I-80 -from Pleasant Dale to NW 56th Street – Project ID 71 ($129 million)

Year of Expenditure Costs

The Fiscally Constrained Plan must consider the year of expenditure (YOE) cost of projects. Construction costs are expected to increase annually. Based on historic and recent construction cost inflation rates, the LRTP accounts for a temporary rapid increase of 10 percent annual inflation in the first 5 years and 7 percent annual inflation in the next 5 years. Then the inflation rate is assumed to normalize at 5 percent annual inflation in the remaining years through 2050.

Lancaster County Rural Roads Program

The Rural Roads Program includes three program areas:

- Operations & Maintenance
- Pavement Maintenance & Pipes
- Road & Bridge Capital Projects

A gap analysis conducted for Lancaster County in 2018 identified a significant annual funding gap, which would continue based on the LRTP revenue forecasts and recommended resource allocation.

Road and Bridge Capital Projects

The LRTP identifies 95 capital projects in the County, with project costs totaling over $171 million in 2021 dollars. With approximately $188 million allocated to rural road capital projects, 26 of these projects could be constructed when accounting for construction cost inflation over time. The fiscally constrained rural projects are listed in priority order in **Table 7.5** and shown on **Figure 7.1**. Detailed project evaluation scores are provided in **Appendix G**.

Lancaster County updates its One and Six-Year (1 & 6) Road and Bridge Construction Program annually. While many of the 1 & 6 projects are included in the LRTP Rural Road and Bridge Capital Projects, additional bridge projects may be needed. The 1 & 6 project needs typically fall in the following program areas:

Operations & Maintenance:

- Bridge scour repair
- Bridge pile repair
- Bridge channel repair

Pavement Maintenance & Pipes

- Pipe culvert replacements
- Under 20 concrete box culverts
- Pavement preservation (fog seal, crack seal, chip seal, etc.)
- Pavement overlays
- Pavement overlays and widening

Road & Bridge Capital Projects

- Bridge sized structures
- Grading in preparation for pavement
- New pavement

Table 7.5 Fiscally Constrained Rural Road & Bridge Capital Projects

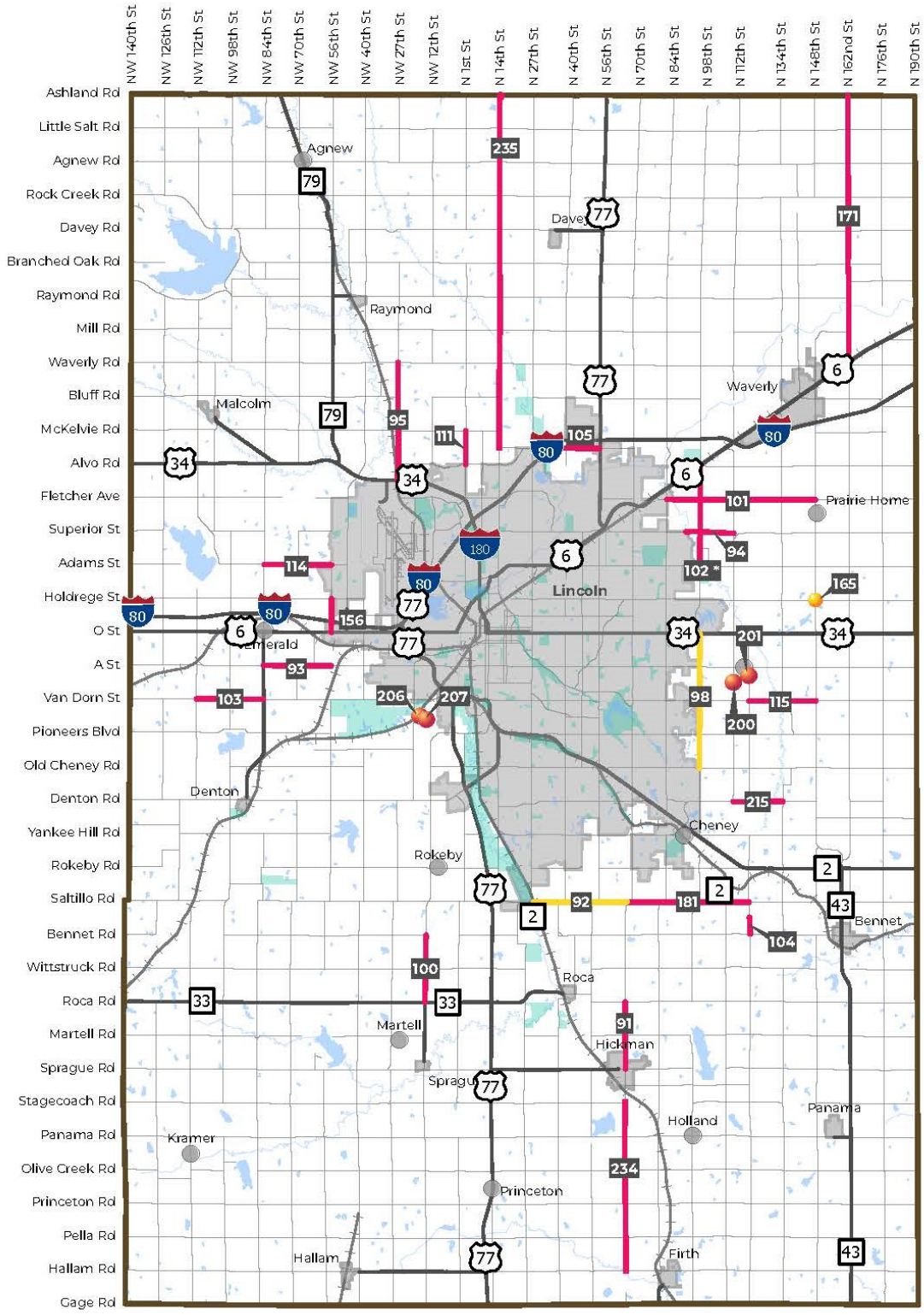
Rank	Project ID	Street Name	Limits	Description	Project Cost (2021$)	Year of Expenditure (YOE)			Refer to Notes Below Table
						YOE	YOE Cost	Cumulative Cost (YOE)	
Committed	165	N 148th Street	Holdrege Street	Intersection improvements	$1,751,100				1
Committed	98	S 98th Street	Old Cheney Road to US-34	Programmed Paving	$17,195,600				1
Committed	92	Saltillo Road	S 27th Street to S 68th Street	Two Lane Widening	$14,804,000				1
	234	S. 68th Street	Firth Road to Stagecoach Road	Two Lane Widening With Shoulders	$10,780,700	2025	$10,780,700	$10,780,700	3
	235	N. 14th Street	Alvo Road to Ashland Road	Pavement and Two Lane Widening with Shoulders	$12,076,200	2025	$12,076,200	$22,856,900	4
1	104	S 120th Street	Bennet Road North 0.5 Miles	Potential Paving	$650,000	2026	$1,046,832	$23,903,732	
2	156	NW 56th Street	W O to W Holdrege Street	Potential Paving	$2,292,000	2026	$2,292,000	$26,195,732	
3	100	SW 14th Street	NE-33 to W Bennet Road	Programmed Paving	$1,300,000	2026	$2,093,663	$28,289,395	
4	103	W Van Dorn Street	SW 112th Street to SW 84th Street	Programmed Paving	$1,300,000	2027	$2,240,219	$30,529,614	
5	105	Arbor Road	N 27th Street to US-77	Paving and Bridge Replacement of Bridge F-201 near N 27th Street	$5,930,000	2029	$11,699,558	$42,229,172	
6	101	Fletcher Avenue	N 84th Street to N 148th Street	Programmed Paving	$6,385,700	2032	$15,145,378	$57,374,550	
7	95	NW 27th Street	Hwy-34 to W Waverly Road	Potential Paving	$4,550,000	2034	$11,897,661	$69,272,212	
8	93	W A Street	SW 84th Street to SW 52nd Street	Programmed Paving	$2,600,000	2035	$7,138,597	$76,410,808	
9	206	SW 16th Street	Bridge O-1 near W Calvert Street	Replace CB	$168,000	2035	$461,263	$76,872,072	

Rank	Project ID	Street Name	Limits	Description	Project Cost (2021$)	Year of Expenditure (YOE)			Refer to Notes Below Table
						YOE	YOE Cost	Cumulative Cost (YOE)	
10	94	Havelock Avenue	Stevens Creek to N 112th Street	Potential Paving	$1,820,000	2036	$5,246,869	$82,118,940	
11	207	SW 15th Street	Bridge O-140 near W Stockwell Street	Replace CB	$168,000	2036	$484,326	$82,603,267	
12	201	S 120th Street	Bridge J-138 near A Street	Replace with CBC	$612,000	2037	$1,852,548	$84,455,815	
13	111	N 1st Street	Alvo Road to McKelvie Road	Potential Paving	$1,300,000	2037	$3,935,152	$88,390,967	
14	181	Saltillo Road	S 68th Street to S 120th Street	Two Lane Widening	$2,450,000	2038	$7,787,059	$96,178,026	
15	171	N 162nd Street	US-6 to Ashland Road	Paving	$12,200,000	2026	$12,200,000	$108,378,026	
16	200	S 112th Street	Bridge J-135 near A Street	Replace with CBC	$612,000	2042	$2,364,373	$110,742,399	
17	114	W Adams Street	NW 84th Street to NW 56th Street	Potential Paving	$2,600,000	2043	$10,546,959	$121,289,358	
18	91	S 68th Street	Hickman to Roca Road	Two Lane Widening with Shoulders	$2,000,000	2044	$8,518,698	$129,808,056	
19	115	Van Dorn Street	S 120th Street to S 148th Street	Potential Paving	$2,600,000	2046	$12,209,423	$142,017,479	
20	215	Pine Lake Road	S 112th Street to S 134th Street	Grading and Pavement; bridge Q-110 near S 134th St	$3,188,000	2048	$16,505,121	$158,522,600	
21	102	N 98th Street	Adams Street to US-6	Potential Paving	$5,305,209	2050	$30,281,788	$188,804,388	2

[1] Committed projects are included in the 2022–2025 Transportation Improvement Program and are assumed to be fully funded and constructed prior to allocation of resources to other Rural Road & Bridge Capital Projects.
[2] Project ID 102 is partially funded (approximately 32%) within the Fiscally Constrained Plan.
[3] Project ID 234 added to the Fiscally Constrained Plan via MISC22002.
[4] Project ID 235 added to the Fiscally Constrained Plan via MISC22012.

Revised November 2025

Figure 7.1 Fiscally Constrained Rural Road & Bridge Capital Projects



Amended September 2025

City of Lincoln Urban Roads Program

System Operations & Maintenance, Minor Intersections

The cost to maintain and operate the transportation system is increasing. LTU employs 125 people to maintain and operate the transportation system, which includes street sweeping, snow removal, stormwater, ditch and drainage maintenance, culvert maintenance, minor intersection improvements, mowing, crack sealing, pothole repair, signing, and pavement markings, among other tasks. As the cost of materials, wages and healthcare for employees increases, the cost to complete the essential functions of O&M increases. The City of Lincoln has pursued innovation and the use of technology advances to make efficient use of available resources. An estimated $1.08 billion is needed for Lincoln's O&M program through 2050. The LRTP recommends fully funding Lincoln's O&M program.

Road & Bridge Rehabilitation

The Rehabilitation program includes the repair of arterial and residential streets when the pavement conditions deteriorate to an unacceptable level, as well as bridge rehabilitation and signal replacements. A pavement condition rating system is used to help determine which road surfaces are in most need of repair. It is important to note that money invested today in the ongoing maintenance and repair of the street system saves a significant amount of money in the future by avoiding the expanded costs associated with full reconstruction of roadways.

Routine and preventative maintenance activities will be performed, such as localized repairs, crack and joint sealing, and various surface treatments (slurries, sealing, and micro-surfacing). As pavement ages, thin to thick overlays, panel replacements, base stabilization, and repairs will be used to avoid more costly reconstruction if possible.

Without additional revenue sources, several important transportation urban area project and program categories will not have adequate funding. Additional revenue sources, such as continuation of the Lincoln on the Move sales tax, would significantly help to meet the community's

The LRTP recommends funding the rehabilitation program at a level commensurate with the 2040 LRTP. This recommendation includes $515 million of committed and flexible funds, which equates to approximately 350 lane miles over the 29-year planning horizon when accounting for construction cost inflation. This amount will not fully address Lincoln's road and bridge rehabilitation needs.

LTU is committed to using the available rehabilitation funds efficiently and using the pavement management system as a tool to identify the most effective maintenance treatments. Several additional action steps included in **Chapter 8** are recommended to help offset the shortfall in funding for the rehabilitation program:

- Continue experimentation and innovation to maximize return from available resources.
- Encourage the use of alternative travel modes (biking, walking, and transit) to lessen the demand on the streets.
- Continue to implement the traffic signal coordination (i.e. Green Light Lincoln) and adaptive communication program to maximize the operational efficiency of the existing system, thereby reducing the pace of lane-miles being added to the street network.
- Because streets that are neglected over time require costlier reconstruction, continue to advance preventative maintenance strategies (e.g., pothole

repairs and crack sealing) to extend the life of Lincoln's streets and minimize the lifecycle costs.

- Investigate opportunities for increased rehabilitation funding.

Studies, Preliminary Engineering, ROW & Statutorily Required Records

This program category covers pre-project level engineering studies, responses to non-project specific public inquiries, engineering standards and guidelines, staff coordination with private sector growth proposals, and legal requirements for record keeping. The LRTP recommends fully funding ($91.5 million) continuation of these essential staff functions.

Roadway Capital Projects

The LRTP identifies 105 capital roadway projects with project costs totaling over $1.1 billion in 2021 dollars. The $500 million allocation to roadway capital projects consists solely of committed funds; that is, no flexible funds are included due to the funding shortfall. The $500 million would fund 40 projects when accounting for construction cost inflation. This includes eight projects with committed funding that are anticipated to be constructed within the next four years, and 13 public-private partnership (PPP) projects, which are expected to be constructed during the LRTP planning horizon. **Table 7.6** lists the ranked projects that can be funded within the Fiscally Constrained Plan, including the committed projects and those that will be funded through PPPs. **Figure 7.2** shows the fiscally constrained urban roadway projects.

The Lincoln on the Move ¼ cent sales tax and the Highway Allocation Bond will allow the city to construct more projects in the first four years of the plan, with an average funding level of nearly $22 million per year for capital projects. After the ¼ cent sales tax sunsets in 2025, the average funding level for capital projects would be reduced to $16 million per year, reducing the number of projects that can be

Rather than defaulting to roadway widening to address current and future congestion, the LRTP focuses on intersection improvements and traffic signal coordination. By encouraging flexible and performance-based geometric design processes and best practices, the limited funding available for Roadway Capital Projects can be stretched to address the congestion needs on more corridors. This alternative approach is reflected in the

The Fiscally Constrained Plan must consider the YOE cost of projects. Construction costs are expected to increase annually. Based on historic and recent construction cost inflation rates, the LRTP accounts for a temporary rapid increase of 10 percent annual inflation in the first 5 years, 7 percent annual inflation in the next 5 years. Then the inflation rate is assumed to normalize at 5 percent annual inflation in the remaining years through 2050.

Two Plus Center Turn Lane Projects: The LRTP recommends allocating approximately $17 million to Two Plus Center Turn Lane projects. These projects are typically done opportunistically in conjunction with roadway rehabilitation projects, and the incremental cost to add the center turn lane is funded through this program. With a typical incremental cost of $2.25 million per mile (2021 dollars), this allocation could fund an estimated 2.4 miles of Two Plus Center Turn Lane Projects when accounting for construction cost inflation. Another 1.8 miles of Two Plus One construction will be constructed as a part of federal aid projects in the next four years. Ten miles out of the 14 miles of identified Two Plus One projects would remain unfunded.

Table 7.6 Fiscally Constrained Urban Roadway Capital Projects

Rank	Project ID	Street Name	Limits	Description	Project Cost (2021$)	Year of Expenditure (YOE)			Refer to Notes Below Table
						YOE	YOE Cost	Cumulative Cost (YOE)	
Committed	121	A Street	S 40th Street to S 56th Street	Intersection improvements 40th, 48th and 50th/Cotner and widening of A Street from 40th to 48th for a center turn lane	$10,500,000				1
Committed	79	S 14th Street/ Warlick/Old Cheney	14th/Warlick/Old Cheney	Intersection improvements	$26,400,000				1
Committed	145	Cotner Boulevard	O Street to Starr Street	Intersection improvements at Starr and Holdrege, pavement repair, and mill and overlay	$6,671,000				1
Committed	141	A Street	S 6th Street to S 17th Street	Intersections improvements at 13th and 17th and widening from 6th to 17th for a center turn lane	$6,586,000				1
Committed	77	W A Street	SW 36th Street to SW 24th Street	2 lanes + intersection improvements	$14,000,000				1
Committed	67	S 40th Street	Yankee Hill Road to Rokeby Road	3 lane section with raised median and turn lanes as appropriate	$14,000,000				1
Committed	143	N 84th Street	Cornhusker Hwy (US-6)	Intersection improvements	$5,584,000				1
Committed	216	Adams Street	N 36th Street to N 49th Street	Widening for a center turn lane and pavement rehabilitation	$3,035,000				1
PPP	10	W Holdrege Street	NW 56th Street to NW 48th Street	2 lanes + intersection improvements	$5,445,000				2
PPP	29	Rokeby Road	S 77th Street to S 84th Street	2 lanes + intersection improvements	$3,500,000				2
PPP	120	A Street	S 89th Street to S 93rd Street	2 lanes with raised median, roundabouts at 89th St and 93rd St	$3,000,000				2
PPP	20	Rokeby Road	S 31st Street to S 40th Street	2 lanes + intersection improvements	$3,000,000				2
PPP	27	Yankee Hill Road	S 40th Street to S 48th Street	2 lanes + intersection improvements	$5,700,000				2
PPP	60	Rokeby Road	S 40th Street to Snapdragon Road	2 lanes + intersection improvements	$2,152,000				2
PPP	81	W Holdrege Street	NW 48th Street to Chitwood Lane (east ¼ mile)	2 lanes + intersection improvements	$2,000,000				2
PPP	120	Yankee Hill Road	S 48th Street to S 56th Street	2 lanes + intersection improvements	$2,200,000				2

Rank	Project ID	Street Name	Limits	Description	Project Cost (2021$)	Year of Expenditure (YOE)			Refer to Notes Below Table
						YOE	YOE Cost	Cumulative Cost (YOE)	
PPP	124	S Folsom Street	W Old Cheney Road to ¼ mile south	Paving one lane in each direction with raised center medians; roundabout at the future Palm Canyon Road intersection and intersection improvements at W Old Cheney and S Folsom	$2,400,000				2
PPP	125	S 40th Street	Rokeby Road to 1/4 south	2 lanes with raised median and roundabout 1/4 mile south of Rokeby Rd	$3,400,000				2
PPP	127	Holdrege Street	87th Street to Cedar Cove	2 lanes with raised median	$2,300,000				2
PPP	128	Holdrege Street	N 104th Street	Roundabout	$1,600,000				2
PPP	129	Saltillo Road	S 70th Street to 1/2 mile east	Roadway and intersection improvements including on S 7th St from Saltillo Rd to Carger Ln	$7,095,000				2
1	130	N 14th Street	Salt Creek to Adams Street	Bridge Rehabilitation/Replacements, intersection improvements, and pedestrian facilities	$29,104,000	2026	$29,104,000	$29,104,000	
2	37	Cornhusker Hwy (US-6)	N 20th Street to N 33rd Street	Intersection Improvements per Corridor Enhancement Plan	$1,200,000	2027	$2,067,895	$31,171,895	
3	41	N 48th Street	Adams Street to Superior Street	4 lanes + intersection improvements	$14,100,000	2029	$27,818,510	$58,990,405	
4	38	Cornhusker Hwy (US-6)	N 11th Street to N 20th Street	Intersection Improvements per Corridor Enhancement Plan	$975,000	2029	$1,923,620	$60,914,025	
5	87	W Holdrege Street	Chitwood Lane to NW 40th Street	2 lanes + intersection improvements	$1,950,000	2029	$3,847,241	$64,761,266	
6	32	O Street (US-34)	Antelope Valley N/S Rdwy. (19th St.) to 46th Street	Intersection Improvements	$6,840,000	2030	$14,439,583	$79,200,849	
7	146	N 70th Street	Havelock Avenue	Remove existing traffic signal and construct roundabout	$2,000,000	2030	$4,222,100	$83,422,949	
8	151	O Street (US-34)	84th Street	Intersection Improvement: dual eastbound left-turn lanes and eastbound right-turn lane and widening to east; maybe northbound right-turn lane	$2,280,000	2031	$5,150,118	$88,573,067	
9	134	W South Street	Salt Creek	Bridge Replacement	$3,200,000	2031	$7,228,235	$95,801,302	
10	142	Fremont Street	Touzalin Avenue	Remove existing traffic signal and construct roundabout	$2,700,000	2032	$6,403,765	$102,205,067	
11	2	S 40th Street	Normal Blvd and South Street	Major intersection area work	$10,000,000	2033	$24,903,530	$127,108,597	

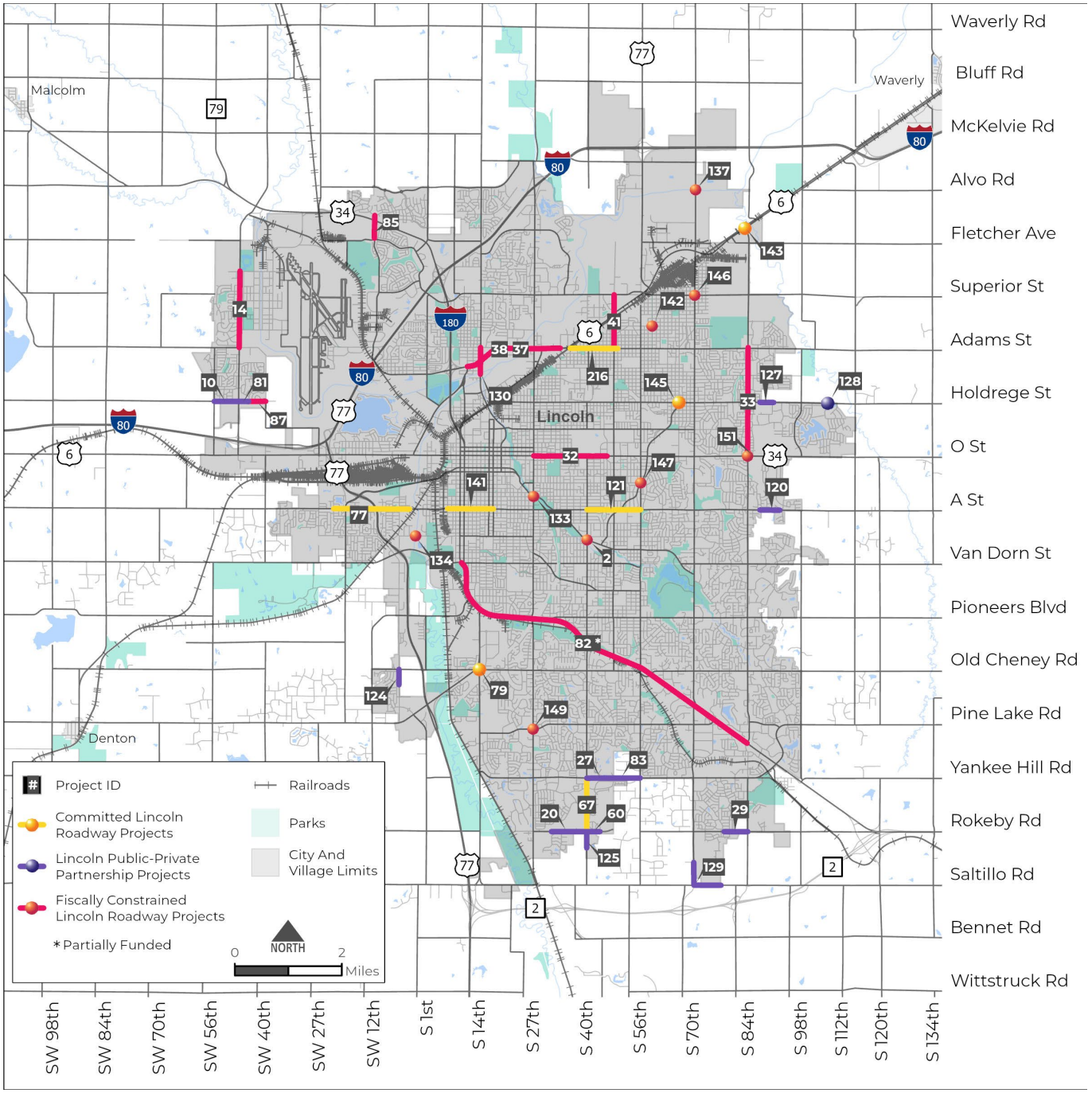
Rank	Project ID	Street Name	Limits	Description	Project Cost (2021$)	Year of Expenditure (YOE)			Refer to Notes Below Table
						YOE	YOE Cost	Cumulative Cost (YOE)	
12	33	N 84th Street	O Street to Adams Street	Intersection Improvements	$15,200,000	2036	$43,820,002	$170,928,599	
13	149	S 27th Street	Pine Lake Road	Intersection Improvement: eastbound right-turn lane	$760,000	2036	$2,191,000	$173,119,599	
14	133	S 27th Street	SE Upper Salt Creek	Bridge Replacement	$4,500,000	2037	$13,621,678	$186,741,277	
15	14	NW 48th Street	Adams Street to Cuming Street	2 lanes + intersection improvements	$10,000,000	2039	$33,373,112	$220,114,389	
16	137	N 70th Street	Salt Creek	Bridge Replacement	$3,000,000	2039	$10,011,934	$230,126,323	
17	85	NW 12th Street	Fletcher Avenue to Aster Road with overpass of US-34	2 lanes + Overpass	$9,370,000	2041	$34,475,843	$264,602,166	
18	147	S 56th Street	Cotner Boulevard/ Randolph Street	Remove signal and evaluate roundabout or new signal	$2,750,000	2042	$10,624,226	$275,226,392	
19	82	Nebraska Hwy 2	S 84th Street to Van Dorn Street	Corridor Improvements (TBD by Corridor Study)	$3,896,000	2050	$273,525,192	$548,751,584	3

[1] *Committed projects are included in the 2022-2025 Transportation Improvement Program and are assumed to be fully funded and constructed prior to allocation of resources to other Rural Road & Bridge Capital Projects.*

[2] *Public-private partnership (PPP) projects are assumed to be fully funded and constructed during the time horizon of the 2050 LRTP. The public funding sources and specific timing of these projects are uncertain. These projects are listed at the top of the Fiscally Constrained Plan in recognition of the City's commitment to leveraging private investments in these projects to support community growth.*

[3] *Project ID 82 is partially funded (approximately 31%) within the Fiscally Constrained Plan.*

Figure 7.2 Fiscally Constrained Urban Roadway Capital Projects









ITS and Technology

The $59 million allocation to ITS and Technology would allow the continuation of existing programs, including Green Light Lincoln, annual signal equipment upgrades, and some planned technology improvements such as automated traffic signal performance measures. The revenue would not, however, support the large capital costs required to invest in new technologies such as transit and emergency signal priority deployment and advanced traffic management system implementation, nor would this level of funding enable LTU to have a pool of funds to opportunistically invest in emerging technologies in transportation.

East Beltway Preservation

The allocation of $23 million to East Beltway preservation includes contributions from both Lancaster County and the City of Lincoln. This funding could be used to preserve a portion of the 960 acres of land needed for the future corridor. The public identified the East Beltway as one of the highest priority Roadway Capital Projects. Proceeding with construction of a project this size depends on additional funding from the state and/or federal government.

Rail Crossing Program

The RTSD, State Train Mile Tax, and Rail Hazard Elimination fund provide dedicated funding to improve the safety of railroad crossings through the addition of crossing gates and flashers at at-grade crossings, railroad crossing surface upgrades, pedestrian and bicycle crossings, as well as grade separation projects. With approximately $236 million of committed funding, the railroad crossing program is anticipated to address high priority crossing improvements but will not address the full needs of the program. The Fiscally Constrained Plan includes construction of the N. 33rd Street and Cornhusker grade separated railroad crossings

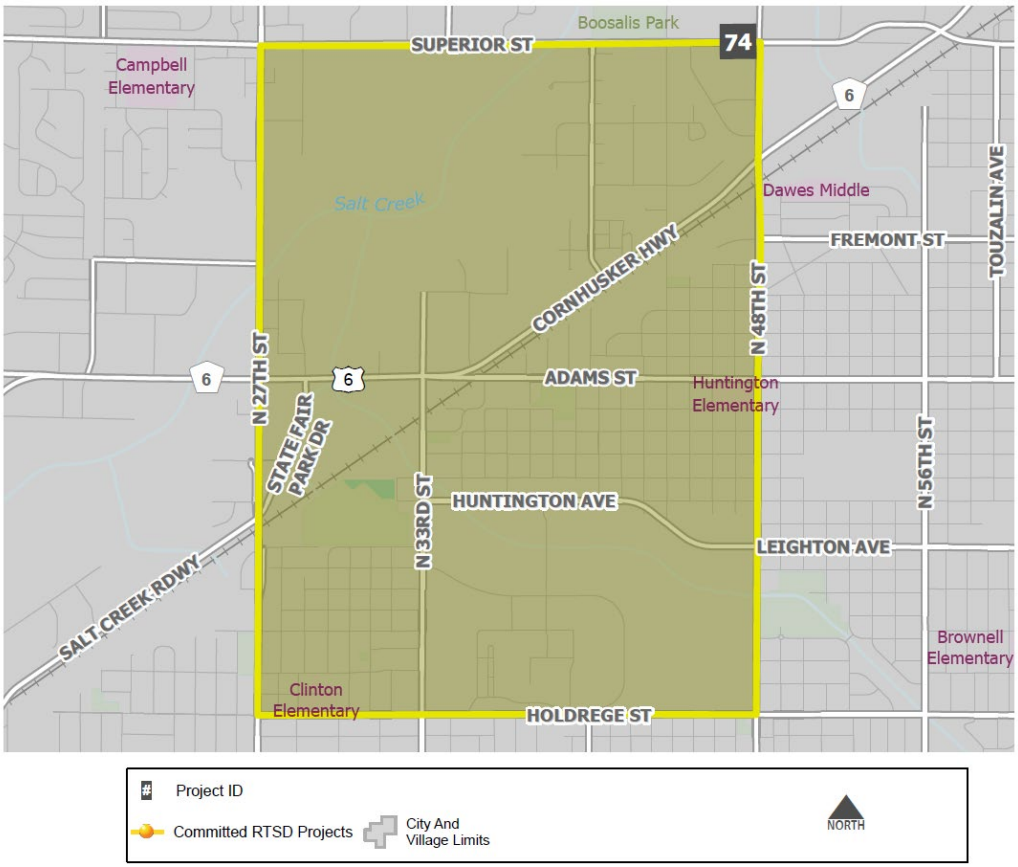
project (Project ID 74, cost estimate of $115.6 million), which is in the current TIP and scheduled for completion by 2029. This project includes intersection improvements (dual westbound left turn lanes) at Cornhusker Highway (US-6) and State Fair Park Drive . The intersection improvements were originally assigned a separate project ID but are now shown under Project ID 74 as they are included in the overall scope of the 33rd/Cornhusker Project. Table 7.7 lists this project, which can be funded within the Fiscally Constrained Plan. Figure 7.3 shows the fiscally constrained RTSD project.

Table 7.7 Fiscally Constrained Railroad Transportation Safety District Projects

Rank	Project ID	Street Name	Limits	Description	Project Cost (2021$)	Year of Expenditure (YOE)			Refer to Notes Below Table
						YOE	YOE Cost	Cumulative Cost (YOE)	
Committed	74	N. 33rd Street	N. 33rd/Cornhusker/ Adams/Fremont; Cornhusker/State Fair Park Drive	Grade separated RR crossings; intersection improvements at Cornhusker Hwy and State Fair Park Drive	$119,842,100				1

[1] *Committed projects are included in the 2023-2026 Transportation Improvement Program and are assumed to be fully funded and constructed prior to allocation of resources to other RTSD Capital Projects.*

Figure 7.3 Fiscally Constrained Railroad Transportation Safety District Projects



Multimodal Program

Transit

Operation of StarTran's bus service is funded through a combination of FTA funds, state transit funds, bus fares, advertising, a UNL agreement, and transfers from the general fund. The transit revenue forecast of $754 million consists of these committed and restricted funds, the vast majority ($742 million) of which directly funds StarTran's capital expenses and operations. The remaining $12 million (in FTA 5310 and 5311 funds) provides grant funding for rural transit, hospitals, and non-profit organizations. Due to funding shortfalls, no flexible funds are allocated to transit. This funding level will allow continuation of StarTran's current service levels; however, it will not enable service extensions (longer hours and Sunday bus service) and may limit local match contributions to major projects seeking federal funds.

A federal RAISE grant was awarded in 2022 for the new Multimodal Transportation Center and the project will incorporate active transportation design elements funded through the Carbon Reduction Program and included in the project cost. The local match will use in-kind contributions and

Table 7.8 identifies the funded and priority transit projects. These projects are expected to be funded within the Fiscally Constrained Plan. StarTran is currently in the process of updating the TDP, which may result in adjustments to the transit priorities in the region. Additional transit enhancements (such as next bus information and transit signal priority) will be coordinated through the ITS and Technology program, as funds allow.

Table 7.8 Priority Transit Projects

Project Description	Project Cost (2021$)
Funded/Committed Transit Projects	
Multimodal Transportation Center	$41,746,700
Maintenance Facility Construction/ Relocation	$22,309,500
Purchase Replacement Paratransit Vehicles	$264,000
Transit Enhancements (bus shelters, passenger stops)	$342,000
Security Enhancements (upgrade buildings/shelters)	$40,000
Purchase Replacement Supervisor Vehicles	$50,000
Computer Replacements and Upgrades	$100,000
Shop Equipment Replacements and Upgrades	$125,000
Building Renovations and Improvements	$150,000
Priority Transit Projects	
Purchase Replacement Buses	$34,100,000
Purchase Replacement Paratransit Vehicles	$3,388,000
Transit Enhancements (bus shelters, passenger stops)	$1,080,000
Security Enhancements (upgrade buildings/shelters)	$1,080,000
Purchase Replacement Supervisor Vehicles	$150,000
Computer Replacements and Upgrades	$2,700,000
Shop Equipment Replacements and Upgrades	$540,000
Purchase Replacement Service Vehicles	$270,000
Building Renovations and Improvements	$2,700,000

Trail Projects

Approximately $28 million in revenue is anticipated for Trail Projects through committed or restricted funding sources. Due to funding shortfalls, no flexible funds are allocated to Trail Projects. The LRTP identifies 64 Trail Projects with costs totaling $59 million. The $28 million allocation would fund 31 projects (including 10 Trail Projects with committed funding in the TIP or Capital Improvement Program or other agreements) when accounting for construction cost inflation. Thirty-three projects would remain unfunded.

Table 7.9 lists the priority Trail Projects that are expected to be funded within the time horizon of the LRTP. The priority Trail Projects are depicted on **Figure 7.4**. Some Trail Projects are anticipated to be bundled with fiscally constrained roadway projects, optimizing construction efficiencies. Trail Projects that improve trail crossings of a railroad may be funded with RTSD funds, as described in the Rail Crossing Projects section of this chapter.

The order of projects may change depending on opportunities for funding. Although the YOE costs are not shown in **Table 7.9** to preserve this flexibility, construction cost inflation was accounted for in determining the number of projects within the priority project list. **Appendix G** includes the Trails Project scoring results.

Trail Rehabilitation

The LRTP recommended resource allocation includes $14 million for trail rehabilitation, which could reconstruct approximately 16 miles of trails when accounting for construction cost inflation. With nearly 100 miles of concrete trails that will reach their 50-year life expectancy by 2050, the trail rehabilitation program would be considerably underfunded. In addition to concrete trail reconstruction, trail maintenance program needs include bridge and sign replacements, trail widening to accommodate increasing use, mowing, snow removal, and tree control, among other ongoing maintenance requirements. A trail widening project (Rock Island Trail Widening) would be constructed using federal Carbon Reduction Program funds and appears as a separate project listing in **Table 7.10** and **Figure 7.5**.

Table 7.9 Priority Trail Projects

Project ID	Trail Name	Limits	Description	Project Cost (2021$)	Refer to Notes Below Table
Funded/Committed Trail Projects					
T-45	Landmark Fletcher	Fletcher Ave from N 27th St to N 14th St	Sidepath	$1,815,100	
T-61	Beal Slough Trail	S 56th St and London Rd to S 70th St and Yankee Hill	New Trail	$1,976,600	
T-54	Chris Buetler Trail - Jamaica North Connector	J Street to N Street	New Trail	$250,000	
T-04	Woodlands	Rokeby Rd to S 70th St to Yankee Hill Rd	New Trail	$950,000	
T-09	Wilderness Hills	Yankee Hill Rd to Rokeby Rd and S 40th St	New Trail	$1,200,000	
T-11	Waterford	N 84th St to Stevens Creek	New Trail	$2,742,300	
T-30	W. O Street	SW 40th St to SW 48th St	Sidepath	$260,000	
T-27	Greenway Corridor Trail/Haines Branch	Pioneers Park Nature Center to Spring Creek Prairie Audubon Center	New Trail	$4,500,000	
T-37	Rock Island	Old Cheney grade separated crossing	Grade Separation	$2,286,000	
T-67	Old Cheney Rd	Warlick Blvd to Jamaica North	Sidepath	$250,000	
Trail Projects to be Completed with Fiscally Constrained Roadway Projects					
T-16	N 48th Street Trail	Murdock Trail to Superior St	Sidepath	$200,000	1
T-55	Yankee Hill Road	S 40th St to S 56th St	Sidepath	$350,000	2
T-15	W Holdrege Street Trail	NW 48th St to NW 56th St	Sidepath	$250,000	3
T-39	10th Street Trail	Hwy 2 intersection improvements	Crossing Improvements	$2,200,000	4
Priority Trail Projects					
T-19	Boosalis - Bison Connector	Van Dorn St to S 17th St/Burnam St	Sidepath	$300,000	
T-44	S 14th Street & Yankee Hill Connector (w/RTSD project)	South LPS Property Line to Yankee Hill	Sidepath	$400,000	
T-21	East Campus Trail	Leighton St to Holdrege St	New Trail	$150,000	
T-31	W A Street Connector	A Street from SW 36th to SW 40th; SW 40th from A St to F St	Sidepath	$120,000	
T-48	Air Park Connector - Phase I	NW 13th St to NW 27th St	Sidepath	$600,000	
T-29	South Street	Folsom St to Jamaica Trail	Sidepath	$750,000	
T-20	Deadmans Run Trail	N 48th St to Mo Pac Trail	New Trail	$550,000	
T-66	Yankee Hill Road	S 14th St to S 27th St	Sidepath	$350,000	
T-43	Yankee Hill Rd	S 56th St to S 70th St	Sidepath	$350,000	
T-64	S 70th Street Connector	Old Post Rd to MoPac Trail	Sidepath	$700,000	
T-53	NW 56th Street Trail	W Holdrege to W Partridge	Sidepath	$100,000	
T-18	Deadmans Run Trail	Murdock Trail to Cornhusker Hwy and Railroad grade separation	New Trail and Grade Separation	$300,000	
T-80	NW 12th Street	NW 10th St to W Fletcher Ave	Sidepath	$200,000	
T-35	N 1st Street	N 1st St crossing of Hwy 34	Sidepath	$400,000	
T-49	Air Park Connector - Phase II	NW 27th St to NW 48th St	Sidepath	$900,000	
T-36	NW 12th Street	W Fletcher Ave to Aster St with US 34 grade separated crossing	Sidepath; Grade Separation	$400,000	
T-34	N 48th Street/Bike Park Trail	Superior St to N 56th St	New Trail; Sidepath	$900,000	

1 Project T-16 to be completed with Roadway Capital Project 41 (N 48th Street from Adams Street to Superior Street)
2 Project T-55 to be completed with Roadway Capital Project 27 (Yankee Hill Road from S 40th Street to S 48th Street) and Project 83 (Yankee Hill Road from S 48th Street to S 56th Street)
3 Project T-15 to be completed with Roadway Capital Project 10 (W Holdrege Street from NW 56th Street to NW 48th Street)
4 Project T-39 to be completed with Roadway Capital Project 82 (Nebraska Hwy 2 Corridor Improvements), which is partially funded within the Fiscally Constrained Plan. Inclusion of this crossing improvement project should be considered in the context of the overall corridor improvement needs and available funding.

Figure 7.4 Priority Trail Projects

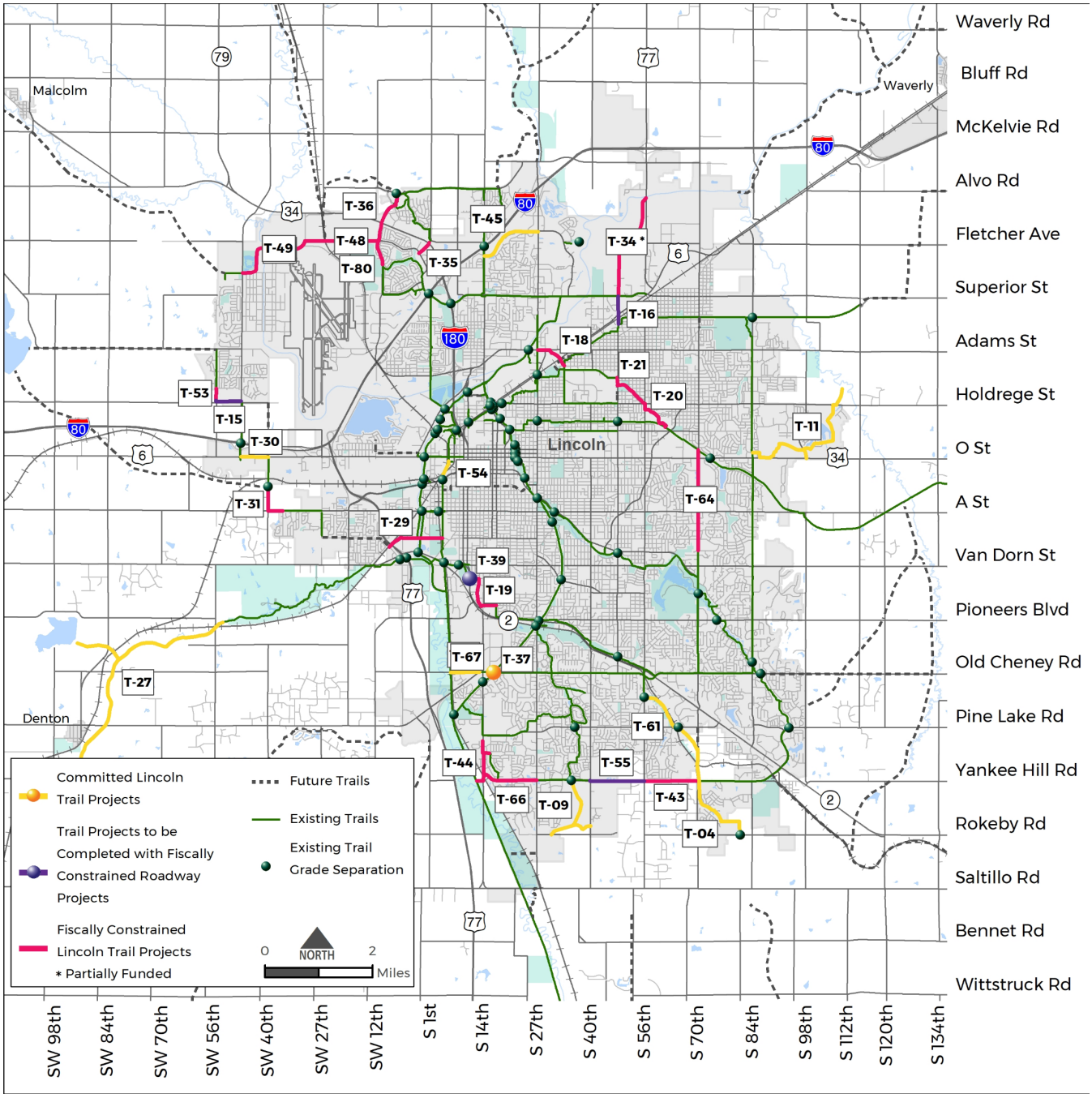
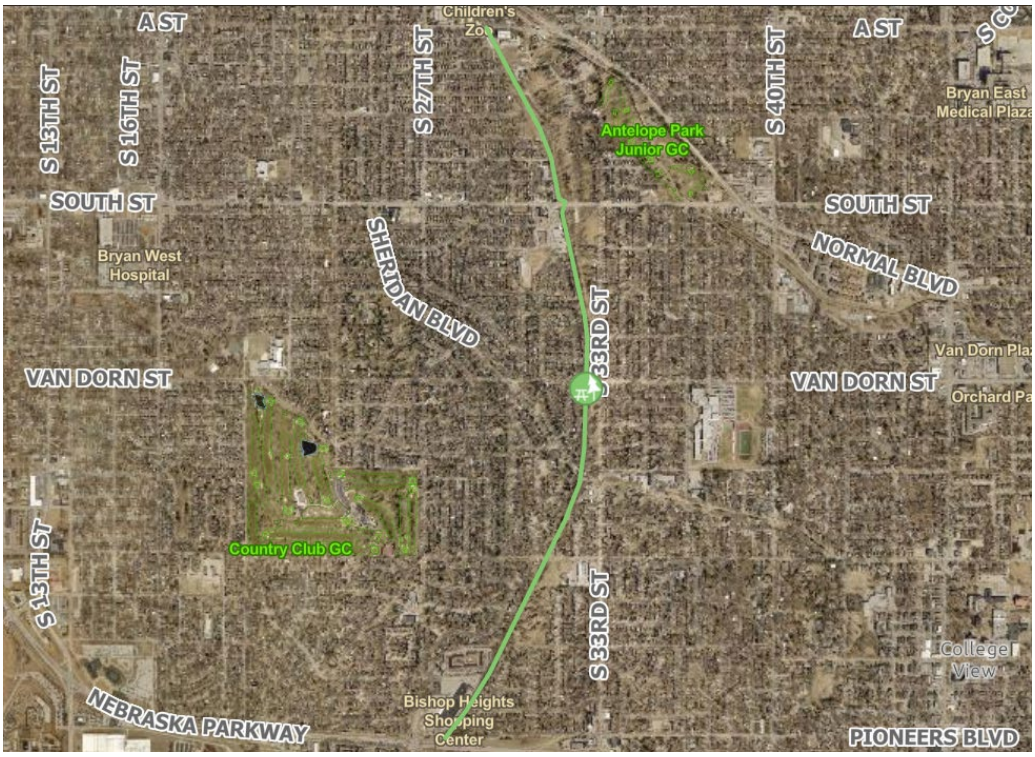


Table 7.10 Trail Widening Projects

Trail Name	Limits	Description	Project Cost (2021$)
Funded/Committed Trail Widening Projects			
Rock Island	A Street to Boosalis Trail	Widen 8' trail to 12'	$2,546,700

Figure 7.5 Trail Widening Projects



On-Street Bike Projects

The Lincoln Bike Plan was adopted in February 2019. Since no committed funding source has historically been provided for implementation of the on-street bike network, the LRTP resource allocation includes a nominal allocation of $6.5 million of flexible funds to the on-street bike program, which could be used to stripe approximately 35 miles of bike lanes, accounting for construction cost inflation. However, this amount falls well short of the funding needed to implement the more than 100 miles of proposed bikeways (some of which are more capital-cost intensive than bike lane striping) and the intersection crossing improvements identified in the Lincoln Bike Plan.

The specific On-Street Bike Projects to be completed with available funds will be selected based on the analysis and prioritization documented in the Lincoln Bike Plan. Where possible, On-Street Bike Projects should be bundled with roadway improvement projects. **Table 7.11.** identifies projects that are candidate On-Street Bike Projects that could be constructed with roadway projects in the Fiscally Constrained Plan. As these roadway projects progress through preliminary and final design, consideration should be given for inclusion of the corresponding Bike Plan project(s). **Table**

7.12 and **Figure 7.6** identify additional candidate on-street bike projects not associated with roadway projects.

Pedestrian, Bike Share, and TDM

The recommended resource allocation assumes a minimum $1 million annual general fund transfer to the sidewalk rehabilitation program. With the $37 million allocation to this program, an estimated 46 miles of sidewalk could be replaced, accounting for construction cost inflation.

The TDM portion of this program may include partnerships with employers to support biking, walking, and transit commuting; flexible work hours; and remote work options. Continued operation and maintenance of the existing BikeLNK bike share program is also recommended to continue. The TDM program could also consider partnerships with Transportation Network Companies (TNC) such as Uber or Lyft, as well as car share options and expansion of the bike share and scooter programs, to support shared mobility options in Lincoln.

Table 7.11 On-Street Bike Projects to be Constructed with Fiscally Constrained Roadway Projects

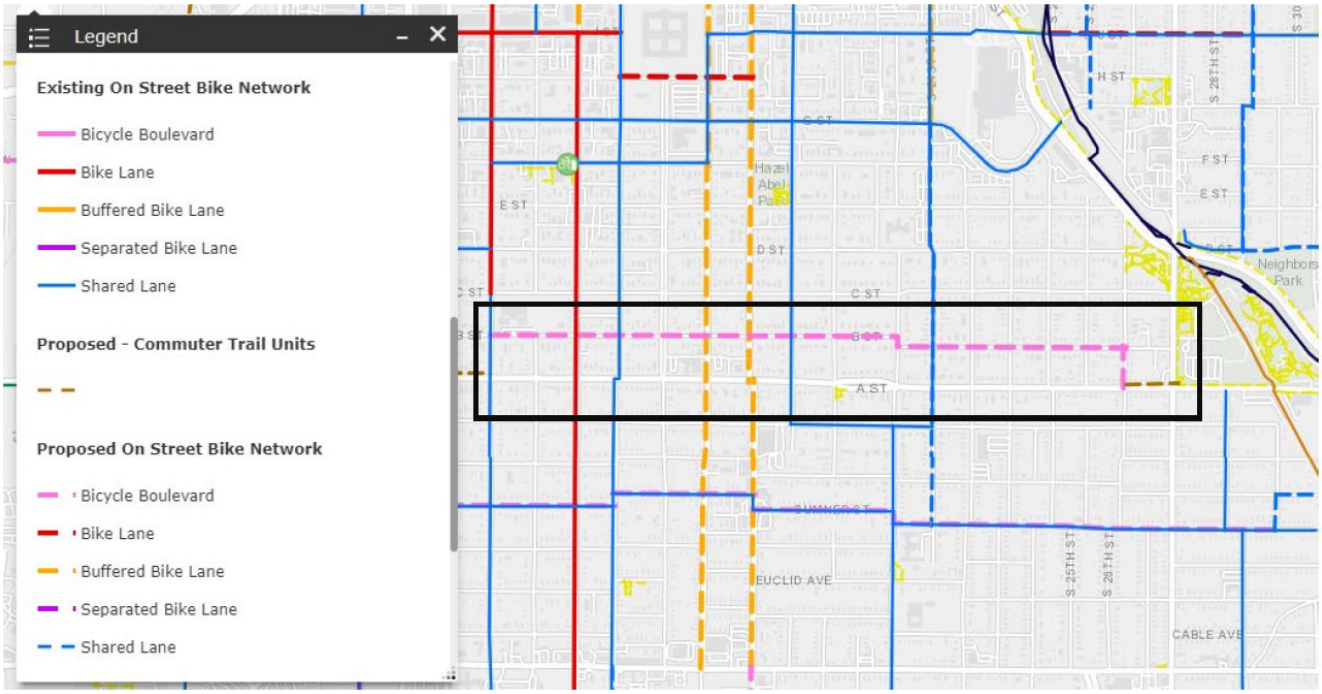
Roadway Project ID	Street	Project Limits	Bike Plan Project ID	Street	From	To	Description
10	W Holdrege Street	NW 56th Street to NW 48th Street	153	W Holdrege St	W Patridge Ln	NW 40th St	Sidepath
77	W A Street	SW 36th Street to SW 5th Street	47	W A St	SW 40th St	S Folsom St	
				W A St	S Folsom St	Multi-use Path	
124	S Folsom Street	W Old Cheney Road to 1/4 mile south	159	S Folsom St	W Denton Rd	Pioneers Blvd	Sidepath
141	A Street	S 6th Street to S 17th Street	24	S 8th St	A St		Intersection Enhancements
			132	S 11th St	A St		Intersection Enhancements
			142	A St	S 4th St	S 11th St	Sidepath
81	W Holdrege Street	NW 48th Street to Chitwood Lane (east 1/4 mile)	153	W Holdrege St	W Patridge Ln	NW 40th St	Sidepath
14	NW 48th Street	Adams Street to Cuming Street	99	NW 48th St	W Seward St	W Knight Dr	Sidepath
				NW 48th St	W Holdrege St	W Seward St	Sidepath
32	O Street (US-34)	Antelope Valley N/S Rdwy. (19th St.) to 46th Street	133	35th St	O St		Intersection Enhancements
			73	N 44th St	O St	R St	Separated Bike Lane
				N 44th St	O St		Intersection Enhancements
			50	S 29th St	Randolph St	R St	Shared Lane
				29th St	O St		Intersection Enhancements
37	Cornhusker Hwy (US-6)	N 20th Street to N 33rd Street	151	Cornhusker Hwy	N 27th St	Trail	Sidepath

Roadway Project ID	Street	Project Limits	Bike Plan Project ID	Street	From	To	Description
41	N 48th Street	Adams Street to Superior Street	105	N 48th St	Fremont St	End	Sidepath
				N 48th St	Cornhusker Hwy/RR		Intersection Enhancements
			102	N 48th St	Judson St	Hartley St	Sidepath
82	Nebraska Hwy 2	S 84th Street to Van Dorn Street	23	High St	Nebraska Hwy 2	S 12th St	Shared Lane
				High St	Nebraska Hwy 2		Intersection Enhancements
			121	Southwod Dr	Nebraska Hwy 2		Intersection Enhancements
85	NW 12th Street	Fletcher Avenue to Aster Road with overpass of US-34	112	NW 13th St	W Fletcher Ave		Intersection Enhancements

Table 7.12 Other On-Street Bike Projects

Street	Bike Plan Project ID	From	To	Description	Project Cost (2021$)
B Street, S 26th Street, and A Street	42	S 11th Street	S 27th Street	Pavement markings, signage, sidepath, and intersection bumpouts	$521,900

Figure 7.6 Other On-Street Bike Projects



Future Congestion Levels

The 2035 and 2050 Lincoln MPO regional travel demand models were run with the Urban and Rural Roadway Capital Projects included in the Fiscally Constrained Plan, as well as the South Beltway and West Beltway. NDOT added one additional State project (ID 71) to the fiscally constrained project list after modeling for congestion had been completed and is therefore not included. The resulting congestion levels are summarized on **Figure 7.7** and mapped on **Figure 7.8** and **Figure 7.9** for 2035 and 2050, respectively.

With the Fiscally Constrained Roadway Capital Projects in place, 95 percent of the system (within the model area) is expected to be uncongested in 2035 (volume to capacity ratio less than 0.8), and 88 percent uncongested in 2050. All roads outside the model area will remain uncongested.

Figure 7.7 Congestion Levels

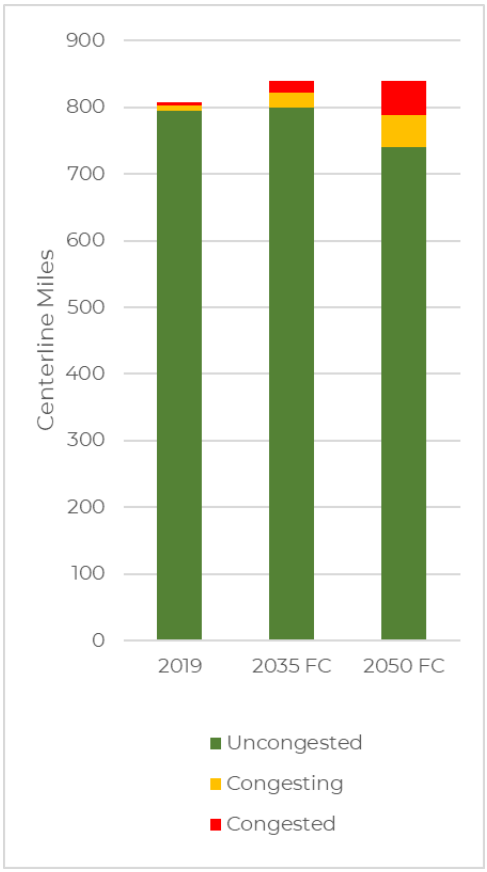


Figure 7.8 2035 Congestion Levels (Fiscally Constrained Plan)

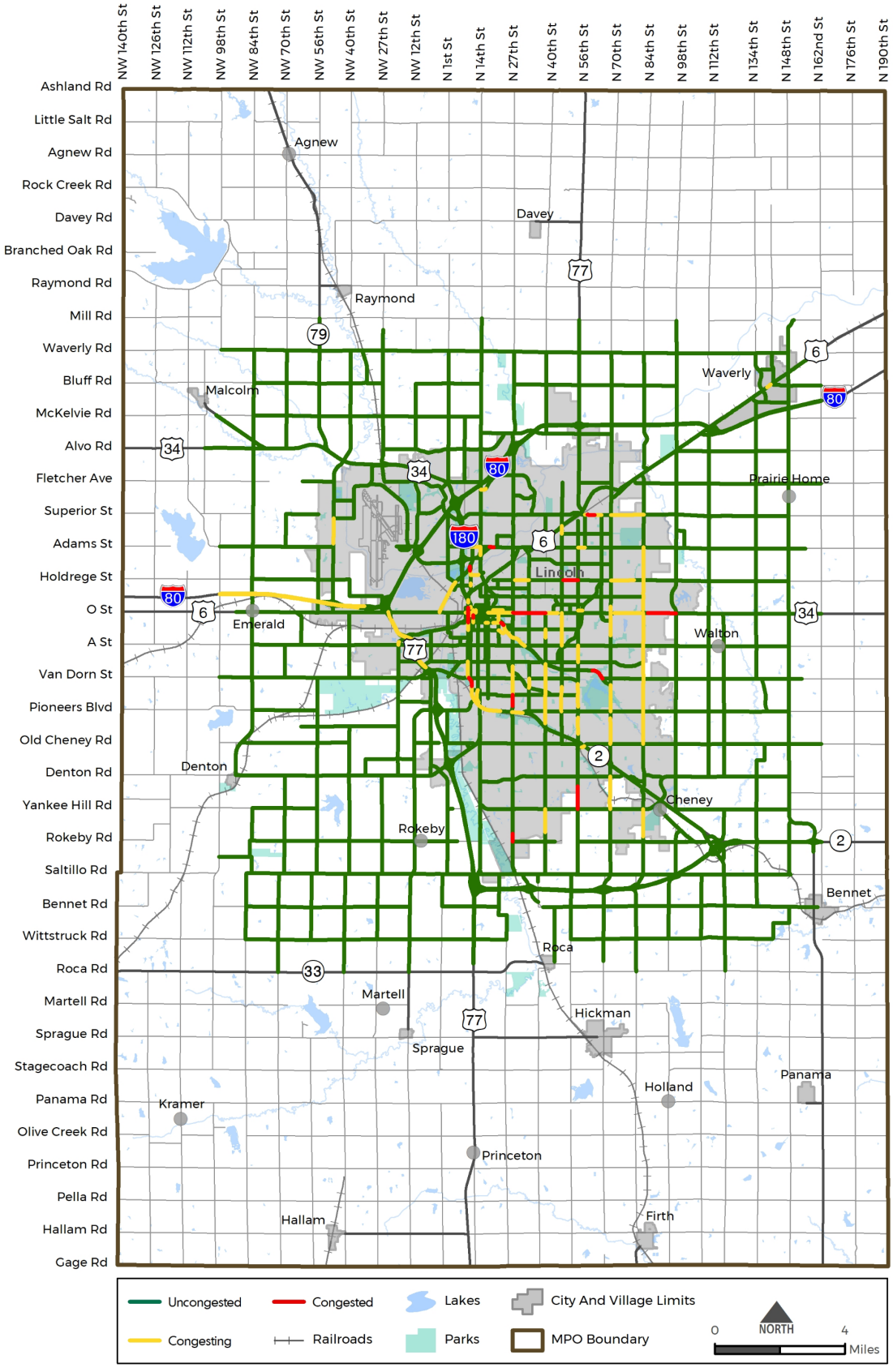
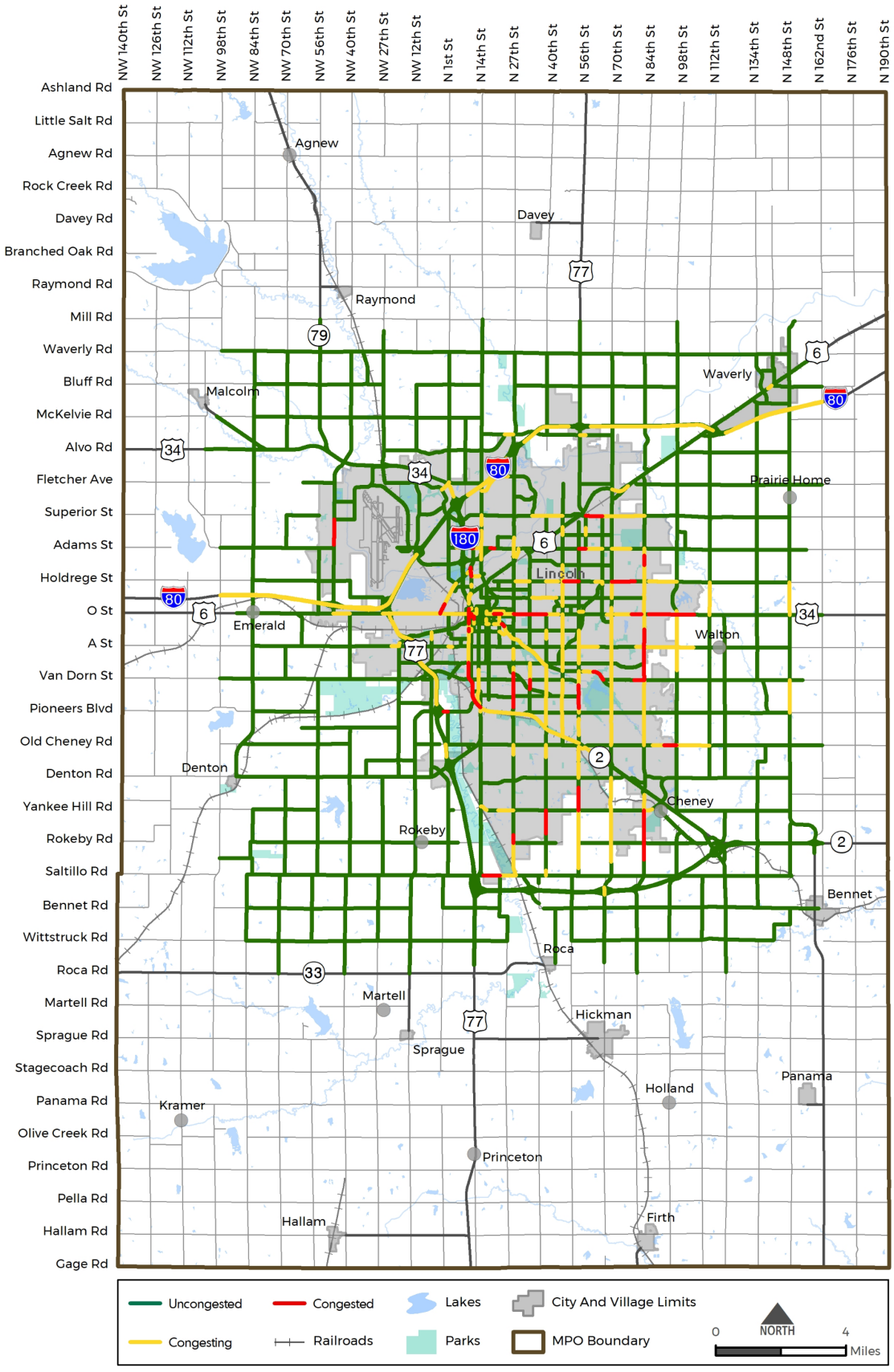


Figure 7.9 2050 Congestion Levels (Fiscally Constrained Plan)



The travel model is not, however, an effective tool to measure the benefits of the traffic signal coordination and intersection improvements identified in the Fiscally Constrained Plan (e.g., Highway 2, 84th Street, O Street) show "congested" conditions on **Figure 7.8** and **Figure 7.9**. However, the traffic signal coordination and intersection improvements along these corridors are not accounted for in the travel demand model. Congestion levels are expected to be reduced with these cost-effective improvements.

Table 7.13 provides a comparison of daily travel time – vehicle hours of travel (VHT) – for the Existing + Committed network and the Fiscally Constrained Plan network in 2035 and 2050. VHT describes all of the hours of travel experienced daily by all vehicles throughout the road system, and reduction in VHT indicates travel time savings experienced by users with implementation of the Fiscally Constrained Plan. These results highlight the benefits of the different project types in the Fiscally Constrained Plan, which attributes 327 hours of travel time savings in 2035 and 1,475 hours of travel time savings in 2050.

Table 7.13 Daily Travel Time

Network	Daily VHT
2035 Existing + Committed	180,208
2035 Fiscally Constrained	179,881
2050 Existing + Committed	220,201
2050 Fiscally Constrained	218,726

Air Quality

The projects and decisions contained within the Lincoln MPO 2050 LRTP can influence local air quality. Estimated vehicle emissions of select air pollutants that are typically related to mobile transportation sources were assessed for the LRTP.

Because Lancaster County is currently in attainment or unclassifiable for the National Ambient Air Quality Standards (NAAQS) under the Clean Air Act, the air quality evaluation was primarily for informational, planning and stewardship purposes, not for regulatory compliance. For example, the City of Lincoln Climate Action Plan has an "80 by 50" goal to reduce net GHG emissions 80 percent by year 2050—the LRTP can inform on the progress being made toward the goal in the transportation sector.

The air quality evaluation was based on traffic data developed through the MPO's regional travel models. NDOT added one additional State project (ID 71) to the fiscally constrained project list after modeling for congestion had been completed and is therefore not included in air quality analysis. The current US Environmental Protection Agency Motor Vehicle Emission Simulator software (MOVES3) was used to develop pollutant emission data.

Evaluation Overview

The evaluation for air pollution emissions included five traffic situations covering the entire MPO area: 2020 current conditions, "existing plus committed" (without any new planned projects) conditions (E+C) for 2035 and 2050, and the future fiscally constrained road networks (FC) planned by the MPO for 2035 and 2050. Air pollutant emissions data for each of these situations for the entire traffic model network were calculated using MOVES3. Because of the potential atypical traffic volumes and patterns experienced in calendar year 2020 due to COVID, the 2020 emissions analysis used 2019 traffic data from the regional model (believed to be more typical) but calculated for calendar year 2020.

The evaluation examined four air pollutants of concern commonly associated with motor vehicles: particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), two precursor pollutants for ozone (volatile organic compounds [VOC] and oxides of nitrogen [NOx]), and overall GHGs expressed as carbon dioxide (CO_2) equivalents. These pollutants are of concern for several reasons:

- Particulate Matter: $PM_{2.5}$, a complex mix of very small solid particles and liquid droplets, is a concern because it can be inhaled deeply into the lungs and can interfere with lung function or lead to other health effects. $PM_{2.5}$ can aggravate asthma, diminish lung capacity, and cause lung or heart problems. Particulate matter can also cause haze. Sources of particulate matter include smoke, diesel engine exhaust and road dust. Particulate matter can be a localized concern near the sources or can cause regional concerns through dispersion. This evaluation included $PM_{2.5}$ emissions from tailpipes, brake wear and tire wear.
- Ozone and Precursors: A strong oxidizing agent, ozone can damage cells in lungs and vegetation and can cause eye irritation and coughing. Ozone is not emitted directly; rather, it is formed by chemical reactions between other precursor pollutants in the atmosphere. VOC and NOx in the presence of sunlight and certain weather conditions can form ground-level ozone. So, ozone concentrations can be affected through the concentrations of the precursor pollutants. Automotive sources of ozone precursors include vehicle exhaust, fuel evaporation, and vehicle refueling. Ozone is a regional concern because it takes time for ozone to form and the pollutants can drift some distance in that time. Ozone generally is most problematic in summer. Combined with GHG emissions and climate change, warmer temperatures in the future may lead to higher ozone concentrations.
- Greenhouse gases: CO_2 is the largest component of vehicle GHG emissions. Other prominent transportation-related GHGs include methane and nitrous oxide. Water vapor is the most abundant GHG and makes up approximately two-thirds of the natural greenhouse effect. GHGs are a concern in terms of global climate change. Human-generated GHG emissions can contribute to climate change through the burning of fossil fuels and other activities. For this evaluation, overall GHG emissions from vehicles have been quantified in terms of an equivalent amount of CO_2 emissions (CO_2 equivalents, or CO_2e).

MOVES3 Modeling

MOVES3 was the software used to develop two groups of vehicle air pollutant emission results for the four air pollutants described previously. The first group of results was a representative set of average pollutant emission rates in grams per mile traveled for various vehicle speeds for years 2020, 2035 and 2050. A weekday in May was selected as an intermediate condition as a basis for comparison. The second group of results was a set of cumulative daily totals of emissions for a weekday in May for the five traffic situations described previously.

MOVES3 requires a considerable amount of technical data for input to generate these results. Some of the needed data can be difficult and costly to develop specifically for a region/locality, so it is often not readily available. The MPO has developed data for vehicle miles of travel (VMT) and average vehicle speeds for the road networks through the traffic models, which were used in MOVES3 modeling. However, other input data were not available locally so the necessary inputs were derived from the MOVES3 national dataset. “National scale” MOVES3 runs for Lancaster County provided input data for the vehicle mix and some VMT distribution. MOVES3 national data were also used for inputs such as fuel types and weather conditions.

The air quality evaluation is intended to illustrate general trends for the MPO region. Changes to any of the inputs would affect the emission results to some extent.

Pollutant Emissions Results

For the first group of emission results, graphs of pollutant emission rates versus vehicle speeds were developed for the three years of interest (**Figure 7.10**) to illustrate how emissions can vary with changes in traffic congestion levels. Note that this figure represents averaged results for the entire vehicle fleet for a single set of weather conditions. Other conditions may provide different rates but would be expected to show similar patterns. The graphs illustrate that traffic flow improvements (higher speeds) generally reduce emissions.

Future years are expected to see lower emission rates due to federal emission regulations and improvements in vehicle technologies (**Figure 7.10**). As older vehicles are replaced with newer ones, lower emissions are expected. Because of this, total vehicle emission levels in future years may be lower even with more vehicles and VMT. The change in emission rates from 2020 to 2050 will be greatest for VOC and smallest for GHGs. The emission rates for 2035 and 2050 are very similar so the differences in total emissions between these years will be due mainly to differences in VMT.

For a simpler comparison of emission rates, a set of overall composite average rates were calculated. **Table 7.14** lists average emission rates of the entire region and all of the various traffic conditions during the course of the example day. **Table 7.14** results are condensed from a full day and include more weather conditions than the single hour shown on **Figure 7.11.**

Table 7.14 Composite Vehicle Pollutant Emission Rates

Pollutant	2020 (g/mile)	2035 (g/mile)	2050 (g/mile)
$PM_{2.5}$	0.018	0.0081	0.0075
NOx	0.63	0.24	0.21
VOC	0.076	0.018	0.015
GHGs as CO2	473	362	342

For the second group of emission results, total daily emissions from the MPO road network for an average May weekday was calculated (**Figure 7.11**). Note that the emission amounts at other times would differ due to several factors—time of year, temperature, day of week, VMT, level of congestion, etc. The evaluation was intended to illustrate general trends (**Table 7.15**).

For PM2.5, NOx and VOC, total emissions in 2050 are calculated to be substantively lower than 2020 even with more VMT (**Figure 7.11**). Cleaner vehicles with lower emission factors will be important improvements in the near term (to 2035). Beyond 2035, the gains from cleaner traditional vehicles will lessen.

GHG emissions are expected to be higher in 2035 and 2050 than in 2020 because the expected growth in VMT will more than overtake the expected reduction in GHG emission rates. Note that these results do not include widespread use of electric vehicles or other emerging technologies that currently are not well defined.

Table 7.15 Composite Daily Pollutant Total Emissions (tons per day)

Pollutant	2020	2035 E+C	2035 FC	2050 E+C	2050 FC
PM2.5	0.12	0.07	0.07	0.08	0.08
NOx	4.3	2.1	2.1	2.3	2.3
VOC	0.52	0.16	0.16	0.16	0.16
GHGs as CO2	3,241	3,264	3,263	3,718	3,700
LRTP Daily VMT (miles)	6,220,000	8,179,000	8,183,000	9,869,000	9,835,000

Figure 7.10 Example Pollutant Emission Rates for Lincoln Arterial Streets (May weekday during 11AM hour)

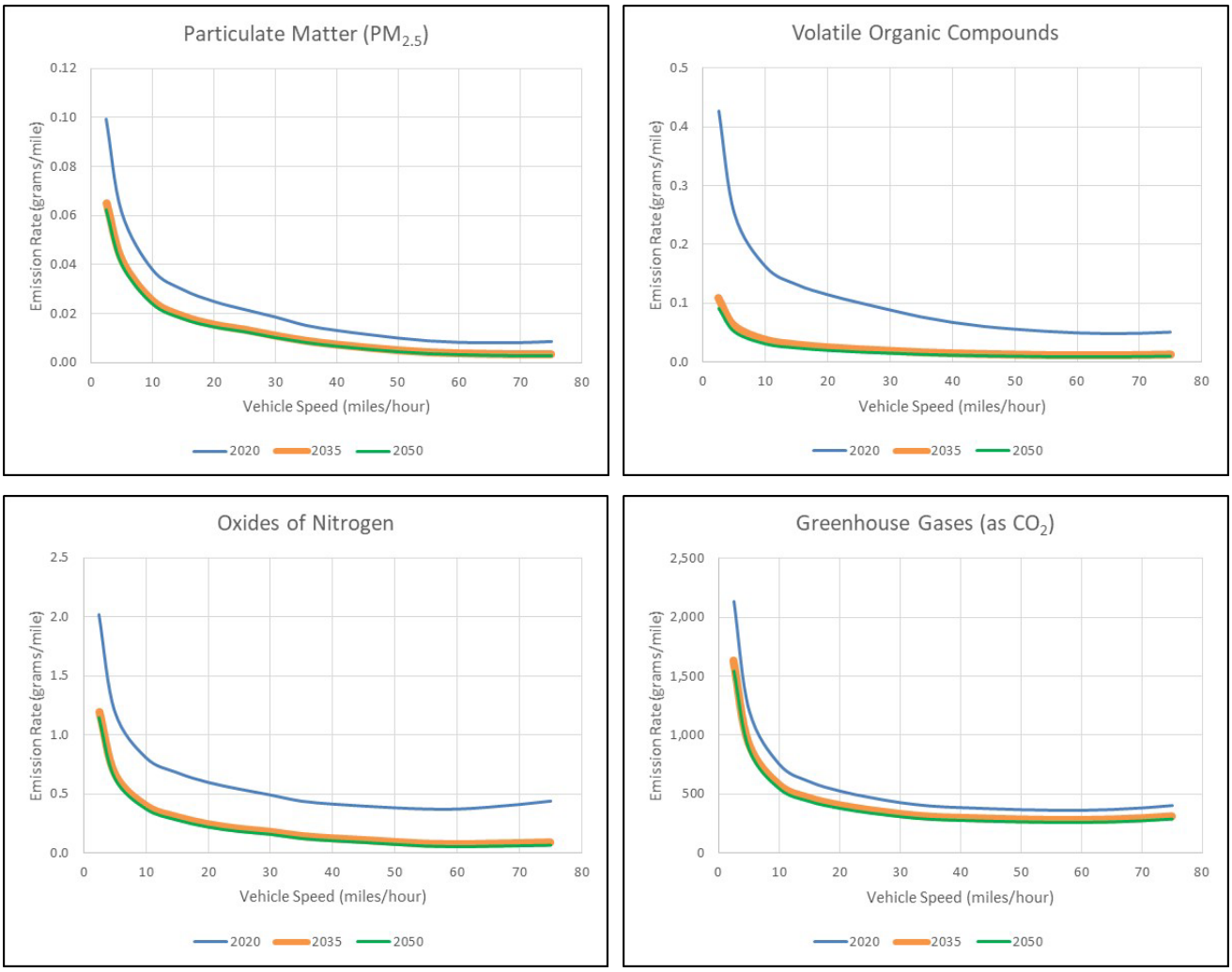
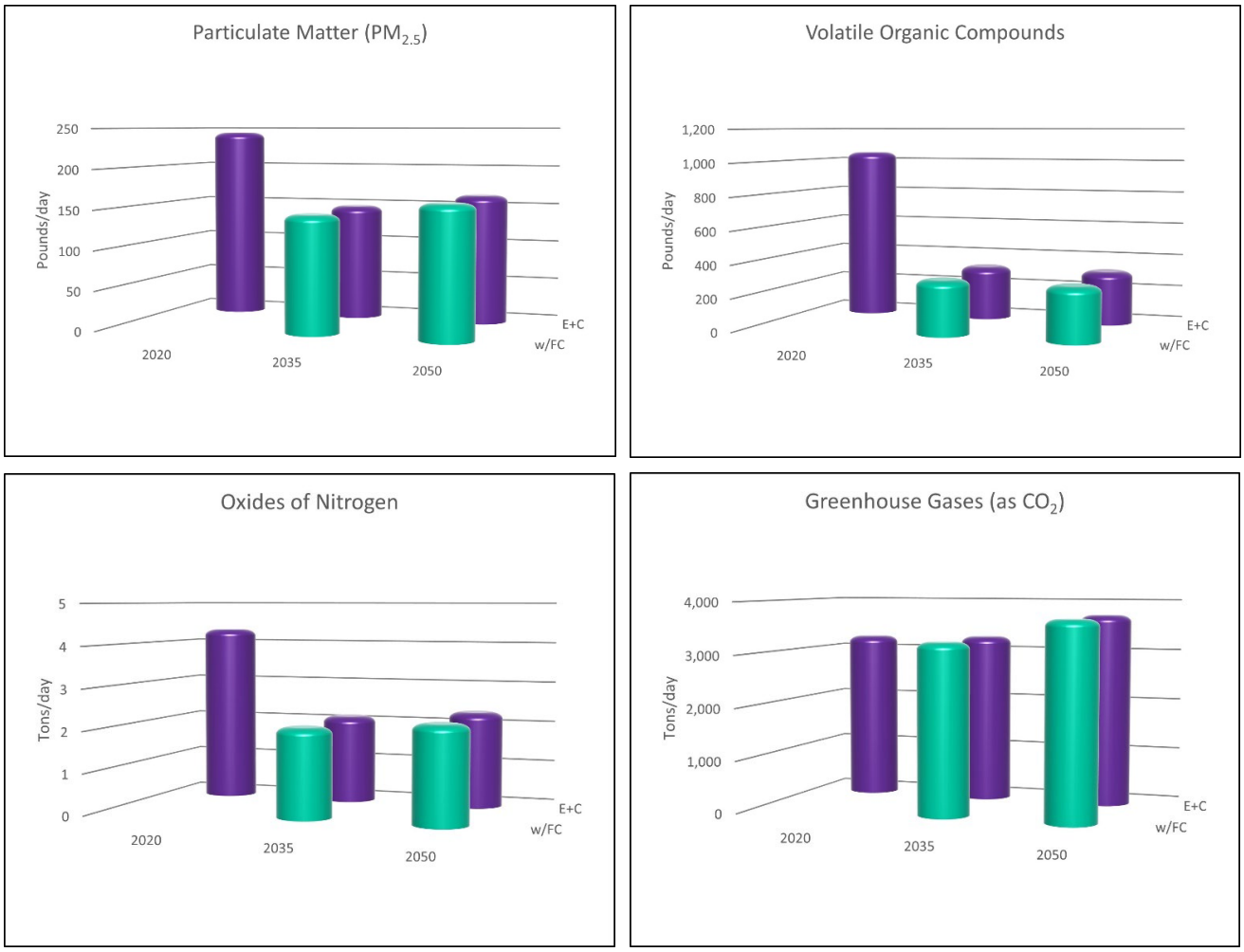


Figure 7.11 Typical Weekday Pollutant Emission Totals for Fiscally Constrained Road Network



E+C is existing plus committed projects
w/FC is with Fiscally Constrained projects

Environmental Justice and Equity

Federal requirements that protect low-income and minority populations from adverse impacts of transportation projects have additional value when combined with a wider scope of criteria that define an underserved and overburdened communities. EJ reflects the intent of minimizing or mitigating harm from transportation investments to vulnerable populations. The broader goal of providing Transportation Equity within a community intends to reduce the existing disparity between population groups by improving conditions for underserved and overburdened communities by directing transportation investments accordingly. NDOT added one additional State project (ID 71) to the fiscally constrained project list after screening for Environmental Justice was completed and is therefore not included.

Environmental Justice

Federal requirements, such as Title VI of the Civil Rights Act and Executive Order 12898, are in place to help protect low-income and minority populations from adverse effects of federal actions, such as federally-funded transportation projects. Adverse effects to low-income and minority persons associated with a transportation project could occur during construction despite the completed project providing an overall benefit or the completed project could result in disproportionately high adverse socioeconomic effects. **Appendix H** includes the expanded review of the socioeconomic environment and mitigation strategies for EJ.

A project-specific EJ analysis (during the NEPA/design phase of project development) provides the necessary tools to minimize or mitigate harm from transportation investments to vulnerable populations, whereas this review provided the opportunity to evaluate potential effects (beneficial or adverse) to prioritize and fund future projects. Block groups within Lancaster County with the percent of minority and/or low-income persons greater than countywide or citywide total percent were identified as minority or low-income populations. Projects located in these block groups would likely require project-specific EJ analysis to determine disproportionately high adverse effects, beneficial effects, or if outreach would be needed to comply with NEPA.

Of the 44 fiscally constrained Urban Roadway Projects, 31 projects are located in or through potential minority populations and five are located in or through low-income populations. These projects generally consist of safety, resurfacing, and intersection improvements with lower potential of permanent ROW impacts that could contribute to adverse economic impacts and little to no potential to alter the access to transportation options or neighborhood continuity. The projects are not likely to isolate, exclude, or separate minority or low-income individuals within a given community or from the broader community; a factor that can negatively impact equity of adjacent communities. These types of projects may have temporary adverse effects during construction, which can be appropriately mitigated with public involvement (including translation services, if warranted) and compensatory conservation measures, but would ultimately increase the quality of transportation within the block group for all individuals. Larger-scale projects such as a grade-separated railroad crossing and new four-lane freeway may be more likely to impact minority and low-income populations and would be subject to more in-depth NEPA and EJ analysis because of the potential to physically divide properties, displace people or property improvements, or alter transportation access (during construction or after the completed project).

Of the 26 fiscally constrained Rural Roadway Projects, six projects are located in or through potential minority populations and zero are located in or through low-income populations. These projects generally consist of paving roads and could have low to moderate permanent ROW impacts, but would otherwise be similar to the urban improvement projects relative to EJ concerns. The lack of rural roadway projects in block groups with low-income populations is an artifact of there being no block groups outside the City of Lincoln designated as low-income.

Of the 31 fiscally constrained Trail Projects, 27 projects are located in or through potential minority populations and one is located in or through low-income populations. Other than concerns similar to the urban improvement projects, trails can provide a low-cost transportation alternative and increase connectivity to essential services, which would benefit minority and low-income persons. The presence of existing trails accessible within one-mile of most of the

low-income block groups explains why so few new trail projects are proposed in low-income block groups. Increasing connectivity to trails by expanding the on-street bike network within these block groups is a cost-effective action step.

By completing project-specific EJ analysis and appropriate public involvement outreach consistent with federal funding requirements, the Fiscally Constrained Plan (including ID 71) will not have an adverse impact to EJ communities. Projects prioritized for the Fiscally Constrained Plan have the capability of satisfying the three fundamental EJ principles as set forth by regulations including:

1. Avoid, minimize or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations.
2. Ensure the full and fair participation by all potentially affected communities in the transportation decision making process.
3. Prevent the denial of, reduction of, or significant delay in the receipt of benefits by minority and low-income populations.

Equity

A Community Vision provides the broad framework for considering transportation investments, and "Equity" was included with the Community Vision expressed in PlanForward. It reinforced an equitable process that ensured all community members had equal opportunity to participate in the MPO's decision-making process. The 2050 LRTP advanced this Vision by adding a new Transportation Equity goal described in **Chapter 2.** This step expressly places equity into the LRTP processes of weighting projects described in this Chapter (**Table 7.4**) and measuring progress made toward the Transportation Equity, which is also described in **Chapter 2**. Unlike the explicit federal requirements established for measuring EJ, the Lincoln MPO has limited guidance for establishing methods for measuring transportation equity. The Lincoln MPO updates the LRTP every five-years, which will allow the methods of measuring equity to be adjusted over time.

Planning stakeholders distinguished the Transportation Equity goal from EJ requirements as the intentional investment of transportation funding to reduce transportation infrastructure disparities between populations considering a range of socioeconomic criteria. The Lincoln MPO had to establish the criteria and methods for completing this evaluation.

The method of aggregating census blocks by population/households for seven socioeconomic criteria is described in **Appendix H** and led to the development of the Equity Index developed for **Chapter 4** (**Figure 4.5**). The Equity Index will be used to measure progress made over time toward reducing disparities for transit access, on-street bike/trail network access, commute time, and pavement condition between population groups. Defining the baseline for these measures was an important step in accommodating the Community Vision of equitable transportation outcomes for all residents.

The fiscally constrained projects listed in this Chapter were established through the project weighting process considering eight LRTP goals. Projects that are included present the highest scores considering all goals, including Transportation Equity. Projects located within block groups of the highest Equity Index score (i.e., highest portion of underserved and overburdened communities) received the maximum score for the Transportation Equity goal. If the scoring committee determined that the project could have a positive or negative impact on those communities within or adjacent to the block group, the

score could be adjusted. An example of a negative impact could be adding new lanes to an existing roadway that would reduce the connectivity between housing and schools or essential services. An example of a positive impact could be a grade separated crossing in a block group with a lower Equity Index score that will improve network safety, access, and commute reliability for adjacent block groups with a higher Equity Index. **Chapter 6** provides important information about committed and restricted funds (**Figure 6.1**) and the resource allocation scenarios chosen for funding projects. This comprehensive scoring process and the selected investment scenario maximize the potential benefit of funding available for projects that will improve equitable transportation outcomes.

In addition to the fiscally constrained projects, the LRTP directs available flexible funding to meet other program needs established by the Lincoln MPO, including operation and maintenance of existing roads and trails, completion of on-street bike projects, and expanded and transit operations. These investments are not listed in the fiscally constrained project lists, yet they will contribute to achieving the Transportation Equity goal in combination with Transportation Equity policy and action steps included in **Chapter 8**.



A project within the Fiscally Constrained Plan that highlights some challenges of measuring equitable outcomes based on Equity Index scores is the N. 33rd Street and Cornhusker grade separated railroad crossings project (Project ID 74, cost estimate of $110.4 million). Funding available for this project comes from local and federal sources established specifically for railroad safety improvements that cannot be spent for other purposes. This project location is within a block group that has a low to moderate Equity Index score, which indicates fewer underserved and overburdened residents/ households in the block group will benefit from the project than if the same project was completed in a block group with a high Equity Index score. Block groups located directly south, west, and east presented High Equity Index scores. The magnitude of this regionally significant, multimodal project will generate positive improvements for transportation safety, access, and reliability for block groups adjacent to the immediate project area and beyond. These challenges reinforce the need to continue evaluating the Transportation Equity

Illustrative Plan

Transportation needs in Lincoln and Lancaster County are significant, and the revenue forecasts for the 29-year planning horizon are not adequate to achieve the goals of LRTP and meet all the region's transportation needs. The LRTP strongly encourages pursuit of additional revenues to fund the transportation improvements that are vital to a thriving community. The following sections detail the NDOT, Rural Road, and Urban Road Capital Projects, as well as the Trail Projects that would remain unfunded through 2050.

Roadways

NDOT Highway Projects

Ten NDOT highway capital projects were scored using the Lincoln urban area roadway criteria and weighting. The rankings of these projects (as listed in **Table 7.16**) reflect where they fall based on the Lincoln MPO's priorities. However, it is recognized that the timing of these projects will depend on the statewide priorities and funding availability. Seven of the 10 projects are shown in the Illustrative Plan on **Figure 7.12** (the other three – the South Beltway, the West Beltway, and I-80 - Pleasant Dale to NW 56th Street – have committed funding and are included in the Fiscally Constrained Plan).

Lancaster County Rural Road & Bridge Capital Projects

All remaining Rural Road & Bridge Capital Projects (including the additional 69 lower ranked projects that are not included in the Fiscally Constrained Plan) are included as Illustrative (unfunded) projects in the LRTP. These projects are depicted on **Figure 7.13** and detailed in **Table 7.17**.

Lincoln Urban Roadway Capital Projects

All remaining Urban Roadway Capital Projects (including an additional 64 lower ranked projects that are not included in the Fiscally Constrained Plan) are included as Illustrative (unfunded) projects in the LRTP. These projects are depicted on **Figure 7.14** and detailed in **Table 7.18**.

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Table 7.16 Illustrative Plan (Unfunded) NDOT Highway Projects

Project ID	Street Name	Limits	Description	Project Cost (2021$)
44	O Street (US-34)	84th Street to 120th Street	4 lanes + intersection improvements	$17,900,000
34	US-6 (Sun Valley)	Cornhusker Hwy (US-6) to WO St.(US-6)	4 lanes + turn lanes	$20,400,000
73	US-34	US-34 and Fletcher Avenue	New interchange	$31,900,000
72	I-180	I-80 to US-6	Reconstruction + bridges	$51,200,000
1	I-80	I-80 and I-180	Major interchange work	$52,300,000
68	O Street (US-34)	120th Street to east county line	4 lanes + intersection improvements	$37,000,000
70	US-34	NE-79 to Malcolm Spur	4 lanes + intersection improvements	$15,300,000
Illustrative Plan (Unfunded) Total				**$226,000,000**

Figure 7.12 Illustrative Plan (Unfunded) NDOT Highway Projects

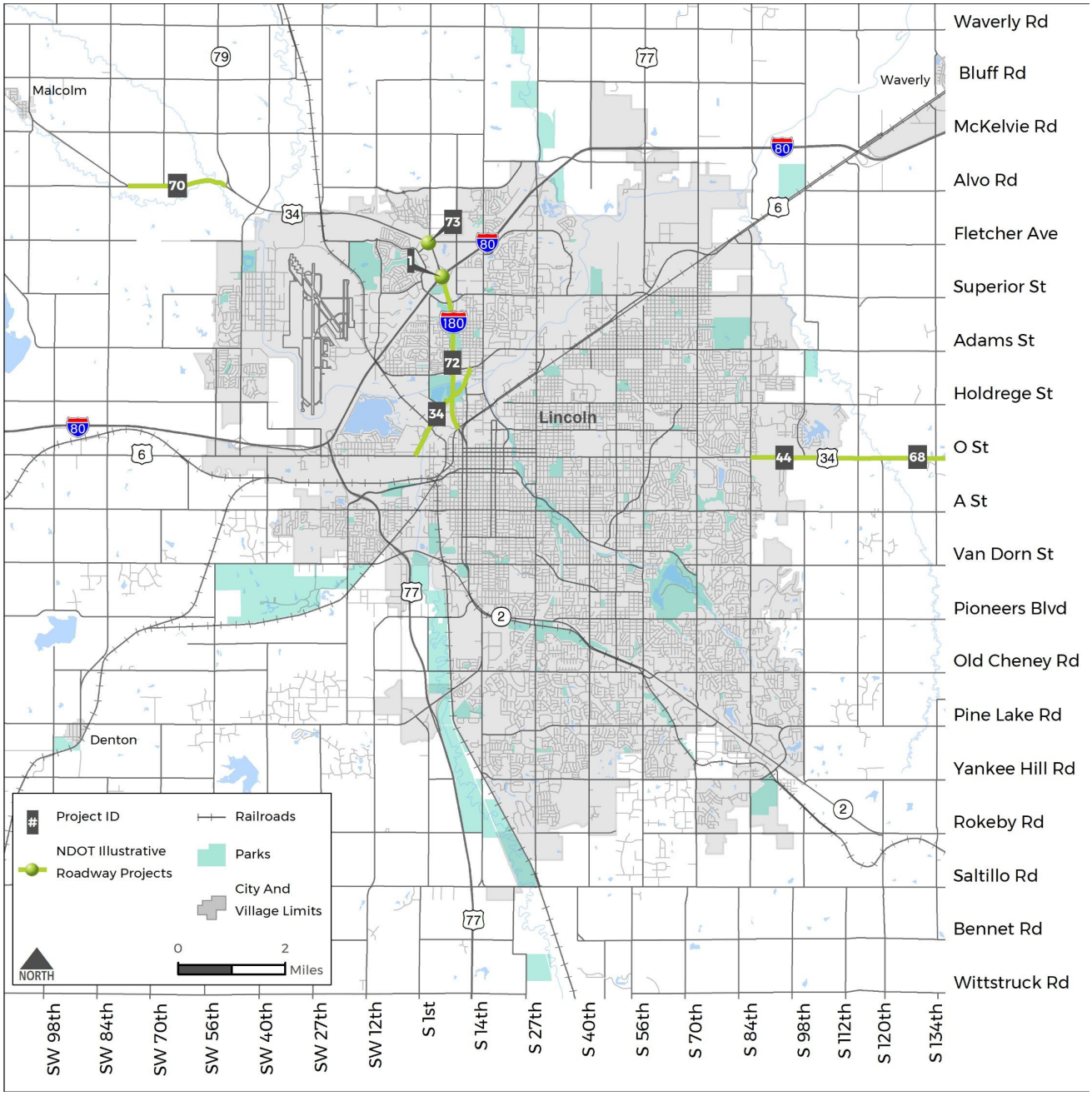


Table 7.17 Illustrative Plan (Unfunded) Rural Road & Bridge Capital Projects

Rank	Project ID	Street Name	Limits	Description	Project Cost (2021$)
	107	W Van Dorn Street	SW 140th Street to SW 112th Street	Potential Paving	$1,300,000
16[1]	108	S 1st Street	Old Cheney Road to Pioneers Boulevard	Programmed Paving	$1,000,000
25	182	N 14th Street	Arbor Road	Intersection improvements	$650,000
26	211	S 46th Street	Bridge S-59 near Bennet Road	Replace CB	$925,000
27	116	Panama Road	US-77 to S 54th Street	Potential Paving	$3,900,000
28	158	N 148th Street	O Street to McKelvie Road	Two Lane Widening	$4,018,000
29	110	W Waverly Road	NE-79 to N 14th Street	Potential Paving	$6,500,000
30	197	Van Dorn Street	Bridge K-37 near S 98th Street	Replace CBC	$652,000
31	118	Bluff Road	I-80 to N 190th Street	Potential Paving	$1,430,000
32	109	W Waverly Road	NW 112th Street to NE-79	Potential Paving	$5,200,000
33	161	S 148th Street	Old Cheney Road	Intersection improvements	$650,000
34	178	S 68th Street	Martel Road	Intersection improvements	$650,000
35	202	Old Cheney Road	Bridge O-37 near S 1st Street	Bridge Replacement	$3,465,000
36	163	S 148th Street	Van Dorn Street	Intersection improvements	$650,000
37	162	S 148th Street	Pioneers Boulevard	Intersection improvements	$650,000
38	157	S 148th Street	Yankee Hill Road to O Street	Two Lane Widening	$4,900,000
40	159	S 148th Street	Yankee Hill Road	Intersection improvements	$650,000
41	167	N 148th Street	Havelock Avenue	Intersection improvements	$650,000
42	169	N 148th Street	Prairie Home	Intersection improvements	$1,300,000
43	117	McKelvie Road	NW 27th Street to N 14th Street	Potential Paving	$3,900,000
44	97	N 14th Street	Waverly Road to Raymond Road	Two Lane Widening	$1,000,000
45	175	S 68th Street	Olive Creek Road	Intersection improvements	$650,000
46	99	N 14th Street	Arbor Road to Waverly Road	Two Lane Widening	$1,250,000
47	160	S 148th Street	Pine Lake Road	Intersection improvements	$650,000
48	176	S 68th Street	Panama Road	Intersection improvements	$650,000
49	170	N 148th Street	Alvo Road	Intersection improvements	$650,000
50	179	S 68th Street	Wittstruck Road	Intersection improvements	$650,000
51	198	S 56th Street	Bridge P-92 near Rokeby Road	Replace with CBC	$1,460,000
52	174	S 68th Street	Princeton Road	Intersection improvements	$650,000
53	166	N 148th Street	Adams Street	Intersection improvements	$650,000
54	177	S 68th Street	Stagecoach Road	Intersection improvements	$650,000
55	164	S 148th Street	A Street	Intersection improvements	$650,000
56	196	N 112th Street	Bridge J-126 near Holdrege Street	Bridge Replacement	$1,571,000
57	208	Pioneers Blvd	Bridge Q-72 near S 138th Street	Bridge Replacement	$1,188,000
58	168	N 148th Street	Fletcher Avenue	Intersection improvements	$650,000
59	203	Van Dorn Street	Bridge J-22 near S 134th Street	Bridge Replacement	$1,060,000
60	199	A Street	Bridge J-47 near S 120th Street	Replace with CCS	$739,000
61	173	S 68th Street	Pella Road	Intersection improvements	$650,000
62	191	N 14th Street	Raymond Road to Agnew Road	Two Lane Widening	$2,000,000
63	112	N 27th Street	Arbor Road to Waverly Road	Potential Paving	$3,250,000
64	190	N 14th Street	Agnew Road	Intersection improvements	$650,000
65	180	S 68th Street	Bennett Road	Intersection improvements	$650,000

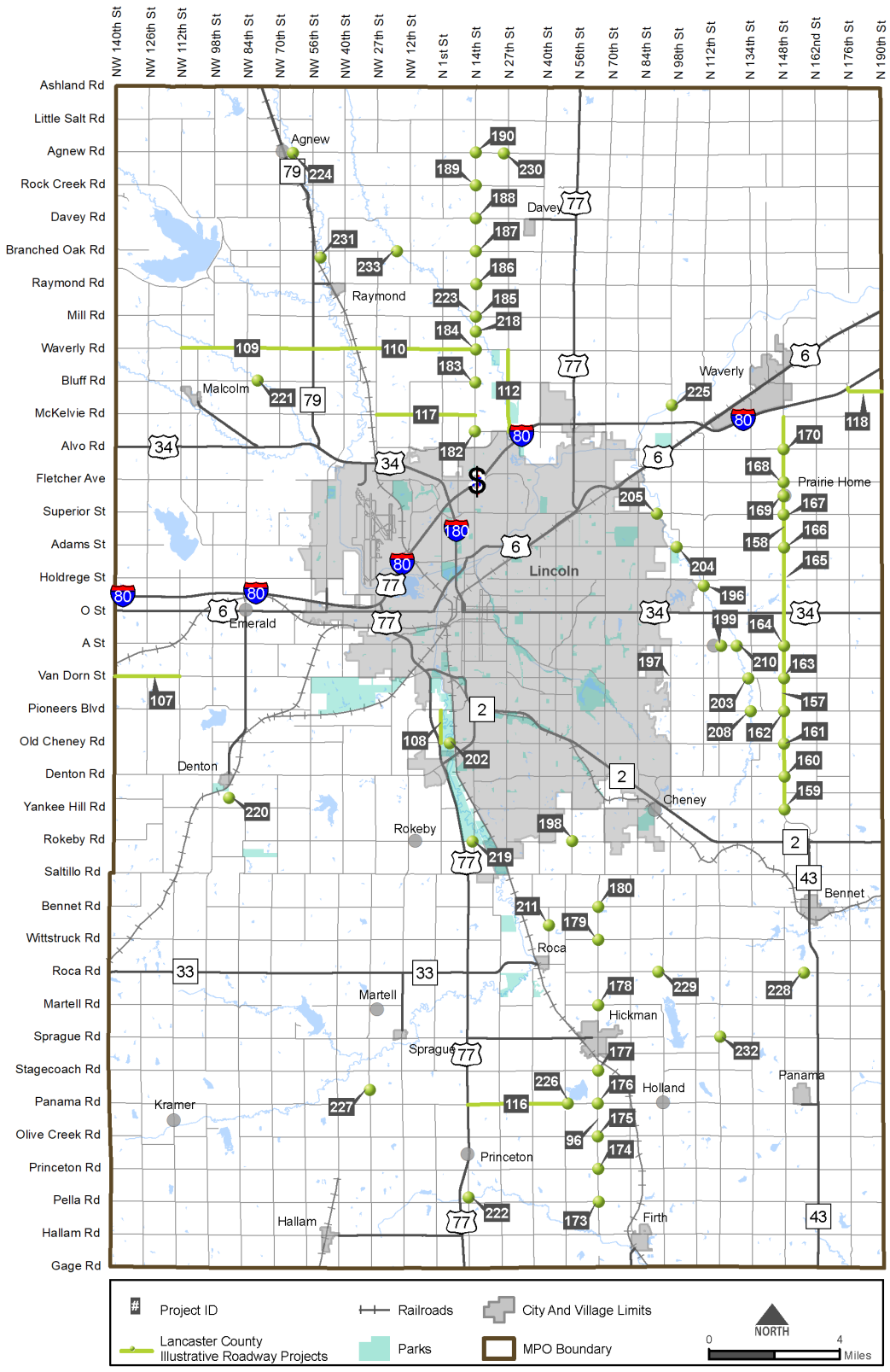
Rank	Project ID	Street Name	Limits	Description	Project Cost (2021$)
66	205	Havelock Avenue	Bridge K-144 near N 98th Street	Bridge Replacement	$2,079,000
67	210	A Street	Bridge J-46 near S 134th Street	Bridge Replacement	$1,237,000
68	189	N 14th Street	Rock Creek Road	Intersection improvements	$650,000
69	187	N 14th Street	Branched Oak Road	Intersection improvements	$650,000
70	204	Adams Street	Bridge K-123 near N 102nd Street	Bridge Replacement	$1,940,000
71	186	N 14th Street	Raymond Road	Intersection improvements	$650,000
72	188	N 14th Street	Davey Road	Intersection improvements	$650,000
73	184	N 14th Street	Waverly Road	Intersection improvements	$650,000
74	185	N 14th Street	Mill Road	Intersection improvements	$650,000
75	183	N 14th Street	Bluff Road	Intersection improvements	$650,000
76	192	N 14th Street	Agnew Road to Ashland Rd	Two Lane Widening	$1,000,000
N/A[2]	218	N 14th Street	Bridge F-88, Oak W-12, 18-15	Concrete Slab Bridge	$1,175,000
N/A[2]	219	Rokeby Road	Bridge O-44, Yankee Hill S-26, 21-44	Drainage Structure Replacement	$65,000
N/A[2]	220	SW 91st Street	Bridge N-114, Denton IN-22, 18-02	Bridge Replacement	$475,000
N/A[2]	221	W Bluff Road	Bridge E-171, Elk S-14	Concrete Box Culvert	$550,000
N/A[2]	222	S 12th Street	Bridge W-104, Buda W-24	Concrete Box Culvert	$275,000
N/A[2]	223	N 14th Street	Bridge F-91, Oak W-1	Concrete Box Culvert	$275,000
N/A[2]	224	W Agnew Road	Bridge D-88, West Oak S-12 21-40, East of Nebraska Hwy 79	Concrete Slab Bridge	$2,255,000
N/A[2]	225	N 98th Street	Bridge G-222, North Bluff W-24 21-41, North of I-80	Bridge Replacement	$2,560,000
N/A[2]	226	Panama Road	Bridge X-129, South Pass S-4 21-43, East of S 54th St	Concrete Slab Bridge	$1,800,000
N/A[2]	227	SW 29th Street	Bridge W-50 Buda W-4 21045, South of W Stagecoach Rd	Bridge Replacement	$620,000
N/A[2]	228	Roca Road	Bridge R-184, Nemaha S 15, East of S 148th Street	Bridge Replacement	$580,000
N/A[2]	229	Roca Road	Bridge S-180, Saltillo S 14, East of S 82nd Street	Bridge Replacement	$870,000
N/A[2]	230	Agnew Road	Bridge C-284, Little Salt S-12	Concrete Box Culvert	$430,000
N/A[2]	231	NW 19th Street	Bridge C-262, Little Salt IN-28	Bridge Replacement	$650,000
N/A[2]	232	Hickman Road	Bridge R-213, Nemaha S-20	Concrete Box Culvert	$430,000
N/A[2]	233	W Branched Oak Road	Bridge C-253, Little Salt S-28	Bridge Replacement	$620,000
Illustrative Plan (Unfunded) Total					**$89,444,000**

[1] *Although it scored high enough to be in the Fiscally Constrained Plan, Project ID 108 is shown in the Illustrative Plan due to uncertainty of the Old Cheney configuration at the West Beltway (closure versus overpass); therefore, the need for this project will be determined at a later date.*

[2] *Projects 218 – 229 are included in Lancaster County's 1 and 6 Year Plan. These projects are included in the LRTP Illustrative Plan but have not been scored.*

Amended November 2022

Figure 7.13 Illustrative Plan (Unfunded) Rural Road & Bridge Capital Projects



Amended November 2022

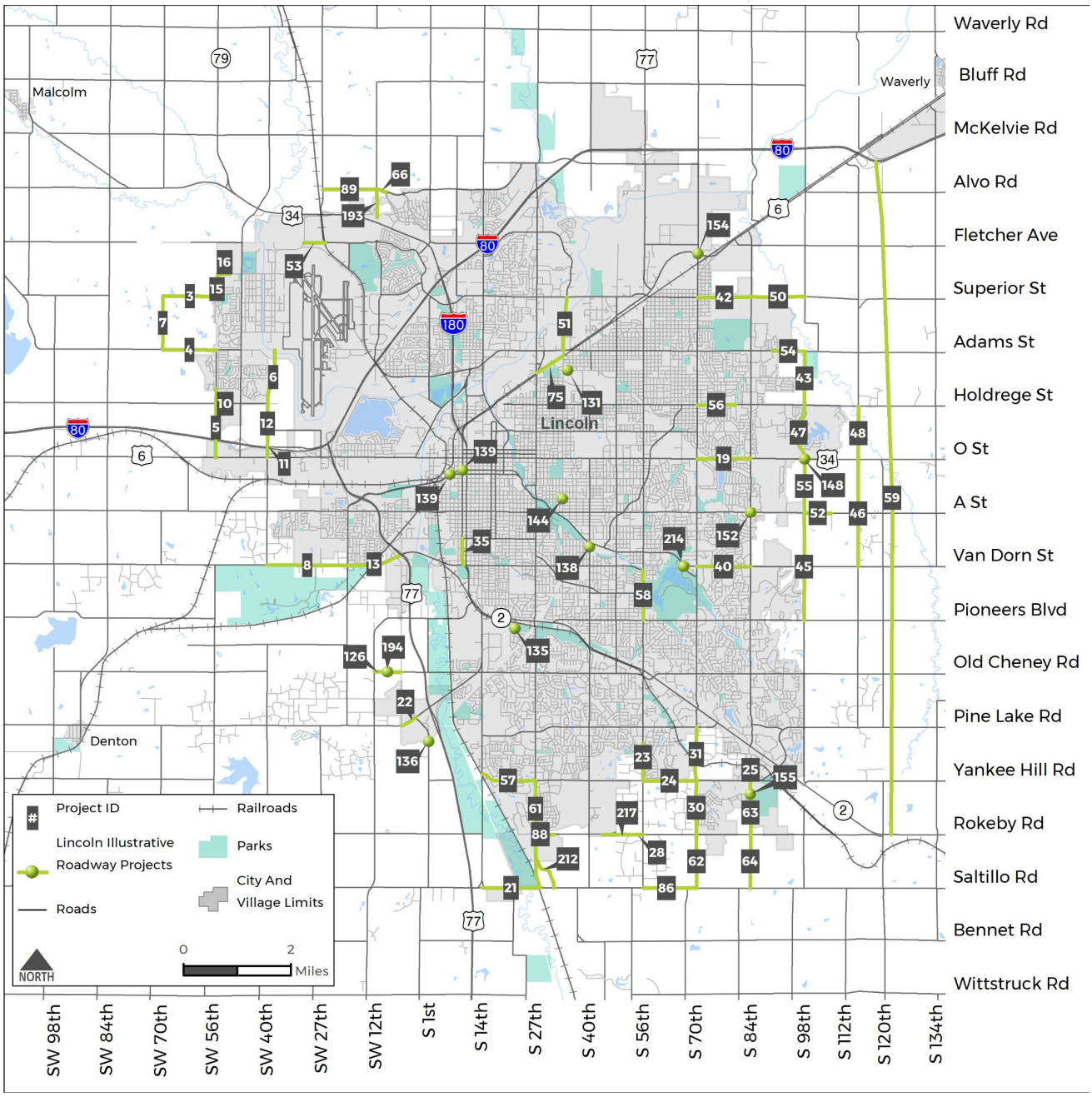
Table 7.18 Illustrative Plan (Unfunded) Urban Roadway Capital Projects

Rank	Project ID	Street Name	Limits	Description	Project Cost (2021$)
21	58	S 56th Street	Van Dorn Street to Pioneers Boulevard	4 lanes + intersection improvements	$13,200,000
22	214	Normal Boulevard	Van Dorn Street	Intersection improvements	$750,000
23	31	S 70th Street	Pine Lake Road to Yankee Hill Road	4 lanes + intersection improvements	$14,000,000
24	138	S 40th Street	Antelope Creek	Bridge Replacement	$2,500,000
25	35	S 9th Street	Van Dorn Street to South Street	3 lanes + intersection improvements	$5,300,000
26	155	S 84th Street	Yankee Woods Drive	Roundabout	$2,750,000
27	56	Holdrege Street	N 70th Street to N 80th Street	4 lanes + intersection improvements	$10,000,000
28	136	S 1st Street	Cardwell Branch Salt Creek	Bridge Replacement	$850,000
29	139	Rosa Parks Way	K Street and L Street	Bridge Rehab and Preventive Maintenance	$3,400,000
30	57	Yankee Hill Road	S 14th Street to S 27th Street	Additional 2 lanes	$7,200,000
31	12	NW 40th Street	W Holdrege Street to W Vine Street	2 lanes + intersection improvements	$3,500,000
32	154	Cornhusker Hwy (US-6)	N 70th Street / Railroad viaduct	Intersection/viaduct reconfiguration	$10,000,000
33	144	S 33rd Street	D Street	Remove existing traffic signal and construct mini roundabout	$1,000,000
34	152	S 84th Street	A Street	Intersection Improvements: dual northbound left turn lanes and NB right turn lane	$1,520,000
35	19	O Street (US-34)	Wedgewood Drive to 98th Street	Intersection Improvements	$6,080,000
36	42	Havelock Avenue	N 70th Street to N 84th Street	2 lanes + intersection improvements	$7,000,000
37	5	NW 56th Street	W Partridge Lane to W "O" Street	2 lanes + intersection improvements	$9,000,000
38	131	Huntington Avenue	Dead Mans Run	Bridge Replacement	$3,500,000
39	40	Van Dorn Street	S 70th Street to S 84th Street	Intersection Improvements	$4,560,000
40	11	NW 40th Street	W Vine Street to US-6, including I-80 Overpass	Overpass	$11,250,000
41	24	Yankee Hill Road	S 56th Street to S 70th Street	2 lanes + intersection improvements	$6,900,000
42	6	NW 38th Street	W Adams Street to W Holdrege Street	2 lanes + intersection improvements	$7,200,000
43	51	N 33rd Street	Cornhusker Hwy to Superior Street	4 lanes + int. impr. & bridge	$20,000,000

Rank	Project ID	Street Name	Limits	Description	Project Cost (2021$)
44	75	Salt Creek Roadway	State Fair Park Dr to Cornhusker Hwy	6 lanes + intersection improvements	$26,000,000
45	15	NW 56th Street	W Cuming Street to W Superior Street	2 lanes + intersection improvements	$2,900,000
46	23	S 56th Street	Thompson Creek Boulevard to Yankee Hill Road	4 lanes + intersection improvements	$9,800,000
47	148	O Street (US-34)	98th Street	Construct roundabout with S 98th Street project OR when signal otherwise warranted	$2,750,000
48	8	W Van Dorn Street	SW 40th Street to Coddington Avenue	2 lanes + intersection improvements	$10,500,000
49	135	Southwood Drive	Beal Slough	Bridge Replacement	$2,200,000
50	193	NW 12th Street	W Alvo Road to Missoula Road	2 lanes + turn lanes	$2,400,000
51	7	NW 70th Street	W Superior Street to W Adams Street	2 lanes + intersection improvements	$7,000,000
52	61	S 27th Street	Yankee Hill Road to Saltillo Road	2 lane realignment + int. impr.	$14,100,000
53	48	N 112th Street	Holdrege Street to US-34	2 lanes + intersection improvements	$7,000,000
54	63	S 84th Street	Yankee Hill Road to Rokeby Road	4 lanes + intersection improvements	$14,000,000
55	21	Saltillo Road	S 14th Street to S 27th Street	2 lanes + intersection improvements, reconstruction to address flooding	$7,600,000
56	55	S 98th Street	US-34 (O Street) to A St	4 lanes + intersection improvements	$14,000,000
57	28	Rokeby Road	S 48th Street to S 56th Street	2 lanes + intersection improvements	$3,500,000
58	217	Rokeby Road	Snapdragon Road to S 48th Street	2 lanes + intersection improvements	$10,330,000
59	25	S 84th Street	Amber Hill Road to Yankee Hill Road	4 lanes + intersection improvements	$5,700,000
60	212	27th Street Realignment	Saltillo Road to Rokeby Road	New Two Lane Road	$20,200,000
61	86	Saltillo Road	S 56th Street to S 70th Street	2 lanes + intersection improvements	$7,000,000
62	3	W Superior Street	NW 70th Street to NW 56th Street	2 lanes + intersection improvements	$7,000,000
63	22	W Denton Road	Amaranth Lane to S Folsom Street	2 additional lanes	$2,200,000
64	46	S 112th Street	US-34 to Van Dorn Street	2 lanes + intersection improvements	$14,000,000
65	52	A Street	S 98th Street to 105th Street	2 lanes + intersection improvements	$3,500,000
66	59	East Beltway	Nebraska Hwy 2 to I-80	New 4 lane divided highway	$315,000,000
67	47	N 98th Street	Holdrege Street to O Street	Additional 2 lanes	$7,500,000

Rank	Project ID	Street Name	Limits	Description	Project Cost (2021$)
68	54	Adams Street	N 90th Street to N 98th Street	2 lanes + intersection improvements	$4,300,000
69	45	S 98th Street	A Street to Pioneers Boulevard	4 lanes + intersection improvements	$28,000,000
70	4	W Adams Street	NW 70th Street to NW 56th Street	2 lanes + intersection improvements	$7,000,000
71	13	W Van Dorn Street	Coddington Avenue to US-77	2 lanes + intersection improvements	$6,900,000
72	53	W Fletcher Avenue	NW 31st Street to NW 27th Street	2 lanes + intersection improvements	$2,800,000
73	30	S 70th Street	Yankee Hill Road to Rokeby Road	2 lanes + intersection improvements	$14,000,000
74	66	W Alvo Road	NW 12th Street to Tallgrass Parkway	2 lanes + intersection improvements	$1,300,000
74	126	W Old Cheney Road	S Folsom Street to SW12th Street	2 lanes with raised median	$3,500,000
76	194	W Old Cheney Road	SW 9th Street	Roundabout	$900,000
77	88	Rokeby Road	S 27th Street to S 31st Street	2 lanes + intersection improvements	$2,400,000
78	64	S 84th Street	Rokeby Road to Saltillo Road	4 lanes + intersection improvements	$14,000,000
79	62	S 70th Street	Rokeby Rd to Saltillo Rd	4 lanes + intersection improvements	$14,000,000
80	50	Havelock Avenue	N 84th Street to N 98th Street	2 lanes + intersection improvements	$7,000,000
81	17	NW 12th Street	Aster Road to Missoula Road	2 lanes + turn lanes	$2,300,000
82	16	W Cuming Street	NW 56th Street to NW 52nd Street	2 lanes + intersection improvements	$1,600,000
83	43	N 98th Street	Adams Street to Holdrege Street	2 lanes + intersection improvements	$7,000,000
84	89	W Alvo Road	NW 27th Street to NW 12th Street	2 lanes + intersection improvements	$7,100,000
Illustrative Plan (Unfunded) Total					**$791,740,000**

Figure 7.14 Illustrative Plan (Unfunded) Urban Roadway Capital Projects



Trails

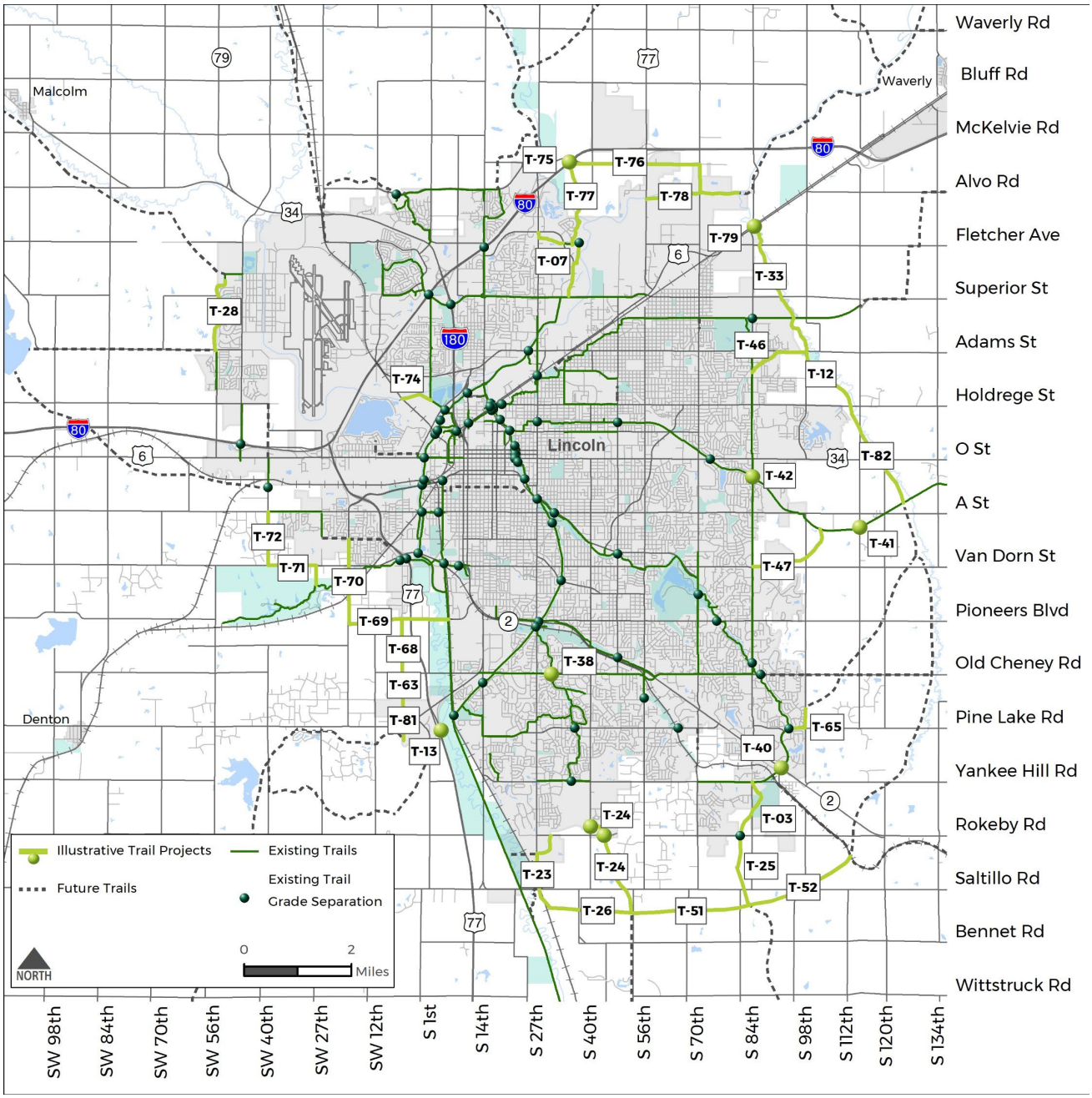
The remaining Trail Projects that are not expected to be funded within the 2050 Fiscally Constrained Plan are included as Illustrative projects in the LRTP, as depicted on **Figure 7.15** and listed in **Table 7.19**. The timing and priority of these projects may change depending on opportunities for funding.

Table 7.19 Illustrative Plan (Unfunded) Trail Projects

Project ID	Trail Name	Limits	Description	Project Cost (2021$)
T-07	Landmark Fletcher	33rd St & Superior St to 27th St	New Trail; Sidepath	$700,000
T-28	NW 56th Street Trail	W Adams St to W Superior St	New Trail	$600,000
T-75	Arbor Road Trail	N 14th St to I-80 with grade separation at I-80	Sidepath and Grade Separation	$600,000
T-76	Arbor Road Trail	I-80 to Salt Creek Trail	Sidepath	$2,400,000
T-38	Tierra Williamsburg	Old Cheney grade separated crossing	Grade Separation	$1,200,000
T-77	Little Salt Creek Trail	Arbor Rd to Landmark Fletcher	New Trail	$2,000,000
T-79	Stevens Creek Trail	Salt Creek Trail to Cornhusker Hwy with grade separation of Cornhusker Hwy	New Trail	$1,000,000
T-47	Van Dorn Trail	S 84th St and Van Dorn to S 106th and MoPac Trail	New Trail	$1,200,000
T-26	South Beltway Trail - Phase I	S 27th St to S 56th St	New Trail	$1,500,000
T-74	Oak Creek Trail	Saline Wetlands Nature Center to N 1st St	New Trail	$300,000
T-78	Salt Creek Trail	N 56th St to Stevens Creek	New Trail	$900,000
T-13	Cardwell Branch Trail	GPTN Connector to Folsom Trail	New Trail	$800,000
T-65	Pine Lake Rd/S 98th St	Billy Wolff Trail to Napa Ridge Dr	Sidepath	$300,000
T-63	Folsom Street	W Old Cheney south 1/2 mile	Sidepath	$65,000
T-71	Van Dorn St	SW 40th St to Prairie Corridor Trail	Sidepath	$500,000
T-23	S 27th Street Connector	Rokeby Rd to South Beltway	New Trail	$800,000
T-40	S 91st Street Trail	Hwy 2 grade separated crossing	Grade Separation	$2,200,000
T-25	S 84th Street Connector	Rokeby Rd to South Beltway	New Trail	$700,000
T-72	SW 40th St	Van Dorn St to W A Street	Sidepath	$350,000
T-46	Prairie Village Trail	N 84th St to Stevens Creek, South of Adams	New Trail; Sidepath	$500,000
T-24	S 56th Street Connector	Rokeby Rd to South Beltway	New Trail	$1,200,000
T-33	Stevens Creek	Murdock trail to Hwy 6	New Trail	$1,000,000
T-82	Stevens Creek	Waterford Trail to MoPac Trail	New Trail	$1,700,000
T-70	Coddington Ave	Pioneers Blvd to South St	Sidepath	$650,000

Project ID	Trail Name	Limits	Description	Project Cost (2021$)
T-41	Mo Pac Trail	S 112th Street grade separated crossing	Grade Separation	$1,210,000
T-42	Mo Pac Trail	S 84th Street grade separated crossing	Grade Separation	$1,700,000
T-81	Folsom Street Connector	1/2 mile north of W Denton Rd to Cardwell Branch Trail	Trail	$800,000
T-12	Stevens Creek	Murdock Trail to Waterford Trail	New Trail	$1,300,000
T-68	Folsom St	Old Cheney to Pioneers Blvd	Sidepath	$350,000
T-69	Pioneers Blvd	Jamaica North Trail to Coddington Ave	Sidepath	$700,000
T-51	South Beltway Trail - Phase II	S 56th St to S 84th St	New Trail	$3,500,000
T-03	Woodlands	Jensen Park to Rokeby Rd	New Trail	$500,000
T-52	South Beltway Trail - Phase III	S 84th Street to Hwy 2	New Trail	$3,500,000
Illustrative Plan (Unfunded) Total				**$36,725,000**

Figure 7.15 Illustrative Plan (Unfunded) Trail Projects



Transit

The Illustrative Plan includes full implementation of the future phases of improvements identified in the TDP. The following transit projects and services are included as Illustrative (unfunded) projects. The Illustrative Plan will be updated upon completion of the TDP update in 2022.

Multimodal Transportation Center

A Multimodal Transportation Center (MMTC) will provide a high level amenity for StarTran bus riders, bicyclists who desire to use transit when they travel, pedestrians as an information center and travel hub, and other transportation providers. A MMTC would also provide a strong and permanent statement of intent on the part of Lincoln to become a multimodal friendly community.

The MMTC would function as a bus transfer center, StarTran administrative office, bicycle storage facility, bike share facility, and likely offer space for supportive retail and taxi stands benefitting all of the City of Lincoln. The proposed location for a MMTC would be in downtown Lincoln to improve connections between people and centers of employment, education, and services. Such a center would support more convenient, safe, and easy bus passenger transfers. Having a transfer facility with administrative and operational staffing would also discourage criminal activity and attract more transit riders.

Maintenance Facility and CNG Fueling Station

StarTran will need a new bus maintenance and storage facility. Currently, the bus maintenance and a significant portion of the bus storage facility are well beyond the reasonable building life. The facility, built in the 1930s, is located within the South Haymarket Neighborhood Plan area. The area would be redeveloped into a mixed residential/commercial district.

StarTran has applied for $19.9 million under FTA Grants for Buses and Bus Facilities Program to fund design and construction of a new bus maintenance and storage facility. The first phase of this project includes construction of a CNG fueling facility.

Other Transit Enhancements

The TDP identifies additional transit enhancements including:

- An expansion plan for increasing service on key routes and adding vehicles
- Bus Rapid Transit in high use corridors such as O Street and 27th Street
- Technology improvements to enhance customer knowledge and trip planning with passenger information systems
- Consideration of private transportation options such as Uber or Lyft to enhance customer travel and to transport customers at the end of the bus line to their final destinations
- Consideration of different fuel types and propulsion systems such as electric buses as a means of reducing GHG emissions and lowering fuel costs
- Study of the potential for using existing rail corridors, such as Highway 2 and Cornhusker Highway, for light rail
- Consideration of intercity transportation between Lincoln and Omaha

8. Implementation Plan

The Lincoln MPO is committed to moving forward with the implementation of this plan's goals and in helping to implement the programs and high priority projects identified in the plan. The Implementation Plan includes policies and action steps as well as a summary of mitigation strategies that are anticipated to address the environmental, social, and cultural resource impacts of priority projects. It guides the MPO's implementation of the LRTP over the next five years and summarizes the relationship to the TIP and the LRTP amendment process.

Land use and transportation are interdependent in that each rely on and are influenced by the other. PlanForward envisions a City and County that provides an ample supply of land for future edge growth. It also encourages infill growth and more compact development with a wider range of housing options, which will support and require a wider range of transportation options. The impacts of the new growth and land use plans will be monitored to plan for future changes to the transportation system.

It should also be noted that the LRTP is to be updated every five years per federal regulations. During these five-year updates or minor updates to the Comprehensive Plan, the assumptions and identified needs and priorities of the transportation plan will be reexamined to best reflect any changes that occurred since the previous update.

Policies and Action Steps

The vision for transportation in Lincoln and Lancaster County is a safe, efficient and sustainable transportation system that enhances the quality of life, livability and economic vitality of the community. The following 18 policies and 170 action steps were developed with community input to support the Comprehensive Plan as the LRTP is implemented. Policies should be applied to the major modes of transportation to implement this vision. Although action steps may support multiple policies, they are typically organized with a primary policy. In a few cases an action step has been repeated for two policies.

Transportation Equity

POLICY: Prioritize equity in planning and implementing safe transportation systems to facilitate freedom of movement for all community members.



Every community member depends on a transportation network and services to meet their access and connectivity needs. As such, equitable transportation means identifying and working to eliminate disparity in the quality of and access to transportation options for all community members. Lincoln is actively working to engage stakeholders across the community who can illuminate issues of inequity in various forms, including transportation, through the **One Lincoln** initiative.

Inequity in some U.S. cities is reflected in historical transportation decisions that physically divided or severely hindered less affluent neighborhoods and residents of color (especially Black populations). Some of those decisions illustrate how lasting damage can occur through unjust and short-sighted transportation policies. Lincoln must avoid these types of disruptive transportation investments moving forward. Transportation investments should intentionally eliminate disparity and undue barriers to already overburdened and underserved populations. By keeping the needs of diverse community members in mind, Lincoln and Lancaster County can commit to transportation decisions that support the mobility needs of all residents.

Transportation Equity Action Steps

1. Expand and maintain infrastructure for all modes of transportation serving overburdened and underserved populations.
2. Remove physical, temporal and language barriers to the transportation network.
3. Offer night and weekend transit operational hours for overburdened and underserved populations.
4. Broaden transit public input and validate priorities, alternatives and plans with diverse stakeholders.
5. Expand representation of overburdened and underserved populations serving on the StarTran Advisory Board.
6. Continue working with Lincoln Public Schools that support transit use by students from overburdened and underserved populations.
7. Routinely distribute multi-lingual transportation information through human service providers locally and One Lincoln partners.
8. Provide equitable access to transit and shared mobility options for unbanked community members and those without access to credit card payment options.
9. Use insight and information from municipal and county service agencies to target mobility support for our aging population.

Transportation and the Environment

POLICY: Incorporate environmental stewardship, sustainability, and resiliency into transportation decisions and investments.



Lincoln and Lancaster County currently comply with federal air quality standards, supporting a great quality of life for residents and allowing greater flexibility for transportation infrastructure investments. This is a desired state now and for all future generations. The transportation sector is the nation's leading source of GHG emissions, and total emissions have steadily grown within our region as daily VMT and congestion levels have increased. Decisions within the region will address threats to transportation infrastructure and human health anticipated to result from climate change.

The **Lincoln Climate Action Plan** was developed through an inclusive and robust stakeholder development process in 2020. It recognizes both the global threat and the local implications that climate change can have on the safety and well-being of all community members, as well as the resilience of public infrastructure such as roads and bridges. The plan also recognizes transportation with a compelling list of strategies meant to reverse the trend and help achieve the goal of 80 percent net GHG reduction by 2050. Alternate modes must replace a portion of SOV trips, and cleaner fuel sources must replace internal combustion engines to achieve this goal. Action steps are necessary now to begin transitioning the region toward a more resilient and sustainable future.

Actions taken to accomplish these outcomes will not only protect air quality but expand the ability to avoid other environmental impacts and enrich the overall community experience. Land use and transportation decisions will be made together to support community connections with cultural enrichment opportunities, parks, and natural spaces. Design decisions will be needed to protect stormwater runoff quality, reassign or remove impervious surface, maintain corridor aesthetics and viewsheds, as well as reduce long-term infrastructure costs by incorporating resilient standards and best practices.

Transportation and the Environment Action Steps

1. Support the Lincoln Climate Action Plan to build a decarbonized and efficient transportation system.
2. Develop a Travel Demand Management program.
3. Promote active commuter incentives.
4. Incentivize the adoption of electric vehicles by City employees.
5. Add electric charging stations with public access.
6. Electrify municipal fleet with electric vehicles and charging stations.

7. Coordinate with businesses to ensure workplaces have adequate facilities for active commuters.
8. Design roadways to limit stormwater runoff with permeable or disconnected surfaces.
9. Incorporate cultural and natural resources within the network of active transportation corridors.
10. Encourage resilience planning specific to transportation design and construction to address climate risks of flooding and severe weather events and when applying best practices for benefit cost analysis to federal aid transportation projects.

Complete Streets

POLICY: Plan, design, build, and maintain streets to provide travel mode choice and to accommodate people of all ages and abilities.



The City of Lincoln adopted a **Complete Streets Policy** through an Executive Order/Administrative Regulation in 2013. Complete Streets are public and private streets that include some combination of appropriate infrastructure, as determined by the surrounding context, to accommodate all modes of transportation, including private vehicles, public transportation, walking, and bicycling. An interdepartmental steering committee continues to encourage design and operation of a transportation system that reflects this transportation policy. The group coordinates projects relating to design, planning, construction, reconstruction or rehabilitation of public and private streets, or development projects that would substantially impact or cause construction of public or private streets between City departments. Funding has been directed to the Complete Streets Policy initiative to address known gaps and to demonstrate the potential outcomes of implementing the policy. As part of this effort, streets are identified as best candidates for improvements that accommodate multiple travel mode choices to develop a network of complete streets for the community. Not all streets need to be built as complete streets to accomplish this.

The City is staffed and organized to take the next steps toward a Complete Streets Program, which includes the necessary standards, processes and best practices needed to fully accomplish the Complete Streets Policy. Continued progress toward Complete Streets will be achieved through standards to be established for all mode types within existing and improved public ROW. New infrastructure design will consider such standards for all modes to avoid future retrofits required to make this older infrastructure accessible and safe for non-motorists. Modifications will also be considered for existing infrastructure to better support non-motorists. For all modes to be safe and accessible, development must accommodate their needs. Retrofitting existing infrastructure to add accessibility and safety features is inefficient and costly.

Complete Streets Action Steps

1. Expand the Complete Streets Program by ordinance to include a Complete Streets Plan, procedures, guidelines, and project review process.
2. Establish department policy statements affirming the value of Complete Streets and the structural and non-structural design elements that will achieve the objectives of Complete Streets when making program and project review decisions within the traveled way and ROW.
3. Publish an annual Complete Streets Report that includes a record of projects that were reviewed, summarizes any design standards that conflicted with best practices, and lists exceptions that were approved from adopted design standards.

4. Deliver multimedia campaign and educational information about the Complete Streets Program and how to safely interact with different modes during travel.
5. Update **Complete Streets Gap Analysis and Prioritization Strategy** with a focus on gaps that exist within underserved and overburdened communities, funding outlook, and public-private partnership opportunities.
6. Prioritize Complete Streets projects that address gaps that exist within underserved and overburdened communities.
7. Enhance neighborhoods by adding safe and accessible connections to transit, multiuse trails, sidewalks and bicycle facilities.
8. Continue to develop standards for Quiet Streets on low volume roads where traffic calming prioritizes walking and cycling over motorized vehicles. Quiet Streets enable people using active transportation to make use of the entire roadway, not just sidewalks or the side of the street.
9. Complete demonstration projects based on advisory input from Complete Streets Committee to accomplish Complete Streets objectives and gain public input by implementing lower cost solutions that address infrastructure challenges identified in the gap analysis.

Transportation and Managing Growth

POLICY: Integrate land use and transportation decisions to ensure transportation infrastructure can support travel demands associated with growth.



An estimated 48,000 new Lincoln households are anticipated by 2050. This growth presents the community with important decisions about how to make transportation investments that provide for the needs of existing community members and support the needs of future residents and businesses. By directing more residential households toward infill locations, additional transportation opportunities are realized. Greater densities will add support for multiple modes of transportation and reduce the distances between housing and jobs or services. Taking advantage of infill opportunities also slows the pace that new infrastructure is needed, although edge growth will support ¾ of expected population growth and expand the roadway network. Development decisions are driven by market-based conditions influenced by demand, development requirements, and costs. Roadways in new growth areas are planned to accommodate connections with diverse community assets such as parks and schools, as well as Complete Streets amenities for non-motorized transportation, that are often missing but needed in older developed neighborhoods.

Transportation infrastructure supports all land use types and growth anticipated for the community. Individual households will make decisions about acceptable travel distances, and the transportation network will support reliable and efficient travel options. Alternative modes of transportation will be integrated within all new growth and development decisions to provide travel choice and ensure that the value of existing infrastructure is maximized through system optimization.

Transportation and Managing Growth Action Steps

1. Increase multimodal connections within and between all neighborhoods and commercial centers.
2. Support infill development by providing high-quality transit service to attract riders who would select transit over driving (often called “Choice Riders”).
3. Provide first and last mile connections and intermodal amenities at transit stops.
4. Serve traffic projected in the near term through signal optimization and capacity improvements.
5. Implement funding decisions that reinforce the opportunity for Lancaster County to turn over roadway infrastructure in good condition as Lincoln grows outward.
6. Pave roadways that support future service limits with efficient transitions from rural to urban conditions.

7. Support multimodal connections available along the current Highway 2 alignment following completion of the South Beltway project.
8. Implement **Access Management Policy** on internal transportation routes (e.g., State highways and City arterials) to support efficient access to adjacent businesses and external transportation connectors (e.g., Interstates and Freeways) to minimize disruption to future land uses.

Congestion Management

POLICY: Manage an efficient and reliable multimodal transportation network.



Transportation congestion occurs when travel demand and infrastructure capacity are not well aligned. This causes travel to be delayed and be less efficient, and it produces greater amounts of GHGs. Congestion delay fluctuates throughout the day and can also be influenced by special or emergency events. The Lincoln MPO updated the **Congestion Management Process** in 2020 to meet federal requirements, identify causes of congestion, and develop incremental strategies that maximize the efficiency and reliability of the multimodal transportation network. Many strategies are captured within action steps listed in other policies. The Lincoln MPO includes high priority strategies that are listed here as action steps for managing congestion.

Congestion Management Action Steps

1. Implement the Congestion Management Process.
2. Encourage infill and mixed-use development that aligns with the PlanForward growth scenario.
3. Structure transit fares to encourage additional choice ridership.
4. Add and improve access to the network of Complete Streets.
5. Improve the safety of existing bicycle and pedestrian facilities.
6. Optimize traffic signal coordination and adaptive communication.
7. Coordinate access controls for all roadway types.
8. Improve congesting and congested intersections.
9. Complete 2+1 roadway projects that can address congested road segments.
10. Consider the impacts that emerging technologies in transportation (e.g., autonomous vehicles and online good delivery) may have on travel behaviors and the future capacity needs of the system.

Transportation and Economic Health

POLICY: Foster economic health through transportation investments that improve access to education, employment, and services and reduce transportation costs.



A well-organized and maintained multimodal transportation network supports a thriving economy collectively, as well as individual households. Comprehensive transportation infrastructure is necessary for community members to access education, employment, and essential services and to connect to the diverse cultural and economic opportunities available throughout the region. Lincoln and Lancaster County benefit from strong relationships with local businesses and support their growth through multimodal transportation investments and policies. Innovation is valued and investments in transportation infrastructure and high-speed internet will influence how commerce, work, and education are delivered. Lincoln will continue to approach transportation investments that ensure economic benefits are equitably distributed.

Transportation and Economic Health Action Steps

1. Expand operational alternatives that create public/private partnerships with large companies to increase employee transit ridership.
2. Continue working with Lincoln Public Schools that support transit use by students from overburdened and underserved populations.
3. Develop commitments to working with Southeast Community College, the University of Nebraska-Lincoln, and other educational institutions to ensure access to education and training programs for all city residents.
4. Provide well-maintained infrastructure for all modes of transportation that support existing businesses and services inside the city.
5. Encourage redevelopment that adds a mix of uses that diversify the economic potential and access to jobs within neighborhoods.
6. Provide Quiet Streets as part of the Complete Streets Program that support greater demand for active transportation access to stores, services, and entertainment venues.
7. Eliminate or reduce minimum parking requirements where land use and active transportation infrastructure plans support zero or limited-vehicle households and businesses.
8. Implement the downtown two-way traffic study recommendations.

Pedestrians

POLICY: Improve the safety and connectivity of the pedestrian environment to encourage walking and the use of mobility aids as a mode of transportation.



For most trips, walking or the use of a mobility aid such as walkers, crutches, canes, braces, and other similar device is required to move between destinations. Comfort and use of the pedestrian environment is supported by sidewalks, crosswalks, pedestrian ramps, traffic signals and signs of various kinds, and lighting. The pedestrian environment is expanded when access is provided to transit stops, shared mobility devices, multiuse trails, and walkable districts with markets and recreational amenities. The pedestrian environment offers community members unique opportunities to interact with neighbors and neighborhoods. It provides critical corridors for safe access to schools, as well as essential services when connectivity is provided and maintained. Various development design requirements have been implemented over time, and some parts of the pedestrian environment support walking and mobility aids better than others. The transportation network will continue to be improved by creating and maintaining a safe and connected pedestrian environment throughout the community.

Pedestrians Action Steps

1. Continue to require all new development to abide by design standards for sidewalk alignment and cross-sections when constructing sidewalks and intersections for all street improvements.
2. Require or direct the repair of existing sidewalk sections that have become unsafe for walking or use of mobility devices.
3. Coordinate sidewalk and intersection safety improvements into roadway projects.
4. Provide comprehensive and safe pedestrian walking routes with accessible sidewalks and curb ramps that are safe, accessible and comfortable to pedestrians from neighborhoods to schools.
5. Improve the safety and function of school zones and walking routes for students and pedestrians at all public and private schools in Lincoln as detailed in the City's School Zone Standards.
6. Preserve the downtown sidewalks for pedestrian traffic only by providing safe and connected on-street infrastructure for other modes.
7. Protect vehicle sight distances to minimize the potential conflict with pedestrian crossings.
8. Coordinate the construction and maintenance of safe crossings or grade separations for pedestrians where high traffic streets and highways make crossing difficult.
9. Calm traffic strategically along roadways to help reduce vehicle speeds and provide a safe pedestrian environment within neighborhoods, school zones, and commercial districts.

10. Ensure that pedestrian crossings and pedestrian ramps and other ROW as appropriate are included in the program of snow removal where street plows leave residual piles of snow as they pass and reinforce the timely removal of snow and ice from sidewalks by residents and businesses.
11. Implement safety campaigns targeting specific user behavior for both pedestrians and motorists.

Bicyclists

POLICY: Improve and expand the on-street bicycle and trail network to support public health, recreation, and bicycling as a mode of transportation.



Lincoln supports an award-winning trail network distributed throughout the community. The trail network has grown from 23 miles to more than 255 miles over the past 30 years. On-street bicycle facilities have added another 144 miles of infrastructure to the community for bicyclists and the first two-way, protected Cycle Track was built in Lincoln along N Street between Antelope Creek and South 7th Street. Within the region, trails connect users to parks, lakes, and wilderness areas. Major trail networks connect riders to communities such as Marysville, Kansas, south of Beatrice and Omaha. Locally, the cities of Hickman and Waverly have also developed trails, and bicyclists use the gravel roads throughout Lancaster County for exercise, recreation, and entertainment, including annual race events that bring up to 1,600 riders from around the world. Infrastructure improvements for bicyclists in the community are supported by active groups that focus on transportation safety, access, equity, public health, and recreation. The 2019 **Lincoln On-Street Bike Plan** was created with the community's support to direct the expansion of on-street bicycle infrastructure that makes bicycling for work, errands, recreation, or leisure attractive to more community members. Increasing the number of trips by bicycles, specifically those that are 3 miles or less, is one approach to reducing vehicle miles traveled, congestion, and GHG emissions while improving public health and supporting a thriving economy.

Bicyclists Action Steps

1. Identify additional funding to coordinate and construct the Lincoln On-Street Bike Plan projects.
2. Continue to advance a comprehensive vision for the regional trail network that can be supported by various funding partners.
3. Where possible, include sidepath construction concurrently with roadway projects to minimize construction cost and traffic disruption.
4. Coordinate proposed on-street bicycle facility projects into roadway projects.
5. Develop design guidance reflecting industry best practices and prioritization for each bicycle facility type, including a bike boulevard system and consideration of on-gravel bike routes.
6. Establish and enforce bike parking standards for all new development and redevelopment of commercial, multi-family housing units and mixed-use redevelopment projects.
7. Update bicycle traffic rules to accommodate best practices that support safe operation of bicycles in the traveled way, as well as signalized and stop sign intersections.
8. Protect vehicle sight distances to minimize the potential conflict with bicycle crossings.

9. Coordinate the construction and maintenance of safe crossings or grade separations for bicyclists where high traffic streets and highways make crossing difficult.
10. Strive to increase amenities that demonstrate Lincoln to be the most bicycle friendly community in the Midwest.
11. Implement safety campaigns targeting specific user behavior for both cyclists and motorists.
12. Provide safe and accessible bicycle connectivity to neighborhoods, employment centers, commercial areas, and schools.

Transit

POLICY: Enhance the community's public transportation operations as a means of expanding economic equity and travel choice.



StarTran strives to make transit service and infrastructure decisions that leverage available funding and optimize service for the community. Transit routes serve more than 85 percent of the community. Lancaster County Public Rural Transit operates north and south routes on alternative days of the week as well. Available service times and frequencies are a source of ongoing community discussion to serve the needs of transit-dependent populations. Use of the transit system has steadily increased over the past decade. Route changes implemented in 2018 retained the hub and spoke orientation and moved routes to arterial streets. In 2020, a StarTran **Multimodal Transit Transfer Center Feasibility & Concept Design Study** for downtown was completed. Transit use was affected negatively during the COVID-19 pandemic, and transit was offered fare-free for the duration. VanLNK, the first city-run, on-demand transit service, began in 2020 also. The community input received for the LRTP about transit helps direct the 2021 update to the **Transit Development Plan**. Operational decisions that increase transit use in the city, county and between Omaha and Lincoln can reduce individual household transportation costs, provide access to jobs and education, and support environmental goals to reduce GHG emissions.

Transit Action Steps

1. Seek funding for and construct a new downtown Multimodal Transportation Center.
2. Incorporate more paratransit, flex route, and demand-response support, advanced technology integration, and off-peak service hours where feasible.
3. Broaden transit development public input and validate priorities, alternatives, and plans with diverse stakeholders.
4. Study, recommend, and program for additional intermodal transfer hubs that reduce trip times and increase system connectivity locally and with a regional transit system to Omaha.
5. Expand central signal system software capabilities to provide adaptive signal control technology and other intelligent transportation system infrastructure that supports transit signal priority.
6. Complete demonstration projects that illustrate the potential for transportation innovations to improve and integrate with standards for making vehicle communication (V2X) and advanced mobility decisions that improve transit operations.
7. Provide high-quality transit service and study Bus Rapid Transit (BRT) opportunities to attract choice riders and support infill development. BRT is a high-capacity bus-based transit system that delivers fast and efficient service that may include dedicated lanes, busways, traffic signal priority, off-board fare collection, elevated platforms, and enhanced stations.

8. Improve the transit experience by reducing the distance between the transit stop and traveler's destination (known as first/last mile connections) and adding amenities at transit stops.
9. Maintain high-quality and remotely accessed transit on-board security cameras.
10. Implement recommendations in StarTran's current and 2021 TDP.

Public ROW and Access

POLICY: Manage public ROW and access to balance multimodal mobility needs and protect the value of adjacent property.



Public spaces along transportation corridors have the potential to enhance individual and shared experiences throughout the community. The identity of a community can be communicated through design elements that exist outside the traveled way. Well-coordinated landscaping, public art, pedestrian lighting, and wayfinding can serve to orient individuals and make the traveling experience positive. The ROW can also be used to accomplish multiple purposes, such as easements for utilities, sidepaths, grading for stormwater management, and siting for transit stops. Transportation design requirements help coordinate an effective public ROW and access. Where design requirements are flexible, recommendations that encourage the best use of the public space should be made.

Public ROW and Access Action Steps

1. Monitor the relative cost-benefit analysis of programmatic roadway design standards for sidewalks, stormwater management, lane sizes, trails, culverts and ROW widths currently required.
2. Update and implement a design framework for public ROW and access based on study findings.
3. Encourage flexible and performance-based geometric design processes and best practices that address challenges to transportation agencies created by funding and ROW constraints.
4. Require public and private development to abide by required design standards and make flexible decisions based on the value of investment.
5. Expand wayfinding and orientation provided within the pedestrian environment throughout the community.
6. Preserve access control standards to support an efficient transportation network that is safe for active transportation users as well.
7. Preserve or provide adequate ROW space for healthy street trees and temporary snow storage.
8. Consider strategies that reduce the impacts of transportation projects on existing neighborhoods.

Freight

POLICY: Preserve and enhance the efficiency of the freight system to support the local, regional, and national economy.



Freight transportation within and through the community supports the economy, creates jobs, and provides materials needed for everyday life to occur. Freight movement is a positive indicator of economic strength. Providing reliable, efficient, and safe corridors for freight movement attracts more economic growth. Freight movement is supported by roadways, traffic operations, railroad lines and crossings, pipelines, and airlines. A freight network that uses freeways and highways reduces congestion and makes the transportation network safer for all users. Transportation planning will continue to support the development of a freeway system that completes the South Beltway and coordinates a future East Beltway to support regional traffic demand and reliable movement of freight.

Freight Action Steps

1. Maintain a network of truck routes that provides for the safe, efficient, and reliable delivery of goods.
2. Continue to use the Railroad Transportation Safety District (RTSD) in its mission to reduce the number of conflicts between traffic and railroads.
3. Improve railroad crossings, quiet zones, and grade separations when warranted and that have the greatest economic and safety return on investment to the overall community.
4. Continue corridor preservation, funding, and planning for the East Beltway.
5. Support opportunities to expand the intermodal facility in and possibly adjacent to the Lincoln Airport and Airpark areas.
6. Develop and conduct a pilot project that generates alternate revenue sources (i.e., price the curb) within specified short-term parking areas for freight deliveries to downtown offices, businesses, and residents.
7. Coordinate with State and County partners to consider freight parking and electric refueling plan recommendations that would best support autonomous freight platoon storage.

Shared Mobility

POLICY: Recognize the role of Mobility as a Service provider to help address mobility needs and transportation inequities.



Shared mobility involves transportation services that are shared among users, either in parallel or one after another. Services include shared micromobility, such as bike sharing or scooter sharing, public transit, such as StarTran, and ridesharing via transportation network companies (TNCs). Lincoln has two shared micromobility programs that provide low-cost transportation alternatives compared to personal vehicle ownership and use. BikeLNK, Lincoln's bikeshare program, was implemented in partnership with LTU in 2018. Currently, BikeLNK has 21 docking stations that support 105 traditional bikes and 12 electric bikes (e-bikes) with an additional 13 e-bikes as part of a demonstration. ScooterLNK is Lincoln's second shared micromobility program created in 2020 as a one-year scooter pilot program. Two private electric scooter companies were chosen to participate in the pilot and deployed shared e-scooters in the City ROW for Lincoln residents to use as a transportation alternative to personal vehicles. Shared micromobility may lead to increased use of personal micromobility options throughout the community, reducing the need for some personal vehicles. Additionally, continued expansion and use of these shared transportation services will increase demand for safe on-street infrastructure to limit conflicts with pedestrians and vehicles.

Shared mobility is also being used with StarTran's on-demand service, VanLNK, as well as with private ride hailing service providers to help diversify the transportation options available for the community. Access to shared mobility may provide cost-effective alternatives to personal vehicle ownership if it is well coordinated with the active transportation and transit network.

Shared Mobility Action Steps

1. Continue to develop partnerships that support BikeLNK operations.
2. Provide safe, accessible, and well-connected on-street infrastructure for shared mobility devices to use.
3. Establish Mobility Data Specification tools that organize information about the use of shared micromobility services to evaluate the demand, equitable distribution of services, and safety performance.
4. Leverage dynamic route-generating technology innovations to expand microtransit opportunities in Lincoln and Lancaster County.
5. Incorporate shared mobility into the design review of development and encourage standards for built form for a comprehensive shared mobility network.
6. Dedicate parking areas for carpool, vanpool, and shared micromobility vehicles in municipal garages.

7. Develop partnerships with large employers and commercial center operators to place shared mobility devices that can provide employees with access to services within 3 miles.
8. Coordinate shared mobility device access near transit stops, transfer stations, and transfer hubs.
9. Provide comprehensive and safe multimodal corridors that promote the use of shared mobility for first/last mile trips or to connect between other modes of transit.
10. Update personal e-scooter traffic rules to accommodate best practices that support safe operation of e-scooters in the traveled way, as well as signalized and stop sign intersections.
11. Recommend ongoing improvements to VanLNK, public, on-demand transportation operations and availability.

Advanced Mobility

POLICY: Support the orderly deployment of advanced mobility technologies that preserve and enhance the safety of all road users.



Future mobility experiences and options will be modified through incremental advances in technology. Public and private investments into the market for autonomous vehicles, connected technologies, and drone delivery will integrate into the market driven products available to the public. Civic investments will be made to traffic operations infrastructure and lead to improvements to the safety, efficiency, and reliability of the transportation network. Safety for all community members will be prioritized in the decisions made to adopt and regulate local implementation of advanced mobility options. It is uncertain if autonomous vehicles will reduce or increase the number of VMT. Other advances in technology that support more employees working from home may also influence traffic behaviors over time. Technology advances for mobility have the potential to influence long-term transportation decisions and should be directed to achieve the broadest and most equitable community benefit.

Advanced Mobility Action Steps

1. Develop strategies to accommodate future mobility options and vehicle technologies for Delivery Economy – rules and regulations for operating on the transportation network and vehicle requirements (e.g., drones, scooters, delivery robots).
2. Develop strategies to accommodate future mobility options and vehicle technologies for Roadway Design Standards – include vehicle communication (V2X) standards/guidelines to accommodate evolving vehicle and communications technologies.
3. Revise rules and regulations that currently prohibit or deter advanced mobility technologies.
4. Develop policies to facilitate partnerships with the private sector (e.g., Transportation Network Companies) to complement and/or provide transportation services.
5. Develop policies to monetize technology uses that support advanced mobility and use funds to complete smart technology transportation projects.
6. Leverage a growing economy to support research in advancing carbon neutral transportation options that leverage technology to reduce vehicle miles traveled and congestion.
7. Create policies/regulations to ensure that service territories for advanced mobility technologies extend outside the downtown core.
8. Study parking and development strategies that reimagine the use of public spaces for automated vehicles and the incremental replacement of on-street parking with curbside drop-off and pick-up areas.

9. Establish drone delivery regulations that protect individuals and infrastructure safety and security.
10. Incorporate autonomous shuttles into the StarTran fleet.
11. Study opportunities to capture the value of autonomous vehicles to equitably distribute the cost across all community members.

Transportation Partnerships

POLICY: Seek partnerships with both public and private entities to finance mutually beneficial transportation projects.



Effective multimodal transportation planning and implementation is achieved by coordinating activities of public agencies toward the shared vision of the LRTP. The City of Lincoln, Lancaster County, and the State of Nebraska serve essential roles in developing and maintaining the roadway and bridge network. Integrating a transit system coordinated by StarTran and trail development supported by the Lower Platte South NRD expands the capabilities of the transportation network to support the community. Community partners provide conduits to share information about the transportation system, and private development expands opportunities to maximize the value of public investments in transportation. Partnerships generate access to greater amounts of transportation funding and ensure the transportation system is built in a coordinated manner.

Transportation Partnerships Action Steps

1. Develop County roadways within Lincoln growth Tier 1 & 2 with the intent to transfer infrastructure of good condition that meets design standards that support edge growth.
2. Continue planning and development of a freeway system that efficiently and safely moves regional and thru traffic without using arterial roadways.
3. Collaborate with agencies and associations to develop and distribute educational programs related to safety and security of the transportation system.
4. Maintain proactive working relationships with railroad operators to facilitate effective processes for planning and constructing at-grade and grade separated crossing improvements.
5. Leverage the University of Nebraska for more opportunities to research safety, integrating active transportation, shared mobility, and advanced mobility.

Transportation Safety

POLICY: Strive to reduce transportation-related deaths and injuries, especially for vulnerable users (pedestrians, bicyclists, motorcycle users, the elderly, youth, and individuals with disabilities).



Transportation infrastructure planning and design must always consider the safety of community members. Transportation-related deaths and injuries on City, County, and State roadways affect the community and individuals negatively. Reflecting on the variety of conditions that can contribute to crashes with any mode of transportation serves to help make the future transportation network safer. All transportation partners will continue to evaluate data and improve the design and implementation of safe streets, railroad crossings, and active transportation infrastructure.

Transportation Safety Action Steps

1. Prioritize the protection of vulnerable road users such as bicyclists and pedestrians.
2. Generate community support to establish and reach specific goals for reducing transportation-related deaths and injuries.
3. Engage a transportation safety taskforce to review transportation safety data, consider trends and best practices for improving safety, and advise local officials how to implement strategies that make the transportation network safer.
4. Adopt an action plan that clearly describes the strategies, responsibilities, interim targets, timelines and measures of effectiveness.
5. Adopt messaging that emphasizes that traffic deaths and injuries are preventable.
6. Prioritize transportation resources based on evidence of the greatest needs and impacts for safety.
7. Support updates to state and local regulations that make the multimodal transportation network safer.
8. Provide physical separation between on-street bicyclists and motorists based on safety countermeasure best practices and available crash data.
9. Update the municipal code to allow bicyclists to occupy full lane, not just as close as practicable to the right-hand side of the right-hand lane, where physical separation is not provided.
10. Implement incident management planning to help the transportation system recover swiftly from incidents.
11. Study and recommend changes to posted speed limits within residential neighborhoods to expand the low stress network for on-street bicycle users.
12. Evaluate roadway width for collectors and design streets for slower speeds.

13. Study and recommend policies that prioritize walkability and safety near employment centers, commercial corridors, and high-density residential areas in a manner similar to that of School Zone Standards.
14. Provide intersection crossings that are safe for bicyclists and pedestrians.
15. Maintain high-quality and remotely accessed transit on-board security cameras.

Transportation Maintenance

POLICY: Optimize the maintenance of transportation infrastructure through data-driven asset management.



Transportation infrastructure represents the largest land use type for which a public agency is accountable. Preservation and maintenance of the transportation network is important to the community. Poor road conditions can cause extra wear and tear on vehicles and add barriers to active transportation use. Roadways, bridges, transit equipment and amenities, trails, traffic controls, and sidewalks require ongoing maintenance schedules, and all new infrastructure increases future maintenance costs. Addressing deferred maintenance is prioritized to maintain infrastructure in good condition and repair degraded infrastructure. The community also desires to ensure that infrastructure maintenance supports equitable outcomes that may direct more funding to some areas of the community rather than others for periods of time.

Transportation Maintenance Action Steps

1. Continue to communicate about Lincoln on the Move rehabilitation projects, forecasted maintenance plan, and funding parameters.
2. Advance system preservation (e.g., filling potholes, repairs and crack sealing) to extend the lifecycle cost of existing streets and program rehabilitation of major and residential streets annually with priority for resolving deferred maintenance equitably throughout the community.
3. Continue to strive for methods that use durable and resilient materials for all new construction and assets.
4. Continue annual programming for the sidewalk replacement and rehabilitation program to meet the safety, access, and connectivity needs of residents within the city.
5. Continue snow and ice removal for the on-street bicycle and pedestrian network including intersections.
6. Establish multiuse trail condition standards and methods for segment evaluation used to program maintenance type and timing.
7. Use decision support tools recommended by StarTran's Transit Asset Management Plan (TAMP) to optimize lifecycle planning of capital public transportation assets.

Transportation Funding

POLICY: Seek innovative finance and funding methods to support continued investment in transportation infrastructure projects that benefit the community.



City, County, and State partners coordinate funding and leverage available federal funds, regional funds, developer commitments, transit farebox fees, and private contributions to build and maintain the multimodal transportation network. Community members desire a well-maintained transportation network that grows with the needs of development. Available funding is directed to address these outcomes, but anticipated funding levels are not adequate to meet the identified multimodal needs. Innovative funding strategies can both stretch the value of each dollar and identify new funding sources to address unmet needs. The transition to electric vehicles will result in fewer federal gas tax funds available for transportation improvements and maintenance. Local funding strategies must also explore transportation financing alternatives for the community to evaluate so that future funding strategies are reasonably understood.

Transportation Funding Action Steps

1. Implement the funding program and construct the committed and priority projects per the Fiscally Constrained Plan in the LRTP.
2. Coordinate with state and federal agencies on developing new and updated transportation funding opportunities to meet transportation needs of the community.
3. Establish dedicated and sustainable funding sources for pedestrian and bicycle projects and programs.
4. Capitalize on opportunities to leverage alternative funding sources, such as public-private partnerships, for roadway improvements and transit services.
5. Coordinate with NDOT to program funding solutions for constructing the East Beltway.
6. Continue to use the Railroad Transportation Safety District (RTSD) in its mission to reduce the number of conflicts between roadway traffic and railroads, improve safety for pedestrian and bicycle crossings, and study, design, and construct railroad crossing improvements that have the greatest economic and safety return on investment to the overall community.
7. Encourage flexible and performance-based geometric design processes and best practices that address challenges to transportation agencies created by funding and right-of-way constraints.
8. Program new construction that supports growth areas and increased corridor density for residential and commercial growth as city limits expand in support of the PlanForward growth scenario.

9. Maintain a quality transportation system in all areas of the community by balancing the distribution of program funding equitably.
10. Identify new funding sources as increased electrification of personal vehicles, which don't pay fuel tax, may reduce federal funding over time.
11. Incorporate sustainable funding sources and mechanisms and protect maintenance funding with user type fees or taxes to keep up with constant maintenance needs.
12. Develop policies to monetize technology uses that support advanced mobility and use funds to complete smart technology transportation projects.
13. Actively communicate with the community about the benefits of multimodal and safety investments, as well as the allocation of transportation funding that is achieving system development and maintenance priorities.

Airport

POLICY: Ensure the Lincoln Municipal Airport is efficient, accessible, and environmentally sound.



The Lincoln Airport provides for the air transportation needs of the community and connects visitors from around the world to the region. The airport is located with convenient access to private air carriers, industrial distribution, and national security facilities. Landside transportation infrastructure supports the efficient and accessible operation of the airport; connecting personal vehicles, ride sharing providers, public transit and active transportation with airline travel. Maintaining this infrastructure benefits the economic vitality and mobility of the region.

Airport Action Steps

1. Support the development of landside transportation infrastructure strategies when the 2007 **Airport Master Plan** is updated.
2. Support the freight demands associated with airport-based distribution with quality roadway infrastructure.
3. Improve multimodal access to the Lincoln Airport and business park campus.
4. Protect environmental resources on and adjacent to the airport from negative impacts.
5. Maintain compatible land uses and zoning within the 60 DNL and 75 DNL noise contour lines.
6. Continue to enforce zoning restrictions for building and structure height in the approach and turning zones.

Mitigating Impacts to Environmental, Social, and Cultural Resources

As part of the planning process to develop the 2050 LRTP, proposed transportation projects were evaluated for potential environmental impacts that could result. **Chapter 7** describes the evaluation process. The evaluation was completed to support the project screening process and to assign evaluation weight relative to the Transportation and the Environmental Goal. **Appendix H** provides additional support information. In general, adherence to the overall mitigation sequence of "avoid and minimize impacts, or compensate for unavoidable impacts" should be applied for all projects that are implemented.

Mitigation Strategies

Detailed mitigation strategies should be developed during the engineering of each transportation project. Cooperation and collaboration with environmental agencies early and throughout the construction process will ensure the best result.

Freshwater and Saline Wetlands



Wetlands should be avoided as much as possible. If permanent impacts to wetlands are unavoidable and greater than 0.1 acre, then compensatory mitigation may be required with a Section 404 permit issued by the U.S. Army Corps of Engineers (USACE), and potentially Water Quality Certification by the Nebraska Department of Environment and Energy.

Wetland impacts could be offset by one of the following methods:

- Use of mitigation bank credits
- Construction of permittee-responsible mitigation consisting of either onsite or offsite wetland restoration, enhancement, establishment, or preservation, in addition to yearly monitoring for five years

Compensatory mitigation may be required at a 2:1 or higher ratio depending on the type and quality of wetland being impacted. Saline wetlands have specific mitigation requirements and ratios that may require additional coordination with resource agencies and USACE.

The Growth Tiers Map in PlanForward indicates an emphasis on directing growth away from saline wetlands and outside the Little Salt corridor for the long term.

Floodplains



When grading must be done in floodplain areas, the surface hydrology must be carefully considered. While compensatory storage mitigation addresses the floodwater quantity issue, the flow of surface water during a flood event must also be addressed to mitigate any possible effects to downstream or upstream properties.

Lincoln and the 3-mile extraterritorial jurisdiction are governed by a "No Adverse Impact" policy for new growth areas. This ensures that construction activity on one piece of property will not negatively impact another. The floodway should remain open for the conveyance of flood water; stream crossings must generally be constructed so as to cause no rise in the flood level.

These projects may require a floodplain development permit and may be subject to restrictions concerning changes in floodplain surface elevations. Projects can be designed to avoid or minimize impacts to the base floodplain. Mitigation may consist of onsite solutions to restore the flood corridor and habitat or offsite solutions to attenuate flood levels or preserve, restore, or establish similar habitat. If unavoidable, changes in floodplain surface elevations within the base floodplain may require submittal of a conditional letter of map revision to FEMA.

Trails are sometimes constructed in floodplain areas. These structures, if properly constructed, should not cause adverse impact. However, care should be taken when grading for trail construction, and the trails themselves may require a higher level of maintenance due to sediment and debris deposit during flood events, movement of the base material due to high water table, and increased vegetative growth.

Stream Corridors



Stream corridors, or riparian areas, provide important wildlife habitat and connections. These corridors are often associated with floodplains and similar mitigation efforts are effective. A City of Lincoln building code regulation limits the placement of buildings or fill within a 60-ft buffer surrounding drainageways (i.e., streams or creeks) and is referred to as the "minimum flood corridor" (LMC Ordinance 26.07.126). These buffer areas must be kept in place to provide a functional riparian area.

When roadways must cross streams, it is important that proper design allow a sufficiently wide riparian corridor to pass underneath the structure, which is why NDEE guidelines may require a 30-ft vegetated buffer along impacted channels and be planted with perennial, native species. The use of culverts on National Hydrographic Dataset streams should be avoided as these stretches interrupt the continuous stream corridor. Impacts to stream channels may require Section 404 permitting with USACE.

Endangered Species

Projects planned in areas identified as suitable habitat for or the known range of threatened and endangered species must comply with all state and federal regulations. In general, these areas have a higher imperative to avoid when engineering roadway projects. Proper conservation measures would be incorporated into the project planning and design to avoid and minimize impacts to protected species or their habitat. If impacts are not sufficiently mitigated through conservation measures, then further consultation with Nebraska Game and Parks Commission and U.S. Fish and Wildlife Service would be required.

When possible, trails would be located outside sensitive habitats to avoid impacting protected species. If design and planning considerations involve protected species conservation, then trails can provide educational signage and increase awareness.

Tree Mass

Construction may affect tree masses even when the trees are left in place. Changes in grading can change runoff flows and subsurface water available to roots. Compaction of soil by heavy equipment can decrease soil permeability. Root zones should be protected from compaction by avoiding the area or by placing non-compacting materials over equipment travel lanes during construction. Retaining walls may be used when sight distances require dramatic changes in grade, rather than grading back beyond the ROW.

If tree removal is unavoidable, then replacement tree planting would be a suitable mitigation measure; however, special consideration should be given to the location and variety of replanted trees. For example, the Lincoln Parks and Recreation Community Forestry Unit provides several alternatives to replace ash trees (*Fraxinus* spp.) to minimize the spread and adverse impacts of the emerald ash borer (*Agrilus planipennis*) (**Lincoln Emerald Ash Borer Response and Recovery Plan, 2018**).

Migratory Birds

Most migratory birds in Nebraska are provided protection under the Migratory Bird Treaty Act or Nebraska state statutes. Construction activities that would otherwise result in the "taking" of migratory birds, eggs, young, and/or active nests should either be avoided or satisfy applicable mitigation activities identified by NEPA or approved environmental document.

To avoid impacts to protected bird species, construction activities would include certain conservation measures. Removal of vegetation in suitable nesting areas would occur outside the primary nesting season (i.e., April 1 to September 1) and when no birds are actively nesting (Note: Some may be ground nesting birds). Work on bridges or culverts would also occur outside the primary nesting season.

If removal of potential nesting habitat cannot be avoided during the primary nesting season, then a qualified biologist would survey prior to construction to determine the presence or absence of breeding birds and active nests. The 2018 **NDOT Avian Protection Plan** is a useful reference because it includes standard evaluation procedures and protocols for compliance.

Public Use Properties

Public use areas include parks, open space areas, trails, and some school playgrounds that offer recreational opportunities. The Department of Transportation Act of 1966 (DOT Act) includes a special provision, Section 4(f), stipulating that the FHWA and other DOT agencies cannot approve the use of land from publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public or private historical sites (**Cultural Environment** discusses historic sites) unless certain conditions apply. Project activities that restrict access may also be considered a "use" under Section 4(f).

Additionally, recreation resources developed with federal funding through the Land and Water Conservation Fund (LWCF) are protected under Section 6(f) of the LWCF Act. Section 6(f) prohibits the conversion of these properties to anything other than public outdoor recreation uses.

Depending on the type and size of the impact and the type and size of the 4(f) resource, a number of options may be available to minimize impacts to comply with the regulations, including exceptions, *de minimis* determinations, programmatic evaluations, and Individual 4(f) evaluations.

Native Prairie



Runoff from impermeable surfaces that often carry pollutants can negatively impact native prairies. Mitigation strategies include runoff detention and retention areas where runoff can be slowed so that pollutants can settle and infiltrate.

Issues can also arise when prairies are burned as part of regular management practices causing smoke and reduced visibility. Proper management techniques include selection of burning event dates to ensure favorable winds and mowing or haying when burning is not feasible. Similar to other resources, direct impacts to prairies would be minimized through planning and design and could be mitigated through prairie restoration efforts.

Cultural Environment

The cultural environment consists of historic resources, including historic standing structures, historic districts, and archeological sites. For the broad-brush level of planning, mapping to identify designated cultural resources in proximity to potential projects is appropriate, mostly to serve as an early reminder of potential historic impacts. Note that actual project planning should consider both designated cultural resources and those eligible for the National Register of Historic Places, but not yet identified.

Projects that are federal undertakings (federal funding or approvals) require review under Section 106 of the National Historic Preservation Act. Therefore, early planning, once actual projects are programmed, helps avoid, minimize, or mitigate adverse impacts on cultural resources.

Proximity alone does not constitute adverse impact, and well-designed improvements and especially system maintenance can benefit historic resources, especially neighborhood districts. Similarly, trails may have no adverse impact or even be beneficial to the livability of historic residential areas and revitalization of commercial areas.

Avoidance and minimization of impacts, and mitigation if needed, would be situational and likely different for each project, but could consist of vibration restrictions or modifications to design plans to avoid specific structures or areas.

Environmental Justice

Available census data is used to identify areas of the community that meet the criteria for EJ populations. The fiscally constrained projects are reviewed to identify projects that are located within or adjacent to one or more of these areas. This process is described in **Appendix H**. Projects located in areas that exceed the threshold used to identify both Minority Populations (**Figure H.13**) and Low-Income Populations (**Figure H.14**) would likely need additional EJ project-specific coordination during project planning and implementation. Requirements would vary based on funding for the projects (e.g., federal aid or local funds).

Transit Service



Transit services support EJ populations (**Appendix H**), who may depend on transit more than others within the community. A goal of the **Transit Development Plan** is to provide transit service for transit-dependent individuals who need transportation to get to work before 6:00 AM or after 6:00 PM. In addition to extending weekday services, allocation of transit service along higher density and higher ridership areas could provide more frequent or perhaps longer service hours on those routes. Such changes can introduce benefits, as well as challenges to low to moderate income and racial and ethnic minority populations. Additional service hours may be beneficial but adversely may also discourage low-income populations from moving out of the areas and inadvertently cause poverty to remain concentrated in these areas of the city. To avoid this unintended circumstance, service and Census data will need to be evaluated carefully on a regular basis and as the TDP is updated.

Roadway Maintenance in Existing Neighborhoods



Maintaining roadways with good condition and operation for existing neighborhoods can also support EJ populations. Good quality pavement condition and improved curb ramps for pedestrians reduce wear and tear on vehicles and support active transportation. Repaving neighborhood roads is being accomplished with **Lincoln on the Move** rehabilitation project funding. Two Plus Center Turn Lane projects are summarized in **Chapter 5** and generally improve traffic flow without requiring additional ROW in most cases and are designed to alleviate traffic congestion and all of the negative associated impacts (noise, air quality impacts, etc.) without significantly impacting the roadway profile. As explained in **Chapter 7**, roadway rehabilitation projects remain an emphasis, with historic rehabilitation budgets for roads, trails, and sidewalks proposed to be retained or grow for all modes.

Connectivity Between Modes

Connecting various modes of transportation creates greater opportunities for EJ populations to access jobs, education, essential services, and other amenities throughout the community. Personal vehicles, transit services, active transportation, and shared micromobility can all work together to expand access for overburdened and underresourced populations.

Connecting trail systems to the pedestrian and street system, linking bike networks to transit services, and linking transit service to major employment centers are encouraged through multiple policies listed in this Chapter. Bike racks on City buses improve the bike-to-transit connection and implementation of the **Lincoln On-Street Bike Plan** will eliminate gaps in the current network.

Relationship to Transportation Improvement Program

The Lincoln **MPO Transportation Improvement Program** documents the prioritized list of federally funded and/or regionally significant transportation projects and improvements for the next four-year period. Projects included in the TIP support all surface transportation modes, including highways, streets, public transit, bicycles, and walking. Projects are considered for TIP funding from this LRTP according to the Fiscally Constrained Plan described in **Chapter 7**. The TIP is updated annually and includes clearly identified funding sources.

The Lincoln MPO works with the NDOT to approve the highway, trail, bike, and pedestrian projects and transit investments included in the TIP. After adoption for a four-year period, the TIP can be amended or modified administratively to account for changes in funding or project needs. Amendments to the TIP must be made in conformance with the LRTP, a requirement that retains the publicly supported prioritization process for projects and assignment of funding.

Amendment Process

Federal regulations require the LRTP to be updated every five years. During these five-year updates, the assumptions and identified needs and priorities of the transportation plan will be reexamined to best reflect changes that occurred since the previous five-year update. Between the five-year updates, there is an amendment process through which the LRTP can be modified.

As with all long range plans, conditions in the community will likely change over time and related shifts in priorities will occur. A change such as an increase in the amount of growth in one direction of the urbanizing area with a corresponding decrease in expected growth in another direction will shift the needs and priorities of the transportation system. Some projects that were expected to be needed farther out in the planning period may be needed sooner. Likewise, a project that is no longer needed as soon as expected could be delayed.

Changes in the basic assumptions or goals and policies of PlanForward and the LRTP may require formal amendments to both documents. Changes to the Fiscally Constrained Plan are to be made by a formal plan amendment through the MPO planning process. These may take the form of a standalone amendment or as a package of amendments during the established annual review process. For example, when a project is identified as needed sooner than expected and that need is in the first ten years of the Fiscally Constrained Plan, a project(s) of similar cost will need to be dropped lower in the priority list to keep the plan fiscally constrained.

Close adherence to the amendment process will be of particular importance if a project is desired to be placed in the first four years of the plan. The first four years of the Fiscally Constrained Plan should closely reflect the MPO TIP for projects of regional significance and those using the federal planning process and federal funding. Close coordination and consistency between the TIP and the LRTP should be an ongoing effort.

All amendments to the Fiscally Constrained Plan will need to be reviewed and approved by the MPO Technical Committee, which includes local, state, and federal representation; the Lincoln-Lancaster County Planning Commission; and the MPO Officials Committee. The amendment process will also need to adhere to the MPO's public engagement and information dissemination.



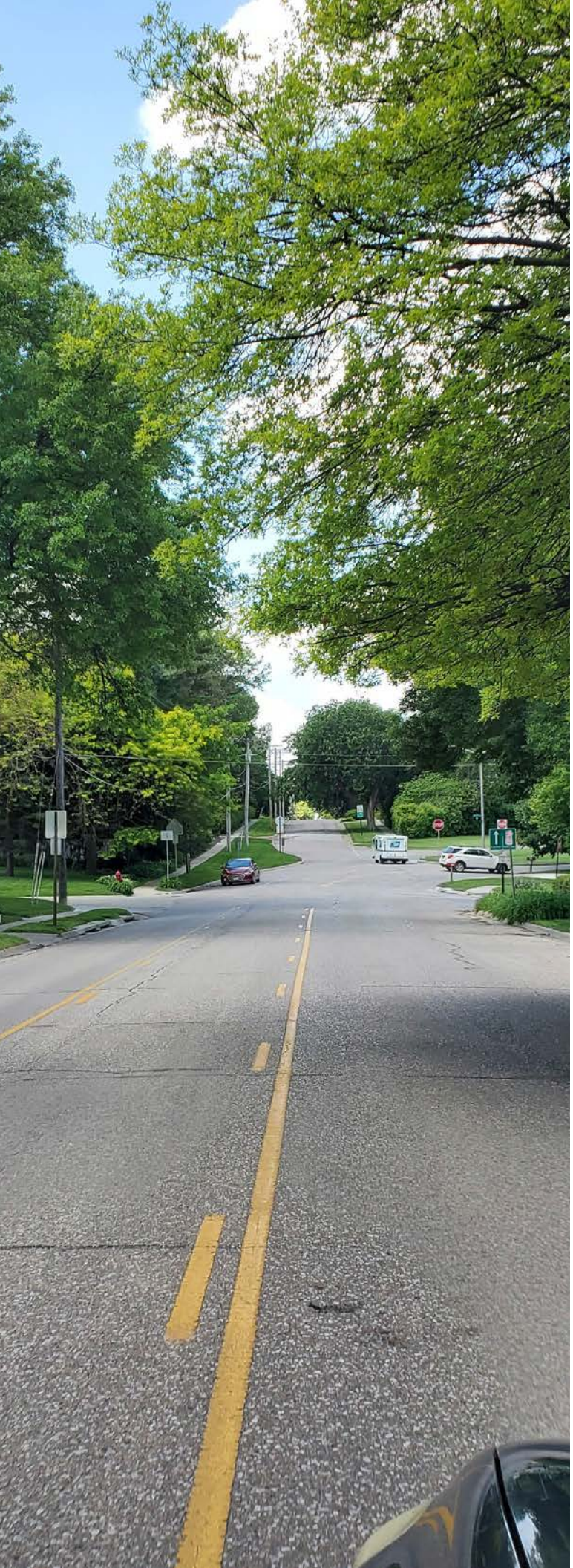
A Multimodal Transportation Vision!

The vision for transportation in Lincoln and Lancaster County is a safe, efficient, and sustainable transportation system that enhances the quality of life, livability, and economic vitality of the community.

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connecting & enhancing communities

321 South 9th Street
Lincoln, NE 68508



APPENDIX A
LRTP Meetings

Appendix A – LRTP Meetings

MPO Officials Committee

The Lincoln MPO Officials Committee functions as the policy making arm of the MPO. The Lincoln MPO Officials Committee membership consists of elected officials representing the City of Lincoln, Lancaster County, and the State of Nebraska. The Committee is composed of six voting members and two non-voting members.

Voting members review and act on transportation-related programs and studies recommended by the MPO Technical Committee. Reviews and recommendations by the Officials Committee are for compliance with the established planning process and the policies of the general purpose governments and agencies that they represent.

Non-voting members represent the federal transportation agencies for the region and provide policy guidance to the Committee.

The Officials Committee includes the following elected officials who represent the governmental bodies that make policy decisions.

Voting Members

- Mayor, City of Lincoln
- County Board of Commissioners Chair, Lancaster County
- County Board of Commissioners Vice Chair, Lancaster County
- City Council Chair, City of Lincoln
- City Council Vice Chair, City of Lincoln
- Director, Nebraska Department of Roads

Non-Voting Members

- Federal Highway Administration
- Federal Transit Administration

Secretary

- MPO Administrator (Director, Lincoln-Lancaster County Planning Department)

The Officials Committee holds quarterly meetings and is subject to call additional meetings as circumstances warrant. The meetings, posted and open to the public, are held at such time and place as generally convenient to the membership.

MPO Technical Committee Meetings

The Lincoln Area MPO established a Technical Advisory Committee to investigate specific transportation-related topics in greater detail than what is typically accomplished at Officials Committee meetings. The Committee is made up of representatives of various professional transportation and related planning disciplines who serve in a review capacity to consider the effects of transportation plans and programs on social, economic, and environmental factors in conformance to appropriate federal regulations. All Technical Advisory Committee meetings are posted and open to the public.

The Technical Advisory Committee generally serves as the administrative and technical staff to implement the Continuing Transportation Planning Process in the Lincoln Metropolitan Area and to propose, develop, and/or review transportation-related programs, studies, and proposals for the Lincoln Metropolitan Area. The Committee conducts the work necessary to produce the recommended Long Range Transportation Plan and makes recommendations to the Officials Committee on proposed

amendments to the transportation plan. Short-term planning documents developed and reviewed by the Technical Advisory Committee include the Unified Planning Work Program, Transportation Improvement Program, and Annual Transportation Report, among other LRTP implementation documents. The Technical Advisory Committee makes recommendations to the Officials Committee on proposed programs, studies, and proposals.

The Technical Advisory Committee include the following members or their representatives.

Voting Members

- Lincoln-Lancaster County Planning Director, Tri-Chair
- Lincoln Transportation & Utilities Director, Tri-Chair
- Lancaster County Engineer, Tri-Chair
- Lincoln City Engineer/RTSD
- Planning Department Principal Planner
- County Engineer Design Division Head
- Lincoln Assistant City Engineer
- Planning Department Multi-Modal Transportation Planner
- Urban Development Department Director
- Lincoln-Lancaster County Health Department Air Quality Supervisor
- Lincoln Parks and Recreation Director
- StarTran Transit Manager
- Lincoln Airport Authority Executive Director
- Nebraska Department of Transportation District 1 Engineer
- Nebraska Department of Transportation Planning and Project Development Manager

Non-voting Members

- Federal Highway Administration
- Federal Transit Administration
- Chairperson, Pedestrian and Bicycle Advisory Committee
- District General Manager, Lower Platte South Natural Resources District

Staff Administrator

- MPO Transportation Planner

While representatives from the cooperating governmental agencies represented on the Technical Advisory Committee may offer expertise in various disciplines, it is anticipated, when necessary, that expert advice and guidance may be sought from other governmental agencies, law enforcement agencies, educational institutions, and, if necessary, private consulting organizations, depending on staff availability and budgetary considerations. The Technical Committee holds meetings bi-monthly and is subject to call as circumstances warrant. The meetings are open to the public and will be held at such time and place as generally convenient to the membership.

LRTP Project Oversight Planning Committee

The LRTP Project Oversight Planning Committee (POPC) provided regular technical oversight of the LRTP update process and coordinated and exchanged information among departments and agencies related to the process. The LPOPC met eight times during the planning process and included representatives from:

- Lincoln-Lancaster Planning Department
- Lincoln Transportation & Utilities Department
- StarTran

- Lincoln Urban Development Department
- Parks Department
- Lancaster County Engineering
- LCLC Health Department
- Nebraska Department of Transportation
- Federal Highway Administration
- Federal Transit Administration

Revenue Subcommittee

The Revenue Subcommittee of the POPC developed the revenue forecasts for the LRTP and the resource allocation scenarios. The subcommittee included representatives from the Lincoln-Lancaster County Planning Department, Lincoln Transportation & Utilities Department, Lancaster County Engineering, StarTran, and Parks Department.

Trails Subcommittee

The Trails Subcommittee of the POPC scored the trail projects and convened to review and discuss preliminary project scores. The Trails Subcommittee included representatives from the Parks Department, the Lincoln-Lancaster County Planning Department, and Lincoln Transportation & Utilities Department.

Roadway Subcommittee

The Roadway Subcommittee of the POPC guided the methodology to conduct the roadway project evaluation. They met several times to review and discuss preliminary project scores. The Roadway Sub-Committee included representatives from the Lincoln-Lancaster County Planning Department, Lincoln Transportation & Utilities Department, and Lancaster County Engineering.

Community Committee

The Community Committee, comprised of the nine Planning Commissions and 20 community stakeholders representing various interests, had a primary role in helping to develop both the Comprehensive Plan and the LRTP. The Committee worked with staff to study, analyze, and discuss major elements of both plans. Primary activities during Committee meetings included:

- Education on specific topics so that Committee members could make informed decisions
- In-depth discussion and brainstorming exercises
- Review of draft materials

Community Committee members served as ambassadors for both plans and were encouraged to promote and discuss the plans within their professional networks.

LRTP Meeting Dates

The following table lists LRTP meetings in chronological order. Although the Community Committee met monthly during the Comprehensive Plan development, the dates listed below involved specific discussion on the LRTP.

Date	Meeting
March 26, 2020	Community Committee
April 27, 2020	MPO Technical Committee
April 30, 2020	Project Oversight Planning Committee
April 20, 2020	Community Committee
May 28, 2020	Project Oversight Planning Committee

Date	Meeting
July 30, 2020	Project Oversight Planning Committee
August 27, 2020	Community Committee
August 31, 2020	MPO Technical Committee
September 24, 2020	Project Oversight Planning Committee
November 5, 2020	POPC Roadway Subcommittee
November 12, 2020	Project Oversight Planning Committee
November 30, 2020	POPC Revenue Subcommittee
December 2, 2020	POPC Roadway Subcommittee
December 3, 2020	POPC Trails Subcommittee
December 10, 2020	Community Committee
January 28, 2021	Project Oversight Planning Committee
March 23, 2021	POPC Revenue Subcommittee
March 23, 2021	POPC Roadway Subcommittee
April 5, 2021	POPC Revenue Subcommittee
April 9, 2021	Project Oversight Planning Committee
April 19, 2021	MPO Technical Committee
April 29, 2021	POPC Revenue Subcommittee
April 29, 2021	Community Committee
May 5, 2021	MPO Technical Committee – Tri Chairs
May 17, 2021	MPO Officials Committee
May 20, 2021	Community Committee
May 24, 2021	Project Oversight Planning Committee
June 2, 2021	MPO Technical Committee – Tri Chairs
June 9, 2021	MPO Technical Committee – Tri Chairs
June 21, 2021	MPO Technical Committee
Jun 24, 2021	MPO Officials Committee
August 24, 2021	MPO Technical Committee
August 26, 2021	Community Committee
September 16, 2021	Officials Committee
October 27, 2021	Planning Commission
November 29, 2021	Technical Committee
December 15, 2021	Officials Committee



APPENDIX B
Public Engagement Summaries

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Attachments

Attachment B-1 – Phase 1 Virtual Presentation

Attachment B-2 – Phase 1 Social Pinpoint & Online Survey

Attachment B-3 – Phase 1 Graphical Summary

Attachment B-4 -Scenario Workshop Summary

Attachment B-5 – Phase 2 Virtual Presentation and Projects Packet

Attachment B-6 – Phase 2 Online Survey

Attachment B-7 – Phase 3 Open House Content

Focus Group Phase 1 Summary

September 21 – 23, 2020

Meetings

The Long Range Transportation Plan (LRTP) project team held 10 focus group meetings with stakeholders representing various community interests. The purpose of the meetings was to gather insight on key transportation issues and concerns. All focus groups were facilitated in a virtual meeting space. The project team used Mentimeter to support live online polling and input service to obtain input from all participants. The focus groups were structured to represent different interests and included the following:

- Development Community
- Bicycle/Pedestrian Groups
- Freight Interests
- Neighborhood Associations
- Downtown Interests
- Transit/Human Services
- Institutions
- Business Community
- Healthy Living & Environmental
- Multicultural and Diversity

In total, 77 community members participated in the first round of focus group meetings. This was more than double the number of participants compared to the 2017 LRTP Update focus groups.

Agenda

Each meeting lasted approximately one-hour and:

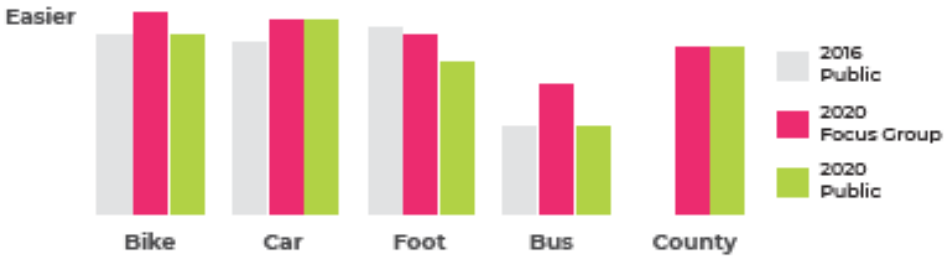
- Provided an overview of the LRTP planning process and challenges facing transportation decisions
- Discussed the perceived ease of travel by mode
- Introduced the eight draft goals and ranked them according to priority for each group
- Obtained input about strategies/action steps that could help achieve highest rated goals
- Encouraged support for public survey
- Identified next steps and how to stay involved.

Ease of Travel

Focus groups were given the opportunity to rate the ease of travel by mode type. Focus group responses are shown as pink in **Figure B-1**. The same evaluation was completed with the 2016 public surveys when the 2040 LRTP was developed and again with this LRTP Update process. This evaluation offers a relative means to assess the changes in perceptions over time as shown on **Figure B-1**. It was apparent when focus group participants are given the opportunity to engage with each other about this topic, that the perception of ease is higher for every mode. Travel by bike is perceived to be the easiest mode of transportation, while travel by bus continues

to lag other modes. Many participants indicated that they did not travel in the County enough to adequately answer the question about ease of travel outside the City.

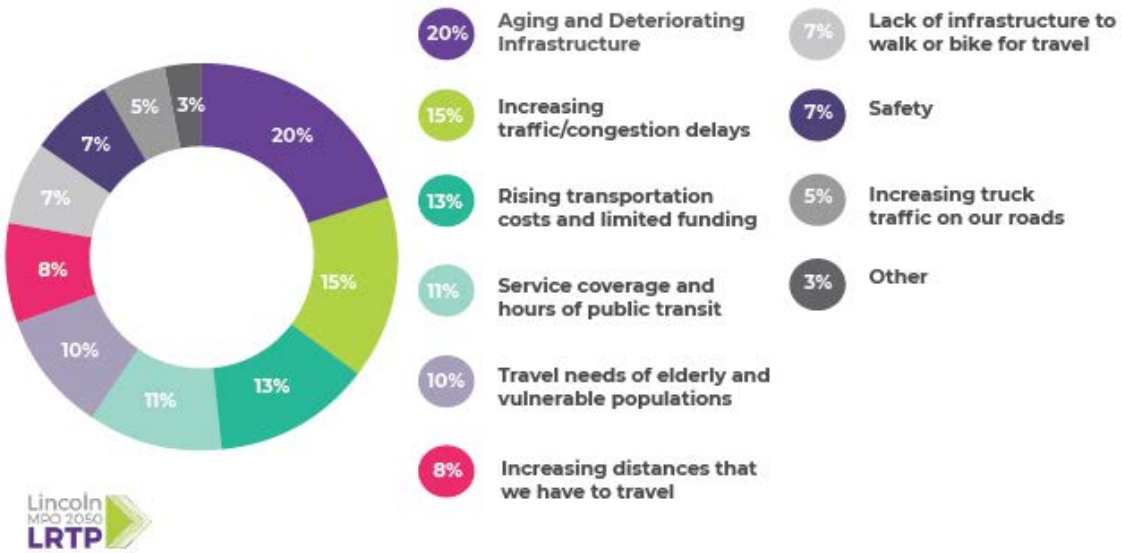
Figure B-1 Perception of Ease of Travel by Mode 2016 and 2020



Challenges

The project team asked focus group participants to select up to three options from a list representing the most pressing challenges that the LRTP needs to address. All options received some votes. Having an understanding of the range of challenges and how pressing the community perceives them helps with planning considerations and project identification. As **Figure B-2** illustrates, community members are aware of the aging and deteriorating infrastructure. Perceptions ranged from individuals who didn't think any progress was being made to many who expressed not enough is being done to address the challenge. Participants were aware of the sales tax initiative to direct more funding to roadway maintenance. The topic of traffic and congestion was also prominently considered. Participants observed that congestion will get worse as the community grows and more cars are on the road. The participants were familiar with the diminishing ability to afford construction projects as they become more expensive, funding sources are strained, and funding sources are dedicated to support certain modes.

Figure B-2 Perceived Transportation Challenges to Address



Goals

The project team shared the eight goals with the clarification that seven of the goals were carried forward from the current LRTP. The project team described the newly drafted goal for Transportation Equity in detail and explained the process used to develop the draft goal.

Representative

Focus group participants rated how well they thought the proposed goals reflected the community (**Figure B-3**). The average of all focus group scores (4.12 out of a possible 5) indicates that the goal represents the community slightly more than well. Participant commentary was helpful to recognize that more work is needed to attain the goals and that there can be differing opinions about the importance of some values that some goals carry.

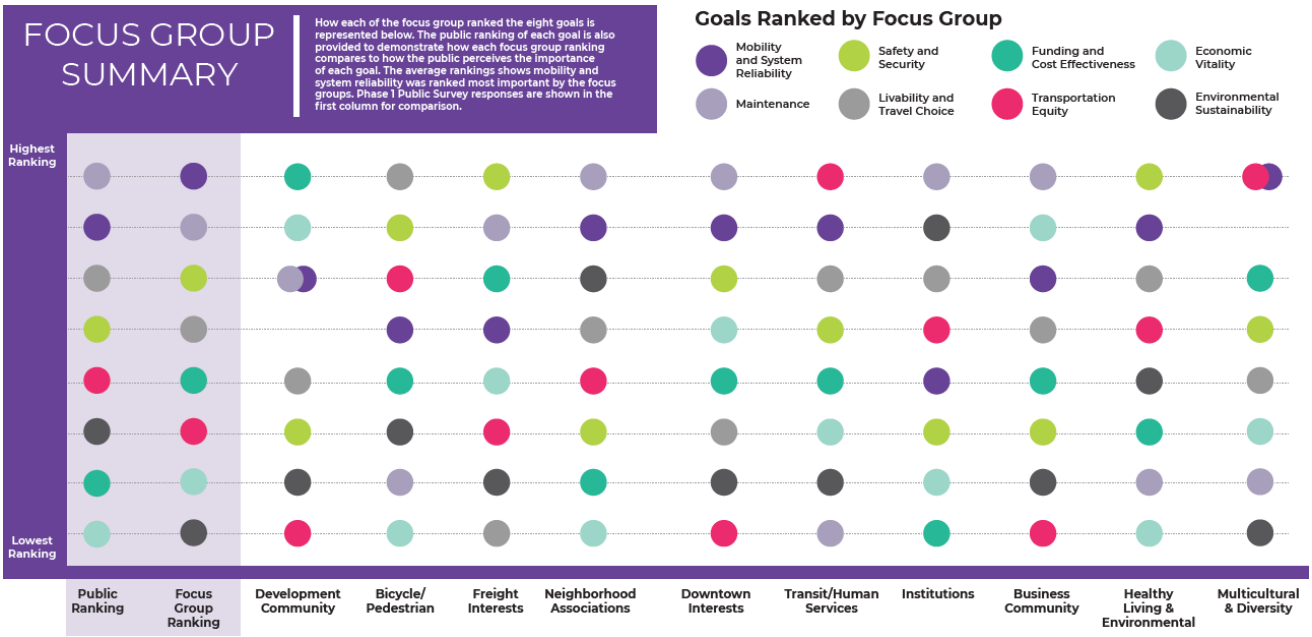
Figure B-3 Perceptions of Proposed Goals and Representative Comments



Ranking

Each focus group participant used Mentimeter to rank the eight goals from highest to lowest importance (**Figure B-4**). Focus group participants were from homogenous groups, reflecting participants with similar interests. Though differences among individuals are inherent, the way the focus groups rated goals helps to understand influence and driving initiatives found within the community. **Figure B-4** is useful in sharing how these rankings differ and how the average of all focus group responses cannot fully reflect all the diverse views and interests of those impacted by the LRTP.

Figure B-4 Distribution of Goals Ranked by Focus Groups and the Public



Action Steps

After each focus group ranked the goals, the two or three highest ranked goals were used to guide an exercise to document potential action steps **(Table B-1)**. Action steps were described as the methods that could be followed to realize the goals each group highly prioritized. Focus group participants were encouraged to share many ideas to help build a wide range of approaches that could support the LRTP.

Table B-1 Focus Group Recommended Action Steps for Achieving Highly Ranked Goals

Development Community	
Maintenance	• Use bonding for future road construction. • Provide increased funding for street maintenance. Implement strategies to better maintain streets before they fall apart. • Implement recommendations of transportation coalition for cost savings of design standards.
Economic Vitality	• Have shovel ready sites with roadways already built. • Build arterial streets in the growth areas. • Prioritize new roadway construction to accommodate new growth areas. • I would like to see a little more up front with construction and design to increase life span of structures. • New construction methods for street improvement. • It's a multiplier effect. Infrastructure allows more homes and businesses to be built, that bring more tax dollars, and allows more construction, etc. It's a cycle we need to embrace, not look to tamp down for political reasons. • Annex the abutting acreages. • City prioritize growth areas for the expansion of Lincoln limits. • City support additional density projects.
Funding and Cost Effectiveness	• Street design...City build residential streets. • In a time of limited street funds we seem to be building beyond practical with a lot of round-abouts that are expensive and time consuming upfront and also will be expensive from a long term maintenance. • Policy change for design standards and long term temporary solutions are viable options for roadways. • Spend monies collected for construction on construction. Pay engineering services salaries with General Fund dollars. Eliminate paying for snow removal with wheel tax dollars. Devote more local funds to local projects. Federal funds for major projects. • Change standards for storm water, lane size, and trails, box culverts. Row widths too large. • Review and revise design standards for arterial roads to make them more cost effective. Look at expanding block length requirements to minimize infrastructure constructed.

Bicycle and Pedestrian Groups	
Livability and Travel Choice	• Make sure our plans prioritize a multi-mode transportation system that allows for a walkable, bikeable community for residents and people who visit. • Strengthen Complete Standards policy & expand to county. Add more comfortable on street bike infra. More connections to transit. • Study how these goals are achieved in places that have high success with this goal. • Additional bus hubs. • Educate on the bus'n'bike options. • Increased bus and trail access to larger workplaces. • More walkable businesses and grocery stores. • Focus on increasing traffic capacity in the north-south corridors. Build out cycling infrastructure in underserved areas of the city, particularly north of O Street, and in NW Lincoln. • More connections and better trails in underserved areas. • Conducting a land use analysis to determine the ideal transit options for those neighborhoods. • Conducting a gap analysis to understand where resources must be used to ensure we have a livable urban environment. • Complete Streets!! • Complete Streets program. Educate people to get on board with it. • Consider new developments within the city to incorporate (family friendly) bike facilities that will tie into existing network.
Transportation Equity	• Work with City Public Works to get better traffic lights, reducing speed limits. Educate public on bike trails. • Look at the gaps in the system and prioritize these areas. Overall, prioritize funding within LTU for cycling and pedestrian facilities when maintaining, replacing or building new streets and connections. • Improve bicycle and pedestrian infrastructure in north Lincoln to increase connectivity with other parts of the city. • Focus groups in underserved communities, inclusion of underserved populations in decision making. • Use equity lens to look at access by mapping bike, walk, transit with income and ethnicity. Greater outreach and engagement of more diverse pop. Expand bike share. Keep working to hear from all. • Be specific on who you want to reach out to (e.g. BIPOC). • Be inclusive on the planning component. • Provide communication materials (i.e. survey materials in different languages and provided in different formats). • Free city buses for residents - more diversity on advisory boards (and this group) - prioritization of public funds on zip codes w/ lower incomes/valuations - bus'n'bike options. • City led initiatives for bike classes, bike give-aways (maybe bikes recovered and unclaimed from LPD?).

Bicycle and Pedestrian Groups	
Safety and Security	• Implement Complete Streets, and lower speed limits in some areas. • Crossing main streets. • Protected on street bike facilities. Intersection design to protect people on foot & bikes. Slow speeds. Sidewalks fix and build more. Connections to places. • One of the most needed strategy in my opinion is to make sure that the crosswalks and signals prioritize the safety of bicyclists and pedestrians. There are so many in town that don't even show the walk signal or don't give enough time to cross. • Vision Zero policy. • Education component (provided in different languages and formats to ensure we reach as many Lincoln residents as possible). • Good trail and sidewalk lighting - reasons for residents to be around less-safe areas (a frisbee golf course is better than extra police patrols) - public education. • Increase the number of protected bike lanes in high traffic areas. Re-time pedestrian crossing lights, so people are less likely to run the light. • More signage, painted lanes, separated lanes (that funding allows). I think the more that the community physically sees these options, the more vehicle users will be aware of bike/peds. • Educate, educate, educate the public on basic driving habits, not running red lights, stop signs and the large trails systems we have that affect their driving habits. More signage around trails showing awareness to motorists.

Freight Interests	
Maintenance	• The trucking industry supports an overall and fairly implemented increase in fuel taxes along with an overhaul of the public fees/taxes for alternative fuel vehicles to support infrastructure spending. • RTSD does good job with maintenance which benefits BNSF and the traveling public. Maintain partnership. • Continue to refine the coordination of local maintenance efforts with larger, long range capital projects.
Mobility and System Reliability	• Local freight movement is ripe with innovation. However, the industry is going to be slower to adopt new technologies than one might think. There is still much work to be done in automation and fuel technologies. • Reducing number of RR crossings keeps freight moving efficiently. • RR focus on resilience is growing as flooding has had great impacts on reliability. • Innovation with new technology will impact the RR industry, but not certain yet how widely. • We continue to be focused making design choices that will result in the construction of transportation facilities that will have long-term durability and will ultimately help with long-term reliability and innovation in the area of multi modal system.

Freight Interests	
Transportation Equity	• Further refine the coordination between local maintenance and larger capital projects.
Safety and Security	• Long term plan should include as much traffic separation as possible. Example: the South Beltway. It will separate truck from other traffic. • The safety and security specifications that the airport has to meet are tightly controlled by both the FAA and the TSA so the strategy is a very collaborative process with those federal agencies. • Grade separations. Close or consolidated at grade crossings. • Crossing safety coordination with Highway department. • Active warning devices. Strive for vest engineering solutions, not just band aids.

Neighborhood Associations	
Maintenance	• Fix it first campaign. • Understand best practices for construction methods that ensure minimal maintenance. Conduct maintenance of roads, sidewalks, and bike trails. Have a reliable database of systems and their condition using GIS. • Steady funding even when the economy dips. • Include older neighborhoods in street maintenance plans. Phase upgrades in a natural sequence for efficiency. Example: Do not paint bike lanes on a street that needs to be resurfaced. • Do things right the first time, coordinate projects. • Quadrant maintenance. Apply equal levels of all transportation systems maintenance to each area of the city based on geographic divisions. • Look at new ways to build and repair. • Continuous review using technology. • Moratorium on private entities digging up streets shortly after city street construction. • Consider long range cost effectiveness as the city has done with the approved tax funding on street maintenance. Also -all Dept's. Working in a collaborative & coordinating projects.
Mobility and System Reliability	• Urban growth boundary.

Neighborhood Associations	
Environmental Sustainability	• Don't cut down all the trees! • Not really sure. Work with neighborhoods associations and civic groups. • More electric vehicle charging infrastructure. Continue transition of transit buses from diesel and CNG to battery electric. • Urban growth boundary. • Technology to smooth traffic flow. Continued support of non-motorized transportation routes. • Construct byways that are peripheral to living spaces for high speed traffic. Construct natural barriers to the added mixed pollutants. Greenspaces! • Be open and supportive of emerging transportation methods (scooters, hover boards, Segways, whatever). • Again, just staying on top of environmentally sound options that will decrease our carbon footprint. Leave our tree canopy alone! • Consider impact on quality of life- safety, pollution. Also consider the natural environment and how to build pedestrian/ bike areas.

Downtown Interests	
Maintenance	• Updated Maintenance task force and oversight. • Focus more on the more traveled roads so repairs can be made more quickly. • Higher initial bid specs that stress durability over volume of street distance. Tough choice but better made roads last longer. • Prioritize, Prioritize, Prioritize. Include public and partners. • Fund maintenance - transparency in prioritization and involve partners.
Mobility and System Reliability	• Identify areas where existing transportation networks could be better connected as an initial effort - utilizing limited resources wisely to develop a more connected system. Leverage partnerships public and private to close the gaps in funding. • Online connectivity that allows user to submit their desired destination and site suggests methods and routes to achieve that destination. • Strive to time traffic lights on heavy used roads to keep traffic moving. • Increase multi-modal connections. Education about use encourage more mass transit.
Safety and Security	• Employ standard protocols for A level of security at main pick/drop off points of contact. • Lighting is always a concern expressed by the campus community. • Invest in street designs to protect all modes to reduce pedestrian-vehicle conflicts, bike lanes, introduce more traffic calming. • Well-lit areas and roadways. • Better lighting at bus stops.

Transit and Human Services	
Maintenance	• A strategic plan for annual maintenance to be budgeted into the program with set timeline for annual schedules.
Mobility and System Reliability	• Making sure the equipment is in good order, is new and modern. • Provide more options in public transportation, take steps to make these options available and viable for individuals with a variety of special needs. Increase times and areas covered by public transportation, think about 3rd shift workers. • Leverage technology through trip planning software that includes interline ticketing capabilities. • More frequent and hours of transit. • Reworked network left gaps in service (home/work decisions impacted). • Light rail to connect main points in town to Omaha and airports • More interconnect points outside downtown. • More bus stops so people don't have to walk half a mile or more to their closest bus stop; considering a light rail system to connect downtown Lincoln with downtown Omaha and both airports; more transfer points on bus routes.
Livability and travel choice	• Ensure that all areas of the community are adequately covered with bus service or door-to-door Van Link service. • Look at trends to where people are choosing to live and work on ensuring there are accessible modes of transportation available.
Transportation Equity	• Include input from different disability groups to see what they require and or/need. • Engage stakeholders in meaningful conversations about needs and gaps in service. • Devoting resources for transportation while multiple housing developments exist. Engage community citizens input in a variety of methods not just a meeting that occurs one day at one time. • Ensure that people from marginalized communities are involved from the beginning on the planning and implementation of new programs and services. Particularly solicit their input on how all StarTran and Handi-Van policies affect people from those co(mmuniites) • Protect services in inner city as growth occurs outward. • Extended hours of transit. • Walkable neighborhoods designed with transit in mind. • Large commercial parking lots not comfortable for pedestrian. • Rideshare support • Address lg xng (large crossings)
Economic Vitality	• Make sure that the city supports the needs of transportation and puts it into the budget.

Institutions	
Maintenance	• Increase funding through a variety of revenue generation strategies. • Redirect or add funding to make maintenance a priority. • Preventive maintenance. Plan on it. Budget for it. And then add another 10%. • I focus on maintenance in the areas that are the primary transportation routes to ensure safe and effective traffic. • Not only providing more funding for this goal but better education of Lincoln's population of how the transportation system is being improved. • The 0.25 tax will definitely assist the City projects. However, the County projects have been left behind. A comprehensive planning and implementation process would be beneficial. • Dedicated tax strategy and combination of internal/external maintenance sourcing of maintenance.
Livability and Travel Choice	• Colocation strategies of housing, retail, multiple transportation options. • Find the balance of offering urban life and suburban life. Make Lincoln look like a larger city with ride sharing encouraged along with electric scooters. • Promote modes of travel that improve health such as walking, biking, etc. • Promote access to educational opportunities. • Education and promotion on the health and financial benefits of various travel options. • Students are planning out their lives following graduation or seeking places to further their education and many students are looking for places to permanently call home. Traveling throughout the city plays a major factor in the decision. • I agree with what everybody else is said! • A plan that prioritizes investments into transportation systems that support multimodal systems. The sustainability factor can be accomplished within this direction or priority.
Environmental Sustainability	• Provide education and incentives to move people from traditional transportation options to those that are environmentally friendly and healthy. • Prioritize sustainability strategies. • Launch an ongoing education plan based on reliable data and science. • Strongly agree with this goal although it needs to be quantified in order to convince others. The younger population in particular views this as a goal, potentially impacting their future. • Work with organizations that specialize in environmental sustainability and make these projects and it's details public knowledge and ask for input from the community on these projects. • You're going to need to show the monetary value of this while at the same time showing the responsibility it is meant to achieve. They are competing but both important. • A comprehensive plan that promotes the development and use of environmentally friendly transportation options. • Planned, walkable community neighborhoods.

Business Community	
Maintenance	• Are we using the correct materials and sealing the joints to helps our roads last? • Fix the arterial streets. Major streets are terrible. Find a way to pick sustainable surfacing of streets. Use the correct materials to fix the streets. • Since maintenance needs are driven primarily by use a funding strategy that relies heavily on user type fees or taxes is important. • The issue of maintenance is, is the city using the right materials. Are our concrete roads being sealed correctly? Are we replacing asphalt as much as we are replacing the concrete? • Well-articulated plan clearly explaining current and future costs. • Are streets being sealed correctly. • Being sure accurate materials are being used. Are the correct mediums available to Lincoln? Are the contractors employed properly trained and not cutting corners? • With so much ground to makeup, a longer-term funding & maintenance schedule, and being publicly known. • Routine sealing of concrete seams to avoid rapid deterioration of newer roads. • I suggest developing an aggressive maintenance program with a dedicated funding source - lock box if you would - expanding on the Advisory Committee on Transportation model. • Needs assessment to identify priorities and cost estimates on a phased plan. Focus on arterial routes. • A well-organized City team that uses new technology. • Build and invest in best possible initially. Then implement strong but flexible system and process to proactively maintain and prolong life and function, invest in high quality and state of art materials and install. • Develop a defined maintenance plan according to travel volume and safety, with defined timelines for each critical activity, with budget considerations.
Economic Vitality	• Collaboration with private sector to maximize use and function, look to other communities that have done this well and work to emulate their practices based on size of our city and county and projected growth. Keep politics out and focus on data. • Coordinate effort with land use plan to identify locations for development. And study options for developing infrastructure that supports alternative modes of transportation. • Dedicated funding source that is renewable for short term and long-term maintenance and growth projects. • Have StarTran take guidance from business owners and city on when the best hours of operation. Don't focus all projects in same area of city to make sure traffics still flows. • Develop a North/South expressway to enable traffic from within Lincoln and outside Lincoln to move more effectively across the city creating new business developments.

Business Community	
	• In order for businesses to receive raw materials and for products to get to market we must have quality infrastructure that meets the need of business. Residents need good roads to get to market and to not damage their vehicles. • Economic vitality is critical to funding for roads so strategies that insure we have appropriate transportation access to businesses is critical. • Reduce traffic congestion. Use an education program. • Don't have all projects in 1 quadrant of the city which cuts off business accessibility. • Transparency of projects and solicitation of needs from residents and businesses during the whole process. • Economic Vitality is making it easy for people to get where they need to be, efficiently and eliminating delays that force people to a different route, sometimes void of business and retail. "Lets go around mentality, or through a neighborhood" • Focus investments were needed keeping an eye on the impact on economic development. • Better light timing. • Determine priority corridors and transportation methods that best support each business sector or population concentration.
Environmental Sustainability	• Think big on what we want our city to be and offer and take a long-term perspective to establish goals and reverse engineer to determine steps to achieve goals, look to most successful cities, collaborate, invest in tech & be a leader across country.

Healthy Living & Environmental	
Maintenance	• Adequate funding via our tax base.
Mobility and System Reliability	• Decentralized Bus System.
Livability and Travel Choice	• Interview folks that live downtown or near the downtown and see what their challenges are. • Probably spills over into Environmental/Sustainability but can't emphasize enough how we should better prioritize multi-modal "complete streets" approaches. • Complete streets. • Survey individuals in the geographic area you want to impact. • Consider/evaluate the impact of changes on all modes of transportation; multiple safe, affordable, options for all to consider, not just some. • Making sure the proportion of the population that can't drive has a viable option. • Safe bike lines. • Comp plan growth in residential housing should include TOD, Complete Streets, Smart Cities concepts.
Transportation Equity	• Making sure that the proportion of the population that can't drive has a viable option to get where they need to go. • More infrastructure in poor neighborhoods.

Healthy Living & Environmental	
Safety and Security	• Review where most accidents have occurred over the past year or two and look at causes. • Well-lit pedestrian areas and bus stops. More bus stop shelters. • Better cross walks, better bike lane marking & route selection. • Policies on safe connections, adequate sidewalks, trails. • Review areas with accidents and/or crime, more bus shelters. • Focus on safety data and mitigation options. • Adequate lighting at public transportation stations/bike and pedestrian; safe routes, crosswalks.

Multicultural and Diversity	
Mobility and System Reliability	• Look at large employers of our clients and make sure to have transportation options that arrive and depart near shift changes • A strategy that looks at the entire system. that incorporates new ideas in transportation. One that meets the needs of individuals and business. • Determine end points of bus routes based on the input of most frequent bus passengers - where are they going each day and when? Utilize an easily accessible, multilingual app for community members to use. • Frequency of the bus services that can connect with exchanges. Increase the numbers of lights that can bring safety to the users (pedestrians and vehicles). Increase number of routes so the city can be inter-connected. • Review strategies being used by similar size cities. • Using or duplicating similar strategies was used in similar states or cities. • Reliable companies with big experience can do their job with less time and costs.
Transportation Equity	• Address language barriers. • When major decisions are being made to include low-income families that actually use the transportation system. • Create multilingual transportation information (bus maps, apps, even on-bus support available in a language other than English). Ensure buses go to major employers located at the edge of town. Ask potential passengers about when and where they go. • Talk to frequent users, language barriers in access and schedules, access in using to go to places that people need to go. • It is important the needs for traveling to work, school, and leisure are available to all. Public transportation does not currently meet the needs of workers who need to work very early or very late. Safe walkways and bike lanes will also help. • It is very important to use multilingual information to resolve language barriers. • Bilingual - bicultural staff that may understand why we have to have sensitivity. • Understanding what means to be immigrant and low income. • A schedule of maintenance and the collaboration of the public to question, to suggest or to modify what is not worked or working.

Virtual Meeting Phase 1 Summary

September 18 – October 16, 2020

Overview

The first virtual public meeting for the Lincoln MPO's LRTP Update was made available for public viewing between September 18 and October 16. The Lincoln MPO hosted the virtual presentation, which was produced as an online storymap with embedded video segments for viewers to watch. The audio file provided closed captions which could be translated through YouTube functions. The storymap tool allowed reference documents to be linked in support of the information presented by the video. The overarching purposes of the virtual presentation were to:

- Communicate the importance of the LRTP Update
- Describe the draft transportation vision and goals
- Provide information on the current and future transportation system
- Introduce some of the issues and challenges associated with transportation planning
- Introduce some of the known opportunities and trends for transportation planning
- Solicit input on the transportation needs in the region

The presentation video segments (**Attachment B-1**) were viewed 135 times. No registration was required to view the presentation materials. The Phase 1 Public Survey was linked and described in the storymap multiple times with the adjoining video demonstrating how to complete the survey form.

Advertising

A bilingual flyer describing the LRTP and directing the public to information on the website was distributed to the participants of the September 2020 focus group meetings, and it was posted on the LRTP Update webpage. Over 1,800 email notifications were sent to individuals on the Lincoln Planning and Neighborhood email lists. The public meeting notice was posted in the *Lincoln Journal-Star* newspaper for one day before the meeting. Social media was also used to encourage community members to view the meeting materials and complete the survey. One social media post was shared a week through the Plan Forward account to reach the widest possible audience. The Facebook advertised posting reached more than 32,300 people and engagement with the post exceeded 1,000 people. Community presentations also served informational and advertising purposes. A presentation was made August 10, 2020, to the Mayor's Neighborhood Roundtable Zoom meeting. Meeting attendees received similar information to the Phase 1 Virtual Public Meeting. Attendees were asked to send information about the upcoming meeting and survey to their respective neighborhood groups via neighborhood newsletters, emails, and social media channels.

Social Pinpoint and Phase 1 Online Survey

When the 2050 LRTP website was launched, the public had two opportunities to share ideas. PlanForward social media and the Mayor's Neighborhood Roundtable were the primary targets

for sharing information with their contacts. A Social Pinpoint Comment Wall and Pin Map were made available to start the community conversation. This process helped to populate an early list of challenges and opportunities to carry forward during Phase 1 public outreach. Commenters were required to provide an email address which generated a larger contact list to use when notifications were sent out to complete the Phase 1 public survey. The Phase 1 public survey was hosted through Survey Monkey in English and Spanish and was available to complete between September 16 to October 14, 2020. The purpose of the survey was to gain insight about the goals, ease of travel by mode, and significant transportation challenges.

What We Heard

A complete list of Social Pinpoint and Survey Monkey responses is included in **Attachment B-2**. Social pinpoint comments and pin locations are summarized on pages 3–6 of **Attachment B-3**. A summary of what was shared during the Phase 1 public survey is provided in the following sections.

Support for LRTP Goals

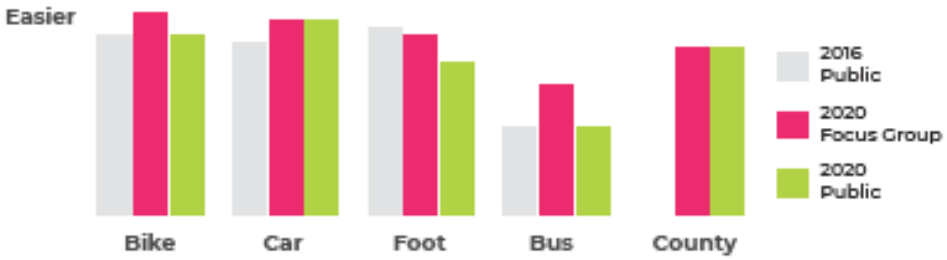
The public ranked goals through survey and focus groups through Mentimeter. Ranking results between the two groups was similar. The public ranked Maintenance as the highest importance with Mobility and System Reliability second. Focus groups also had these two highest but in reverse order. The top four (including Livability and Travel Choice, as well as Safety and Security) were all shared between the public and focus groups. The public ranked Economic Vitality lowest followed by Funding and Cost Effectiveness. The averaged ranking support for the goals was 4.03 out of a possible 5, very well representing the community. Common themes found in the comments for rankings included:

- Address funding needed to make the transportation system support the other goals in the plan.
- Provide a reliable transportation system that meets the needs of all community members.
- Continue to find ways to expand and enhance the transit services offered for those who depend on it.
- Plan for people. Planning for cars and not people is not as sustainable and limits what the community can become with continued improvements to the active transportation network.
- The new transportation equity goal was encouraged, but not readily understood.

Ease of Travel

Survey participants were given the opportunity to rate the ease of travel by mode type. Survey responses are shown as green on **Figure B-5**. The same evaluation was completed with the 2016 public surveys when the 2040 LRTP was developed and again with this LRTP Update process. This evaluation offers a relative means to assess the changes in perceptions over time as shown on **Figure B-5**. Travel by car is perceived to be the easiest mode of transportation, while travel by bus continues to lag other modes. Many participants indicated that they did not travel in the County enough to adequately answer the question about ease of travel outside the City. The perception of all modes, except for pedestrians, was that travel is as easy or easier than it was in 2016.

Figure B-5 Perception of Ease of Travel by Mode 2016 and 2020



Transportation Challenges

The Phase 1 public survey gave community members the opportunity to share their top three most pressing transportation challenges that the LRTP can work to address. Overall, the responses from the public did not closely match the responses received from the focus group participants. Aging and deteriorating infrastructure was included in the responses almost 75 percent of the time. Increasing traffic/congestion delays was included approximately 50 percent of the time. These responses were consistent with focus group responses, but service coverage and hours of operation for the public transportation system (third most frequently selected) was more common than with focus group participants. The fourth highest rated challenge in the public perception is a lack of infrastructure to walk or bike as a viable travel option. However, focus group participants ranked this option near the bottom of the list.

Common themes found in the comments for responses that selected the "Other" option included:

- Wear and tear that our winters put on the roadway
- Managing funding sources to pay for expensive infrastructure
- Progressively and safely incorporating technology advancements
- Making significant transportation changes to address climate change
- Making cross town travel faster
- Winter maintenance
- Construction phasing
- Pedestrian safety and unsafe travel speeds

Focus Group Phase 2 Summary

March 10 – 16, 2021

Meetings

The LRTP project team coordinated six focus group meetings with the previous participants who represented various community interests. The individuals were provided six time slots to choose from so that the groupings would result in a mixture of representatives and interests. The purpose of the second phase of meetings was to share and discuss the summary of input received during the first phase of public outreach, gather insight on distribution of limited transportation funding, and gain insight about how to communicate potential action steps associated with the LRTP.

All focus groups were facilitated as Zoom meetings. One option was provided for an in-person meeting that would abide by all Directed Health Measures. No participants signed up for the in--person option. Mentimeter was used again to support live online polling and input service to obtain input from all participates. In total, 42 community members participated in the second round of focus group meetings. The 2017 LRTP Update focus groups did not include a second round of focus group meetings.

Agenda

Each meeting lasted approximately one-hour and:

- Summarized Phase 1 public input
- Described the project evaluation process
- Discussed the topic of funding availability and cost of construction
- Summarized projects for Lincoln roadway, Lancaster County roadway, and trails
- Revisited the topic of action steps and policies
- Shared next steps and how to stay involved

Project Evaluation Process

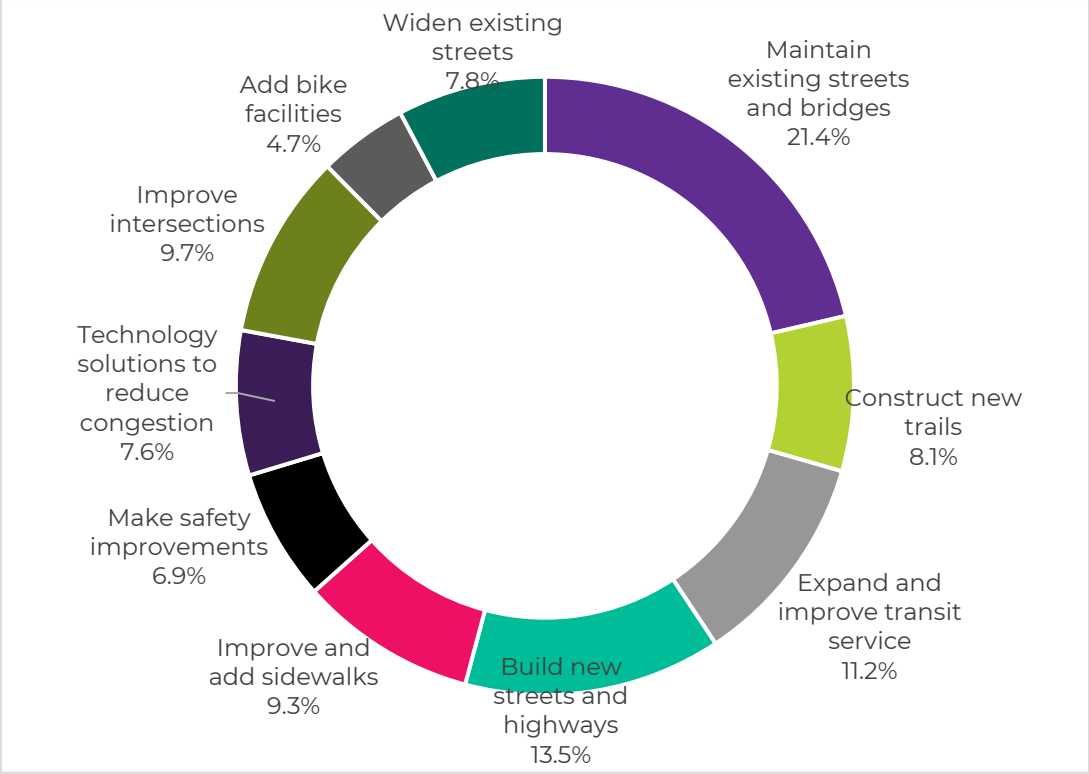
The process of identifying projects for the LRTP was summarized for the participants. The data-driven method for assessing each project against the goals was also summarized. The points awarded for public priorities would be determined through the public survey process. Focus group participants were encouraged to spread the word to colleagues and neighbors about the importance of completing the survey.

Distribution of Transportation Funding

Focus groups were presented information about projected transportation funding levels for 2022 and the estimated project costs for all projects identified during the first phase of the planning process. Available funding, funding sources, and funding priorities influence the number and type of projects that can be accomplished. Participants were provided $100 transportation dollars

that could be assigned through Mentimeter to 10 transportation investment areas. Participants could assign any amount to each category or none for any individual category. The average distribution of limited funding is presented on **Figure B-6**. Maintaining existing streets and bridges, building new streets and highways, and expanding and improving transit services received the highest proportion of funding from focus groups. Adding bike facilities and making safety improvements were considered as lower cost projects compared to roadway infrastructure and important to accomplish.

Figure B-6 Focus Group Distribution of $100 Transportation Dollars



Action Steps and Policies

During the first phase of public outreach, focus group participants recorded 233 individual ideas about action steps that could be taken to help accomplish LRTP goals. All ideas were reviewed and organized to create 61 draft action steps following Phase 1 outreach. Action steps ranged from very specific to very generic. Approximately 30 minutes of the focus group meeting time was used to discuss three draft action steps that received a lot of input during the first phase of outreach. Any time remaining was used to discuss one other action step selected by the group. A summary of the comments provided for draft action steps are shared in **Table B-2**.

Table B-2 Focus Group Comments on Example Action Steps

Mobility and System Reliability: An efficient, reliable, and well-connected transportation system that leverages innovation and technology for moving people and freight.	
Possible Action Step: Collaborate with University researchers and industry thought leaders to document advanced mobility: • **Barriers to effective adoption** • **Standards for public/private workforce** • **Automated delivery, and** ▪ **Potential for changing travel behaviors that could impact system performance.**	
Temporal/ Achievement Comments	• Bulleted list • List that identifies phases • It sounds like the outcome is a whitepaper, not a practical outcome of steps we can take. Would like more of the latter. • Prioritize, what is achievable now? • What is done after this is documented? • Delete potential • Provide start dates
Equity Comments	• Add to barriers to effective adoption - identify potential barriers to populations within our community • Examine equity impacts with automated transportation. Also examine safety impacts of all transportation users including those on foot or wheels • "How do we maintain public input when the research of improvements are identified" • Make sure end users have direct input into this • Can someone with audio or visual impairments use the system reliably?
Trends Comments	• It seems the last bullet is sort of the first priority to study. • Why not visit with University researchers and determine what they would recommend? Potentially to clarify or otherwise. • Moving people based on current trends and needs… • Straight Lines & Well Connected - With 14th and OC being such a hot topic of discussion I would like to strongly consider the connection of Yankee Hill to Hwy 77. I know Wilderness Park is a huge concern but can a land swap program be implemented. • There may be an opportunity to evaluate our needs post-pandemic and let the data feed a change in strategy…

Economic Vitality: A transportation system that supports economic vitality for residents and businesses.	
Possible Action Step: "Program new construction that supports growth areas and increased corridor density for residential and commercial growth as city limits expand in support of the PlanForward 2050 growth scenario."	
Finance/Partnership and Needs of Community Comments	• Does this follow the market needs. Or is agile enough to move with what the market would want? • Does Program also include Financing Allocation? • Research new sources of funding and partnerships for new ways of transport • More engagement with development community. • Development impact fees need to subsidize public infrastructure expenses on the periphery. • Do we consider the usage versus cost per improvement when selecting projects? For example, 1 mile of trail costs $380k/1 mile when 1 mile of roadway is $9M. If we have build an efficient trail network, it will encourage more usage and fewer vehicles.
Multi-Modal Comments	• Examine impacts of various transportation modes on economic vitality and continued recruitment/retention of employers, employers and citizens • Make sure bike, bus and ped transportation opportunities (sidewalks, trails, etc.) are easily ACCESSIBLE and safely located. Just putting a sidewalk or trail along a 4-lane corridor does not necessarily provide a good solution. • Have a transportation system that increases frequency and access. Needs to expand • Several Communities the size of Lincoln have examined & implemented a light rail system to enable community consolidation between urban sectors. Would be a huge undertaking similar to the West Haymarket Development. Just a knee jerk observation.
Density/Complete Streets Comments	• What does increased density mean? Be specific • Is increased density for housing or commercial uses? • Need to grow up, not out. The beltway is fundamentally irresponsible and economically/environmentally unsustainable. • I like this one, especially the comment about increased density. For example, I think the multiunit housing/apartments along Antelope creek has become a very attractive place for young people and empty nesters. • Hierarchy of street types is critical, here, in order to maintain complete street network on all but arterials.

Funding and Cost Effectiveness: Collaboration in funding transportation projects that maximizes user benefits.	
Possible Action Step: "Study and recommend policies that shift funding away from dependance on fuel taxes as more electric vehicles are deployed as well as public value capture for increasing demand on advanced mobility technologies to fund transportation projects."	
Electric Vehicles Tax Comments	• With the increase in electric vehicles, look for alternative funding sources to address the shift away from reliance on fuel taxes • Evaluate the proper rate at which funding burden should be shifted to EV/Autonomous, etc. commensurate with respective VMT data. • Increase wheel tax one vehicles to make up for lost gas tax • Subscription-based charging network could self-fund and potentially generate revenue to expand transit. • An additional tax would have to be implemented on EV's based on an assumption of miles driven per year.
Revenue Sources Comments	• Tax internal combustion engines even more • Toll roads • Split these two up into 1) how do we capture revenue that used to be captured in fuel tax and 2) how do we capture additional revenue for "advanced technologies" • Add something to create urgency. Diversify and increase funding. • Based on comment, be willing to make tough decisions • Does Lincoln have a wheel tax? • Taxation affects behavior • This one is hard as its likely a bit political. It's good to tax fuels a bit to incentivize a transition away, but needs a follow up source of funding so likely a shift to wheel taxes & sales taxes as a source. • Incentivize this transition for people
Multi-Modal and Partnerships Comments	• Should mirror population growth and economic diversity • Consider the cost vs. benefit not only with vehicles but trail, public trans. and ped routes. Investing in these options will reduce congestion on our roadways. We need to automatically add these enhancements as part of any transportation projects. • Trails and complete streets should be evaluated in terms of value add to adjacent property (real estate) values. • A funding mechanism as fuel tax drops should be a priority. • Collaborate with large companies, alternative means to arrive at work means less parking they would need (waisted land space, maintenance on those parking lots) • Public/private interaction and collaboration could influence adoption of employee/resident commitment (transit pass vs parking stall) • Pay attention to the changing demand on office space and employment demand travel patterns.

Maintenance: A well maintained transportation system.	
Possible Action Step: "Continue annual programming for sidewalk replacement and rehabilitation program to meet the safety, access and connectivity needs of residents within the city."	
Funding Comments	• Need funding • Pursue alternative funding sources. • We need a funding source for trails and not depend on street fund • Develop a clear funding source. • Onus on developers/HOA's to build/maintain sidewalk network in perpetuity. • GIS-based program for Lincolnites to file maintenance ticket. • Define home owner responsibility (also snow clearance expectations).
Equity/Public Input Comments	• Need to include community input • Equity needs to be an important part of this • Public input? • There should be a widely publicized call-in number where citizens can report sidewalk issues, the need for snow and ice clearance, etc.
Other Comments	• Stronger metrics for decision making

Livability and Travel Choice: A multimodal system that provides travel options to support a more compact, livable urban environment.	
Possible Action Step: "Expand the complete streets program by developing a complete streets plan that includes the procedures, guidelines, review steps and department policy statements regarding design elements that will achieve the objective of the Complete Streets Policy including bike parking amenities at all municipal and county facilities."	
Funding Comments	• Would be good to clarify funding sources and budget. My understanding is there has been very little funding put into the complete streets program • Complete street designs deplete the road funds significantly. Road funds should be used for roads. Only 5% of the funds for roads comes from the City General fund. 95% comes from gas tax or other road funds
Scoring/Metrics Comments	• Need this expansion and clarity and analysis of what streets meet criteria for becoming complete streets • The last phrase seems specific. Likely other projects that make progress to the goal for more people.
Leadership Comments	• Who's responsible, 8 committees sounds like no one is

Safety and Security: A safe and secure transportation system.	
Possible Action Step: "Protect vulnerable road users such as bicyclists and pedestrians by developing a Vision Zero Plan, supporting updates to state and local regulations, providing physical separation between on-street bicyclist and motorists based on safety countermeasure best practices and available crash data."	
Training Comments	• Are we providing training as well as we modify the system?
Future Comments	• Are we taking int consideration what the future generations would look like?

Virtual Meeting Phase 2 Summary

April 5 – May 5, 2021

Overview

The second virtual public meeting for the Lincoln MPO's LRTP Update was made available for public viewing between April 5 and May 5. The virtual presentation was hosted on the Lincoln MPO 2050 LRTP website with an embedded video for viewers to watch. Native functionality within YouTube supported translation of closed captioning. The LRTP website was the single point of reference for all Phase 2 Public Outreach content. The overarching purposes of the virtual presentation were to:

- Affirm the goals and objectives of the LRTP
- Describe the LRTP project identification and selection process
- Describe how projects are weighted against the LRTP goals and public input
- Describe the tradeoffs that inform projects, policies and action steps
- Solicit input on the transportation tradeoffs required for the plan

The presentation video segments (**Attachment B-4**) were viewed 113 times. No registration was required to view the presentation materials. The Phase 2 Public Survey was linked on the website and described in the video demonstrating how to complete the survey form.

Advertising

An email notification was distributed to the participants of the September 2020 focus group meetings, the city's distribution list, and to everyone who provided online comments or completed the Phase 1 Public Survey. The public meeting notice was posted in the *Lincoln Journal-Star* newspaper indicating how to access the survey and the dates the virtual meeting would be available. Social media was again used to encourage community members to view the meeting materials and complete the survey. One social media post was shared a week through the Plan Forward account to reach the widest possible audience. The Facebook advertised posting reached more than 8,800 people and engagement with the post exceeded 260 people. Community presentations again served informational and advertising purposes. Attendees were asked to send information about the upcoming meeting and survey to their contacts through emails and social media channels. Comments provided on the Facebook post affirmed the need to deliver results based on the ¼ cent sales tax increase for maintenance and new growth projects. Other input encouraged a regional rail or bus system between Lincoln and Omaha to be established.

Project Lists and Figures

The second public meeting was originally intended to be conducted in-person, but that was not allowed because of ongoing Directed Health Measures for in-person meetings. The meeting purpose was to share information about the LRTP projects and gain input about public preferences. This is done best in-person, but creative methods were used to give the public a way

to indicate their preferred projects through Survey Monkey. An information packet was provided in English and Spanish for download from the LRTP website. The three project categories were summarized through figures and corresponding project tables for review. The virtual meeting shared how to review this information and provided a visual example of the survey being filled out to help users feel comfortable with the survey process.

Phase 2 Online Survey

The Phase 2 public survey was hosted through Survey Monkey in English and Spanish and was available to complete between April 5 and May 5, 2021. The purpose of the survey was to gain insight about the distribution of limited transportation funds and get input about priority projects roadway and trail projects in Lincoln and Lancaster County.

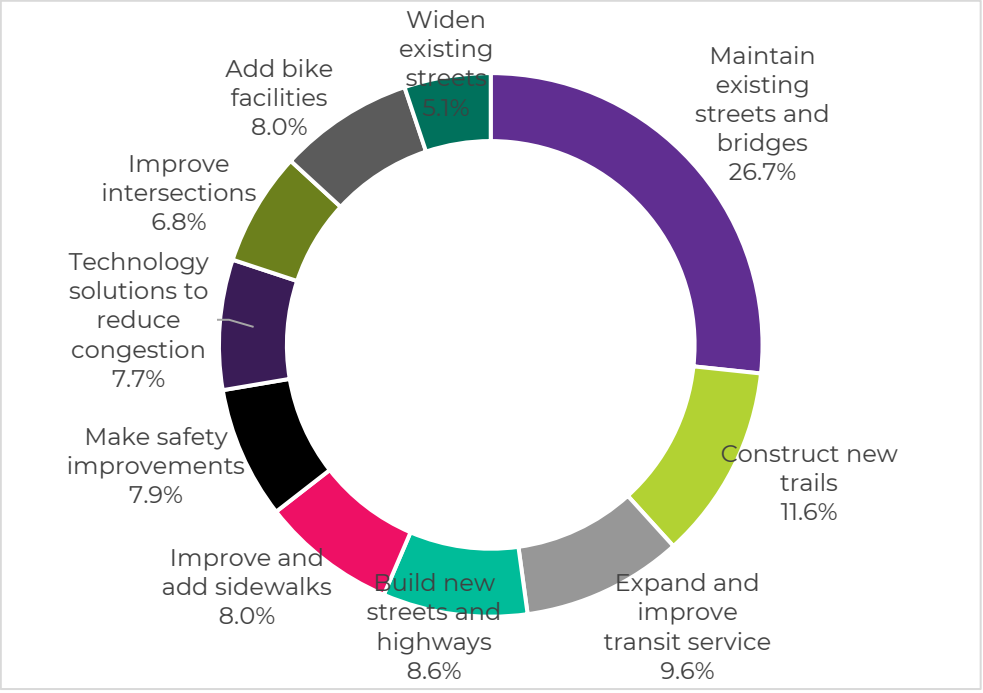
What We Heard

A complete list of Survey Monkey responses is included in **Attachment B-5**. A summary of what was shared during the Phase 2 Public Survey is provided in the following sections.

Distribution of Limited Funding

Community members provided helpful insight about the opportunity to direct limited transportation funding that will benefit the community. **Figure B-7** indicates the proportion of funding that the public would distribute to each of the 10 possible categories of projects. The input reinforces the expectations to improve the maintenance of existing streets and bridges. The input also represents a moderate focus on increasing the number of new trails, number of streets, and amount of expanded transit. Support for active transportation is also encouraged by improved sidewalks and on-street bike facilities.

Figure B-7 Public Distribution of $100 Transportation Dollars

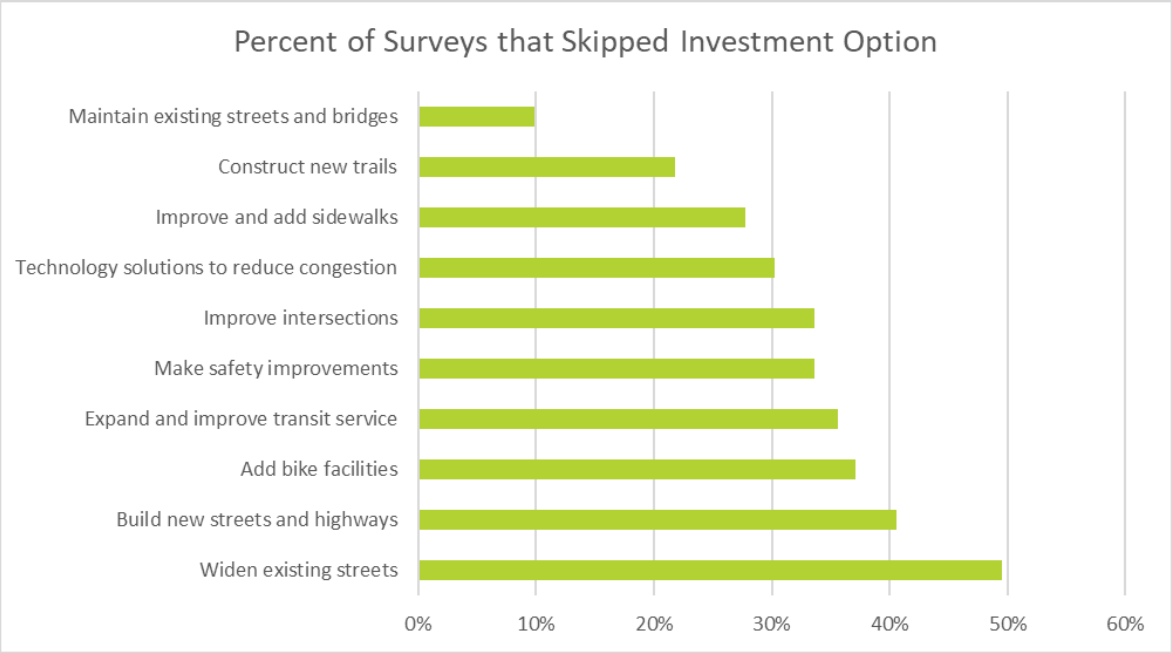


Common themes provided in the comments for distribution of funds included:

- Maintain and improve existing road surface conditions to protect personal vehicles.
- Some highly encourage new and wider roadways to keep Lincoln growing while others observe that these improvements encourage more personal vehicle use and more congestion as a result.
- Reduce the time it takes to travel between places and apply technology solutions to make this happen.
- Provide multimodal transportation options throughout community that are safe for all ages and abilities to support those who cannot or prefer not to drive personal vehicles for shorter trips.
- Add transit hubs and non-peak service to make transit a viable choice for more users.
- Reduce the number of vehicles on the road and miles traveled to address climate change goals.

The project team also reviewed survey responses to consider the types of projects that people chose not to provide any investment toward (**Figure B-8**). This information can imply that, when given a choice, people will not invest in a category so that more funding can be directed to other categories. In the allocation of funding, nine out of 10 surveys applied some amount of funding to maintaining streets and bridges. This was the most consistent theme found within the comments. In contrast, approximately half of all surveys applied no money to widening existing streets. This topic received the most contrasting comments from the public. Knowing how significant portions of the community would not invest in this category is helpful to consider investment scenarios.

Figure B-8 Analysis of Public Investment Alternatives that Received No Funding



City of Lincoln Public Preference Projects

Survey participants were given the opportunity to select five City of Lincoln roadway projects that they believed would best support the LRTP goals. Approximately 80 percent of projects received at least one vote with an average of 7.6 votes for all projects receiving votes. The top five projects by number of votes received are presented in **Table B-3**. The Lincoln roadway projects with the highest number of votes reflect major roadway and intersection improvements, with four projects involving coordination of the state highway system. Community preferences for projects represent up to 5 percent of the total project evaluation score for Lincoln roadway projects.

Table B-3 Public Survey Top Ranked City of Lincoln Roadway Projects

Rank	ID	Location	Bounds	Votes
1,2	2 59	**S 40th Street** **East Beltway**	Normal Blvd and South Street (Intersection Improvement) NE HWY 2 to I-80 (4-lane divided highway)	49
3	21	**Saltillo Road**	S 14th St to S 27th St (2-lane + intersection, address flooding)	33
4	18	**NE HWY 2**	Van Dorn St to Old Cheney Rd (6-lane + intersection improvements)	32
5	1 37 121	**I-80** **US-6** **A Street**	I-80 and I-180 (Major interchange work) N 20th St to N 33rd St (Intersection improvements) S 40th St to S 56th St. (Intersection improvements and widening)	20

A range of reasons were shared describing why projects were selected. There is strong support to continue planning for an East beltway. This is viewed as a way to reduce undesirable highway traffic congesting the existing network. Commenters that selected projects that would widen arterials expressed that this was overdue and needed before new infrastructure is added. The topic of cross-town travel time was addressed multiple times. Comments were generally

supportive of roundabouts though there were concerns about the costs. Many responses were open about selecting projects that benefit them personally, but some comments indicated a desire to distribute projects around the community. Responses support coordinating roadway and bike projects. There were also divergent comments that suggested either to improve transportation within the City or support new roadways to support the City's growth.

Lancaster County Public Preference Projects

Survey participants were given the opportunity to select five Lancaster County projects that they believed would best support the LRTP goals. Approximately 95 percent of projects received at least one vote, with an average of 7.4 votes for all projects receiving votes. The top five projects by number of votes received are presented in **Table B-4**. The Lancaster County roadway projects with the highest number of votes reflect improvements that will address roadways with increasing demand with new edge growth and continued growth of Hickman. Community preferences for projects represent up to 5 percent of the total project evaluation score for Lancaster County roadway projects.

Table B-4 Public Survey Top Ranked Lancaster County Roadway Projects

Rank	ID	Location	Bounds	Votes
1	91	**S 68th Street**	Hickman to Roca Road (2-lane widening with shoulders)	32
2	181	**Saltillo Road**	S 68th St to S 120th St (2-lane widening)	29
3	108	**S 1st Street**	Old Cheney Rd to Pioneers Blvd (Paving)	22
4	102	**N 98th Street**	Holdrege St to US-6 (Paving)	21
5	93 202	**W A Street** **Old Cheney Road**	SW 84th St SW 52nd St (Paving) Bridge O-37 near S 1st St (Replacement)	20

Comments about the reason for selecting projects in Lancaster County were more focused. Many individuals were not familiar with the County roadway needs enough to offer specific input. These individuals focused on projects that would soon become part of the Lincoln roadway network or bridges that need to be replaced. Safety was a common theme in the comments for County projects, specifically Saltillo Road and the current use of 98th Street as a *de facto* East route around the City. Some comments indicated a desire to continue maintaining high-quality gravel roads and recognizing their use by bicyclists as well to provide safe accommodations were possible.

Trails Public Preference Projects

Survey participants were given the opportunity to select five Trail projects that they believed would best support the LRTP goals. Approximately 95 percent of projects received at least one vote, with an average of 11.0 votes for all projects receiving votes, indicating strong support for trails located throughout the community. The top five projects by number of votes received are presented in **Table B-5**. The Trail projects with the highest number of votes reflect improvements that will provide safe multiuse trail connections across high traffic roadways, as well as high profile community investment projects that expand recreational opportunity within the City and

out through the County. Community preferences for projects represent up to 10 percent of the total project evaluation score for Trail projects.

Table B-5 Public Survey Top Ranked Trail Projects

Rank	ID	Location	Bounds	Votes
1	19	**Boosalis – Bison Connector**	Van Dorn St to S 17th St/Burnam St (Sidepath)	42
2	27	**Greenway Corridor Trail/Haines Branch**	Pioneers Park Nature Center to Spring Creek Prairie Audubon Center (New Trail)	37
3	54	**Chris Buetler Trail - Jamaica North Connector**	J St to N St (New Trail)	34
4	20	**Deadmans Run Trail**	N 48th St to Mo Pac Trail (New Trail)	29
5	39	**10th Street Trail**	Hwy 2 Intersection Improvements (Crossing Improvements)	23

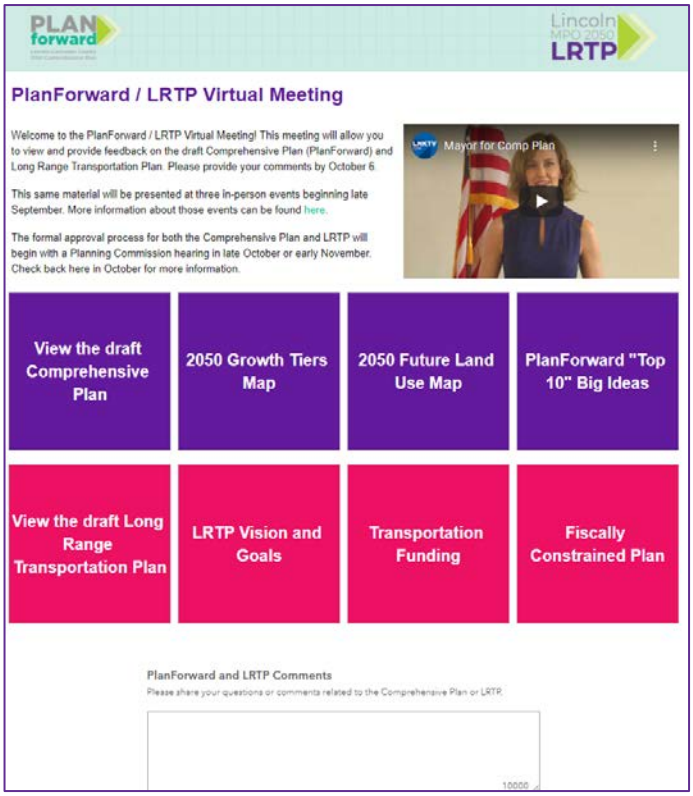
Public comments about why trail projects were selected demonstrated a high awareness of the opportunities that a safe and connected trail network provides. Many commenters recognized that all trails are beneficial, and many selected projects that they knew they would benefit from in their area of the community. Projects should make connections with neighborhoods and fix unsafe crossings. Specific comments were made about crossings at both 10th Street to Van Dorn Park and Old Cheney Road on the heavily used Rock Island Trail. Trails are viewed as a safe alternative to riding on sidewalks and where there are on-street bike routes gaps though some were concerned about trail funding having a negative impact on roadway construction or maintenance budgets. Many responses recognized the economic impact and community health benefits of multiuse trails that connect Lincoln to the larger region (Homestead and MoPac Trails), but that it also needs to be maintained well. Trail system use increased substantially during the pandemic which may have raised some awareness of needs for access throughout the community. Trail investments should be balanced around the community but provide more trails for Northwest Lincoln and older neighborhoods of Lincoln where existing infrastructure is lacking.

Public and Virtual Meeting Phase 3 Summary

September 13 – October 6, 2021

Overview

The third and final phase of public input included three open house events and a virtual public meeting, which were all coordinated with PlanForward public outreach. The draft Comprehensive Plan and LRTP documents were completed and hosted on a shared virtual meeting website for community members to review and confirm that the proposed plans reflect what was heard from the community. Lincoln LRTP website content was also updated and included a forwarding link to the virtual meeting website. The purposes of the virtual public meeting were to:



- Share the draft Executive Summary, LRTP Chapters and Appendices in downloadable format for review and provide opportunity to share comments and questions.
- Summarize the LRTP Vision and Goals, affirm they support Comp Plan goals, highlight community input themes, policies and action steps and ask if they reflect the needs and outlook of the community.
- Summarize anticipated transportation funding amounts, source, and commitment types for the 29-year plan, display how that funding is assigned to various programs, affirm that the assignment of funding prioritizes maintenance, and highlight what could be accomplished if additional transportation funding could be identified. The public was asked if the funding strategy reflects input provided by the community.
- Display the fiscally constrained plan for roads and trails in an interactive format and provide opportunity to share comments and questions.

The virtual public meeting was viewed 1,260 times. No registration was required to view the virtual meeting materials. Three in-person open house events were provided for community members that wanted to view, discuss the draft plans with planning staff, and provide written comments about the draft plans. Open house materials included printed copies of the Executive

Summary and the complete LRTP document to reference. Display boards (**Attachment B-7**) and digital scrolling displays were also created to provide consistency with the virtual meeting content. The dates, times, and locations of each event were advertised in the Journal Star newspaper print and online copy. A Spanish interpreter was provided for the first open house which was expected to have the highest potential need for an interpreter. The 34 open house meeting attendees had the benefit of visiting with Planning Department and MPO staff, asking questions, and discussing how the draft plans addressed their comments. The hybrid model of virtual and in-person community engagement was a useful way to reach the widest possible audience during this phase.

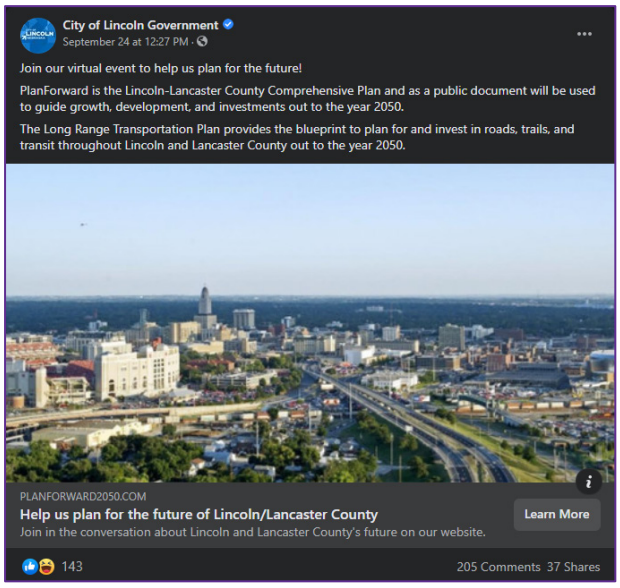
Advertising

An email notification was distributed to the participants of the LRTP focus group meetings, the city's distribution list, and to everyone who provided online comments or completed the Phase 1 and 2 Public Survey. The public meeting notice was posted in the Lincoln Journal-Star newspaper indicating the dates the virtual meeting would be available and the dates of the three open house events.

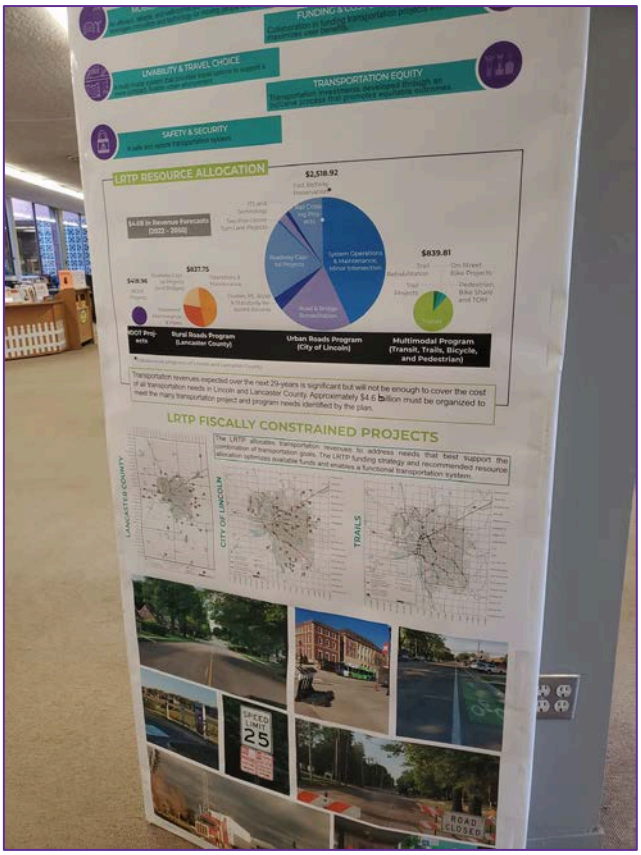
Social media was again used to encourage community members to view the virtual meeting materials, attend an open house, and complete the survey questions. The social media approach for Phase 3 was to announce the three open houses and virtual meeting and to encourage the public to provide comments on the plans. The community conversation that occurred on social media generated approximately 210 Facebook and Twitter comments. A summary of the community conversation is provided in the next section along with public comments that were formally submitted to the MPO.

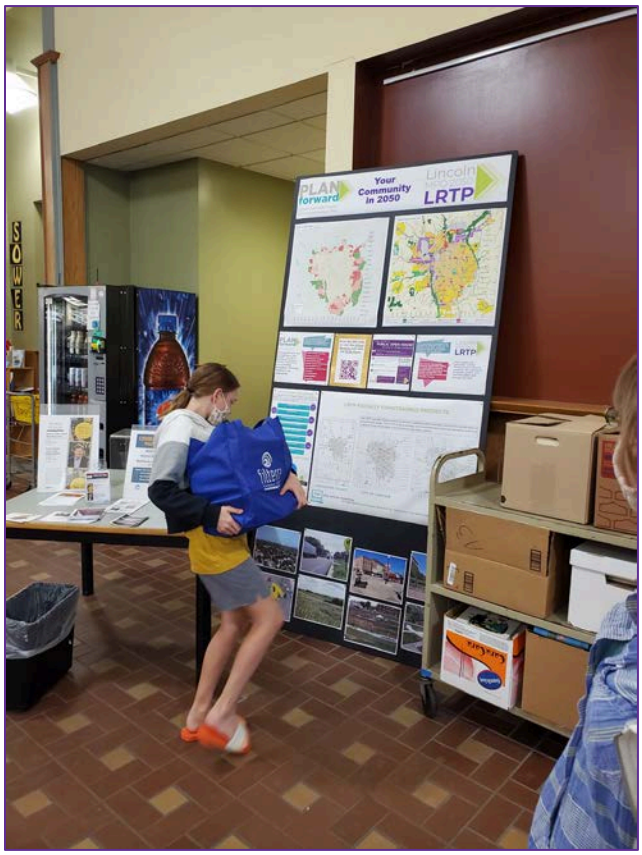
During the social media advertising period, the City of Lincoln also posted multimodal transportation content including the opening of the first bicycle boulevard as part of the Streets Alive event, street closings for Lincoln on the Move street maintenance and repairs, availability of free helmets for ScooterLNK Safety Education participants, and the benefits of the Green Light Lincoln program.





Display boards were placed at five Lincoln libraries, which included the downtown library and one library in each quadrant of the city. The boards were displayed for the duration of the virtual meeting and included a QR codes to direct viewers to the PlanForward website where draft plans and the virtual open house could be viewed from a mobile device.





Public Comment Summary

Informal community conversations and formal public comment were both helpful to validate the draft LRTP. Additionally, public agencies were provided a link to the draft documents with the request to provide formal comments as well. This three-tiered approach to developing public input allowed Planning Department and MPO staff to confirm the Draft LRTP reflects the needs of the community and to identify areas to review and reinforce during future updates to the LRTP.

Social Media Community Conversation

The social media posting provided a direct link to the online virtual meeting where formal public comments could be provided. Online community conversations are also important to the overall process and allow community members an opportunity to interact about the Draft Plans with each other on social media platforms such as Facebook and Twitter. Community members are not required to view the Virtual Meeting before adding to these platforms for community conversation. As such, the general sentiment of the conversation is captured for consideration.

Approximately 210 comments were provided, and the post was shared approximate 40 times by community members. General sentiments captured from the community conversation include:

- **Continue to prioritize maintenance operations.** The Draft LRTP does prioritize maintenance operations by assigning all flexible spending to the maintenance and operations of existing roadways. The Lincoln on the Move funds authorized through 2025 combined with appropriated flexible funds will continue to make progress on needed maintenance described in the community conversation.
- **Continue to prioritize efficient north-south and east-west corridors.** The Draft LRTP implements the Congestion Management Process and continues to support the work of Green Light Lincoln to address this topic. Congestion is one of the many performance-based planning topics used to prioritize the projects on the Fiscally Constrained Plan and the Travel Demand Model updated with the plan supports the improvements listed.
- **Continue to prioritize inclusive design for all transportation uses.** The community conversation provided some recent references about opportunities to connect transportation equity to economic vitality as well as Livability and travel choice goals included in the Draft LRTP. The Draft LRTP addresses all modes of transportation and introduces a new goal for Transportation Equity. The combination of these two topics will continue to help inform the design and project selection criteria over time. The Draft LRTP uses equity-based data to help weight the benefit of individual projects against the Transportation Equity Goal.
- **Continue to prioritize planning for the East Beltway.** Planning for the East Beltway was retained in the Draft LRTP, including the ongoing corridor protection activities coordinated between the City and Lancaster County. The NDOT highway program has not made a financial commitment to the project to date.
- **Spend sales tax funding wisely and according to designed purpose.** The Draft LRTP includes the allocation of flexible transportation funds to meet the highest priority communicated by the public which was operations and maintenance. The City maintains a public website for the Lincoln on the Move new growth and maintenance projects including locations, budgets, and timing. The City will continue to share the information about the benefits of Lincoln on the Move funding which is only authorized through 2025.

Open House and Virtual Meeting Comments

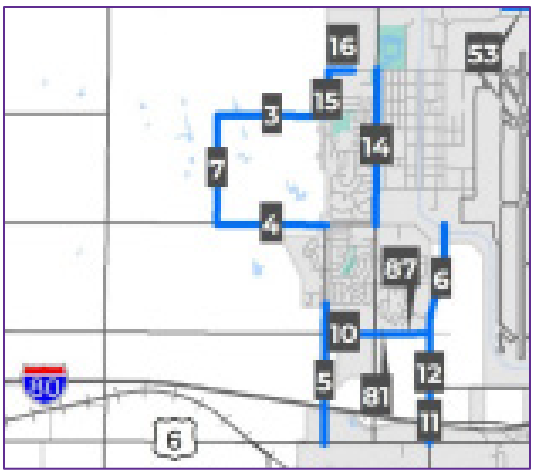
Public comment was encouraged to be submitted through the Virtual Meeting platform, during any of the three public open houses, and by email to the Lincoln MPO. All three platforms were utilized during Phase 3 of the public engagement process.

- **Maintaining the transportation system while trying to find additional funding to do more projects was encouraged.** The Draft LRTP implements this funding strategy and no change to the Fiscally Constrained Plan is needed. Information about potential funding sources to continue maintaining and supporting new growth is discussed in the Draft LRTP. No change is required to the Draft Plan.
- **More advance work on major arterials in new developments was recommended to minimize disruption once development occurs**. The current funding strategy maximized the available funding allocated to a variety of transportation needs. Phase 2 community

input prioritized building new roads well below maintaining existing roadways. Allocating flexible transportation funding to build major arterials in advance of development would not support this input. No change is required to the Draft Plan.

- **A roundabout was encouraged to be considered at NW 1st and Fletcher Road.** LTU will continue to evaluate individual intersection improvements. This project was not identified during the first phase of public engagement nor considered during the project prioritization process. The project will not be included in the illustrative plan but will be reviewed by LTU for future addition if justified. No change is required to the Draft Plan.
- **The Lincoln on the Move sales tax funding was positively recognized and the idea of continuing it or expanding it beyond 2025 was suggested**. The Draft LRTP revenue allocation reflects this funding through 2025. The potential outcomes of continuing or expanding the funding source was summarized within the virtual meeting and on an open house board. No change is required to the Draft Plan.
- **A comment suggested the next major southern east-west trail ling should be along Saltillo Road when it is upgraded from two lanes.** The Draft LRTP identifies east/west trail project for South Beltway Phases I-III (Project IDs T-26, T-51, and T-52) in the Illustrative plan. No change is required to the Draft Plan.
- **A suggestion was made by a commenter for the City to pave or change maintenance practice of unpaved roads inside the City limits.** Within City limits it is the responsibility of the benefited property owners to pay for the initial street paving or to bring substandard streets up to the minimum design standards for the applicable type of street. In new sub-divisions the developer pays for this cost, in older parts of town, paving districts or repaving districts are created and costs assessed to those benefited property owners over a 20-year period. More information about this process can be found at, lincoln.ne.gov, search for "special assessment districts". The Draft LRTP does not propose to change this current standing practice by the City of Lincoln. No change is required to the Draft Plan.
- **A suggestion was made to find more funding to implement more projects, especially alternative mode projects.** The Draft LRTP documents all of the revenue sources and organizes the restricted purpose from the flexible funds. The Draft LRTP is a performance based plan that uses data to ensures selected projects provide the greatest potential to achieve the goals to the LRTP. The Draft LRTP also maximizes benefits of alternative transportation expenditures by bundling on-street bike lanes, sidepath trails, and sidewalk improvements with various roadway capital improvements including within the Fiscally Constrained Plan. Additional funding ideas are documented in Chapter 6 of the Draft LRTP. No change is required to the Draft Plan.
- **A comment was made about the lack of 4-lane continuity north-south should be resolved along 27th Street.** The Draft LRTP documents the Travel Demand Model and the Congestion Management Process. South 27th Street between Highway 2 and Sheridan Boulevard is included with the Congestion Management Process to be addressed through traffic signal coordination. The peak hour vehicle to capacity ratio is expected to reach 1.22 by 2050. This segment was optimized during Phase 2 of Green Light Lincoln and system-wide optimization continues to support more efficient north-south corridors within their existing right of way and intersection configurations. No change is required to the Draft Plan.

- **A concern was raised about emergency response times for fire and ambulance vehicles during congested traffic conditions.** This concern is important to monitor, but it was not expressed by the LRTP project oversight planning committee which includes public employees and officials that interact with Lincoln Fire and Rescue staff. The Congestion Management policy of the Draft LRTP includes the action step to continue optimizing signal coordination and adaptive communications. Emergency vehicle signal preemption can be evaluated with this action step. No change is required to the Draft Plan.
- **A concern about East O Street was raised.** "East O St has become a nightmare and needs to be addressed now." It was unclear if the written concern was about roadway conditions, traffic congestion or other issues. Project ID 32 will improve O Street between 19th Street and 46th Street. Project ID 151 will improve the intersection of O Street and 84th Street with dual eastbound left turn lanes and eastbound right-turn lane and widening to the east. A northbound right-turn lane is also being considered to improve efficiency and reliability at this intersection. No change is required to the Draft Plan.
- **A concern about StarTran operating days and hours was provided.** Multiple comments were shared about the lack of Sunday and holiday bus services as well as evening availability. The Draft LRTP recognizes the operation and capital resources allocated to StarTran. Public comments about service quality and logistics are provided to StarTran to support the update of the Transit Development Plan (TDP) that is currently underway. Future changes to the TDP and funding available to support it will be reflected in an updated LRTP. No change is required to the Draft Plan.
- **A recommendation was made to raise the priority of the South 68th Street Projects between Norris school campus and the City of Hickman.** The commenter expressed the concern that approximately 3,000 vehicles travel the roadway for school twice a day. The roadway is shown in the illustrative plan as multiple 1-mile section and intersection improvements. The projects do not have adequate funding currently to be completed as part of the Fiscally Constrained plan. The need for the projects and opportunity to complete them together can be evaluated by Lancaster County. If additional funding can be identified and the County prioritizes the project, the next LRTP Update can add the project. No change is required to the Draft Plan.
- **A grouping of concerned comments was made about projects in northwest Lincoln, their justification, and the potential to encourage leapfrog residential development.** Project 14 improves NW 48th between W. Adams and W. Cuming. This project is consistent with support needed along the corridor and the Future Land Use. The improvement will provide efficient and reliable traffic through the corridor. No improvement along NW 56th Street is considered in the Draft LRTP. The needs based plan was partially developed by carrying the illustrative plan projects forward from the 2040 LRTP. This included project ID 7, 3, 15, and 6 shown below. Each of these projects was rated very low against the LRTP goals based on the data driven decision making process. Their



continued inclusion in the illustrative plan is reflective of that outcome. A future subarea infrastructure plan may be completed to determine if these projects should be adjusted in the next LRTP update. No change is required to the Draft Plan.

- **A comment was made to continue increasing mode-choice options such as bike, bus and autonomous electric shuttle.** The Draft LRTP includes multiple policies and actions steps that will expand the quality and range of alternative modes of transportation. Federal performance standards that apply to the Lincoln MPO monitor percent single occupant vehicle as the mode choice for commuting. The Livability and Travel Choice goal along with the data-driven performance measures reviewed annually will help maintain steady progress toward expanding mode choices for more trips. Also, the Transportation and Managing Growth policy includes the action step to increase multimodal connections within and between all neighborhoods and commercial centers. Finally, the Advance Mobility policy includes the action step to incorporate autonomous shuttles into the StarTran fleet. No change is required to the Draft Plan.
- **The Transportation Element of the draft Comprehensive Plan received public comments with various recommendations:**
  - *Use transportation-based zoning*: The Complete Neighborhoods Element was one of the Comprehensive Plan's top 10 big ideas. Transportation provides access to goods and services needed for daily life activities in these neighborhoods. Often, Complete Streets are needed to help support the Complete Neighborhood. The Complete Streets policy was developed to help direct transportation solutions that support current and future land uses. No change is required to the Draft Plan.
  - *Identify light rail/express bus routes*: The Transportation Element acknowledges a current lack of densities needed to support bus rapid transit and other options such as light rail in Lincoln would be more costly. The shift to higher infill and strategic redevelopment supported by the Comp Plan can increase opportunities for transit solutions. The Lincoln MPO will complete the action step for updating the Travel Demand Management program (Transportation and the Environment Policy), the State of Nebraska recently competed an inter-city bus route study, and StarTran is currently updating their Transit Development Plan. No change is required to the Draft Plan.
  - *Use environmentally friendly vehicles (battery electric buses, light rail, electric automobiles, trucks)*: The Draft LRTP upholds the Lincoln Climate Action Plan to build a decarbonized and efficient transportation system. The Draft LRTP is explicit about action steps that specifically require coordination with the Lincoln MPO such as the Travel Demand Management program, incentives to adopt electric vehicles by City employees, public access electric charging stations, and electrification of municipal fleet. No change is required to the Draft Plan.
  - *StarTran suggestions included: Cross-town bus routes, later evening and Sunday bus service, express bus, park-and-ride routes (Transit Policy, Action Step 10), develop mini-transfer hubs outside of downtown (Transit Policy, Action Step 4), permanent fare-free service (Transit Policy, Action Step 10), new downtown terminal transfer point (Transit Policy, Action Step 1), and LPS cooperate in transporting students (Transportation Equity Policy, Action Step 6), and dedicated bus lanes on streets (Transit Policy, Action Step 5 instead).* All public comments about StarTran operation and capital programming are

provided to StarTran. The Transit Development Plan will produce any recommended fare changes, route updates and cross-town bus route considerations and will be available for public comment. No change is required to the Draft Plan.

- *No new parking garages*: Parking garages are not addressed in the LRTP. No change is required to the Draft Plan.
- *Shift funding from street construction to public transit.* Chapter 6 of the Draft Plan presents the funding outlook and highlights the restricted use of most funds for specific projects and programs (i.e. Highways, safety, new growth, maintenance, bridge, rail, transit, bicycle infrastructure and operations.) The remaining flexible funding accounted for approximately $239 Million for the 29-year planning period. Based on public input, LTU recommended allocating flexible funds to Operations and Maintenance program. The remaining committed funding for street construction cannot be diverted to public transit program. Additional committed transit funding would need to be identified and programmed in the LRTP. No change is required to the Draft Plan.
- *Better incorporate public transit/hiking/biking into complete streets*. The next step in expanding the Complete Streets Program (existing) is to include a Complete Streets Plan (Complete Streets Policy, Action Step 1). This will produce the needed procedures, guidelines, and project review processes to expand the program as suggested. No change is required to the Draft Plan.
- *Infill rather than grow on fringes*. The Draft LRTP works to strengthen transportation network for infill recommendations in the Draft Comprehensive Plan. The success of adding a quarter of all new housing within the current City limit will be supported by increasing multimodal connections within and between all neighborhoods and commercial centers (Transportation and Managing Growth Policy, Action Step 1-3). No change is required to the Draft Plan.
- *More publicly available charging stations for electric vehicles.* The Draft LRTP addresses the oncoming demand for more electric vehicle charging stations with the Transportation and Environment Policy. No change is required to the Draft Plan.
- *Expand and improve trail connections, expand bike lanes on public streets.* The Draft LRTP extends the ability to utilize limited trail and bicycle infrastructure funding by identifying opportunities to bundle identified projects with planned roadway improvements when possible. In Chapter 7, Table 7.9 identifies the 11 bicycle infrastructure projects from the Lincoln On-Street Bike Plan that can be completed with a Fiscally Constrained roadway project. The Draft LRTP also supports updating the Complete Streets Gap Analysis and Prioritization Strategy (Complete Streets Policy, Action Step 5) which can address missing connections and demands created by additional infill and redevelopment strategies. Addressing these gaps for underserved and overburdened areas of the community is also addressed (Complete Streets Policy, Action Step 6). No change is required to the Draft Plan.
- *Add a north-south protected bike lane from K street to the University of Nebraska campus.* The Lincoln On-Street Bike Plan identified buffered bike lanes along 13th, 16th, and 17th Streets connecting downtown to the University. Protected bike lanes can be reevaluated, but the cost would further reduce currently available funding for expanding

bicycle infrastructure elsewhere. Alternative funding is called out as well (Transportation Funding, Action Step 3) within the Draft LRTP. No change is required to the Draft Plan.

Two virtual meeting survey questions asked participants to rate their input. The public was asked to:

- Rate how well the Vision, Goals and Policies reflect the transportation needs and outlook of the community, and
- Rate how well the funding strategy reflect input provided by the community.

Both questions received too few responses (four and seven respectively) to make any specific conclusions. No responses indicated that enough transportation funding was available. Funding is a concern and some perceive that additional funding is required, not just recommended.

Agency Input

Notification was sent to approximately 50 public agencies and non-profit interest organizations representing a wide range of resource and interest groups. The list of agencies notified about the Draft 2050 LRTP is listed in Appendix H. Federal and State agencies were provided a full 30-days and a link to download for review the draft LRTP and Executive Summary. All other agencies were notified of the public notice period and the location of the draft documents posted online. No agencies provided substantive comments that would require any change to the Draft LRTP.

- The U.S. Fish and Wildlife Service acknowledged and thanked the MPO for providing the review opportunity. No comments were provided to the Lincoln MPO by the Agency.
- The People's City Mission recommended that Agency comments be addressed with an indication of how the final LRTP was directly impacted and/or changed because of Agency comments. Input from LTU and NDOT about projects led to the updated project listings. No other changes were made resulting from Agency Comment.
- The Historical Society of Nebraska indicated their appreciation for being included and that their involvement tends to focus on the corridor and project level review. They requested no changes to the Draft LRTP but that the historic review process be followed during project development. This is addressed in Chapter 8 section, Mitigating Impacts to Environmental, Social, and Cultural Resources.
- The Partnership for Healthy Lincoln (PHL) submitted a letter of support for the Draft LRTP. The partnership was supportive of the balanced transportation system approach. They were encouraged by the adoption of a new Transportation Equity goal and applauded efforts to identify and work to eliminate disparity in the quality of and access to transportation options for all community members. They endorsed the policy for Complete Streets and strongly endorses the {action step} to increase the safety and connectivity of the pedestrian environment to encourage walking and the use of mobility aids as a mode of transportation. Continued discussions are encouraged about access to employment, education, housing, and key destinations by transit. Shared Mobility Policy, Advanced Mobility, Transportation Partnerships, and Transportation Safety were also encouraged to continue advancing conversations with an eye to the future.

Attachment B-1 – Phase 1 Virtual Presentation



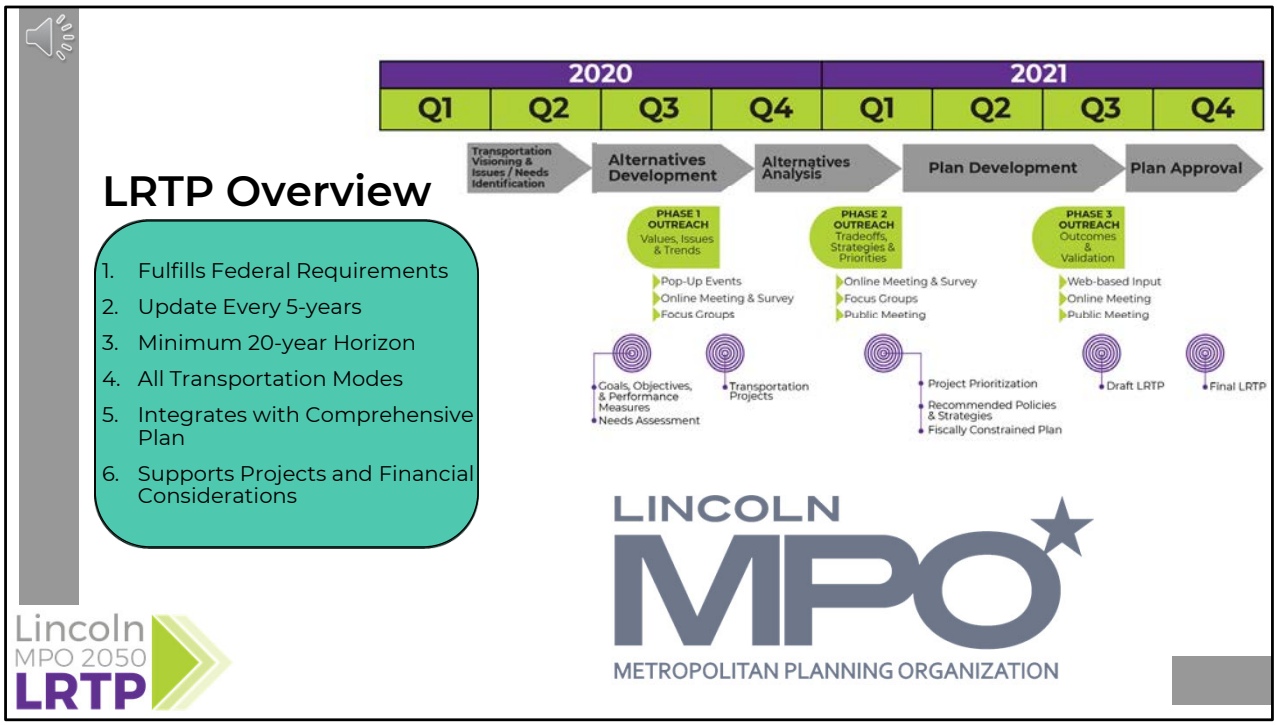
1.1 (Cover)

- "Hello, and thank you for participating in the virtual public meeting for the Lincoln Metropolitan Planning Organization's 2050 Long Range Transportation Plan or "LRTP."
- "While the project team would prefer to meet with you in-person, we appreciate your willingness to participate remotely as your input is important to help inform the development of the LRTP"
- "The priority for this phase of the project is to hear from you on your values, what issues concern you, and what trends you think are important for the project team to consider during the next phases of the planning process"



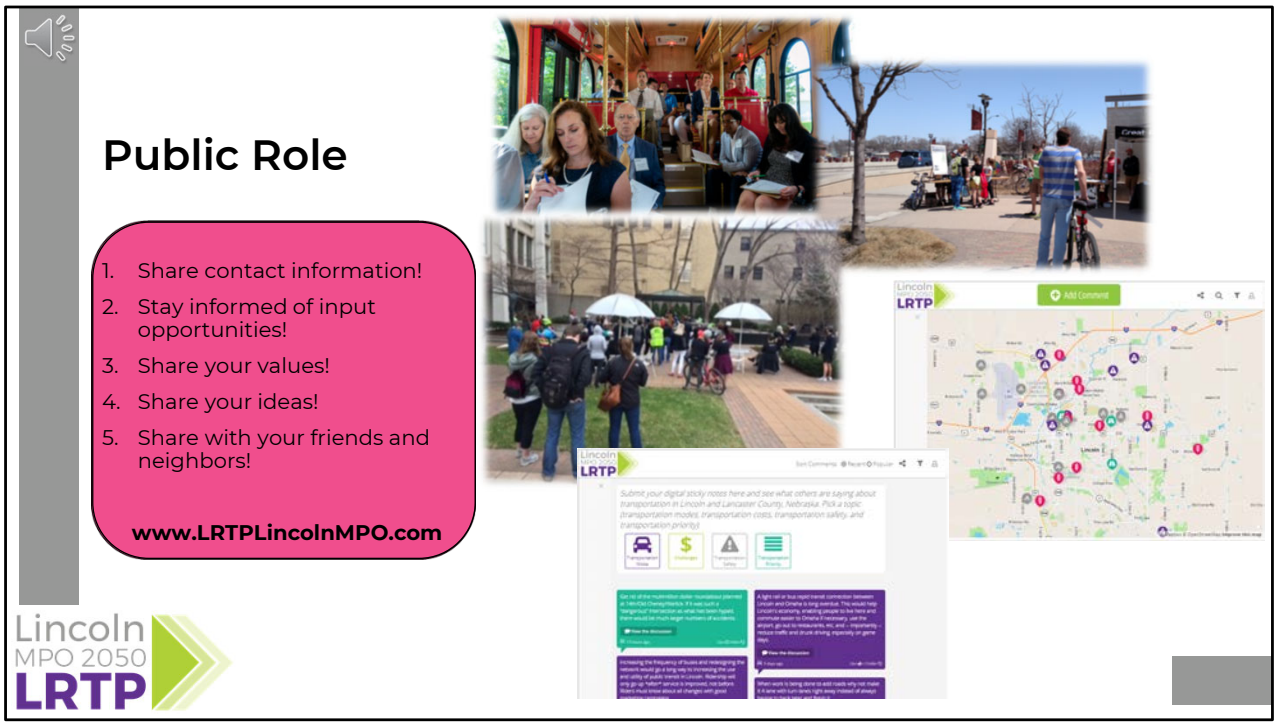
1.2 (Presentation Overview)

- "We would like to provide you with some brief information about the presentation and how to complete the online survey"
- "This presentation is provided in sections that total approximately 20 minutes. The following five sections can be viewed individually and include:
    - An introduction to the LRTP,
    - An overview of the LRTP vision and goals,
    - Information and data on the current and future needs of the region,
    - Issues and challenges identified to-date, and
    - Opportunities and trends identified to-date"
- "We will also summarize what we're heard from the community so far and explain how you can provide your input"



1.3 (LRTP Overview)

- "The Lincoln Metropolitan Planning Organization, or MPO, is comprised of representatives from local government and transportation authorities to collectively review transportation issues and develop multimodal transportation plans and programs for the metropolitan area"
- The LRTP fulfills the requirements of the Federal Transportation planning process by describing the transportation needs of a community for at least 20 years. The LRTP is guided by the Lincoln MPO and is required to be updated every five years."
- "The LRTP must consider the full complement of transportation modes – roads, bicycles, pedestrians, trails, transit, railroads and airports. In Lincoln and Lancaster County, the LRTP is consistent with the Transportation chapter of the Comprehensive Plan, but provides a greater level of detail regarding projects and financial information."



1.4 (Public Role)

- "Public input about transportation is an ongoing process. As one example, in 2018, a Citizen's Transportation Coalition finalized strategy recommendations for Lincoln to fund needed road maintenance."
- "Right now, community members have an important role in determining the development and outcomes of the LRTP"
- "This LRTP will be a reflection of the community's values and vision"
- "At the end of this presentation, we will provide you with a link to a survey where you can provide additional feedback that will influence the development of this LRTP"
- "The project team is in the early phases of the planning process and there will be multiple opportunities for additional input as the project continues."



1.5 (LRTP Content)

- "The LRTP will be a multimodal plan with information on all forms of transportation."
- "The LRTP will include an evaluation of the existing transportation system in Lincoln and Lancaster County, including the physical infrastructure and the transportation operations."
- "It will also consider newer and emerging transportation possibilities like electric scooters and car-sharing, as well as future technologies. It is important that modes of transportation within network of roads, sidewalks, trails, rails and transit stops are well-connected, accessible, and interact safely."
- "The LRTP will culminate with recommended policies to guide implementation of near-term and long-term projects which best achieve the vision for the next 30-years"



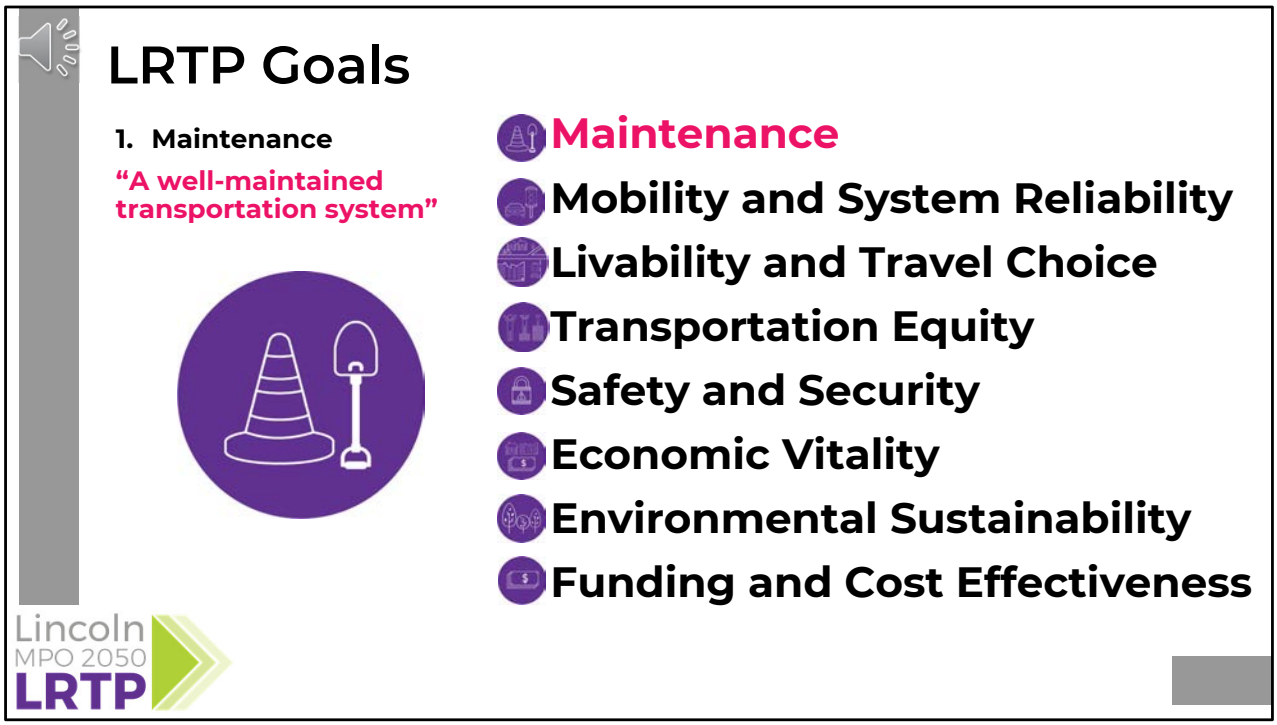
1.6 (Multimodal Transportation)

- "Lincoln and Lancaster County residents, employees, commuters, students, and visitors require safe, equitable, connected, convenient, accessible and reliable transportation options that provide access to employment, neighborhoods, schools, health and human services, and shopping."
- "A comprehensive multimodal transportation system also provides the freedom of personal mobility and the choice of how to travel"
- "When we say multimodal transportation or alternative modes of transportation, we simply mean all the ways in which people can move about including driving, walking, biking, carpooling, or riding transit or scooters."
- "By planning for all types of transportation, the Lincoln MPO is able to support the needs of all people moving about the area."

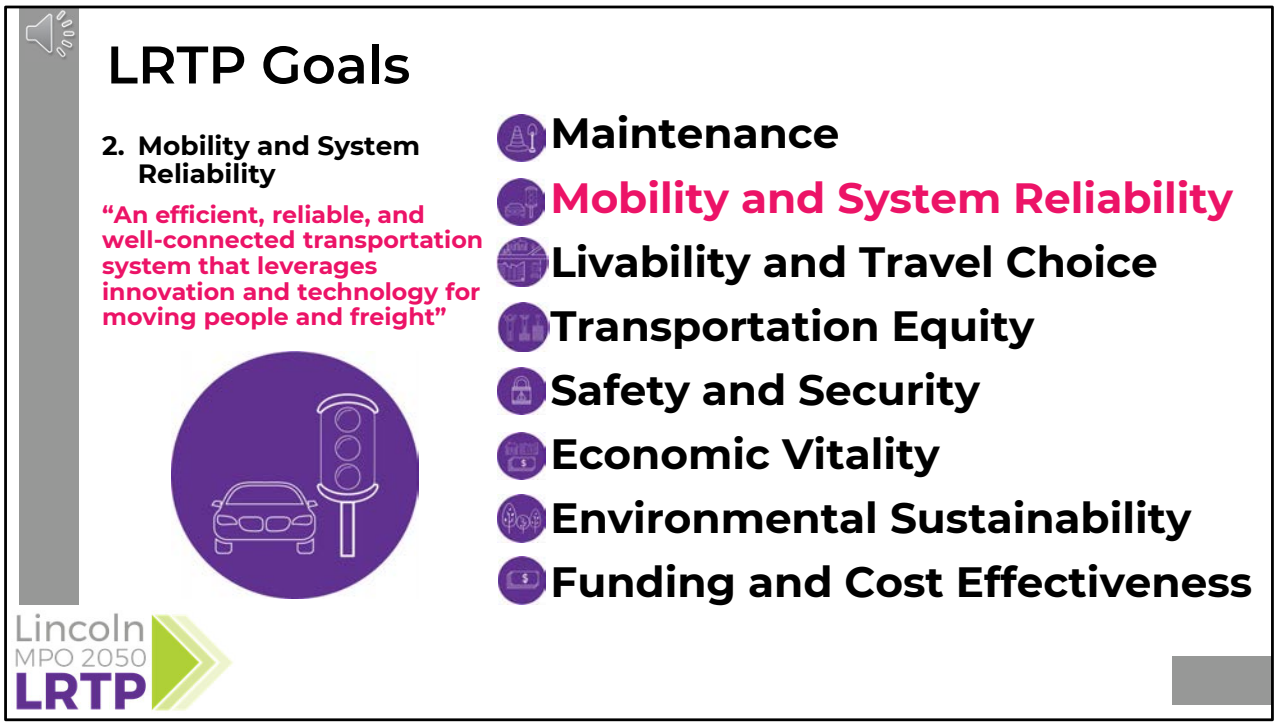


2.1 (Vision)

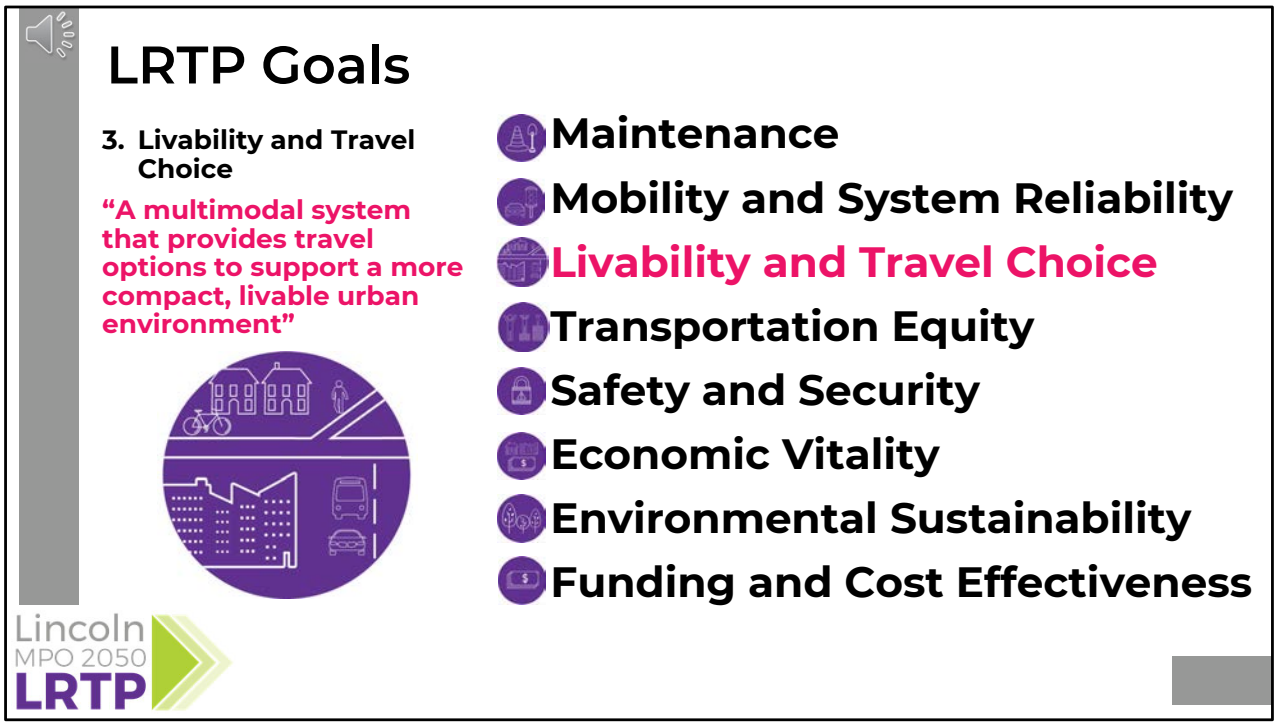
- "The LRTP is closely linked to Comprehensive Plan and integrates with the four themes of the Comprehensive Plan's vision, including: Livable, Resilient, Innovative, and Equitable" Transportation is a key element of each."
    - A Livable network supports safe and healthy environments
    - A Resilient network builds a strong foundation for future generations
    - An Innovative network embraces continuous process improvement and innovation
    - An Equitable network creates a culture of equity, diversity, and inclusion



2.2.1 (Linking)
"Maintenance refers to a well-maintained transportation system, preserving it in the best condition for as long as possible."



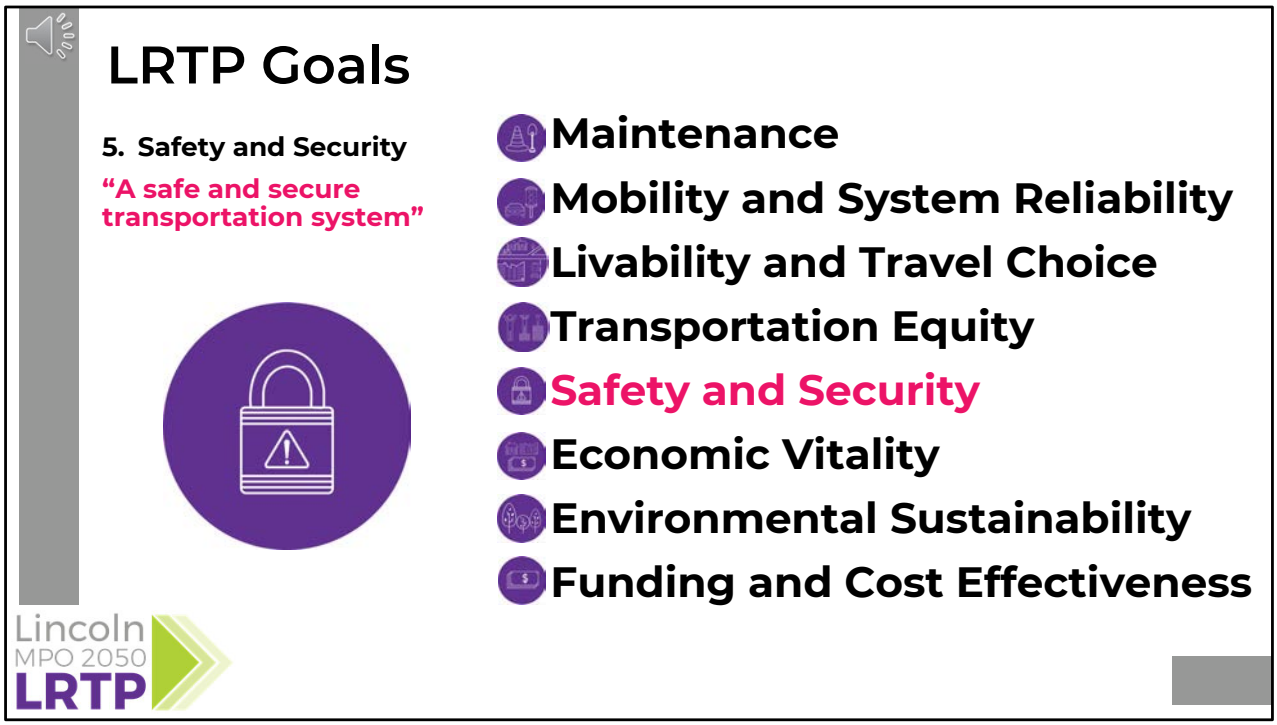
2.2.2 (Linking)
"Mobility and System Reliability refers to an efficient, reliable, and well-connected transportation system that leverages innovation and technology for moving people and freight"



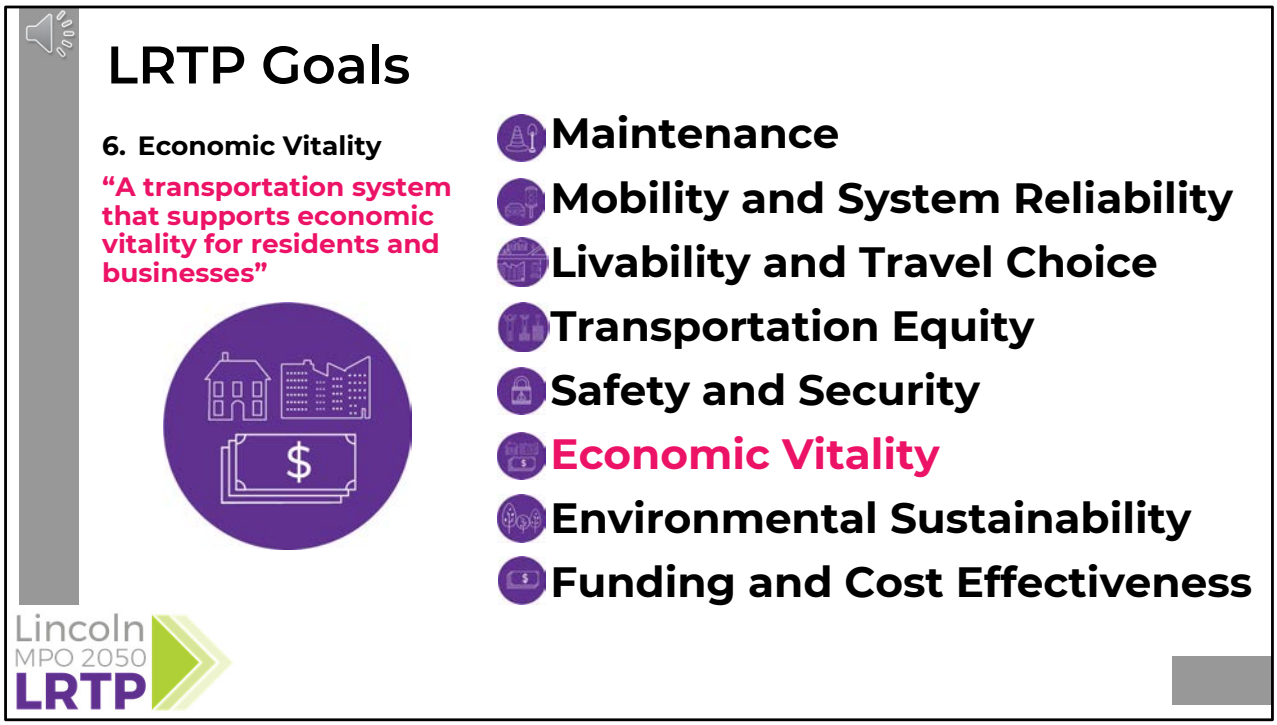
2.2.3 (Linking)
"Livability and Travel Choice refers to connecting all mobility options with a compact, livable urban environment to maintain and improve the quality of life for residents"



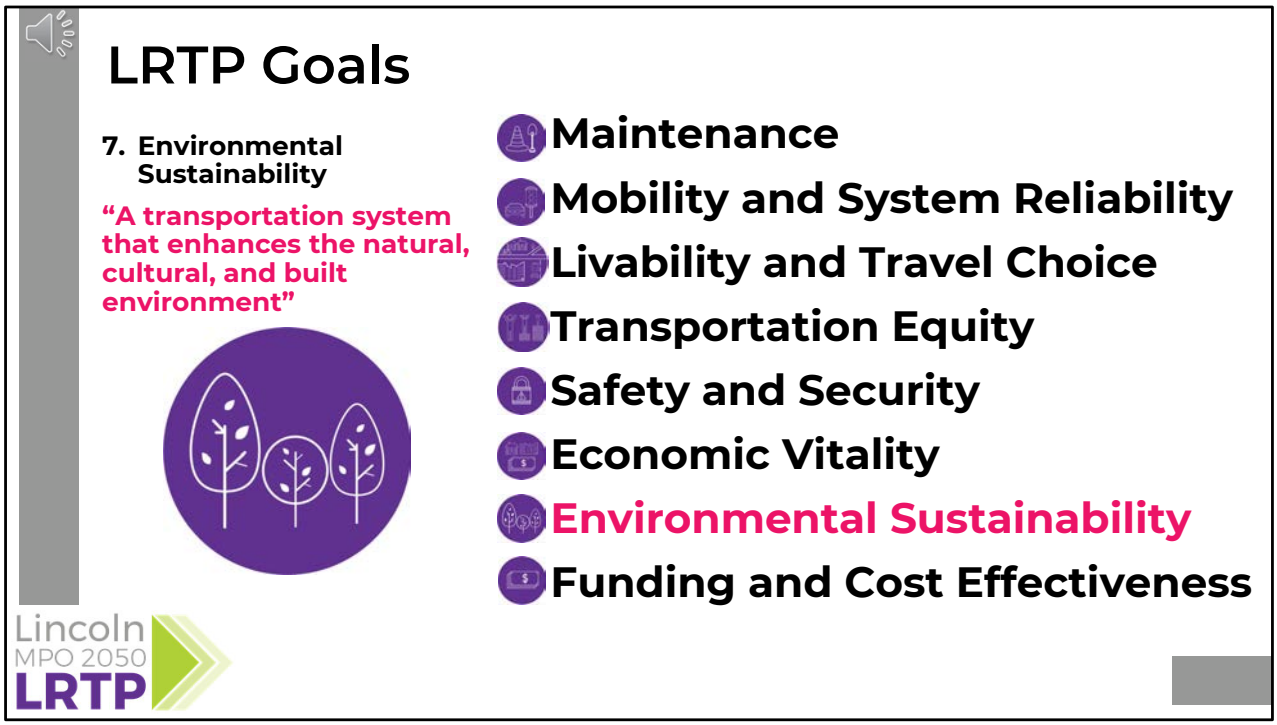
2.2.4 (Linking)
"Transportation investments developed through an inclusive process that promote equitable outcomes."



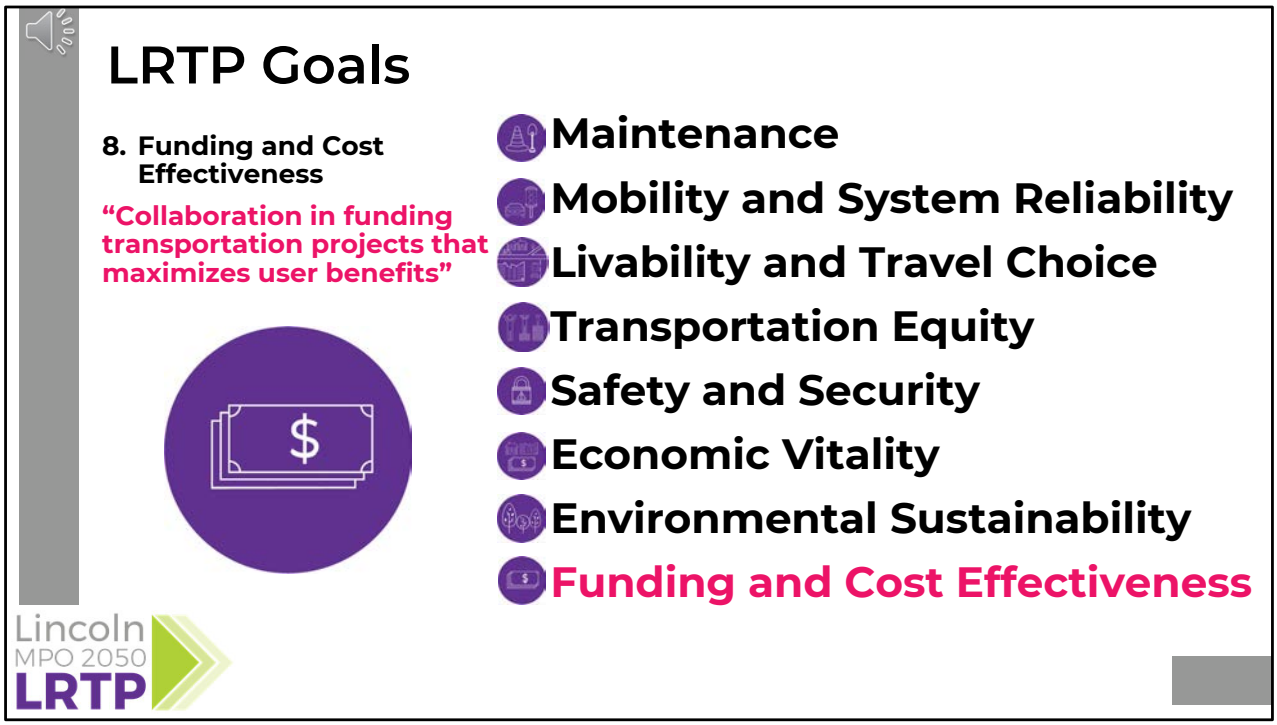
2.2.5 (Linking)
"Safety and Security is just that… ensuring a safe and secure transportation system, decreasing conflicts and unsafe conditions so that everyone gets home safely"



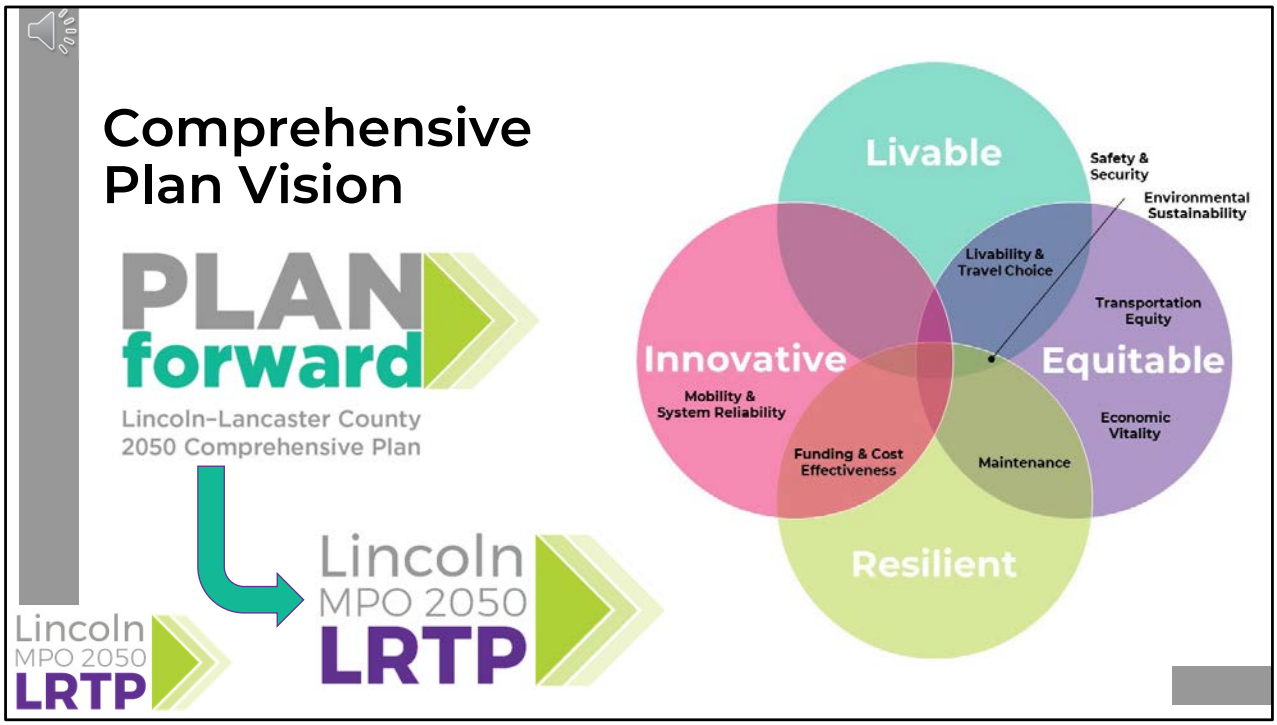
2.2.6 (Linking)
"Economic Vitality focuses on developing a transportation system that supports economic vitality for residents and businesses"



2.2.7 (Linking)
"Environmental Sustainability refers to a transportation system that enhances the natural, cultural, and built environment"

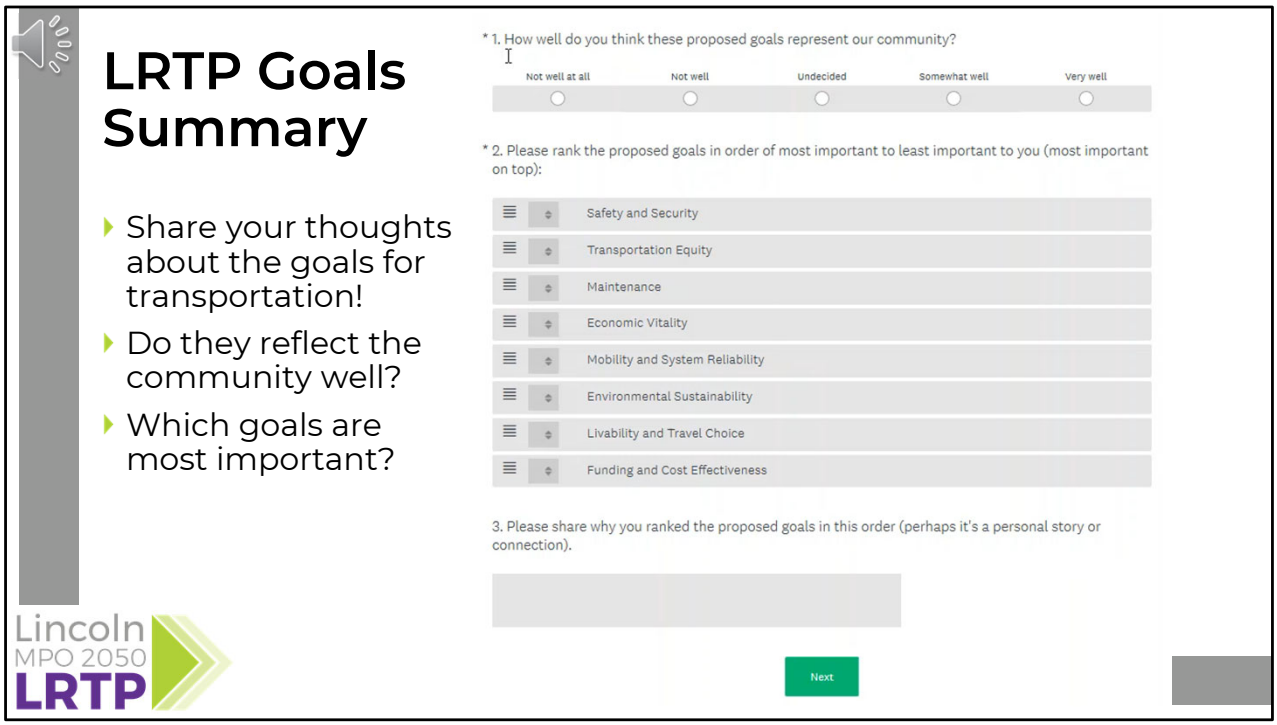


2.2.8 (Linking)
"Funding and Cost Effectiveness: ensures that collaboration in funding transportation projects maximizes user benefits"

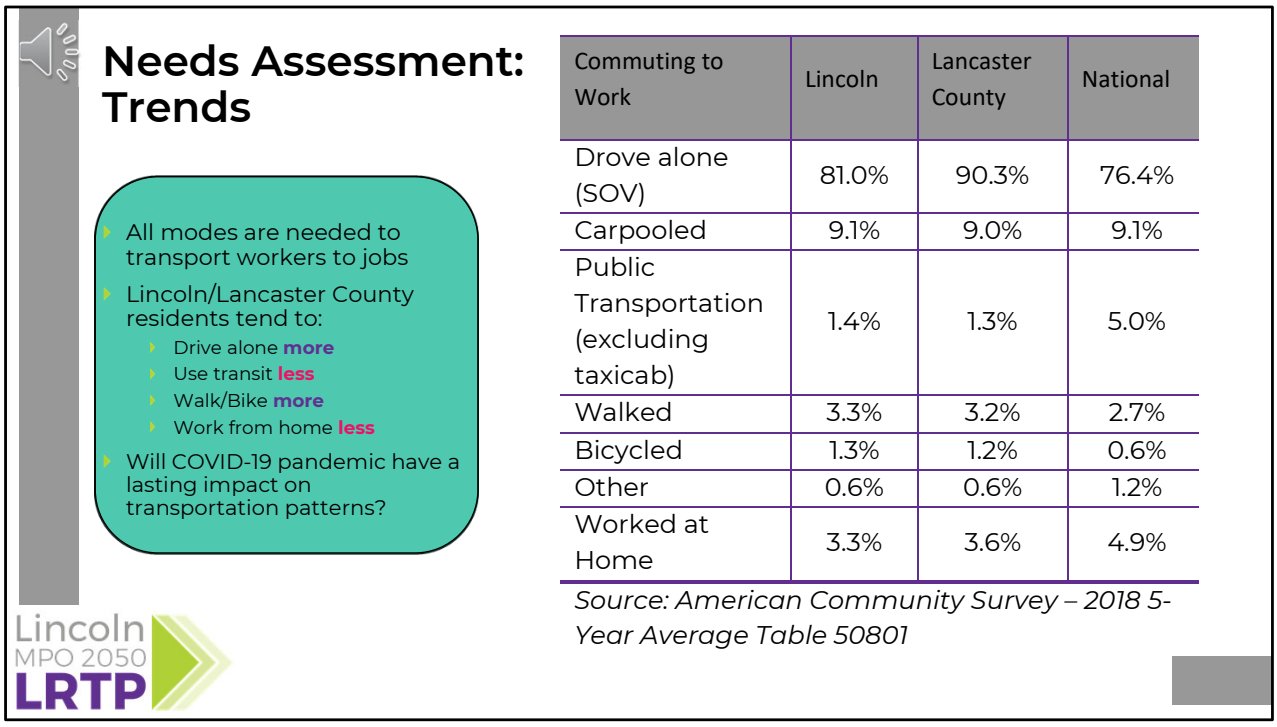


2.2.9 (Vision)

- "This image shows how each of the four themes and eight goals relate to one another and work together to provide a cohesive framework for the LRTP."
- "These eight goals also satisfy the required federal regulations for funding."



- 2.3 (Summary)
- "As you listened and learned about these goals, were they any goals that stood out to you? Do you think these goals represent you and your community?"
- "What goals started rising to the top of importance for you?"
- "In the online survey, we will be asking for your input on these goals to ensure all ideas are considered."

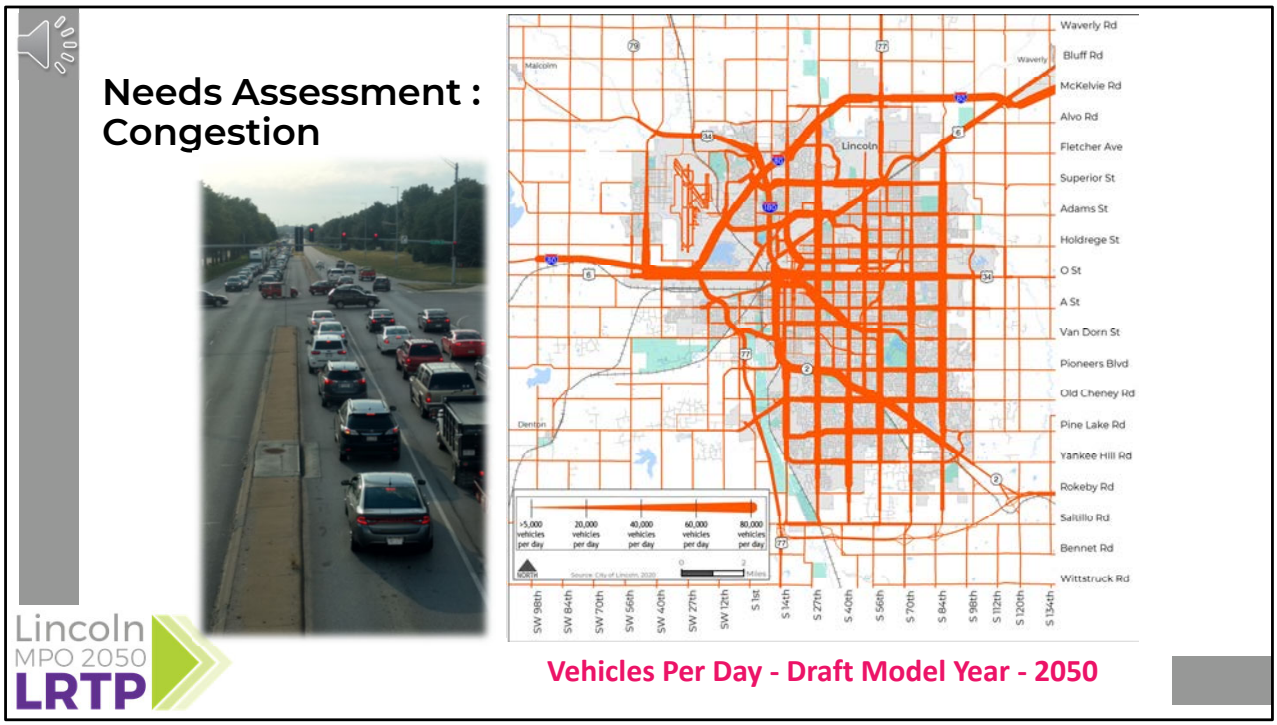


Commuting to Work	Lincoln	Lancaster County	National
Drove alone (SOV)	81.0%	90.3%	76.4%
Carpooled	9.1%	9.0%	9.1%
Public Transportation (excluding taxicab)	1.4%	1.3%	5.0%
Walked	3.3%	3.2%	2.7%
Bicycled	1.3%	1.2%	0.6%
Other	0.6%	0.6%	1.2%
Worked at Home	3.3%	3.6%	4.9%

Source: American Community Survey – 2018 5-Year Average Table 50801

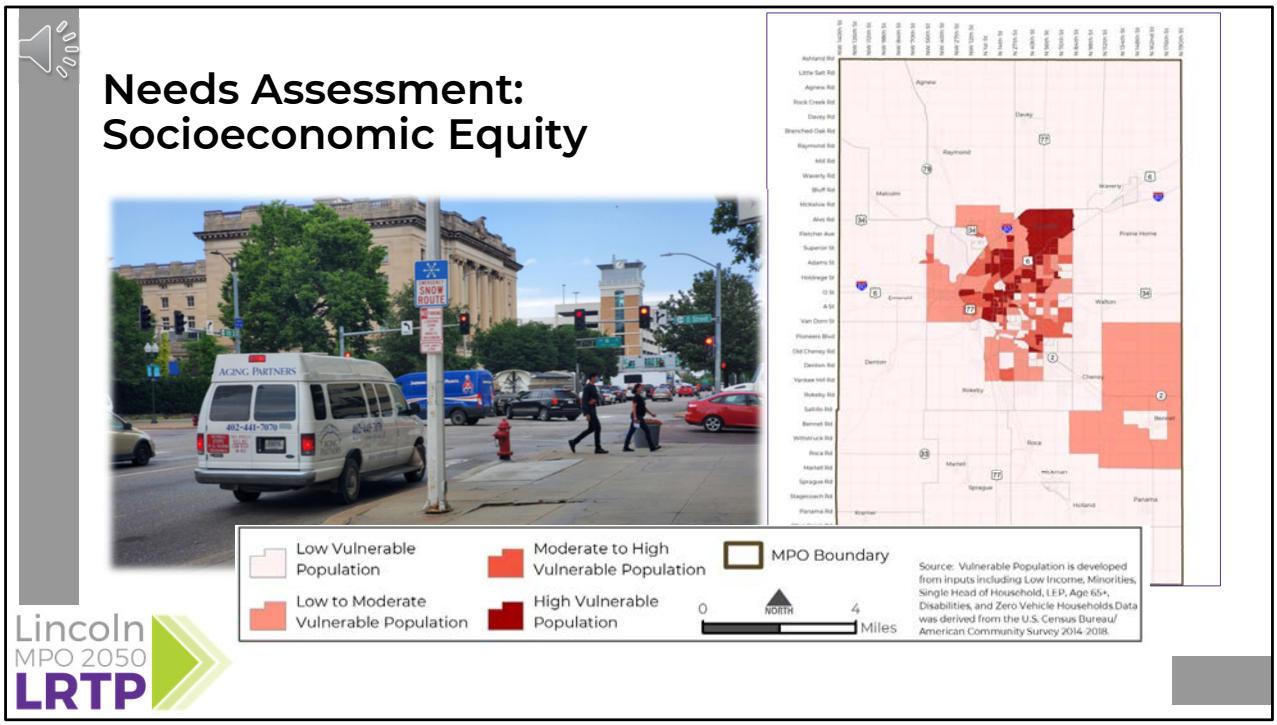
3.1 (Trends)

- On a typical day, the overall population in Lancaster County increases by roughly 21,000 as more employees commute to work inside of the county than the number of residents who commute out of the county for employment.
- Over half of the employed residents of the county experience a commute time of less than 19 minutes.
- Most commuters get to their jobs using a personal vehicle that they drive alone; approximately 14 percent more than the national average.
- But a greater proportion of residents also bike and walk to work than the national average.
- Ridership numbers for StarTran have continued to grow, but it is not used for commuting at much as the national average indicates could be possible.



3.3 (Congestion)

- Congestion management activities work to provide efficient and reliable transportation throughout the county.
- As the community of Lincoln has grown outward, the average commute time has slowly ticked up from approximately 16 minutes to 19 minutes over the past 30 years. In that time, drivers are traveling almost 4.5 more miles per day; 1,600 miles per year.
- Anticipated growth and travel patterns will lead to more congested roadways. The projects that are currently programmed by the City, County and State will lower some congestion levels, but additional growth will require more programming and projects to maintain an efficient and reliable network.



3.4 (Equity)

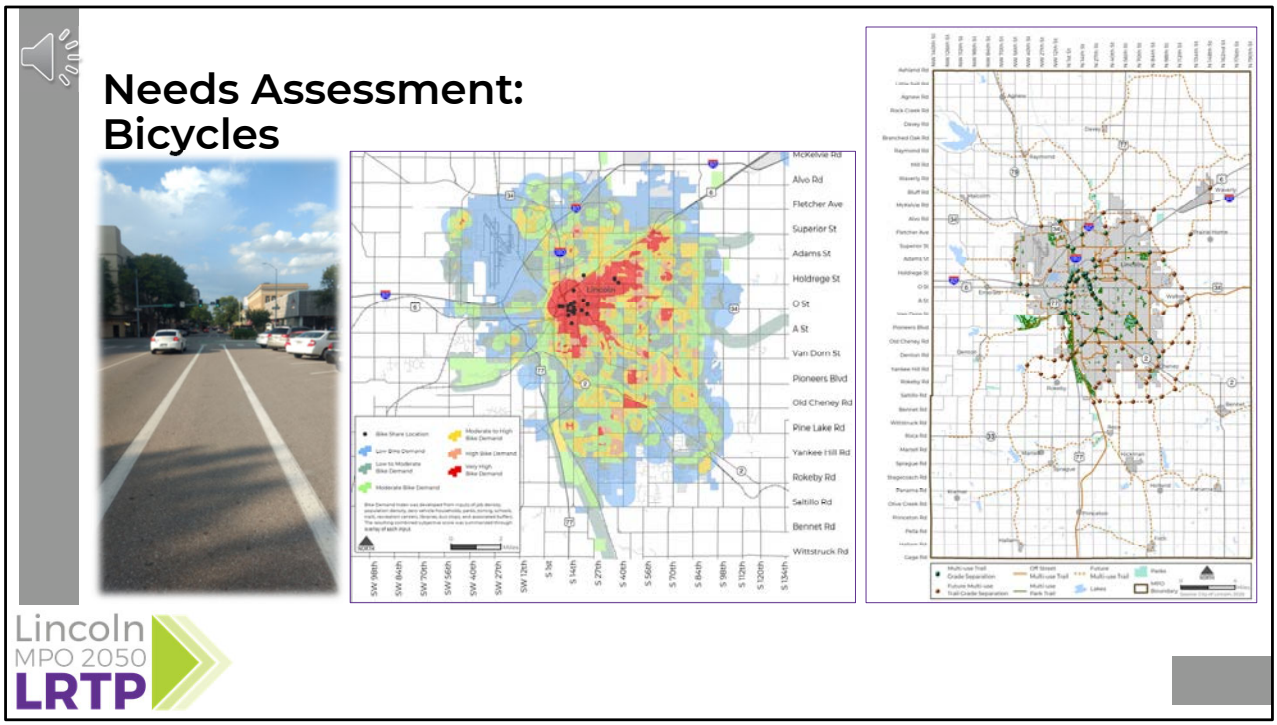
- Transportation planning decisions have the potential to improve equity within a community and provide benefits to those with the greatest need. Lincoln and Lancaster County have diverse population bases that reflect different socioeconomic backgrounds.
- For example, approximately 13 percent of residents are 65 years or older and almost six percent of residents don't have access to a personal vehicle. These populations are not evenly distributed throughout the county have different expectations of the transportation network. The Lincoln MPO is aware of specific populations like these and the needs they have of the transportation network.
- Transportation options and locations for individual and families with higher than average unmet needs are important factors to consider when planning the transportation network.



3.4 (R&B)

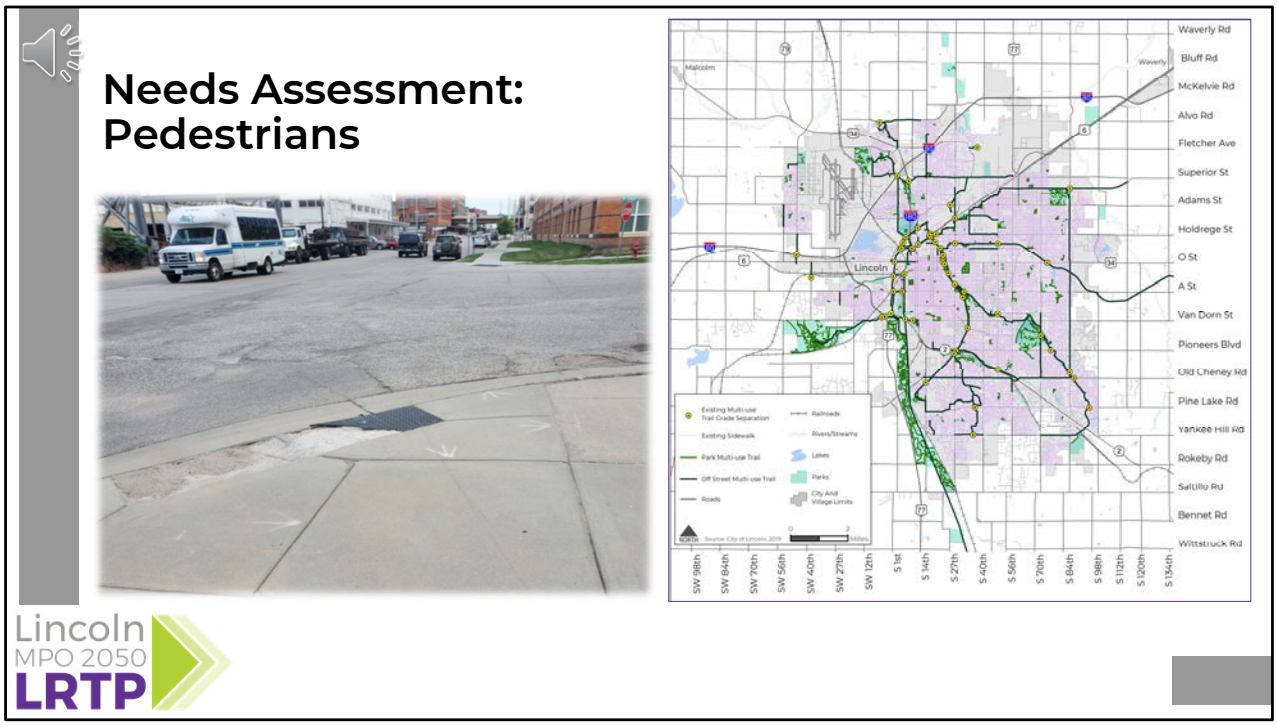
- Two of the largest annual budget expenses for Lincoln and Lancaster County are the construction and maintenance of roads and bridges.
- Annual funding available for construction is stretched as the average costs for materials and labor grows faster. Widening a roadway or adding a new roadway are done as the community grows. Where growth is directed and how fast it occurs has a direct influence on construction budgets.
- Almost 60 percent of roadway surface miles in Lincoln are rated good or very good. Lincoln and Lancaster County evaluate the best method for distributing the available maintenance dollars. Repairing roads that have fallen into the poorest condition is much more expensive than providing preventative maintenance that keeps roadways in good condition as long as possible. In this way, Lincoln and Lancaster County can stretch limited maintenance funds over more miles of roadways and prolong the useful life of roadways before they must be replaced.
- Bridges provide key connections to destinations for Lincoln and Lancaster County residents. Over 500 City, County and State bridges are managed in Lancaster County and a substantial proportion are rated in good condition.

Almost half of the bridges located outside of the City are rated in fair condition.



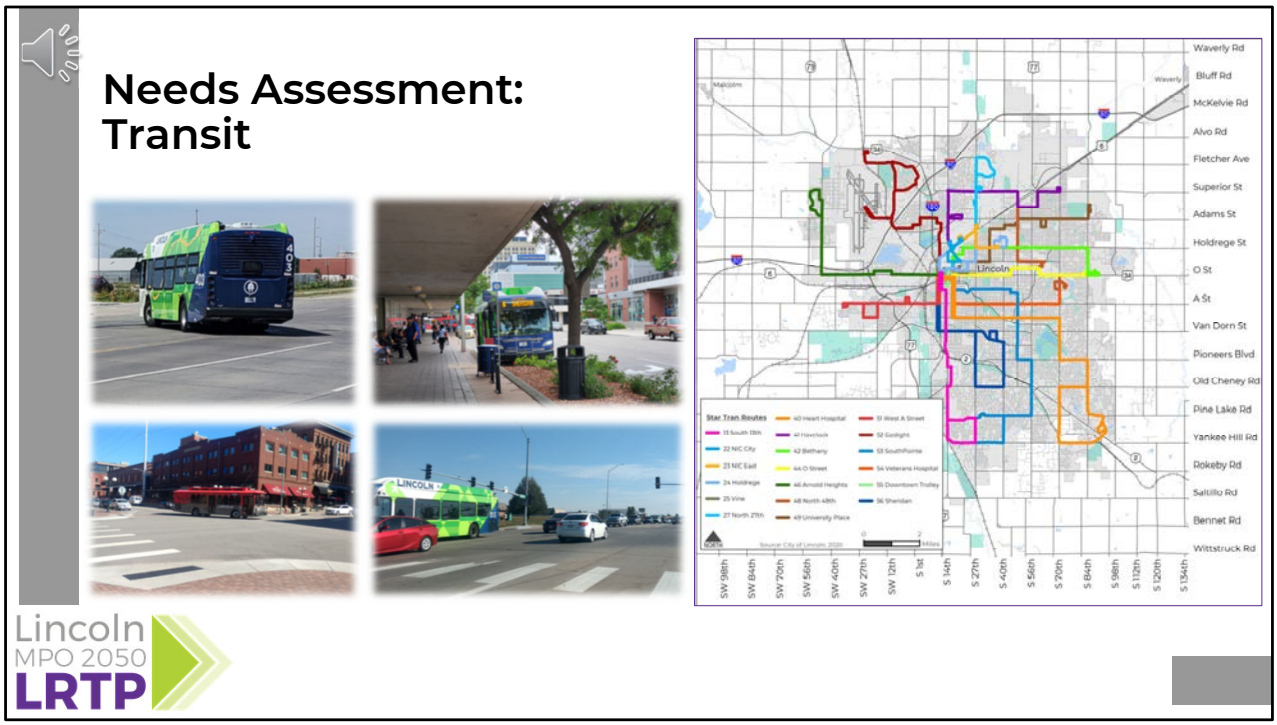
3.5 (Bicycles)

- The City of Lincoln network of bicycle facilities has expanded significantly since 1989 when approximately 23 miles of bike trails existed. Today, thanks to multiple partnerships and projects, more than 255 miles of trails exist and riders can utilize 144 miles of on-street bicycle routes.
- This network also stretches beyond the city limits, providing existing and planned trail network that connects throughout the County.
- The integrated trails and bicycle facility network provides recreation opportunities while also serving the needs of residents who bike to work and students that pedal to schools
- Through on-going implementation of the 2019 on-street bicycle plan, Lincoln is planning and programming for 88 intersection enhancements, 47 miles of new bike routes and other improvements totaling 135 individual projects.



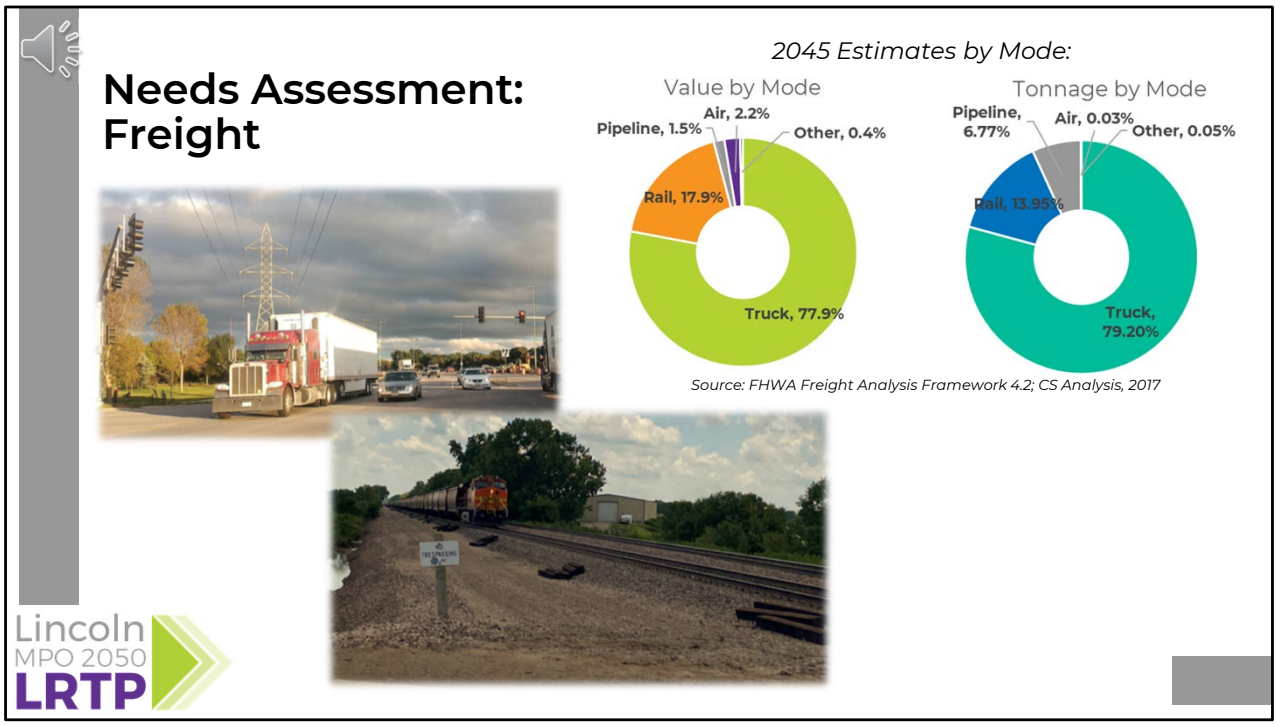
3.6 (Pedestrians)

- Approximately 1,500 miles of sidewalks provide pedestrian access to most homes, businesses, and other destinations in the City of Lincoln. Development requirements generally result in construction of sidewalks on both sides of new streets.
- Sidewalk conditions vary throughout the City with some deficiencies such as gaps in sidewalk, poor pavement conditions, or missing crosswalks, all which limit the ease of mobility of pedestrians and bicyclists, including persons with disabilities.
- Accessible sidewalks provide connections to trails, parks, neighborhoods, transit, and other city amenities such as recreation centers.



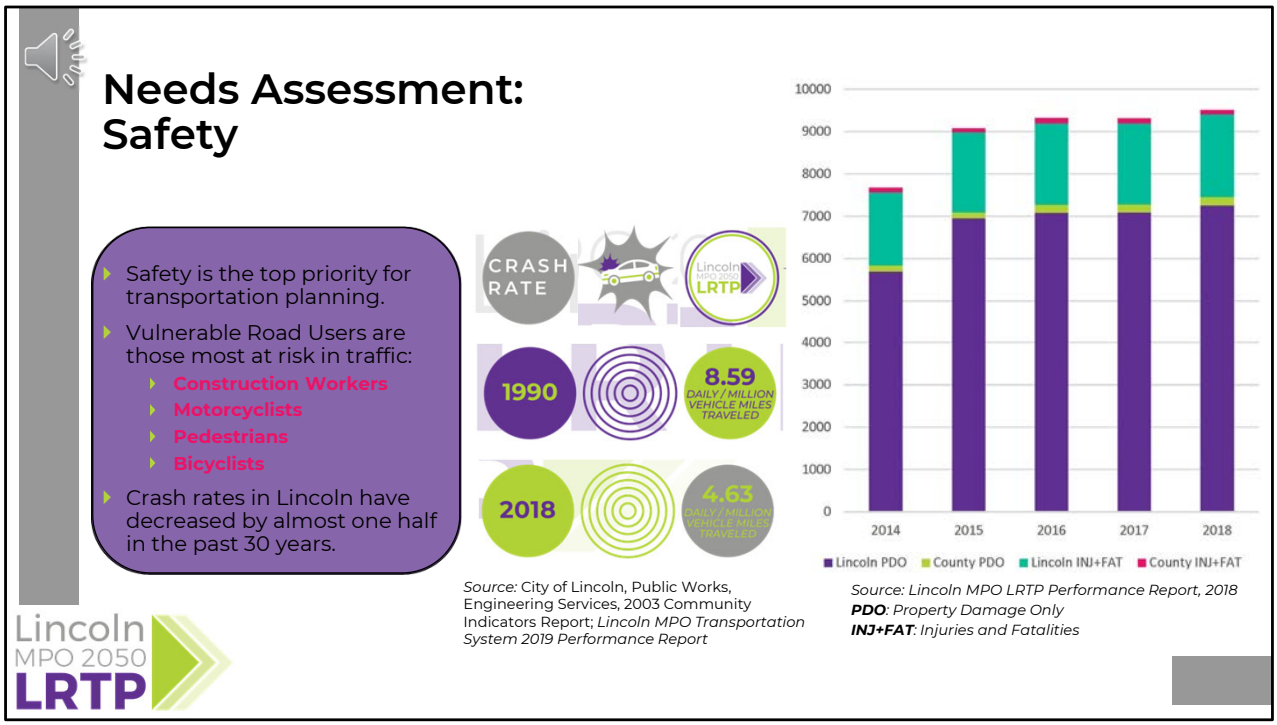
3.7 (Transit)

- StarTran provides transit service within the City of Lincoln. Fixed-route bus service represents the primary mode of operation.
- StarTran operates 19 bus routes in Lincoln. Lancaster County Public Rural Transit also offers north and south routes for County residents on alternative days of the week.
- Average daily ridership for bus routes in Lincoln vary depending on route type and what corridors and destinations they serve, but overall transit ridership approached 2.5 million in 2019.



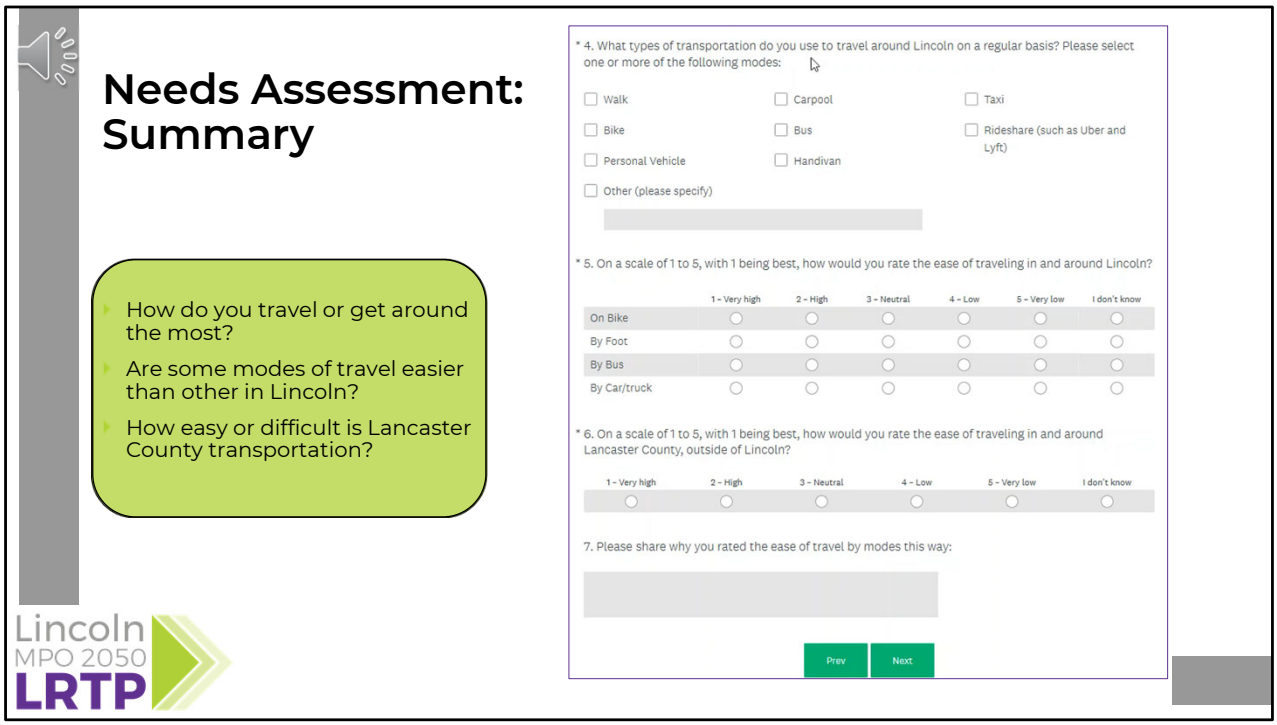
3.8 (Freight)

- Lincoln and Lancaster County transportation network includes Key Freight Corridors that facilitate statewide and interregional truck travel. These corridors provide connectivity between important urban and rural freight generators the overall freight network. Providing an efficient and reliable freight network is important to local and system-wide freight objectives.
- Completing the South Bypass project between Highway 77 and approximately 120th Street will divert substantial amounts of truck freight to a new roadway with access controls that are consistent with managing efficient freight movements, making the existing portion of Highway 2 through Lincoln less congested and more safe.
- Rail, Air and Pipelines also deliver essential freight movements in Lincoln and Lancaster County. In all, the combined freight system is estimated to move 32.3 million tons of products annually, valued at almost $34 billion by 2045.



3.9 (Safety)

- Safety is the top priority for transportation planning. All modes of travel work best when they are safe and protecting the most vulnerable road users, including construction workers, motorcyclists, pedestrians, bicyclists and other travelers.
- The number of reportable crashes in Lincoln and Lancaster County per year averages roughly 9,000. Severe or fatal accidents cause significant impacts for individuals, families, and property. Between 2014 and 2018, almost 10,000 crashes resulted in injury or fatality. The City of Lincoln completed the traffic safety study in 2020 to assess the trends behind these numbers. Improvements to roadways and intersections, combined with traveler education and enforcement can work to lower the risks of these types of crashes.
- It was previously mentioned that Lincoln and Lancaster County drivers are traveling more miles per year. The number of crashes per million vehicle miles traveled is almost half of what it was 30 years ago. Continued improvements in transportation infrastructure, technology and driving habits may continue to drive these crash rates downward.



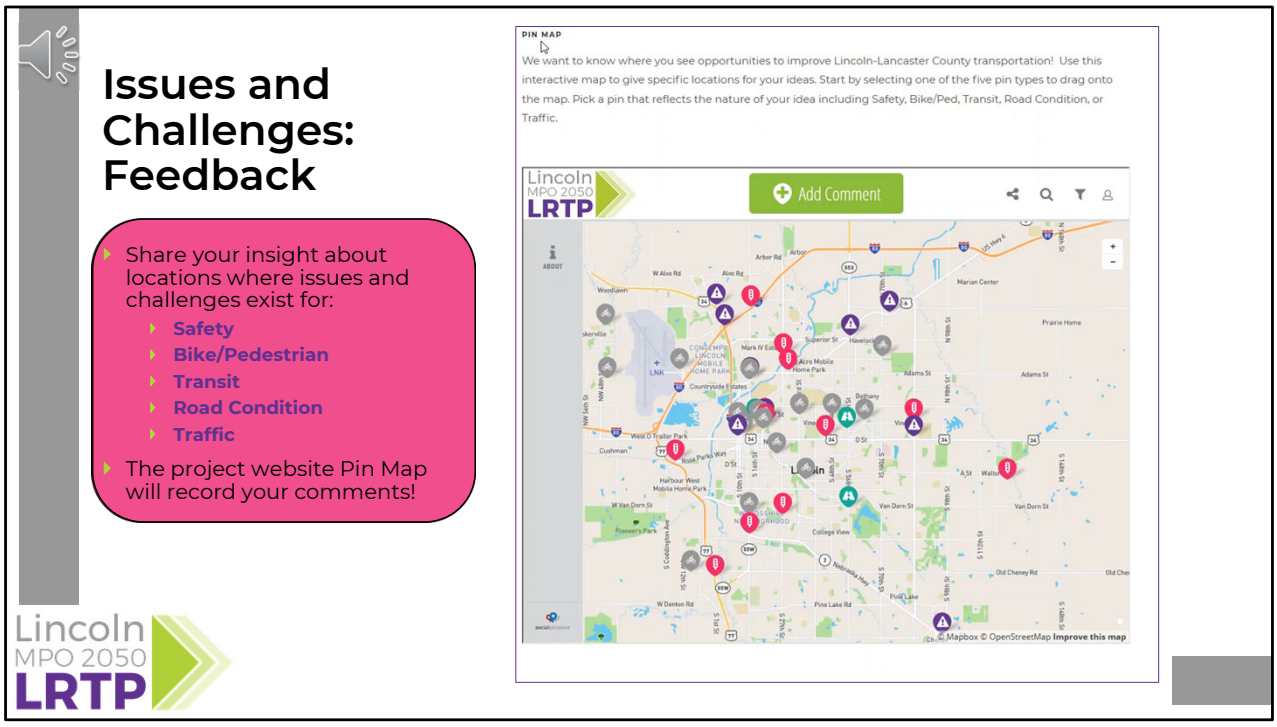
3.10 (Needs Summary)

- Safety is the top priority for transportation planning. All modes of travel work best when they are safe and protecting the most vulnerable road users, including construction workers, motorcyclists, pedestrians, bicyclists and other travelers.
- The number of reportable crashes in Lincoln and Lancaster County per year averages roughly 9,000. Severe or fatal accidents cause significant impacts for individuals, families, and property. Between 2014 and 2018, almost 10,000 crashes resulted in injury or fatality. The City of Lincoln completed the traffic safety study in 2020 to assess the trends behind these numbers. Improvements to roadways and intersections, combined with traveler education and enforcement can work to lower the risks of these types of crashes.
- It was previously mentioned that Lincoln and Lancaster County drivers are traveling more miles per year. The number of crashes per million vehicle miles traveled is almost half of what it was 30 years ago. Continued improvements in transportation infrastructure, technology and driving habits may continue to drive these crash rates downward.



4.1 (Issues Intro)

- As was shared in the previous section, a variety of resources are coordinated to deliver the multi-modal transportation network for Lincoln and Lancaster County. The organizations responsible for creating and maintaining this network keep focus on the day to day needs related to system operation, maintenance and performance. Helpful insight also comes from the public who have personal experience using the transportation system and can speak to their view of issues and challenges.
- Knowing these issues and challenges can help to prioritize projects. Improving access to destinations, increasing connectivity for different modes of travel and removing barriers to personal mobility are topics the public can share during the planning process.



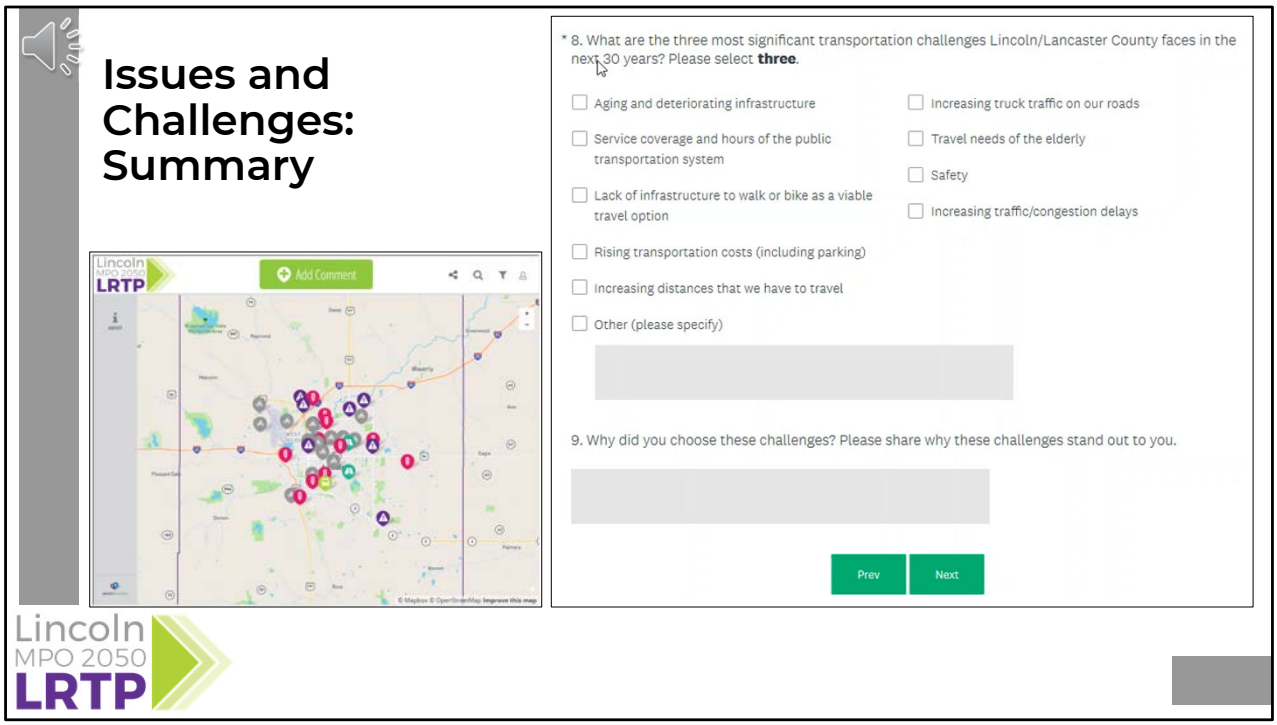
4.2 (Issues Feedback)

- This 2050 Long Range Transportation Planning Process was initiated with agency stakeholders and community representatives involved in the Comprehensive Plan update. Through the process of sharing and discussing background information with these group, a list of current needs and challenge has been created. What have we heard so far?
    - Roads provide key travel modes for freight, commuting and daily car travel. Improving locations with expanded roadways that serve growing travel demands is ongoing.
    - The desire to have efficient and reliable travel leads to ideas about reducing congestion.
    - Providing north-south thoroughfares that move people more efficiently is a common comment
    - Some suggest that increased focus is needed to balance the needs of cars while planning more multi-modal corridors and limiting the negative impacts to air quality.
    - While some identify improving maintenance of existing roads, others

are focused on making plans to anticipate and serve edge growth with diverse and reliable alternatives to single occupant vehicles.

    - Road and bridge maintenance is an ongoing need for Lincoln and Lancaster County. Limited funding creates difficult choices between important priorities as Lincoln expands further from the city's center

- That's just a taste of the input provided so far. The public involvement process continues now to collect additional feedback from focus groups and the general public.



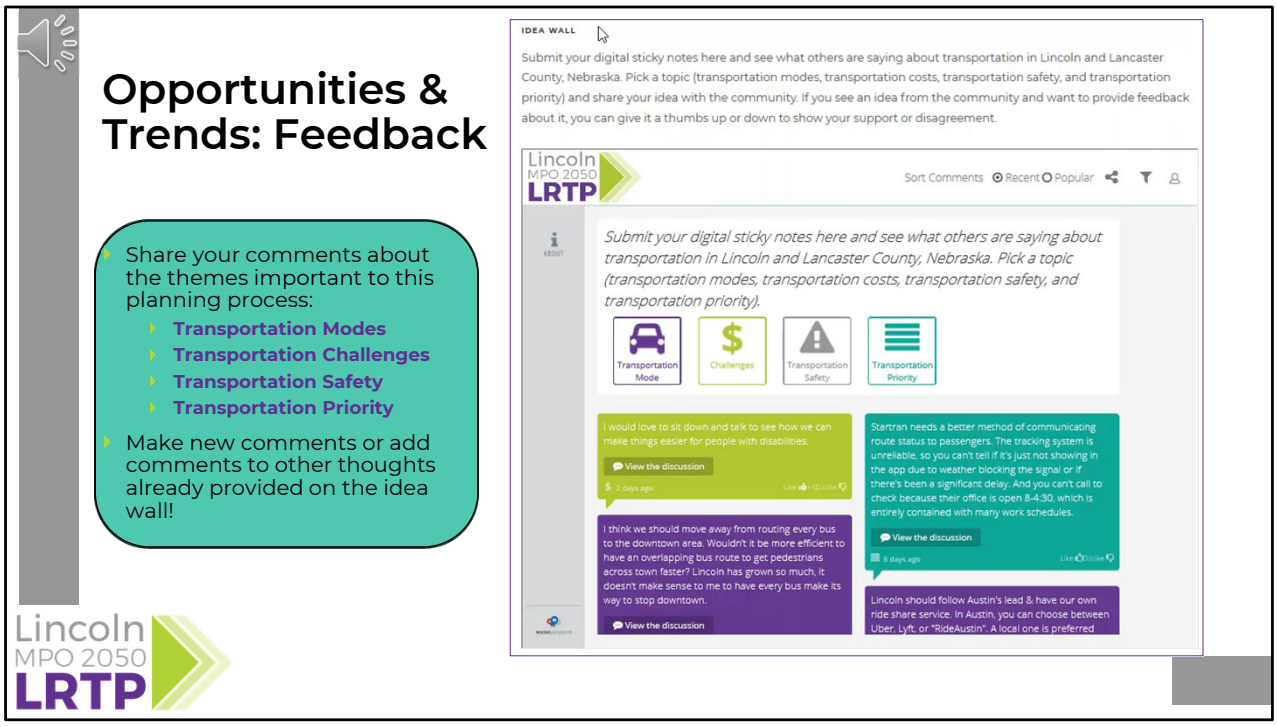
4.3 (Issues Summary)

- It doesn't matter if you've lived in Lincoln and Lancaster County for 30 days or 30 years; you use the transportation network and you likely have some ideas that can help improve it. So, what issues and challenges do you see within the community?
- Do you want to provide specific locations for your best ideas? The 2050 LRTP Pin Map shown on the screen is a convenient way to pinpoint your best ideas and to see ideas shared by the community. You have the option of providing specific thoughts about safety, road conditions, traffic, bicycle & pedestrians, and transit needs. A link will be provided at the end of this presentation to visit the Pin Map.
- Also, the online survey for this phase of public involvement will help organize the community's thoughts about the most important challenges facing Lincoln and Lancaster County for the next 30 year.



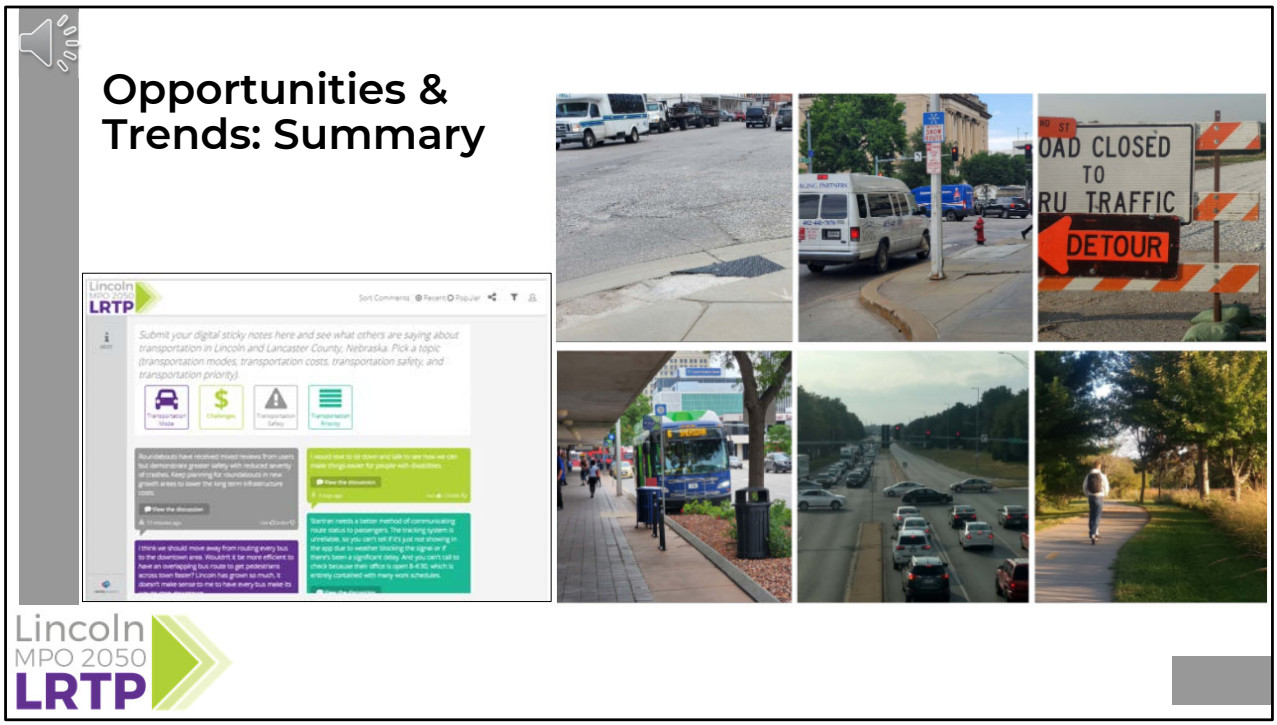
5.1 (Opportunities Intro)

- "The information shared so far in this presentation provides some insight into the process of planning for, creating, and maintaining a robust transportation system. Such a diverse and dynamic system will have issues and challenges to address."
- In addition to addressing current challenges and needs, the planning process also looks out at least 20 years to envision and capitalize on emerging opportunities and trends"
- "Identifying opportunities and trends can guide actions driven by policies, programs and investments in infrastructure. These actions may reflect changes in how the system is used, who is using it, how travel patterns may change and what technologies are emerging that will support and influence how the network is operated."
- "The Lincoln MPO plans help Lincoln and Lancaster County to take the necessary steps that will take advantage of these and other opportunities and trends. But your ideas are needed as part of the planning process.



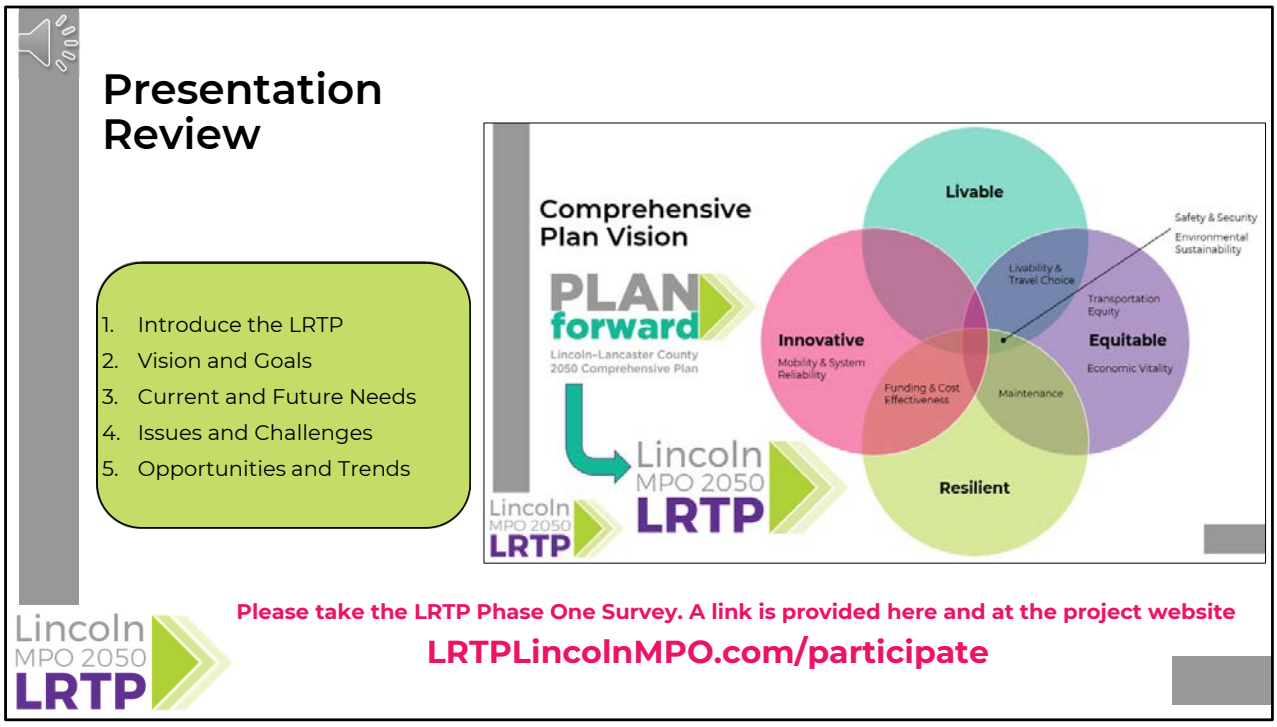
5.2 (Opportunities Feedback)

- Community Stakeholders have already provided some feedback on emerging technology opportunities and trends
- The image on this slide shows the Comment Board from the website where you can add your thoughts as well.
- We've received comments related to:
    - Excitement and concern about using advanced technologies for traveler information and automated vehicles.
    - Considerations for how travel may change as more people work from home,
    - Renewing thoughts about the role of transportation in keeping Lincoln a livable city and a destination of choice
    - Involving diverse voices in the planning process including the growing minority populations that call this home and the youth voices that may have a different view of transportation than today."
- "We look forward to hearing your thoughts on these topics and others through the survey!"



5.3 (Opportunities Summary)

- As you listened and learned about these opportunities and trends, what other opportunities and trends do you think the community and the MPO should explore further?
- You will have an opportunity to communicate this through the online survey.
- Also, the Comment Board through the website is a great way to see ideas shared by the community and to add your own.



Closing

- Thank you for taking the time to listen and learn about the Lincoln MPO's 2050 LRTP!
- At this point, please click on the link available on the screen to begin the survey.

Attachment B-2 – Phase 1 Social Pinpoint & Online Survey

Attachment B2 - Phase 1 Social Pinpoint and Online Survey Content

Social Pinpoint Comments

Comments Related to Transportation Modes

We need a better public transportation system that would be used because it is convenient and economical rather than as a last resort. A rail line that connects North Lincoln, South Lincoln and downtown with stops in many neighborhoods similar to the bus system now, as well as Omaha, would be beneficial for the environment and reduce our congested roads.
Dislike
Like

I think we should move away from routing every bus to the downtown area. Wouldn't it be more efficient to have an overlapping bus route to get pedestrians across town faster? Lincoln has grown so much, it doesn't make sense to me to have every bus make its way to stop downtown.
Dislike
Like +10

Lincoln should follow Austin's lead & have our own ride share service. In Austin, you can choose between Uber, Lyft, or "RideAustin". A local one is preferred because it keeps $ local. Also, there is an option to round up the fare to nearest $ & have those extras pd to a local charity of choice. Further, with Ride Austin, the city can regulate safety issues directly in terms of drivers. It generates more $ for the drivers per fare and is cheaper for the consumer too. Why don't we have this already?
Dislike
Like +4

We need not only a more widespread, reliable, frequent bussing system, but probably some decent rail lines for commuting and accessing major hubs (downtown, university and college campuses, other major shopping and business centers). This is a big enough city to have decent rail, which is faster, more comfortable, and more reliable than adding buses to street traffic for absolutely everything. Let's become a halfway modern city and have some subway or above-ground trolley and rail lines!
Dislike -1
Like +9

A light rail or bus rapid transit connection between Lincoln and Omaha is long overdue. This would help Lincoln's economy, enabling people to live here and commute easier to Omaha if necessary, use the airport, go out to restaurants, etc, and -- importantly -- reduce traffic and drunk driving, especially on game days.
Dislike
Like +13

Increasing the frequency of buses and redesigning the network would go a long way to increasing the use and utility of public transit in Lincoln. Ridership will only go up *after* service is improved, not before. Riders must know about all changes with good marketing campaigns.
Dislike
Like +5

When work is being done to add roads why not make it 4 lane with turn lanes right away instead of always having to back later and finish it
Dislike -3
Like

In the long term traffic has to be removed from “O” and “P” streets through downtown. This will promoted walkable area for commerce and public functions. Additionally, 9th street entering downtown and 10th st. exiting need to be rerouted or moved underground to promote pedestrian access to and from the Haymarket.
Dislike -3
Like +6

I think car sharing will start catching on in the next 10 years. As we transition to autonomous vehicles, individual ownership is likely to decline. We aren't there yet, but I recommend keeping an eye toward autonomous and shared transit. Similarly, electric vehicles are picking up steam now. Most of the required infrastructure for EVs is in the home, as most charging is done at home, but Lincoln has done a good job of making public options available and transitioning its fleet.
Dislike
Like +6

Buses, buses, buses! More of them, more frequent, more routes, more hours especially at night and on weekends, distributed throughout every part of town. Let's make it possible for everyone to work, go to school, shop, use public buildings, enjoy downtown events, visit family and friends, see a doctor/dentist, go to dinner/movie/bar/gym. Make every place accessible, too. Our population is aging, don't trap them in their homes!
Dislike
Like +10

Bus (with more frequent stops), or Bus Rapid Transit is probably the most effective option I know of for Lincoln but would love to see a downtown/inner ring streetcar and associated TOD districts to allow the density to support it in the long run. We will need these things to compete with cooler, larger cities for employees that don’t want to own cars.
Dislike
Like

Comment Related to Transportation Challenges

N 29th and 30th between Apple and Y need to be paved.
Dislike
Like

I would love to sit down and talk to see how we can make things easier for people with disabilities.
Dislike
Like

Comment Related to Transportation Safety

bicycle lanes on 11th street are in rough (major potholes and obstructions), would love to the road conditions improve. bicycle lanes on 16th and 17th street downtown, i see lots of cyclists on these busy streets and it's a terrifying sight!
Dislike
Like

There is a risk of crash after the bridge over the Salt Creek, when the N Antelope Valley PkWay change to 14th Street, some cars put the turn light too late when they try to turn left into the Saunders Ave. The speed limit is too high 40 miles per hour till the N Antelope Valley end, and the 14th Street begin
Dislike
Like

Roundabouts have received mixed reviews from users but demonstrate greater safety with reduced severity of crashes. Keep planning for roundabouts in new growth areas to lower the long term infrastructure costs.
Dislike
Like

Comment Related to Transportation Priorities

Good morning, I believe we should have reliable transportation for 3rd shift workers. Many of these workers rely on bicycles (which during winter is not the safest or best way to travel) or on rides with other co-workers, which can be costly and inconvenient. We need to provide over night transportation and also Sunday transportation. For some families, this is the only day to enjoy family activities. We need to remember not everyone has a car, not everyone has the budget to spend gas on leisure
Dislike
Like +3

Startran needs a better method of communicating route status to passengers. The tracking system is unreliable, so you can't tell if it's just not showing in the app due to weather blocking the signal or if there's been a significant delay. And you can't call to check because their office is open 8-4:30, which is entirely contained with many work schedules.
Dislike
Like

Get rid of the multimillion dollar roundabout planned at 14th/Old Cheney/Warlick. If it was such a "dangerous" intersection as what has been hyped, there would be much larger numbers of accidents.
Dislike -5
Like +1

We need to begin working on the East Bypass. This will aid travel to and from Omaha and relieve traffic within the city.
Dislike
Like +6

Public transport and bicycle transport should be the priority if Lincoln wants to continue in it's goals of attracting the next generations to live here. Not to mention the environmental benefit. Connecting more frequent bus routes that go out of town to other cities like GI or Omaha could increase economic opportunities to many in Lincoln while allowing them to remain in residence here.
Dislike
Like

Social Pinpoint Pin Locations Summary

Social Pinpoint – Bike/Ped Pins

Crossing 9th/10th near Van Dorn: The Highway 2 corridor in this area presents a barrier to east/west bike and pedestrian traffic. A connection is desired between the Bison and Boosalis Trails. The bike plan includes a group of projects in the area to provide shared lanes and improve signing and marking. A pedestrian signal at the intersection of High Street and NE Highway 2 and a sidewalk widening on Van Dorn between Bison Trail and South 11th are key improvements to help address these comments.

Airpark/Airport Area Circulation: Public comments continue to suggest the need to improve bicycle circulation around Airpark and providing safe connectivity to the larger trails network throughout Lincoln. The bike plan includes a group of projects that will provide support of these ideas including NW 48th Street, West Adams, West Cornhusker Hwy and Airport Road/Fletcher Avenue sidepaths, West Dawes Avenue and West Seward Street Shared Lanes.

Southwest Lincoln Circulation: As development pressures grows southwest of Lincoln, public comments also encourage planning ahead for bicycle commuting corridors with safe infrastructure. Sidepaths along West Pioneers Boulevard, South Folsom Street, and Old Cheney Road included in the bike plan will support planned development progression.

Other Bike Plan Projects: The Lincoln On-Street Bike included 157 projects needed to realize the vision of advancing a citywide low-stress bicycle network. Project priorities were placed on connecting the network and providing the lowest stress level reasonably feasible. As demand increases and funds become available, some on-street bike facilities are anticipated to evolve. Public comments about access to downtown form 14th Street, crossing Normal Boulevard at Sumner, crossing 9th/10th at T Street, downtown and campus infrastructure reflect the shared

vision and projects or policies expressed in the bike plan. Pin locations that were not addressed in the bike plan were reviewed to consider if they should be added to the project list.

- MoPac Trail crossing at 33rd Street
- MoPac Trail access to 48th Street
- MoPac Trail crossing at North Cotner Boulevard
- Vine Street bike lane markings on UNL Campus
- Traffic Control at Randolph Street and Billy Wolff Trail
- Pedestrian crossing at North Antelope Valley Parkway and R Street
- Pedestrian crossing at Highway 77 and West O Street
- Intersection improvements at Vine Street and 22nd Street
- J Street on-street bike route transition to a bike boulevard or lane

City/County Trails Network: The Lincoln on-street bike network works in coordination with the urban multi-use trail network. Public comments encourage the City to provide the safest possible intersection crossings where these trails intersect City streets. Expanding the trails network into the County was also encouraged connecting existing trails to communities outside of Lincoln. County Bicycle Circulation: Some public input was also provided that called attention to the use of multi-use trails, gravel roads and paved shoulders in the County for bicycle recreation and some commuting. Preservation of corridors for county trails continues as the county plans for growth. Connectivity for bicycles is provided across the South Beltway at key locations. County design standards for paved shoulders and multi-use limestone sidepaths are shared for further consideration.

Social Pinpoint – Transit Pins

Increase Density Adjacent to Highway 2: Density was suggested as a way to increase ridership demands. Specific opportunities along Highway 2 were suggested to consider.

Social Pinpoint – Roadway Pins

Provide Edge Growth Infrastructure: As eastbound growth creates higher traffic counts, bring roadway infrastructure along 98th is encouraged.

Urban Paving: Unpaved roadways within the City were identified and recommended for paving. Paving roads that also improve access to multi-use trails was a documented recommendation.

Roadway Condition and Configuration: Public comments about roadway conditions that should be resolved sooner than later were recorded. The condition of South 56th Street between Van Dorn and South Street and R Street east of N 50th Street were specifically encouraged to be improved. Continued focus was encouraged to improve Vine Street intersection following improvements to 16th Street conversion to two way on UNL campus.

Social Pinpoint – Traffic Pins

Improve North/South Capacity: The public comments related to movement of north and south traffic were consistent with previous plan updates. Recommendations from the public ranged from widening cross sections along north and south 27th Street, connecting 33rd Street thru

Capital Parkway, and matching cross sections along North Antelope Valley Parkway between R and Vine Streets. These recommendations were considered with the roadway project prioritization.

Provide Intersection Improvements: Public input helped identify possible intersection modifications that could be considered to improve operational capacity. Intersections recommended to evaluate ranged from North Antelope Valley Parkway at Vine Street to the adjustments that could address turning movements at 10th and High Streets. Operational improvements, such as signal timing, were encouraged to continue.

Improve Segment Efficiency: The improvements that could be made to address roadway segment efficiency were also organized. Small improvements, such as configurations between Pioneers and Highway 2 at South 14th Street are already programmed. More challenging suggestions focused on aging infrastructure challenges at North 29th Street, State Fair Park Drive and Cornhusker Highway or constrained right of way along O Street between 40th and 46th Streets.

National Highway System Coordination: A few comments were provided that require coordination between multiple members of the MPO. An interchange with Interstate 80 at 14th Street was suggested and dueling comments were provided about completing the West Beltway segment Pioneers to Saltillo Road and the eventual need for an East Beltway connecting Highway 2 to Highway 6.

Social Pinpoint – Safety Pins

Accommodate Bicycle and Pedestrian Crossings: Public comments focused on crossings that are used or desired to be used for bike/ped crossing. Many of these similar comments are addressed by Bike/Ped pins. Two intersections identified for addressing safe crossings included Vine Street at North Antelope Valley Parkway, Old Cheney Road at the Rock Island Trail Crossing and the users desire for safe crossing at Highway 2 and High Street.

Consider Reducing Posted Speeds: Vehicle speed was identified as one safety concern the public considers. Suggestions were provided to study and possibly implement reduced speed of travel on Cornhusker Highway between 70th and Cotner as well as newly increased speeds on Highway 2 between 84th and 98th Streets.

Improve Intersections for Vehicle Safety: Public comments identified some intersections that may be modified to improve safety. Intersections included 14th and Cornhusker, 9th and O Streets, 84th and O Streets, and Cornhusker and Havelock.

National Highway System Interchanges: Growth to the northwest of Lincoln and increasing demand on Highway 34 and Fletcher raised some public concern for continued safety reduction. Intersections of I-80/I-180/Highway 34 and the intersection with Fletcher were recommended for considering improved interchanges for addressing the need for traffic safety.

Phase 1 Public Survey Responses

How well do you think these proposed goals represent our community?

	Not well at all		Not well		Undecided		Somewhat well		Very well		Total	Weighted Average
1	4.35%	10	5.22%	12	15.65%	36	32.61%	75	42.17%	97	230	4.03
											Answered	**230**
											Skipped	**0**

Please rank the proposed goals in order of most important to least important to you (most important on top):

	1		2		3		4		5		6		7		8		Total	Score
Maintenance	**23.0%**	53	**13.9%**	32	**15.2%**	35	**11.3%**	26	**15.2%**	35	**7.8%**	18	**7.8%**	18	**5.7%**	13	230	5.35
Mobility and System Reliability	**21.3%**	49	**20.0%**	46	**14.8%**	34	**19.1%**	44	**10.0%**	23	**7.8%**	18	**3.0%**	7	**3.9%**	9	230	5.68
Livability and Travel Choice	**16.1%**	37	**14.4%**	33	**14.4%**	33	**11.7%**	27	**12.2%**	28	**13.0%**	30	**8.7%**	20	**9.6%**	22	230	4.89
Transportation Equity	**9.6%**	22	**10.9%**	25	**12.6%**	29	**14.8%**	34	**12.6%**	29	**13.0%**	30	**13.5%**	31	**13.0%**	30	230	4.32
Safety and Security	**8.3%**	19	**14.8%**	34	**15.7%**	36	**16.1%**	37	**15.2%**	35	**18.3%**	42	**9.6%**	22	**2.2%**	5	230	4.81
Economic Vitality	**1.7%**	4	**7.4%**	17	**7.0%**	16	**8.3%**	19	**9.1%**	21	**18.7%**	43	**29.6%**	68	**18.3%**	42	230	3.19
Environmental Sustainability	**14.4%**	33	**9.6%**	22	**10.9%**	25	**7.4%**	17	**12.6%**	29	**10.0%**	23	**13.9%**	32	**21.3%**	49	230	4.13
Funding and Cost Effectiveness	**5.7%**	13	**9.1%**	21	**9.6%**	22	**11.3%**	26	**13.0%**	30	**11.3%**	26	**13.9%**	32	**26.1%**	60	230	3.63
																	Answered	**230**
																	Skipped	**0**

Phase 1 Online Survey

Please share why you ranked the proposed goals in this order (perhaps it's a personal story or connection).

Sustainability is such a huge part of mine and my children's future. I will likely be moving out of Lincoln to go to a city with better public transportation options.

Economic vitality provides for everything else

I have lived in cities with great public transport where you don't need a car. To me, that is a real, healthy city and the kind of place where I want to live. I am considering leaving Lincoln because the public transport is so lacking, actually.

My top choices are what I want for Lincoln.

Maintenance (taking care of the current system) is VITAL to a reliable transportation network, supports the economy by supporting freight and consumer traffic, and helps to ensure transportation equity among all areas of the community (as often the older parts of town require maintenance because their roads are older). Regular maintenance (I think) helps minimize higher long term reconstruction costs required as a result of neglect, helps with safety of the transportation network, doesn't impede the natural, cultural and built environment, and at the base level (before improvements can be made) supports livability and travel choice better than a broken down system. I tried to order my list so that each goal would help support, in some way, the goals below it. Because there are always limited resources available, I believe using those resources most effectively with overlapping impact is good for the transportation system and its users.

This is the future I would like for Lincoln.

Most important to me is reliability because too many times I have been forced to take a Lyft or Uber to get to work on time after a bus is 20+ minutes late.

1 & 2 It needs to be safe, reliable and clean option for people to trust that they will arrive safe and on time for meetings and medical appointments to even consider using it. Then it can enhance people's

use to reach the businesses that are relocating to new buildings like in Fallbrook. Funding is important but people need access to businesses and doctors then to use it frequently paying the city for the cost

It's what I prefer.

We need to be moving toward a future where we rely on the sun for the majority of our energy needs, and use oil only very sparingly. We're going to run out of oil, and it's important that we start thinking sustainably so that when it's gone, we're ready. At the same time, doing this can't break the bank.

When we are improving transportation within the community it enhances mobility, livability, equity, environmental stability, and economic vitality all at the same time. They don't necessary need to be ranked above each other.

Biking safely in Lincoln is challenging.

I think Lincoln is a great city to live in and I think it can be approved. I don't want to have too grand of visions put out there without keeping the price in align with what can be supported. As the project architect for the Railyard, it saddens me to see that the original vision wasn't sustainable in bringing a vibrant event space to support the Arena.

Lincoln's urban population is aging. More seniors, living at home, will need transportation for basic needs like groceries, doctors appointments, etc. It needs to be convenient, well maintained, reliable and secure. People movers, monorails above the streets are good examples of how other cities are handling this issue.

Safety, equity, and maintenance need to be the top priorities, otherwise people are at risk when traveling. Without maintenance, safety is compromised; it also elevates expense when repair becomes necessary (supports cost effectiveness). With additions/enhancements to the travel network, multimodal systems can relieve congestion within certain modes of transportation. Multimodal systems and maximizing the connectedness of the travel network should reduce miles traveled (especially by car), time spent traveling (by car) and therefore carbon emissions (which impact longer-term, larger-scale societal safety). Economic vitality, while critical, should not compromise safety, equity, or environmental sustainability. It may be achieved through a multimodal and reliable travel system which can minimize parking areas and costs, and increase foot traffic, which can make these areas more appealing for consumers to travel to and shop within.

I feel that Lincoln has a unique advantage being a public power state in that we can provide better infrastructure.

I think everyone in Lincoln should have the ability to get around efficiently. It shouldn't only be the people who have the privilege of owning a car.

A city where people cannot easily travel for work, school and all the other necessities is a city that will struggle rather than succeed.

I think we need to do better at maintaining our current system. Also, when development happens, our infrastructure is not ready for it. The development drives the availability for funding of roadway improvements. We are very reactive, not proactive.

Safety and environmental security are very important.

Would love that StarTran series on Sundays and Holidays

I think we need a transportation system that allows people to get all across the city quickly and in a way that connects different parts of Lincoln. Ideally we'd have a train system. Also please provide benches

for every bus stop with coverings. Personally, I don't take the bus but I always see people standing in the cold or rain.

Choice of transport is the most important, and you can only have that choice if maintenance is kept up. You also need to to be very safe, both by cleaning it regularly, and keeping crime to a minimum

It's important to me that people of all different backgrounds can access transportation and that it is used to make our city more equitable and our communities healthier

I value having affordable, accessible, and environmentally friendly public transportation over having more options, even if a little more convenient. Small changes such as the bus route app make the system much easier to use!

I ranked Livability and Travel Choice, Safety & Security, and Mobility and System Reliability as my top three because any system that does not prioritize those will fail. For example, Star Tran has limited hours, anything with a connecting route takes forever, and there are not nearly enough buses running to make it convenient (they should run every 10-15 minutes, if you want people to use them; they should run once per hour if you are looking to meet minimum contractual obligations while maximizing profit). I ranked Transportation Equity, Maintenance and Environmental Sustainability as the next three because they're important ethical reasons to have a good public transit system. I put Funding and Cost Effectiveness and Economic Vitality as last, because they are "icing on the cake", but not intrinsically important to the goals of a public transportation system. They may be persuasive politically, but they are not intrinsically important to the system.

Equity is important so that everyone can have access. Safety and security are almost just as important, as well as cost effectiveness and maintenance so the system is sustainable and desirable and feasible for users. Above all the system must be reliable, or it is completely useless. Other factors are valuable as well.

The sidewalk conditions and usability are a hazard for those with mobility issues.

I personally want to be able to travel around the city effectively and efficiently without each trip being a guess. An example for me it when I want to travel from downtown to East O st, the reliability of the 44 bus, as an example, is hit or miss where its one or two busses for a route that has a one hour loop. I believe this falls more into demand and funding areas.

I've ranked these in the order I have, because the primary purpose of transportation systems, and city planning more generally, should be to maximize the happiness of residents. The current model of planning in America is car-centric, and keeps residential and commercial areas separated by wide margins. However, I believe this model has mostly negative impacts on the mental health of residents. Additionally, this model locks out the poor, disabled, and elderly who cannot drive, in addition to the people who choose not to own a car.

I used to live in a car-centric neighborhood in the southeast of Lincoln, and I felt like a prisoner in my car. I felt disconnected from my neighbors and the local community, because everyone was siloed off in their homes, only coming out occasionally to commute by car. Once I moved closer to the downtown area, my quality of life improved significantly. I couldn't walk to restaurants, bars, the grocery store, and my friends' houses, without ever starting my car. I would bump into my neighbors, and actually got to know the people who I lived around. Additionally, I saved a lot of money on gas and maintenance, and got a lot more exercise. Having true transportation choice, in the form of additional buses, bike lanes, and walking paths, will allow everyone in the city of Lincoln to be an active participant in the community. I know that this survey is about transportation systems, but I also hope that city leaders encourage development of denser housing and mixed residential/commercial areas. There is a lot of

evidence in other cities to indicate that these changes will make Lincoln a nicer place to live for everyone, not just for people who can drive a car.

Personal opinion based on what is/has been seen in the world.

BUS

All people in Lincoln should have easy accessibility to public transportation. Public transportation should not take over an hour to get from home to work unless going across the entire city (north to south).

It needs to be possible to live and work in Lincoln without a car. This is important for people who cannot afford a car as well as for the many people who prefer public transportation to help reduce carbon emissions.

If cost is too high, it doesn't matter how good it is, people won't be able to use it, so that's number 1. How well it's maintained and how mobile it is is also very important. If it is not reliable then people will try to find other options, so it must be reliable.

I think a lot of our roads need maintenance. There is a lot of work to be done so we can drive on smooth and reliable systems.

In order for public transportation to be successful it must be accessible to as many people as possible. Frequency of busses is also important so that it is convenient for people to use.

Currently, the bus routes/stops/schedules are ridiculous and not rider friendly. I live 10 minutes from downtown Lincoln where I work. For me to get to my job by 8am, I would have to catch a bus using the current schedule at approx 6:30am, and I'd have to walk at least 6 - 8 blocks to get to the nearest bus stop. When the weather is snowy, rainy, icy this is not a rider friendly schedule. Also, working in downtown Lincoln, I've been in the crosswalk when I've had the walk sign and almost been hit by a Lincoln Transportation System bus driver on numerous occasions. The same on UNL city campus, I've seen bus drivers almost hit pedestrians in the cross walks and almost hit bike riders that are in the bike lanes.

Many are interrelated, so difficult to prioritize one over another.

In my opinion, safety of the traveling public is most important followed by mobility and system reliability Admittedly most folks would not know about Accessibility but it should be included alongside mobility.

For someone who doesn't drive, there just needs to be more options and accessibility for them. People need to be able to get around however they can get around. A lot of people bike and that needs to be a safe experience. I've had a few times where I've been biking (or walking!) and almost been hit by a car even though I'm using the crosswalk with the walking person lit up. A lot of people use the bus and that needs to be a reliable experience. I've had buses come too early or not at all. And they don't come all that frequently or along that many different routes which makes getting around difficult sometimes. It would be great to have more biking lanes around the city and more options for transport around the city for people who don't drive.

No story, just thinking back on my use.

I placed the highest emphasis on livability and travel choice because I have lived in other cities with far superior multi-modal networks with a wide variety of travel choices and transit options, and it dramatically enhances quality of life. In my opinion, this is one of Lincoln's biggest shortcomings as a city.

I have often chosen where to live or work based on transportation options in order to reduce my reliance on having a car (for both economic and environmental reasons). Being able to reliably and efficiently travel to work, school, shopping, or other activities is crucial to making the city livable and equitable.

The most important thing is to provide affordable transportation options for our most vulnerable citizens.

It is time consuming to travel by car from one part of Lincoln to another. For example travelling from south to north or from southwest to northeast takes almost as long as travelling to the outskirts of Omaha.

I believe that all of these goals are important. However I think you need a system that is functional and affordable above everything else.

Severe lack of maintenance causes deaths. I saw this when I lived in Michigan during the recession. In my opinion, this is a safety issue.

Mobility and system reliability must be maintained. The current bus system is completely inadequate for the south areas of town.

Transportation equity ensures that ALL can travel, which in turn boosts economic productivity and availability of service jobs in high-income living areas.

I feel these 3 are the most vital to our future as a community.

I want to be able to catch a bus anywhere in the city to go anywhere in the city. Coverage is sparse in areas. And I want the bus system to be environmentally sustainable. The others are all tied for 3rd.

We need to be able to focus on caring about how we are impacting the environment, how we are increasing access, and how we are focused on increasing equity within the community.

The maintenance and sustainability aspects should come prior but are not really more important than equity within the community.

Maintenance is clearly number one, in some significant ways we have failed over the last several decades as a city/county to maintain the great transportation network we had built, like much of America, and allowed the infrastructure to rot. Unfortunately this will require significant investment to now fix, as problems that would have been solved cheaper had sufficient maintenance been performed, will now be proportionally more expensive due to deferral. The only way to get ahead of this cycle is to start prioritizing the small problems before they become big problems, otherwise we're stuck in a cycle of only fixing the problems once they're big and expensive.

To me, Lincoln has always been a community ahead of the curve and, I think, the city needs to adapt to the changes coming whether it's autonomous transportation, newer approaches, etc. To me, an autonomous, electric bus/transportation system would serve the community well and the city could work with UNL to propose and develop such a service.

B uses don't have enough riders to make them viable at this time. I see empty or near empty buses all the time.

this town as put transportation on the back burner for 40 plus years

An inequitable transportation system will continue to harm people of color and low income individuals. To truly thrive, Lincoln must have infrastructure that allows for multiple modes and ensures the safety of pedestrians/cyclists. I was car free for two years in Lincoln and used a bike as my primary transportation. I found many places it was hard to get to by bike, especially to affordable grocery stores

if someone lives in downtown Lincoln which is a food desert. I have used the buses rarely because the times I would want to use them, to get home late at night on the weekends they do not run. By not having late night service on the weekend, you are essentially forcing people to drive into the Haymarket or Downtown for their nights out. In order to increase livability, there must be multiple modes available to get people where they need to be.

It should not take over 30 minutes to get across our city. We need bypasses and more efficient routes.

First of all, what do those even mean in actual practice?? Does "equitable outcomes" mean we need as many miles of bike trails as we have roads or does it mean every business has the same level of access for its patrons? If so, no, I don't agree with "equitable outcomes"! Does "Livability and Travel Choice" mean more forms of transportation that the citizenry isn't even asking for? These are very difficult to rank if there are no concrete explanations as to what, exactly, is meant by these catchwords.

The main purpose for roads should be to get people from one place to another, safely, and in an efficient manner. That's it, that's what people want. Everything else is extra. Those roads should connect businesses to their customers but those connections shouldn't impede everybody on the road. Providing multiple options for transportation should be considered IF we have the demand for them. Providing multiple options that will never/rarely get used is a waste of finite resources. While it is ideal for the roads to be "attractive", we should always ask if the costs for these enhancements are worth it. If these enhancements hinder the flow of traffic, increase maintenance costs, or increase the building costs, we should be asking "what is the best way to spend our tax dollars so as to be good stewards of the taxpayers' money?" Thus, the cost effectiveness is considered integral to every project from day one.

Just my assessment of the proposed goals. All are important.

I look a maintenance of roads and equipment as number 1 because if not maintained, will cost everyone more.

Funding cost is next because I don't want to be paying more wheel tax. Wheel tax should be abolished. The original reason for the wheel tax was to fix roads in Lincoln. That tax has now changed to fund Lincoln schools too.

We had a chance to remove the wheel tax when we were allowed to add a .25% sales tax. If it had been .5%, we could have made enough to abolish the wheel tax and everyone using the roads would be taxed.

the taxpayer is tired of footing the bill for projects- figure out how to created funding outside of raising taxes

Transportation equity? Really? Equitable for who? Does a black woman or white man or Asian male all pay per hour to park at a parking garage or parking stall. Equitable? Really? The plant Earth only has so much land mass, and whoever owns the land decides what to put on it. I can't imagine you can make things equitable. Go ahead and tell me a black person will pay less than a white person for the same parking spot and see how far that gets you. Equitable? Have you ever heard of imminent domain? That's the most pathetic statement and priority I have ever seen.

Maintaining roads, keeping them safe, and budgeting them to continue those things is clearly most important. The rest is done through innovation and personal choice.

I have ranked them in this order, because I work for the State full-time for 13 years riding the StarTran , which I have to: 1. Be to work on time; 2. Safety with the variety of passengers you're surrounded by; 3. Had times people were messy on bus & as a 7 a.m. rider still seeing the mess a couple days later & sticky I commented to driver; 4. Even if I'd consider another personal medical doctor or job position many

options are gone when StarTran is such a limited area for the land spread our City Limits covers; 5. Have option to access smaller businesses for access & help on issues; 6. Funding & cost effective for all lifestyles; 7. & 8. Were hard for me to define priority after #1-#6

dfa

just my thoughts

my feelings about how city should move forward with future transportation needs

All of these goals are noble and great goals. I just think the reliability piece takes the cake because how good can a plan or project be if it is not upholding system reliability.

When I read your goals I understand why driving in Lincoln is so frustrating 1. Efficient flow both day and night 2. Maintenance completed with some sense of urgency 3. Stop putting 40 signals in 1 intersection

Too much time and effort is spent on making sure every citizen can drive his/her own vehicle and always park at the front door of whatever. Less concern about individual transportation options and more concern about public transit options is needed. Cheap fossil fuels are not the answer. Include economic and social impacts on climate and sustainability in models. Are numbers of vehicles per person >16 yr going up or going down? Are numbers of occupants per vehicle per trip going up or down? Do you care? Are there targets for these? What are other quantifiable targets?

Our streets and sidewalks are in terrible shape. Our neighborhood campaigned to support the quarter cent street improvements. We haven't seen any of it applied to the core of the city neighborhoods.

I enjoy public transportation in Lincoln but I believe it could be more sustainable environmentally, possibly by investing in electric busses or something of the sort to help not only sustainability but also cost effectiveness.

1. As this plan is a long term goal I believe one of the most important things is Environmental Sustainability. It matters to every individual, group, and living being in our city and around the globe and making an impact here will not only benefit Lincoln directly, but everyone. 2 & 3. Having the ability to easily move around Lincoln no matter where you live is highly important as it unifies our city and helps people with work and recreation without putting more strain on our streets as Lincoln continues to grow. 4. Making sure these transportation choices are safe is key to the public using them. 5. If public transportation falls into disrepair people will stop using it and our city will be worse off both ascetically and economically. When people move around it could be for work, and if people are unable to work that hurts Lincolns economy. 6. Obviously finding a balance between cost and the funding procured is a hard game to play, but I believe investing in renewable/manual modes of transportation is awesome! Example: Slowly converting buses etc. to electric and having solar to charge them would be amazing! Up front costs would be massive yes, but long term they pay off not only financially but also environmentally. 7 & 8. I think making sure everyone has equal access is important but I think that was covered in #2 and 3.

27th & Hwy 2 is a log jam. North South traffic is terrible in Lincoln

Walkable/bikeable cities are important ways to create environmental sustainability. And contribute to people interacting in the street or bike paths, as a way to build the commons. Something that is sorely lacking in Lincoln with everyone isolated in cars

It's most important that our options for transportation fulfill the basic purpose of getting everyone where they need to go without immense difficulty, which is why I prioritized mobility/system reliability and equity. The safety and quality of that system is the next most important consideration. I also

ranked sustainability in the middle because transportation modes can contribute to the deterioration of our climate or slow that impact significantly.

Each of these goals are important, but we are in a critical moment where climate change mitigation and making sustainable choices are imperative for ensuring a livable future.

It's important that people of all income levels are able to take advantage of well-maintained transportation systems and that those systems allow people to get where they need to go.

As a cyclist riding safe, pleasant streets is my #1 priority.

Our streets and infrastructure haven't been well maintained, which costs more long term. Money must be spent with good forethought and environmental soundness. Reliability and safety will guarantee success.

The current model is outdated, under-utilized, and dependent on taxes. Think outside the box. A fleet of small, self-driving vehicles -- on a grid controlled by a central program -- could be reserved for point-to-point travel. Let's call it "StarPod." (Mobility and System Reliability.) It is convenient, so it will attract median-income users as well as low-income users. It can start small and build a bigger fleet as needed, or sell of vehicles if it needs to shrink. People can buy into the system long-term instead of owning a car. (Funding and Cost Effectiveness.) Big buses are expensive to maintain and hard to pull over without blocking traffic. Mass transit in Lincoln is only practical and profitable for work commutes at 8 a.m. and 5 p.m. Pods are cheaper to operate and repair, and they don't require drivers. (Maintenance.) Pods need cameras for security. The central computer system needs protection from hackers. Some pods need to be customized for children. The city can designate parking spots for pods anywhere. (Safety and Security.) StarPod is fully customizable, so it is easy to use, and it serves every neighborhood equally. (Livability and Travel Choice.) Its door-to-door service works for youth, the elderly, and the disabled or in all kinds of weather. (Transportation Equity.) Start and end points are determined by users, so every business and workplace is supported. (Economic Vitality.) StarPod can utilize vehicles that run on clean fuel. (Environmental Sustainability.)

i think it's important to provide safe and reliable connectivity between all areas of Lancaster County

Made sense to me.

Transportation has to be reliable, cost effective and all modes of transportation should be welcome and given the utmost importance, including public transportation and cycling

I worry that the people who would select transportation equity are not properly represented in this sample, so I ranked it high. I worry that safety & security would mean a policed transportation system, which I do not find necessary with proper education and social service funding.

Need better public transportation options. Yellow flashing lights overused

Livability critical to establishing options for use.

Would like transportation easier for all not just to go downtown

The system needs to be oriented to the needs of all kinds of people.

I'd much prefer to drive in Chicago than anywhere in Lincoln because for as fast as they drive, Chicagoans can navigate their streets and know what they are doing. Street layout in Lincoln makes NO sense, nor do drivers safely navigate them. Throw public transportation into the mix and Lincoln is a really a backwards town.

In reality the are about equal. I would put Environmental Sustainability Slightly ahead of the rest

I don't believe the overall transportation picture is equitable or provides for being able to travel with a variety of viable possibilities for those who may not have an automobile or someone to get them somewhere. We need a transit system that makes it possible for ALL people get ANYWHERE in the city they need to go in a REASONABLE amount of time.

Safe, low cost, close to home and point B.

Public safety is the most important aspect to me concerning this topic. Our transportation system should be based heavily concerning safety/security.

The system needs massive expansion to serve our population and working poor!

It does no good whatsoever to continue building new and longer roads, if you are not properly maintaining the existing roads we already have. And our current administration is falling very short in this whole area of maintaining roads. Many of our streets are in pathetic shape. And it seems like nobody really cares about that. so that's why I put maintenance as number one by far and away the most important reason.

city gov. is only one sided

It is very difficult to achieve any of the other goals without mobility and reliability. If the system, is unreliable, residents will continue to choose cars over other forms of transportation.

We need longer hours, better routes, a new hub and free fares

Have never had a car, but have used the bus for years.

I want to make sure we balance pedestrians and bikers' needs with car and bus travel

Environmental issues are huge for sustainable equity and long term effectiveness. I am very concerned about this and want more trails to support safe alternatives to driving.

I want roads that aren't going to have to be fixed right after they get built

Balancing wants with needs.

Lincoln only succeeds when we ALL succeeds and transportation can be a major barrier to people if not done right. I also think that we must embrace that the environment is actually what all life depends on....even the stock market. Without a mind toward inclusivity and sustainability, Lincoln will not thrive.

When I lived in Minneapolis about 10 years ago, I was so pleased to be able to bike, bus, and light rail everywhere I needed to go in a reasonable amount of time. It allowed me to save money on transportation at a time when things were very financially tight. It was such a relief during financial strain to not have to worry about transit, too since that was how I worked, socialized, and got my groceries.

I was so surprised when I moved here that SOV get right of way and do things like pass busses after coming from other communities that prioritize carpool, zero emission, and busses.

n/a

Transportation should be prioritized for the people who need it for their daily lives above those who use it as an option or for shopping and entertainment purposes. If it is to be a useful system, it must be reliable and well-maintained. New projects should always be undertaken in such a way as to have minimum impact on the environment and promote a healthier community.

We need to get the truck traffic off of Amberly Road and 148yh Street in Waverly as much as possible.

Based on my needs

Right now we have a maintenance issue in Lincoln. Things don't get fixed soon enough before the become a major issue and cost more money.

Example: Tierra/Williamsburg Trail between Sequoia Street and Tierra Park is being washing out by the creek for the past 3 years, its just a matter of time before the trail will be washed out and we have to make a major repair.

Maintain what we have!!

Increase access(lanes to 27-40&48st)

Driving is easy, biking more problematic

This, and perhaps all ranking is somewhat arbitrary; but in some cases, if you design and maintain a system with usability, sustainability, reliability, safety and security, vitality, and equity in mind; then it stands to reason that effectiveness, maintenance, reliability, usability, viability and sustainability can become a holistic feedback loop. Once any few of those starts to falter significantly, the entire system can become lop-sided, and start having sustainability, funding and cost, safety, or any of the other interrelated issues. Perhaps asking someone with a holistic, interconnected worldview is either not helpful at all, or a reminder that priorities often need constant and continual reassessment, just as diagnostics, usage, and somewhat more elusive but recently more quantifiable social perception statistics. In other words, Yes, all of the above, with effectively equal weight, as drawn in the Venn diagram.

In my neighborhood, the sidewalks are intermittent through out the neighborhood. i see this issue to be unsafe and not very inclusive for children, families and limited ability persons for pedestrian travel throughout all times of the year.

I chose 1 for safety and security because I want to live a place that safe and I can call HOME.

After the riots of this summer that took place in our city that disrupted the transportation framework of the city the number one priority has to be the safety and well being of the citizens and property of the city. BLM and Antifah are scary people and need to be dealt with accordingly.

Franklly all of these goals are really important. A safe, well maintained road, bus, and trail network is key. It should also be equitable for all citizens.

equal transportation opportunities allow for more reliability, opportunity, and stability for people in need.

It’s in the available transportation that quality of living can be shared by all. Let us provide reliable, healthy, and wide ranging opportunity.

Approximately 30 years Lincoln had a mayor (Johanns) who cut taxes by not maintaining streets. It took about 8 years before it became obvious that our streets were beyond repair and very expensive to replace.

If its not sustainable, its wasteful and harmful. One should always take care of what they have before expanding, but always look to the future. Work with the given budget and get the most out of every dollar. Make sure those dollars are spread evenly. Citizens do not fundraise for roads, nor should they have to for commuter trails.

Our community is aging and we currently have limited travel choice, unless you are able to drive. Driving alone is not a sustainable mode and the transportation system needs to be forward thinking and make efforts to include more choices for travel options.

I always believe in maintaining what I have over acquisition of more.

Just need better ways to travel across the city faster.

All of the topics are very important. I tired to ride the bus to work. It takes too long and we cannot just have more cars on the road. Safethy is very important too.

In working with the cultural centers, health equity in regards to transportation options, connection to neighborhood and everyday places, multi-lingual information and resources are necessary

These categories are all too vague. Need to define what they mean!

I bicycle commute, and would like to see many more people commute and do errands and commute by bike.

This is what is important to me.

Public transportation will change - driverless vehicles, much more responsive and adaptable. Bus routes will die as direct services are provided.

You honestly need all I to have a successful plan.

To me, people choose where to live and work based on comfort and ease of use, amenities and livability. You can do most jobs (X) anywhere but how you enjoy where you live, retains and attracts new residents, companies, and investment.

Ranking doesn't help me: a sustainable and equitable system is also multi-modal and supports economic vitality.

Prefer to have environmentally friendly mobility choices that allow all in the community to get where they need to go

In every service, maintenance is very important, however the other points do not detract from any merit, since access, the vitality of the service, everything is related and they are points that should be considered.

I think maintenance is essential, since the safety of the transport units depends on it, and the main and secondary roads and streets are totally renovated and efficient.

My personal story is when I had my baby in my arm I had to use transportation and with the cold and what it took to take me to my destination it took 2 hours to go and back 2 more hours so it was all very hard in the winter

What types of transportation do you use to travel around Lincoln on a regular basis? Please select one or more of the following modes:		
Answer Choices	Responses	
Walk	**73.7%**	165
Bike	**48.7%**	109
Personal Vehicle	**92.4%**	207
Carpool	**10.3%**	23
Bus	**23.2%**	52
Handivan	**0.0%**	0
Taxi	**0.5%**	1
Rideshare (such as Uber and Lyft)	**16.1%**	36
Other (please specify)	**0.5%**	1
	Answered	**224**
	Skipped	**6**

On a scale of 1 to 5, with 1 being best, how would you rate the ease of traveling in and around Lincoln?

	1 – Very high		2 – High		3 – Neutral		4 – Low		5 – Very low		I don't know		Total	Weighted Average
On Bike	**9.1%**	20	**38.6%**	85	**22.3%**	49	**10.9%**	24	**2.7%**	6	**16.4%**	36	220	2.52
By Foot	**8.6%**	19	**27.0%**	60	**32.9%**	73	**19.4%**	43	**8.1%**	18	**4.1%**	9	222	2.91
By Bus	**2.3%**	5	**6.4%**	14	**15.9%**	35	**28.2%**	62	**23.2%**	51	**24.1%**	53	220	3.84
By Car/truck	**25.9%**	58	**39.3%**	88	**16.1%**	36	**13.0%**	29	**4.5%**	10	**1.3%**	3	224	2.3
Bus	**0.0%**	0	**0.0%**	0	**0.0%**	0	**0.0%**	0	**0.0%**	0	**0.0%**	0	0	0
Handivan	**0.0%**	0	**0.0%**	0	**0.0%**	0	**0.0%**	0	**0.0%**	0	**0.0%**	0	0	0
Taxi	**0.0%**	0	**0.0%**	0	**0.0%**	0	**0.0%**	0	**0.0%**	0	**0.0%**	0	0	0
Rideshare (such as Uber and Lyft)	**0.0%**	0	**0.0%**	0	**0.0%**	0	**0.0%**	0	**0.0%**	0	**0.0%**	0	0	0
													Answered	**224**
													Skipped	**6**

On a scale of 1 to 5, with 1 being best, how would you rate the ease of traveling in and around Lancaster County, outside of Lincoln?

	1 – Very high		2 – High		3 – Neutral		4 – Low		5 – Very low		I don't know		Total	Weighted Average
1	**9.4%**	21	**31.3%**	70	**29.0%**	65	**10.7%**	24	**8.0%**	18	**11.6%**	26	224	2.74
													Answered	**224**
													Skipped	**6**

Phase 1 Online Survey

Please share why you rated the ease of travel by modes this way:

Getting north to south & vice versa can be difficult/slow/frustrating depending on time of day

I mostly bike and am pretty neutral about it

Personal experience

it's hard to fly into lincoln and there isn't a way to get to lincoln from OMA

The bus doesn't run frequently enough to count to the people who need it. The city is way too spread out on foot, I can only travel on foot because I live near the capitol

I didn't rate it higher because there are some potholes.

I regularly travel by foot around my home using sidewalks and the trail system, and periodically in the downtown areas of Lincoln. Travel by foot is smooth and safe in the areas I am walking.

I periodically travel on bike on the trail system near my home and travel there is smooth and safe.

To the areas I travel in and around Lincoln by vehicle, the roadway systems are for the most part well-connected and can handle a fairly high volume of traffic. I tend to use main through-streets on the edges of town if I am going from one end to the other because going across Lincoln through the middle takes longer with so many traffic signals.

For my personal experience when I rode my bike along the trails and walked my dogs in my neighborhood. The sidewalks are pretty smooth with a little bit of bumps.

I feel bike lanes downtown (especially N Street) have taken a higher priority than car traffic. I rarely see them being utilized and it creates congestion while waiting for the bike lane lights when there are no bikers. Some times during the day lights are synchronized to promote traffic flow while other times they are not. The yellow blinking turn lights at some intersections are frustrating during certain times of day. Roundabouts and the south beltway have taken funding that could be better served properly resurfacing heavily traveled in road towns that have continued to go down in quality. Blinking lights at intersections such as Omaha has utilized during the overnight hours would be nice.

Getting around Lincoln is not easy to do. My wife works for the State of Nebraska and her office is moving to Fallbrook. The StarTran does not have an option to get to Fallbrook without walking or running across Hwy 34 safely when people are always running red lights. The safety applies about driving in the city when there are very few through streets getting across or around the city limits. Then its hard to determine when to start driving at a red light with most times 1, 2, and even 3 vehicles run the yellow lights that are already turned red.

The sprawl of Lincoln makes bike and foot travel difficult, even if there are nice paths to do so. Within a mile or two of downtown it is doable, but further away it gets more difficult to do so efficiently. Bus is also low because has limited routes and is often late. Car, unfortunately, is the only high mark--the only reason it is not "very high" is because of occasional congestion and sometimes-scarce parking.

Wish you had good or ok instead of high.

The bus system is infrequent enough that it's very inconvenient. I think that the transportation system should be designed so that navigating by car is difficult, which encourages bike, foot, and bus transportation.

I have used both the bus system and bike in the past, which have worked. Getting across Lincoln is a bit more challenging by personal vehicle.

Light are poorly timed seems like I have to stop at every traffic light even when there isn't any cross traffic

Well designed streets for cars. Need work on bike lanes to get to downtown from other parts of the city

In the downtown area, traveling by bike or on foot is closer to a High rating; however, the rest of the city prioritizes car travel, which disincentivizes walking and biking (less safe, more stressful, vast distances). Traveling by car in certain directions may be rated Very High, but traveling in other directions may be rated Neutral. I don't travel by bus - it's unfamiliar to me in Lincoln. With more familiarity, my perspective my change.

Lincoln is set up on a grid system and it's easy to navigate

It's super hard to travel within or outside of Lincoln with the bus system. The bus system in Lincoln is slow and many areas in Lincoln cannot access it.

Why do we have projects like the X as part of the Antelope freeway that have no way for pedestrians to access this important bypass? If I want to walk in this area I am left with the sketchy bike path rather than a more direct route to UNL and the Haymarket. Plan for pedestrians rather than bikes or cars which are privileged in recent projects. I need to feel it is safe to walk somewhere and if needed try to flag down a car if things get rough. Lincoln is no longer a sleepy little college town. People are mugged and worse, so please keep that in mind for those of us who prefer walking to riding a bike.

It seems to me we have a great trail system for biking and walking. Our existing roadways are not well maintained and only built out reactively, not proactively. Lancaster County has many roads closed due to bridges and county gravel roads are very rough / washboarded.

Downtown bike lanes are between two car lanes. Drivers routinely pull into the crosswalks and don't look for pedestrians. Sidewalks are typically poorly shoveled in the winter. No expressways/highways to get across town easily.

I do not have a car and I depend on bus lines to traveling in and around Lincoln

I ranked bus low because no coverings/benches and not an abundance of routes. Car is easy, and relatively quick. Every thing else is alright.

Downtown area of Lincoln is a mess of one way streets, and randomly ending roads. The rest of lincoln is easy to get around as all the streets a straight forward, 2 way streets

More bike trails and sidewalks are always appreciated. More bus routes and a better-designed app/information would also be helpful

There needs to be a train between Omaha and Lincoln I have gotten trapped in one location or the other before and it would help a lot on game days.

Traveling by car gets easier as you become familiar with the layout of Lincoln, but it can be really confusing at first with a lot of one-ways and few grid systems. The number of bike lanes has been increasing rapidly, and the trail systems are really well maintained - but I think there's always room for improvement with these methods, in particular with bike lanes around the city.

There are certain advantages and disadvantages of each choice. Walking is the easiest mostly because you don't have to deal with one-ways and medians. There is a lot of construction that can block up the roadways and bikeways, sometimes at very inconvenient locations. Nonetheless, there are a lot of nice trails connecting the city that are generally pretty well maintained, and the numbered streets with only the major labelled by name are convenient for navigation. The bike lanes are also nice, where they are present.

Lincoln was built around cars, everywhere else is farmland

Most methods are pretty doable. There's adequate paths for biking and walking, and a good bus system. But traveling by car is a nightmare. Between traffic congestion, inconsiderate drivers, and general mayhem on the roads, Lincoln is easily one of the worst cities I've ever had to commute in.

The hub-and-spoke model of the bus system is not a good one for how Lincoln is laid out. All routes are terribly indirect, and it takes too long for most trips to be convenient. Because of that, most people who are going to use the bus systems are the people who have no other choice.

Regarding walking, certain areas (i.e., downtown) are conducive to walking. But all other areas are designed solely to be easy for cars, which makes walking more difficult. Denser development and mixed residential/commercial zoning outside the downtown area would go along way in making Lincoln more walkable.

In general, Lincoln has great biking /walking trails. BUT biking routes in traffic lanes and narrow excesses over bridges scare me to death when I am on a bike

Bike trails are great! Bike lanes are not great esp downtown, otherwise bike travel in Lincoln is very easy. Bus schedules and routes could serve the community more thoughtfully. Please stop with two lane roundabouts for cars. Walking is good I like it

It remains difficult to get from one side of Lincoln to another via car. Central roadways are frequently congested, and hwy 2 usually requires going out of the way.

Just very little public transportation and constant construction.

Usually there are sidewalks in most places so you can use a bike or walk to get there. There are streets everywhere so traveling by car will get you anywhere. I feel as though the bus lines are too constrained (not many paths), usually offer limited time(some buses only come once an hour), and the reach of the bus is limited to the inner city for the most part.

Everything is working alright but obviously could be improved from an efficiency standpoint.

Bus frequency and length of evening and weekend service in Lincoln should be increased to improve ridership.

The bus routes in Lincoln are terrible and don't cover all parts of town. Walking is ok if there's sidewalks, many neighborhoods don't have sidewalks so you either have to walk in the mud/grass/dirt or walk in the street. I wouldn't ride a bike in Lincoln, especially on the street. Drivers don't pay attention and some bike riders don't follow the rules of the road by signaling turns, stopping at stop signs/stop lights, etc.

I like the bike trail network and bike lanes, but there's always room for improvement. If it wouldn't take me 1.5 hrs to travel from my home to work by bus, i'd use busses.

Walking and biking around Lincoln is decent but there are a lot of places where sidewalks are not available to walk safely. The Mopac and other trails are awesome if they go the direction you want to go but there are plenty of areas where riding a bike isn't as safe (no trails or bike lanes etc). Driving around in your own vehicle is super easy in most cases, but riding the bus is not fun. It takes forever, there aren't a lot of options and usually a few changes are needed to get where you are going and the frequency of buses is poor.

I am providing pre-COVID assessment since travel patterns have changed recently. We do not have any good north-south or east-west highways within Lincoln. City should take a second look into converting 27th street from two-lane to 4-lane between Hwy 2 and South St (Country Club area). I know its a hot potato.

I think that bike transportation is okay. The farther you travel outside of the city the harder it is to find places to lock up your bike (although that is also true within the city in many places as well). I think that bike transportation would be improved if there were more bike lanes or signs supporting sharing of the road. I just don't want to get hit by someone when I'm biking in places where it seems like people who are driving cars act completely entitled to the road. The biking trails are helpful though and I use them all the time. Having more of these may be useful as well.

Traveling by foot is okay. Sometimes there aren't enough sidewalks in places. Sometimes people want to get in a right hand turn immediately and almost hit me with their car. I know a lot of comments are about culture, but perhaps changing transportation options will change culture over time.

Bus is really not as good as it could be. It's mostly reliable, but sometimes a bus comes early and there's not really anything you can do but wait for the next bus. If you're lucky that's in 30 minutes or less, but it might be an hour depending on the route or time of day, which is horribly inconvenient. There are definitely places in Lincoln that I need to travel to that are not very convenient to do by bus. For example, getting to the airport requires two separate bus rides for me and might take about an hour to do it even though it's a 15 minute car ride from where I live.

The various paths/sidewalks around the city make it easy to navigate by foot.

The bus system is quite lacking when it comes to navigating anywhere other than downtown. There's also no late night bus service for those who work later shifts, and no bus service at all on Sundays.

Traveling by car is quite easy and Lincoln is a pretty navigable city. The only complaint being that the volume of traffic making cross-city drives considerably long.

My experience.

I don't bike, but I know many people who commute this way and know that the trails cover a lot of the city. Walking can be convenient in some areas and busses are hit or miss. The busses between East and City campus are great and I use them regularly, but I find it more difficult to reach other parts of town this way.

The timing on the stop lights is an absolute mess. I have lived in several cities of various sizes and what takes 15 minutes in other cities usually takes 25 minutes in Lincoln.

We have great bike paths that connect many parts of town. Walking can be challenging due to distance from one part of town to another. The bus system going into downtown is problematic in terms of route options. As an example, if I were to ride the bus from my closest bus stop, I would be dropped off at the State Capitol and then need to walk another 2 miles to reach my campus office. With bus time and walking time, that means I have about 1 1/2 hours of travel time for a 7 mile trip.

Unless you live downtown or near campus, by foot or by bus doesn't work well.

I think there are enough ways to get around town on foot without too many issues. I think the bus system does a decent job for a city of Lincoln's size. I think traveling by bike and car pose challenges, especially for certain parts of the city.

I don't have a car (or a bike at the moment) so I have to depend on friends and family to take me out of Lincoln

There's so many potholes and uneasiness when I'm walking downtown. I wish there was more patrolling or perhaps emergency poles similar to ones on UNLs campus. Driving-wise potholes are the biggest issue.

It's hard to get from north lincoln to south lincoln in any sort of capacity. Very congested traffic all the time with no fast way double lanes except for opposite sides of the city at 11th and 84th st.

For 6, it depends on if you are considering public transportation. Public transportation outside of Lincoln is way crappier than transportation inside of Lincoln. Roads are well maintained and easy to use in a personal vehicle.

5 Bikes: WHY AREN'T THERE BIKE LANES ON THE STREETS??? There are wonderful bike paths, but if I want to bike to a destination that isn't near a bike path, there is no safe route. That puts me back into my car. Why?

5 Foot: The lack of bike paths forces bikes onto the sidewalks. And while these are nice, dodging the occasional rude biker is unappreciated.

5 Car/truck: Generally well maintained roads, generally low traffic, a pleasant journey. Winter clearing of ice seems to be an issue here. Why? Had much better clearing in Michigan. Why don't the darn plows scrape the roads of ice? Waiting weeks (residential) or days (larger roads) for the ice to melt is a ridiculous safety hazard and I've personally broken my hand and been hit because of others' driving skill. Why?

The bus system (routes) need some work, but I like StarTran. The spoke and wheel design should be improved upon. Also, I love the bike trails, but there needs to be a north-south corridor closer to 40th street. The 84th street trail and the Billy Wolf are great, but there is hardly anything in the center of town to go north-south via bike.

It's easy to default to my car because it's easy. I work downtown and would love to utilize the bus system more often. But I don't feel like it runs often enough and sometimes I work odd hours and the busses don't run at those times.

Our sidewalks are safe and well maintained facilitating walking. The buses are okay but don't run frequently enough. Roads for cars are good but there is no easy way to get across town.

The roads are maintain in and around Lincoln and Lancaster County. New construction is always annoying, but is vital for maintenance

I don't regularly use bike or bus enough to comment. While some areas are pedestrian-friendly to walking like downtown, the more suburban areas can have trouble connecting - missing sidewalks or lack of cross-walks. The trail system does a nice job of a walkable "interstate" moving from area to area. Travel by car/truck is obviously the easiest, and while there's work to be done on the road network in Lincoln/Lancaster County, it is our strongest mode of travel.

Even though I work in Lincoln I live in a town/community outside of city limits. It has limited bike/walking trails and its streets are either old or new, nothing in between. I'd love for my community to develop more bike trails, trails that would connect with trails leading into or out of Lincoln.

I don't know any of this question.

Lincoln has poor road system for a city this size

Walking around Lincoln can seem dangerous in the neighborhoods due to the lack of street lights available. The lack of people on the sidewalks makes one feel more vulnerable and concerned for safety. There are good strides being made for bikes, but buffered bike lanes are necessary. The lane on 14th street is unusable for those who are nervous about riding in traffic. More lanes that are protected from traffic are necessary.

Traveling by car in Lincoln is frustrating. There are multiple roads that change from one lane to two and sometimes more than once. These changes cause long lines and unsafe "racing" to merge into traffic. Many main roads don't extend from one side of town to another, so that forces people to use the ones that do in higher numbers. Many of our main roads do not have turn lanes, again, causing backed up traffic. When walking in Lincoln, especially downtown, it is very easy to get from one place to another. Most neighborhoods have sidewalks so, again, walking is easy.

Other than during road construction season, getting around the city and county is not problematic.

If I used my own personal car it will be - very- high but , the other way of transportation is very low

I go from North Lincoln to far South Lincoln on a regular basis. It always takes 25 to 30 minutes to cross the city.

Synchronization of stoplights for North-South and East-West travel would increase efficiency.

I know Controls. Synchronization would be easy to accomplish. Pick a safe speed like 5 mph below posted speeds. Pick a spot to begin like 9th and O. Start heading South at O street. The next stop light should turn green when a vehicle traveling 5 mph below the speed limit approaches the light. If a vehicle turns, it would be subject to the other direction synchronization but, after the first light, would be able to catch up.

I believe that traffic actuated lights could be used in the control scheme. During the normal Red light cycle for the main street.

street system is a mess- 2 names on many streets, don't go all the way through, 2 lanes turn into 1, some one way, round abouts, no well layed out- like San Francisco

Lancaster county and Lincoln city need to stop getting into bed with each other and separate themselves with each other. The city of Lincoln has vested interests in projects and programs that the county doesn't, and I think the city should move away from it's habitual co dependency on Lancaster County. Group think is prevalent and the City of Lincoln needs to take care of it's own interests first. Also, the streets in the city of Lincoln are the WORST. Why the heck you have so many one way streets and so many islands in between lanes that a person can't even make a U turn without turning around? Too much concrete in the middle of the road. Too many "No U Turn" signs. 27th Street needs to be wider and screw the Country Club Homeowners Association who bitch about their golf course to do it.

Sick and tired of not being able to make a left or right turn or pull out of a parking lot because the city wastes money putting concrete in every center lane. Stop wasting my money pruning trees and grass on islands in the middle of the roads. Those concrete islands should be filled with stone with no money wasted paying people to prune trees and mow grass. Less concrete in the middle of the roads means more money for improvements. It's time for Centennial Mall area to get rid of the parks, monuments, and walk ways and open that section of town up for cars. Sick and tired of making U turns because some overpaid traffic engineer is worried someone is going to get a fender bender. Too many one way streets. Too many prohibited left hand turns. ALSO VERY DANGEROUS, som of the four way intersections in the residential areas and school zones have no stop signs at 4 way intersections. School children have almost been run over. Someone is going to get sued. At least have 2 of the 4 intersections with a stop sign? Closing Camp A way? FOr what? There is plenty of land elsewhere for ythe city and state to ruin a perfectly good campsite for a transportation facility that can easily move elsewhere. The city demands citizens shovel every night, and last year a snow plow went down my street ONCE/ Really? Why are citizens held to a higher standard than city showplow workers. My neighbors and I are sloveling our streets because the city's snow plows suck. What's the point in shoveling my sidewalk with 24 hours if the city street snow plows don't show up at all. I can't even get down my street to my house because the snow isn't plowed, let alone get home to shove my sidewalk. That shoveling ordanince is pathetic. Detour signs posted during street construction are horrible, leading people to turn left or right for a construction detour and then not navigating them to another route. Pathetic.

We need to improve the roads, cut down on lights, and provide ways around the city without going through it to relieve pressure inside.

I don't know rank wise because I don't use the County's country roads that frequently except to go to the different State parks & management areas on the weekends.

lincoln roads are terrible,bad conditions etc

prim arily I use my car so can't speak too much to other forms of transpotation

The way you have all bus routes routing as a hub and spoke with hardly any cross town, north to south routes makes it hard to use the buses in Lincoln. Let’s say for arguments sake, I’m a resident living near Southeast HS and I have a job at Menards on N 27th. The bus I would have to take would bring me all the way downtown where I then transfer to another bus. That drops me off. Wouldn’t it be easier for me to take a bus that goes along South Street to 27th and then go north directly? I think it would. That’s why hardly anyone outside of Central Lincoln uses our bus system.

99 percent of miles traveled in lincoln is always going to be personal vehicles. 99 percent of the funds and planning should go to making that mode of travel faster/friendlier

By foot and bike are relatively easy. The bus system has had its flaws in the past to make it feel just a tad unreliable, especially in winter months.

I primarily bike everywhere I go and Lincoln has done a fairly good job at its bike trails and biking network. Walking you can basically go anywhere on foot...and driving I think round-abouts should be used much more frequently ESPECIALLY when new construction is being done...it reduces emissions from idling cars at stop lights, reduces electricity from the lights themselves, and helps regulate speed by breaking up the straight line as well as speeding intersections up overall.

Travel in the county is passable, north-south traffic in the City of Lincoln is very poor

One way, divided thuroughfare move traffic but are hard to navigate locally and are hard to cross on foot

Lancaster Co is car dependent, but there are road closures and bridges out

I have lived in other communities where traffic congestion was terrible - Lincoln is quite easy to travel by car. We also have a great bike trail infrastructure. I live in the Everett area where pedestrian travel is pretty easy - but that was not as much the case when I lived farther East in Lincoln.

bike lanes going north and south are not safe amd a second thought.

Lincoln is unfortunately built to support personal vehicles over all other modes of transportation. I am fortunate to live on a bike trail that leads directly to my workplace; if we did not have safe access to the trail system, getting around Lincoln by bike would not at all be safe or easy.

Lincoln has a pretty good street system for cars and biking is fairly decent when drivers are attentive to them. But it's not very walkable in general (mostly just because everything is so spread out). And the bus system is abysmal. When I used to try to take the bus, it took so long to get anywhere and the busses came so infrequently that I gave up trying.

We have an excellent trail system that should be expanded and invested in. Despite complaints from crabby drivers, traffic moves well in most of the city.

If streets, trails and bus routine are well May on time, travel is easy.

We have the best bike trails of any city, thanks to the Rails-to-Trails initiative. However, the street routes are undeveloped. Foot and bike travel for shopping is hindered by large, busy intersections where drivers don't pay attention to pedestrian signals. Multiple driveways into parking lots expose cyclists and walkers to getting hit by cars. Personal vehicles are still the safest, fastest, easiest way to travel. Bus routes are circuitous and hard to figure out. Short trips become lengthy affairs. Service ends abruptly at end of day.

City needs to invest in transit and walkability instead of turn lanes and road widenings.

Based on my uses and needs.

Transportation by bus requires more improvements, such as Sunday service as well as overnight services for folks that work 3rd shift

Travelling around Lincoln is a nightmare. If you're in a car, it takes at least 20 minutes to get basically anywhere because there are no byways that don't have stoplights at every intersection. The city is so spread out that walking is not a very realistic mode of transportation. Busses don't come frequently enough and make so many stops - with perishable groceries they are not a viable solution for most. Biking is fine.

Lincoln built for car transit

Don’t bike

Public transportation needs to be more convenient and available. No evening, Sunday or holiday service is a joke.

I will NOT ride a bike in Lincoln period. Would rather walk. Also my last choice to get around is Star Tran because it's the absolute worst. Planners need to go to Little Rock, Arkansas to look at their bus system and the trolley system.

If you don't live near a bike bath that is travelling to an area you would like to bike you are at the mercy of the city streets. If you need to take a bus you may be many blocks away from a pickup/drop off site and have to go way out of your way making connections to get to somewhere much closer to you than how far out of the way the bus needs to travel to get you to the "hub" which is a joke. Some buses

should run routes within the city east and west, north and south, and some diaganols so that routes cross with regularity to enhance a riders trip.

Very little traffic

Without a complete beltway system, to navigate the City of Lincoln is ridiculous. I live in Waverly, it is simpler to go to Omaha and conduct business than it is to go to Lincoln. Way way too slow to get around Lincoln. Concerning the County or Roads outside of Lincoln, not nearly enough hard surfaced roads, there are too many roads with little to no shoulder, traffic counts are horrendous on N148th Street, the urban sprawling east of Lincoln is progressing at an alarming rate and roads there simply so not serve the drivers well at all.

Road maintenance, sidewalks and the timing of lights leave much to be desired! If I didn't have a personal vehicle, I couldn't ever go anywhere!

Lincoln has long been known to many as the city of cow town paths. Lincoln is so far behind the 8 ball when it comes to having proper sized roads to move the traffic that needs to be moved. You only need to look 45 miles northeast of here and check out Omaha. They have interstates and 4 lane divided highways going everywhere. The city streets are ridiculously rough and small. Lancaster' county is no better. With all of the bridges that are closed you cannot possibly traverse the county in a straight line anymore. And if you do, you are stuck on a 2 lane road with no shoulders. So the transportation system going by car or truck is ridiculous in this town.

Traffic is becoming an issue in parts of Lincoln.

At least a third of the intersections I try to use as a pedestrian seem inconvenient at best and dangerous at worst—meant for cars, not people.

I think we do a good job.. Plus I moved here from Atlanta so I love not having any traffic!

I recently had to drive during after school traffic for childcare. Drive across town (only 2miles) is bumper to bumper and tempers are high. It feels dangerous!

Our bus system is a joke. And there has got to be roads that go all the way north/south that are 4 lanes. Not shrink down to 2 lanes in the middle

If you have access to a personal vehicle it is easy to travel around the county. Without it, you don't really have options.

By design the city sprawls like crazy, so walking alone is really only feasible in some locations. As for biking, a lot of the infrastructure seems to geared recreation instead of commuting, but I've definitely seen it improve over the last 15 years. The bus is lovely, clean (love the new electric bus), but nonetheless it takes so long to travel anywhere. Traveling by car is simple and care free with low costs for parking and generally ample space. I worry about such high speed limits everywhere, but again with such sprawl, I'm not sure what else the city can do.

Good road connectivity, very little traffic, navigation is fairly simple

If you have a short distance to travel or your destination is along a bike trail, biking can be a convenient transportation option. Biking in downtown areas or elsewhere can be somewhat dangerous if trying to protect pedestrians and avoid negligent drivers. Driving can be a convenient way to get around, but certain intersections and thoroughfares are not very well-designed. Other transportation options would be helpful, especially downtown, to reduce our need for additional parking lots or spaces.

too much gravel that's not maintained well. Too many brides out.

Based on my needs by a non driver

Some parts of Lancaster County are very easy; others are in need of improvement.

We need better streets and more bike lanes and connecting trails between major trails to encourage more bike riding.

Easy to get around by personal car, biking more of a challenge, bus unknown

Mostly because of two interrelated factors: Attitudes, and commercial and private property attitudes, patterns, and methods that block access to pedestrians and cyclists. For instance, If you live east of 84th street, how are children expected to get west of 84th street safely? How are pedestrians or cyclists expected to get to either the David Murdock Trail, or the East Mopac trail, when the neighborhoods, apartment complexes, and other developments block them off from egress, for 2.5 or more miles at a stretch? Why are they allowed to install earth berms, ten foot fences with gates, and otherwise build roads for cars, but block all pedestrian and cyclist access to the trails, and then turn around to complain about cyclist on the roads and streets? Why are so many neighborhoods next to parks and trails allowed to treat their egress to city MUP trails as their own "private property"? Why are cul-de-sacs allowed, to disrupt motor vehicular traffic, but make it unrealistic for recreational or commuter cyclists to access amenities without first loading up bicycle vehicles on a large motorized vehicle first, then unloading at a designated trailhead? Why shouldn't we also be encouraged to leave from our doorstep, just as if we were driving in our motor vehicle? I could go on, regarding lack of sidewalks, conditions of sidewalks, blocking of sidewalks, with bushes, vehicles, garbage cans, inattentive drivers; I could go on about the inherent unsafe, and unwelcome aspect of riding a bicycle on public streets and roads, even slow, non-arterial, neighborhood streets; I could go on regarding lack of access and egress or consideration of bicycle traffic, and bicycle parking, to and from grocery stores, doctor's offices, even many schools, or any other commercial organization. Essentially: not an unfriendly city, but an almost downright hostile landscape that screams "go away, be normal, drive a car, for crying out loud" for over 45 years now, and it has gotten worse, not much better.

I don't really travel a lot, just go to work place from home. So some are I don't know how to reply.

The county roads I use are a mess, especially Saltillo Road. Perhaps the Southbeltway ill improve this.

The trail system is well-kept and it's easy to jump on a trail to go almost anywhere in Lincoln on bike or foot. Well-kept. By car, streets are clogged, not easy to get somewhere directly--all parallel streets but no bypasses. Truck traffic on major roads slows down higher speed streets. Not well-kept.

We seem to have strange hiccups in what is paved. Buses do not come by that often.

It is difficult for me to walk any distance (half block) so I do not walk. To reach any bustop I have to walk, at least, 4-5 blocks so buses are not even considered. When we bought our house a bus stop was a half block away.

Many sidewalks and commuter trails makes for a "high" ease of travel throughout the city. An expanded network with increased connectivity will only improve it. "Neutral" for car/truck because of the seemingly high number of lights and turn lights that are yellow before the first car makes it halfway through a given intersection.

It's easy to get around Lincoln quickly and efficiently as long as you can drive. Land uses need to be more integrated to increase the ease and efficiency for biking, walking and transit.

Terrible traffic planning including light location and timing. No future planning.

Wish we had more bypasses for car travel

Bus system could be better-more flexibility

Bike trails are good and enjoy

Not enough bypasses

Less traffic so far. As people move to the outskirts of the City it will just get worse with out proper planning.

Good Roads good maintenance

I said neutral because it is not an all or nothing answer...some really good things, some improvements needed

The bike network is still too “recreation-based”. Need more attention to biking and micromobility options as transportation.

When I am biking, I sometimes have to ride through areas of the city that do not have safe or convenient ways of getting from point A to point B.

By foot - non existent sidewalks. Good bike trails and biking streets.

Bus has few options with good times for work commutes. Transfers make travel 3-4 times of driving and nearly double that of bike ride. Few express busses at park and ride locations.

The roads system in Lincoln is horrible. We need an expressway. When Hwy 2 moves south, we need to turn the current Hwy 2 into an inner city expressway. We need to turn 56th Street into a Dodge Expressway. We also need overpasses or round abouts at all major intersections on the current Hwy 2 with frontage roads for the current business

All other modes seem to be pretty well planned and adapted for, however bus schedules are not handy and what's up with the no Sunday service? A city of our size should have 7 days a week bus service.

My neighborhood doesn't have consistent sidewalks or safe street crossings. There are no on-street bike facilities, and when riding I feel like drivers think I only belong on the bike trail (which doesn't go where I need it to). The bus routes are great, but the frequency is terrible.

Easy to get around by car in Lancaster County, but not by other modes. Prefer more connections to trails and more comfortable infrastructure for bicycles and continued focus on pedestrian safety in Lincoln.

The buses are not frequent, it takes a long time

Transportation in Lincoln in any type of vehicle is one of the greatest advantages that I know, despite the problems of winter, where we have to pay more care and attention.

I don't travel much by bus but when I used it it was not very efficient

What are the three most significant transportation challenges Lincoln/Lancaster County faces in the next 30 years? Please select three.		
Answer Choices	Responses	
Aging and deteriorating infrastructure	**74.7%**	165
Service coverage and hours of the public transportation system	**42.5%**	94
Lack of infrastructure to walk or bike as a viable travel option	**34.8%**	77
Rising transportation costs (including parking)	**19.9%**	44
Increasing distances that we have to travel	**20.8%**	46
Increasing truck traffic on our roads	**14.5%**	32
Travel needs of the elderly	**15.4%**	34
Safety	**14.0%**	31
Increasing traffic/congestion delays	**51.6%**	114
Other (please specify)	**11.8%**	26
	Answered	**221**
	Skipped	**9**

Phase 1 Online Survey

What are the three most significant transportation challenges Lincoln/Lancaster County faces in the next 30 years? Please select three. "Other" responses

Sustainability

Lack of major arterial roads

Migration away from fossil fuels.

A need for a freeway or expressway that allows travel crosstown like Omaha. The South Belt way is just the start but try going from the core of the city to the south side of town. Sometimes we just go to Omaha instead of slugging our way to sleepy old South Point or even Lowe's. We feel disconnected from a city that keep growing but seems to be increasing segregated by income.

Lack of snow removal and winter maintenance.

Equity of safety and access for riders across identities and health statuses

I don't see the other "challenges" as challenges of greater significance.

keeping transportation safe and usable in winter weather

Every year the same roads have construction on them for example for the past three years it seems like a major construction project has occurred on Holdredge. This shows a serious lack of planning.

self driving vehicles will replace car & bus

have a plan for area development with better functionality of streets to make it easier to get around, make city maps available- even gps gets confused in this chaotic mess of streets- winter maintenance of roads- better budgeting and cutting costs for important road repairs

I drive past the various bikeways on the cities public street. There aren't enough bicycle riders using the bike road ways to justify the cost. Vine Street areas near the UNL parking garages are bike lanes only and no one uses them. Bike lanes taking up a whole street lane are a complete waste of money.

Lack of growth options.

Unreasonable long time it takes for road projects to be completed

Comfort of use of public transit

We need a train- encourage more public transportation

Trains in south Lincoln with no way to get emergency vehicles across to hospitals without waiting.

Poor design of pedestrian spaces.

Lack of roads on the fringe will continue to drive traffic through our neighborhoods

Technology disruptions - autonomous vehicles, electric vehicle/infrastructure, disruptive change

Widen 27st, 40st & 48th streets

Attitudes, attitudes, attitudes. And speeds. and Attitudes. Particularly the prevalent, ubiquitous, egocentric, selfish, "get out of my way" attitudes.

With the return of railway traffic on the trail tracks on the southside of Highway 2, traffic jams are going to be a problem.

TAXES: County roads are paid by property taxes that include LIncoln's property & County's property. Lincoln's streets are paid by WHEEL TAXES, impact fees & a 1/4 cent sales tax.

1. Adapting to new technologies as it relates to self driving vehicles, alternative fuel sources, and the corresponding infrastructure.

Negative environmental impacts of cars and trucks

The biggest problem in maintaining the material that is used to repair streets and avenues is that they do not withstand the cold and humidity of winter, nor do they last long in the summer due to torrential rains, perhaps new techniques and more materials will be discovered. durable than conventional ones for the next 30 years to avoid the constant repairs left by winters

Please share your zip code.	
Answered	**198**
Skipped	**32**

Which of the following best describes your affiliation with Lincoln and Lancaster County (you may select more than one):

Answer Choices	Responses	
Resident	92.93%	184
Business owner	10.10%	20
Visitor for parks, recreational and/or entertainment purposes	6.57%	13
Visitor for shopping and/or dining options	5.05%	10
Visitor for medical appointments and services	4.04%	8
Student	19.70%	39
Other (please specify)	3.03%	6
	Answered	**198**
	Skipped	**32**

What is your age?		
Answer Choices	Responses	
Younger than 18	**1.0%**	2
18 to 24	**13.2%**	26
25 to 34	**18.3%**	36
35 to 44	**19.8%**	39
45 to 54	**16.2%**	32
55 to 64	**20.8%**	41
65 to 74	**8.1%**	16
75 or older	**2.5%**	5
	Answered	**197**
	Skipped	**33**

How would you describe yourself?		
Answer Choices	Responses	
American Indian and Alaska Native	**1.1%**	2
Asian	**2.1%**	4
Black of African American	**1.6%**	3
Native Hawaiian and Other Pacific Islander	**0.0%**	0
White or Caucasian	**83.7%**	159
Hispanic, Latino, Spanish	**3.7%**	7
Other (please specify)	**7.9%**	15
	Answered	**190**
	Skipped	**40**

What is your annual household income?		
Answer Choices	Responses	
Under $15,000	**7.7%**	14
Between $15,000 and $29,999	**8.2%**	15
Between $30,000 and $49,999	**9.8%**	18
Between $50,000 and $74,999	**18.6%**	34
Between $75,000 and $99,999	**13.1%**	24
Between $100,000 and $150,000	**24.6%**	45
Over $150,000	**18.0%**	33
	Answered	**183**
	Skipped	**47**

Attachment B-3 – Phase 1 Graphical Summary



City of Lincoln
Source: Select Lincoln

Lincoln MPO Long Range Transportation Plan

PHASE 1 OUTREACH HIGHLIGHTS

September – October 2020

Community input provides meaningful context and background information that is used to inform the development and implementation of the Long Range Transportation Plan (LRTP). Including the public in this process ensures the plan represents the current and future transportation and mobility needs for the region. The LRTP project team has used a number of strategies to gather community input. Directed health measures and public perceptions about in-person meetings had a strong influence on public outreach strategies used for this plan.

The development of the LRTP will be informed by community input during three phases of public engagement and outreach:

1

Values, Issues, and Trends

How does the transportation plan capture the goals, address the challenges and accommodate the trends that are important to the community?

2

Trade-Offs, Strategies and Priorities

How can the transportation plan recommend decisions between projects and strategies that maximize the outcomes from the anticipated funding available?

3

Outcomes and Validation

What is the recommended plan and does it reflect the needs and values of the community?

The first phase of community outreach for the LRTP development process began in June 2020 with the launch of a public website, www.LRTPLincolnMPO.com. The social media presence of the 2050 Comprehensive Plan and a municipal press release were the first lines used to promote the new website. The website provided the first opportunity for the community to learn about the LRTP process, history of transportation planning, recent outcomes achieved through transportation planning and contact information for receiving updates about the current planning process. The website also provided the opportunity for the public to provide comments and ideas about transportation improvements.

A variety of public input strategies were used to expand the number and diversity of public input received through October 2020. Social media, virtual meetings, and focus groups culminated with a 2050 LRTP Phase 1 public survey. These combined efforts helped to capture the public perception of goals, issues and trends.

Highlights of the community input received during the Phase 1 activities are summarized on the following pages. Records of public input received throughout the project will be provided in the final LRTP as an appendix.

Lincoln MPO Long Range Transportation Plan

ENGAGEMENT TOOLS

SUMMARY

Project Website and Social Media

The LRTP website was launched on June 2, 2020. The site provided helpful information and historical context for transportation planning, answers to frequently asked questions, an overview of the schedule with links to public materials, access to the Social Pinpoint comment wall and pin map as well as contact information and links to social media pages of the City of Lincoln and Lancaster County Engineering. Social media awareness was coordinated with the Lincoln/Lancaster County Planning Department Comprehensive Plan update. A Facebook post provided a direct link to the website and raised awareness for the upcoming Phase 1 public outreach. Beginning September 21st and continuing weekly, the same Facebook page was used to post topical encouragement for accessing the recorded virtual meeting and complete the online survey. These links were liked and shared by members of the public including members of the Focus Groups and attendees of public meetings described by this summary. To round out the Comprehensive Plan and LRTP media integration for Phase 1 public outreach, the Late Afternoon Show with David Cary, planning director for Lincoln hosted a transportation discussion with the project consultant.

Social Pinpoint

The project website hosted two opportunities for the public to have open ended comments and ideas about transportation. The community was asked to provide their comments as digital sticky notes and their ideas for locations where specific considerations should be made. This input informs the development of the LRTP Current and Future Conditions Report, goals, and recommendations for potential projects. The Social Pinpoint digital platform resulted in 25 comments with online discussion and more than 50 locations.

Community Presentations

The 2050 LRTP Phase 1 Public Outreach was conducted during the height of Covid-19 community responses and directed health measures. The planning process incorporated virtual strategies intended to get the word out to a motivated group of community representatives and leaders. A series of live meetings and one virtual meeting helped to engage the community of Lincoln early and widen the range of the community that received updates about the LRTP.

Focus Groups

A series of 10 focus group meetings was facilitated as small group virtual conversations with members of the community. Invitations to participate were extended to 138 members of the community. The presented materials were designed to be interactive and promote a discussion about the proposed goals, ease of travel, anticipated challenges and potential strategies that could be considered to accomplish goals.

Public Survey

Community input about transportation is provided to help inform the development and implementation of the LRTP, ensuring the plan meets the current and future transportation and mobility needs of the entire community. The Phase 1 outreach public survey was launched on September 21, 2020 and the English version was translated for Spanish speaking individuals. A broad contact list was asked to visit the LRTP website, consider the information presented in the virtual meeting and/or complete the survey online. A four-week social media push was used to keep attention on the survey opportunity. By October 20th, the online survey had been completed by more than 235 community representatives.

Lincoln MPO Long Range Transportation Plan

PHASE 1 : SOCIAL PINPOINT COMMENTS

SUMMARY

Social Pinpoint

The project website hosted two opportunities for the public to have open ended comments and ideas about transportation. The community was asked to provide their comments as digital sticky notes and their ideas for locations where specific considerations should be made.

This input informs the development of the LRTP Current and Future Conditions Report, goals, and recommendations for potential projects. The Social Pinpoint digital platform resulted in **25 comments with online discussion and more than 50 locations.** Contact information emails were captured with each comment to ensure these individuals were invited to the Phase 1 virtual meeting and public survey.

Comment Wall

The online comment wall offered community members an opportunity to express their ideas about important transportation themes for the LRTP. A wide range of comments were shared to spur more ideas and conversation within the community. The comment wall discussion is summarized in this section.

TRANSPORTATION MODE

- "Buses, buses, buses! More of them, more frequent, more routes, more hours especially at night and on weekends, distributed throughout every part of town."
- Improve public transportation system to make it convenient and economical rather than a last resort.
- Move away from routing every bus to the downtown area.
- Expand public options for ride share that is not on fixed routes.
- Connect major hubs of activity to reliable and frequent bussing.
- Connect public transit to a rapid transit connection between Lincoln and Omaha.
- Increase frequency of buses to increase use and utility as a reliable options.
- Take action to incorporate car sharing as a service into transportation decisions.
- Autonomous vehicles are not too far off and connecting autonomous vehicles and transit is recommended.
- Plan for downtown/inner ring streetcar and associated TOD (transit oriented development) districts to allow the density to support it in the long run.
- Coordinate construction projects to find more efficiencies to reduce congestion.
- Consider changes that can be made to downtown corridors to make them safe and inviting for pedestrians and not just cars and trucks.

TRANSPORTATION CHALLENGE

- Pave the unpaved roads within the City.
- Consider decisions that make transportation easier for people with disabilities.

TRANSPORTATION SAFETY

- Maintain bicycle infrastructure and road conditions to reduce potholes and obstructions.
- Continue to make improvements to traffic operations where speed limits are highest in the community.
- Roundabouts provide greater safety with reduced severity of crashes and should continue in new growth areas to lower long term infrastructure costs.

TRANSPORTATION PRIORITIES

- Make transit reliable for 3rd shift workers.
- Improve communication about transit route changes to passengers as the current tracking system is unreliable.
- Don't prioritize the roundabout at 14th/Old Cheney/ Warlick if it's not providing resolution to actual safety risks.
- Begin working on the East Bypass now!
- Prioritize public transportation and bicycle transportation to support community growth and protect the environment.

Pin Map Results

The pin map comments were organized around each theme and are summarized below for review.



The online pin map offered community members an opportunity to identify locations for improvements. More than 50 locations with associated modal improvements were provided. Bicycle and pedestrian improvements received the largest amount of pins, followed by traffic and safety pins.

28 Bicycle/Pedestrian Pins

A range of comments were provided for bicycle and pedestrian project locations. The City of Lincoln On-Street Bike Plan includes projects and policies related to many of these locations which are grouped below and are followed by pin comments that are not addressed by the Bike Plan.

Crossing 9th/10th near Van Dorn:

The Highway 2 corridor in this area presents a barrier to east/west bike and pedestrian traffic. A connection is desired between the Bison and Boosalis Trails. The bike plan includes a group of projects in the area to provide shared lanes and improve signing and marking. A pedestrian signal at the intersection of High Street and NE Highway 2 and a sidewalk widening on Van Dorn between Bison Trail and South 11th are key improvements to help address these comments.

Airpark/Airport Area Circulation:

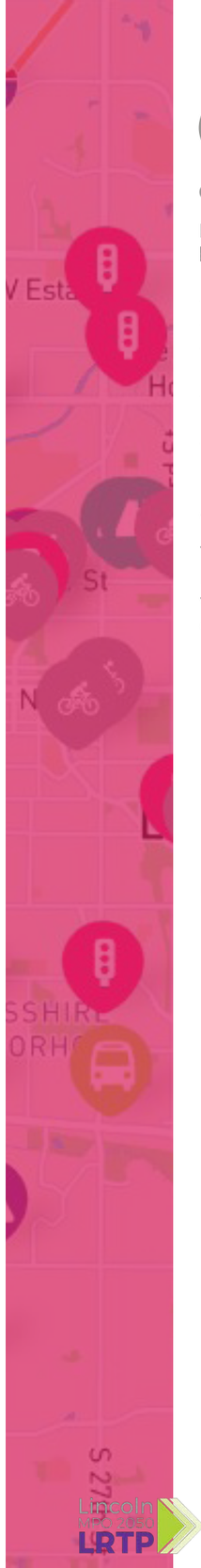
Public comments continue to suggest the need to improve bicycle circulation around Airpark and providing safe connectivity to the larger trails network throughout Lincoln. The bike plan includes a group of projects that will provide support of these ideas including NW 48th Street, West Adams, West Cornhusker Hwy and Airport Road/Fletcher Avenue sidepaths, West Dawes Avenue and West Seward Street Shared Lanes.

Southwest Lincoln Circulation:

As development pressures grows southwest of Lincoln, public comments also encourage planning ahead for bicycle commuting corridors with safe infrastructure. Sidepaths along West Pioneers Boulevard, South Folsom Street, and Old Cheney Road included in the bike plan will support planned development progression.

Other Bike Plan Projects:

The Lincoln On-Street Bike included 157 projects needed to realize the vision of advancing a citywide low-stress bicycle network. Project priorities were placed on connecting the network and providing the lowest stress level reasonably feasible. As demand increases and funds become available, some on-street bike facilities are anticipated to evolve. Public comments about access to downtown form 14th Street, crossing Normal Boulevard at Sumner, crossing 9th/10th at T Street, downtown and campus infrastructure reflect the shared vision and projects or policies expressed in the bike plan.



28 Bicycle/Pedestrian Pins (continued)

Comments Not Addressed in Bike Plan:

Pin locations that were not addressed in the bike plan were reviewed to consider if they should be added to the project list.

- MoPac Trail crossing at 33rd Street
- MoPac Trail access to 48th Street
- MoPac Trail crossing at North Cotner Boulevard
- Vine Street bike lane markings on UNL Campus
- Traffic Control at Randolph Street and Billy Wolff Trail
- Pedestrian crossing at North Antelope Valley Parkway and R Street
- Pedestrian crossing at Highway 77 and West O Street
- Intersection improvements at Vine Street and 22nd Street
- J Street on-street bike route transition to a bike boulevard or lane

City/County Trails Network:

The Lincoln on-street bike network works in coordination with the urban multi-use trail network. Public comments encourage the City to provide the safest possible intersection crossings where these trails intersect City streets. Expanding the trails network into the County was also encouraged connecting existing trails to communities outside of Lincoln.

County Bicycle Circulation:

Some public input was also provided that called attention to the use of multi-use trails, gravel roads and paved shoulders in the County for bicycle recreation and some commuting. Preservation of corridors for county trails continues as the county plans for growth. Connectivity for bicycles is provided across the South Beltway at key locations. County design standards for paved shoulders and multi-use limestone sidepaths are shared for further consideration.

14 Traffic Pins

Improve North/South Capacity:

The public comments related to movement of north and south traffic were consistent with previous plan updates. Recommendations from the public ranged from widening cross sections along north and south 27th Street, connecting 33rd Street thru Capital Parkway, and matching cross sections along North Antelope Valley Parkway between R and Vine Streets.

Provide Intersection Improvements:

Public input helped identify possible intersection modifications that could be considered to improve operational capacity. Intersections recommended to evaluate ranged from North Antelope Valley Parkway at Vine Street to the adjustments that could address turning movements at 10th and High Streets. Operational improvements, such as signal timing, were encouraged to continue.

Improve Segment Efficiency:

The improvements that could be made to address roadway segment efficiency were also organized. Small improvements, such as configurations between Pioneers and Highway 2 at South 14th Street are scheduled for construction. More challenging suggestions focused on aging infrastructure challenges at North 29th Street, State Fair Park Drive and Cornhusker Highway or constrained right of way along O Street between 40th and 46th Streets.



14 Traffic Pins (continued)

National Highway System Coordination:

A few comments were provided that require coordination between multiple members of the MPO. An interchange with Interstate 80 at 14th Street was suggested and dueling comments were provided about completing the West Beltway segment Pioneers to Saltillo Road and the eventual need for an East Beltway connecting Highway 2 to Highway 6

12 Safety Pins

Accommodate Bicycle and Pedestrian Crossings:

Public comments focused on crossings that are used or desired to be used for bike/ped crossing. Many of these similar comments are addressed by Bike/Ped pins. Two intersections identified for addressing safe crossings included Vine Street at North Antelope Valley Parkway, Old Cheney Road at the Rock Island Trail Crossing and the users desire for safe crossing at Highway 2 and High Street.

Consider Reducing Posted Speeds:

Vehicle speed was identified as one safety concern the public considers. Suggestions were provided to study and possibly implement reduced speed of travel on Cornhusker Highway between 70th and Cotner as well as newly increased speeds on Highway 2 between 84th and 98th Streets.

Improve Intersections for Vehicle Safety:

Public comments identified some intersections that may be modified to improve safety. Intersections included 14th and Cornhusker, 9th and O Streets, 84th and O Streets, and Cornhusker and Havelock.

National Highway System Interchanges:

Growth to the northwest of Lincoln and increasing demand on Highway 34 and Fletcher raised some public concern for continued safety reduction. Intersections of I-80/I-180/Highway 34 and the intersection with Fletcher were recommended for considering improved interchanges for addressing the need for traffic safety.

6 Roadway Condition Pins

Provide Edge Growth Infrastructure:

As eastbound growth creates higher traffic counts, paving roadway infrastructure along 98th is encouraged.

Urban Paving:

Unpaved roadways within the City were identified and recommended for paving. Paving roads that also improve access to multi-use trails was a documented recommendation.

Roadway Condition and Configuration:

Public comments about roadway conditions that should be resolved sooner than later were recorded. The condition of South 56th Street between Van Dorn and South Street and R Street east of N 50th Street were specifically encouraged to be improved. Continued focus to improve the Vine Street intersection following improvements to 16th Street conversion to two way on UNL campus.

2 Transit Pins

Increase Density Adjacent to Highway 2:

Density was suggested as a way to increase ridership demands. Specific opportunities along Highway 2 were suggested to consider.

Lincoln MPO 2050 LRTP

Lincoln MPO Long Range Transportation Plan

PHASE 1: COMMUNITY PRESENTATIONS

SUMMARY

Community Presentations

The 2050 LRTP Phase 1 Public Outreach was conducted during the height of Covid-19 community responses and directed health measures. The planning process incorporated a range of virtual strategies intended to get the word out to a group of community representatives and leaders. A series of live meetings and one virtual recorded meeting helped to engage the community of Lincoln early and widen the range of the community that received updates about the LRTP. This summary provides a summary description of the key community presentations and expected outcomes.

Mayor's Neighborhood Roundtable

On August 10th, the agenda for this longstanding group included an update on the 2050 Comprehensive Plan and the 2050 LRTP. The attendees learned about the LRTP purpose, process and intended outcomes. The presentation included an encouragement for all attendees to let their neighborhoods know about the plan and how to provide public comments. A brief demonstration was made to show the group how to add a public comment and leave a pin map location comment on the LRTP website. The contacts included in this group were added to the distribution list for the Phase 1 Virtual Meeting and Survey.

2050 Comprehensive Plan Community Committee

On August 27th, the agenda for the Comprehensive Plan Community Committee included an update on the 2050 LRTP. The information shared with this group focused on the proposed goals of the LRTP, examples of land use scenarios that influence transportation decisions and a summary of the schedule for Phase 1 public outreach. This committee is an integrated part of the Comprehensive Plan outreach strategy and providing their input on the land use and transportation interactions was encouraged. Committee members were encouraged to support the public outreach process by providing comments and sharing about the input opportunities with the public.

Mayor's Advisory Committee on Transportation & Bicycle/Pedestrian Advisory Committee

The agendas for the August 27th Mayor's Advisory Committee on Transportation and the September 8th Mayor's Bicycle/Pedestrian Advisory Committee included an update on the 2050 LRTP. The information shared with these committees was similar to the Mayor's Neighborhood Roundtable. The ACT is focused on the transportation needs and funding for the City of Lincoln, and the BPAC is focused on the development of a comprehensive plan or bicycle/pedestrian network. Members of these committees were encouraged to support the public outreach process by providing comments and sharing about the input opportunities with the public.

Mayor's New Americans Task Force

On October 16th, the agenda for the Mayor's News American Task Force included an update on the 2050 LRTP. The information shared with the NATF was similar to the Mayor's Pedestrian/ Bicycle Advisory Committee. This committee is focused on supporting New Americans in the City of Lincoln. Committee members were encouraged to support the public outreach process by sharing about the input opportunities with their respective organizations/communities.

Virtual Meeting

A virtual meeting was created for the public to hear information about the LRTP, learn about the planning process and access the public survey. The virtual meeting was hosted from September 21 to October 19, 2020. The virtual meeting was captured in sections that described the goals, modes, challenges and trends related to the LRTP. Each video segment provided a view of the survey section that would capture their thoughts on the topic. The recorded video sections provided a total of 20 minutes of recorded content. To accommodate the needs of Spanish-speaking population, a companion link was provided that translated the printed content into Spanish and demonstrated how to enable translated closed captioning on the YouTube recording.

A notification email was shared with all the contact list developed since Phase 1 public outreach began. The notification email sent to this group included a short description of the Virtual Meeting and Public Survey. A link was provided to the project website where both resources could be accessed. A digital fact sheet was provided as an attachment in English and Spanish to provide more background about the plan. Finally, draft language was provided in the email that could be used by anyone to copy and paste into an email for their own distribution group or posting on social media.



Lincoln MPO Long Range Transportation Plan

PHASE 1 : FOCUS GROUPS

SUMMARY

Focus Groups

A series of 10 focus group meetings was facilitated as small group virtual conversations with members of the community. **Over 80 members of the community were invited to participate in one of the scheduled meetings.** The presented materials were designed to be interactive and promote a discussion about the proposed goals, ease of travel, anticipated challenges and potential strategies that could be considered to accomplish goals.

This document summarizes the results and input of the Focus Groups. The input will be used to inform the plan development as well as upcoming public outreach activities.

Focus Group categories included:

1. Development Community
2. Bicycle/Pedestrian Community
3. Freight Interests
4. Neighborhood Associations
5. Downtown Interests
6. Transit/Human Services
7. Institutions
8. Business Community
9. Healthy Living & Environmental Interests
10. Multicultural and Diversity Interests

Do the proposed goals reflect the community?

Each of the eight draft goals were described for the groups. This question asked the groups to assess how the goals reflected the community values they were representing. The average of all focus group scores (4.12 out of a possible 5) indicate that the goal represents the community slightly more than well. Once the survey responses were provided in real time, members of the group were asked to share some thoughts about why they entered their score. The comments were insightful and reflected a deep understanding of how Lincoln has grown and may grow in the future.

34% VERY WELL

- "The new Transportation Equity goal is good. underserved areas need more effort to support an equitable transportation network as some areas are better served than others."
- "The goals are overall well rounded and address the needs of the (multicultural) community."

50% WELL

- "This is a 30-year transportation plan. The MPO should consider that all of these goals are important, but some may be more important in the short term than others."
- "Goals should reflect the need for active transportation needs to be met for more than recreation."
- "Having these goals is helpful, but the process and affordability to reach them needs to be considered."

11% NEUTRAL

- "Recent progress has been made for street maintenance and sidewalk repair. The goals lead to positive outcomes, but more work is needed."
- "The focus on compact and livable community may be someone's vision, but is not reflected in Lincoln."

4% NOT WELL

- "The presumption of density being a desired goal should be challenged further."
- "There is a lack of clarity how transportation manifests equity."

1% NOT WELL AT ALL

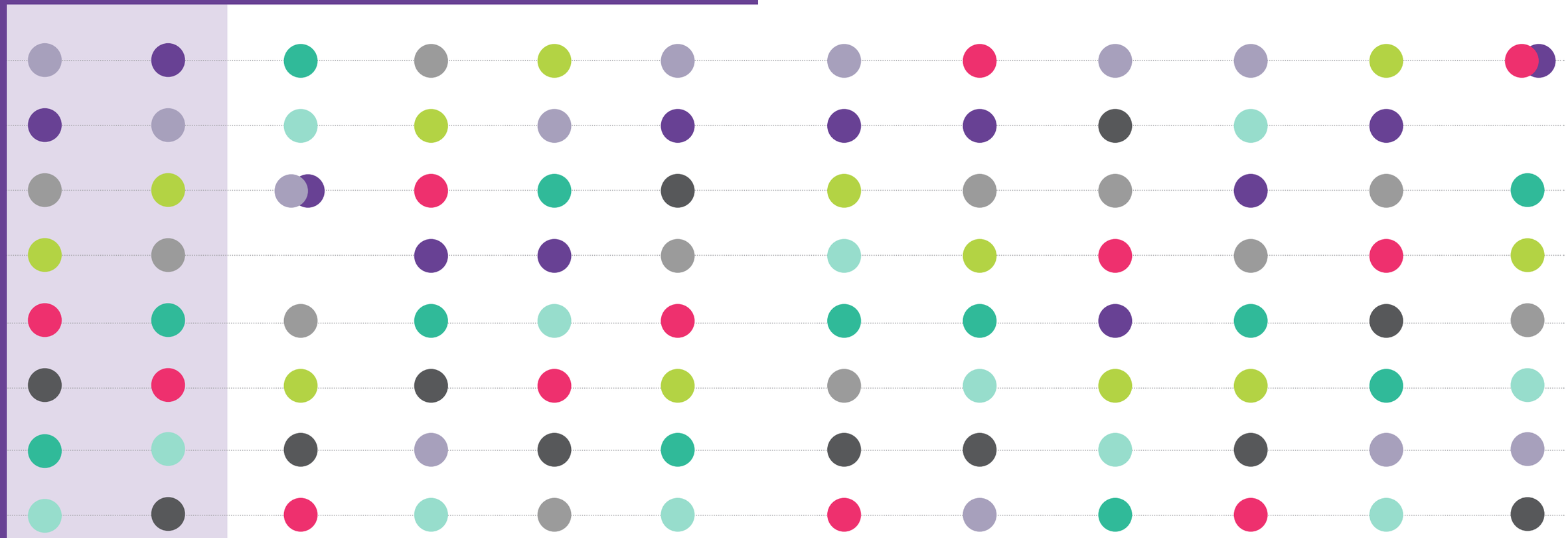
- "The goals are aspirational in nature, but don't appear to reflect well how transportation decisions are actually being made."

FOCUS GROUP SUMMARY

How each of the focus group ranked the eight goals is represented below. The public ranking of each goal is also provided to demonstrate how each focus group ranking compares to how the public perceives the importance of each goal. The average rankings shows mobility and system reliability was ranked most important by the focus groups. Phase 1 Public Survey responses are shown in the first column for comparison.

Goals Ranked by Focus Group

- Mobility and System Reliability
- Safety and Security
- Funding and Cost Effectiveness
- Economic Vitality
- Maintenance
- Livability and Travel Choice
- Transportation Equity
- Environmental Sustainability



Several key findings emerged in analyzing the focus group and public rankings of each transportation goal. Maintenance was ranked the most important goal to the public, which aligned with the neighborhood association, downtown interests, institutions, and the business community focus groups. Notably, the neighborhood association focus group aligned most closely with the rankings provided by the public.

Although mobility and system reliability had the highest ranking average among all goals, it was only ranked the most important goal by the multicultural and diversity focus group. Maintenance which had the second highest average ranking, was selected as the most important goal by five groups, more than any other goal.

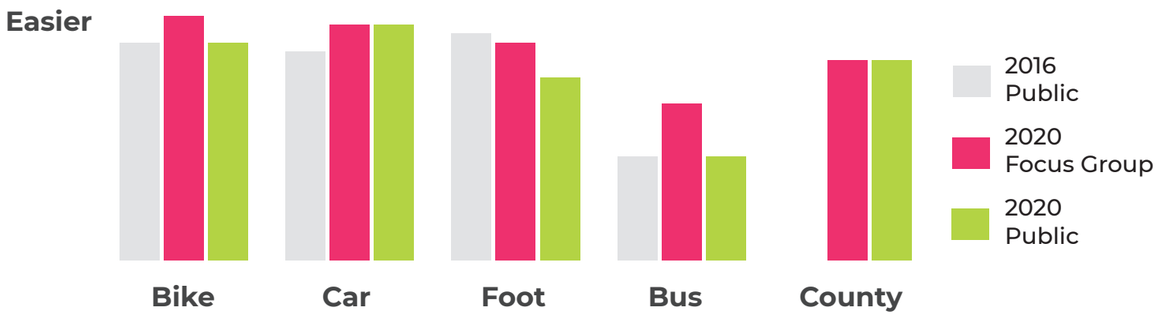
Transportation Equity ranked sixth among goals. Focus Group comments helped understand that by addressing other goals such as mobility, safety, livability and economic vitality, transportation equity can be achieved.

Understanding how each goal is valued by the focus groups provides insight into the needs of a community and the potential issues they face within the transportation network. Additionally, identifying particular and region-wide transportation gaps will allow the City of Lincoln and Lancaster County to improve upon the transportation system and better meet the needs of all users.

How easy is travel in and around Lincoln by mode and in the County?

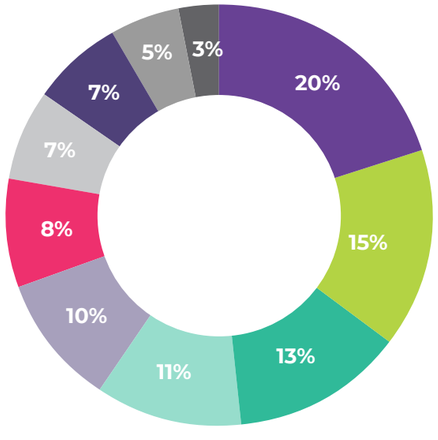
When the 2040 LRTP was being prepared by the Lincoln MPO, the first public survey asked about the ease of travel by mode. The same question was used for the 2050 LRTP and was asked of the Focus Group participants. Current perceptions of the ease of travel can be framed by personal experiences and common knowledge. The Focus Group participants were asked to answer the question from the perspective of community members they were asked to represent. The values returned from the public survey in 2016 and 2020 are shown for comparison.

Overall, traveling by personal vehicle or bike is perceived as easier than by foot. The City of Lincoln bicycle network was recognized as being very convenient and was rated with highest ease of transportation. Transit was rated as having the lowest ease of transportation. Participants were asked to rate the ease of travel outside the City of Lincoln. The groups expressed a lack of clarity how to answer that question but rated the ease of travel as moderately easy.



What are the most pressing challenges to be addressed by the LRTP?

Focus group participants were asked to select up to three pressing challenges from a list of options that represented the most pressing challenges that need to be addressed by the LRTP. All of the options received some votes. Having a good understanding of the range of challenges as well as how pressing the community perceives them helps with planning considerations and project identification.



- 20% Aging and Deteriorating Infrastructure
- 15% Increasing traffic/congestion delays
- 13% Rising transportation costs and limited funding
- 11% Service coverage and hours of public transit
- 10% Travel needs of elderly and vulnerable populations
- 8% Increasing distances that we have to travel
- 7% Lack of infrastructure to walk or bike for travel
- 7% Safety
- 5% Increasing truck traffic on our roads
- 3% Other

What are the most pressing challenges to be addressed by the LRTP?

Aging and Deteriorating Infrastructure

"Lincoln keeps falling further and further behind the maintenance needed for existing infrastructure. Funding is not meeting the need for bridges, roadways and sidewalk maintenance."

Rising transportation costs and limited funding

"We have an increasing number in our population that can't afford access to a personal vehicle."

"Design standards for infrastructure are increasing to exorbitant levels which drives up the cost of transportation for everyone."

Service coverage and hours of public transit

"The days of only providing fixed routes and set schedules for transit seem to be coming to an end."

Travel needs of elderly and vulnerable populations

"Bus schedules and appointment times don't always connect."

"When elderly and disabled lack access to transit services, they become restricted to certain parts of town and that hurts everyone."

Increasing distances that we have to travel

"When businesses move away from the urban core, it hurts the residents that depend on it, but it also increases paving, increases miles traveled and increases congestion."

Lack of infrastructure to walk or bike for travel

"I'm surprised by the lack of safe sidewalks that causes people to walk in the streets. Sidewalks are very important to quality of life in our neighborhoods."

Other

"Nobody seems to stop to realize the negative impact of ever-increasing road noise on large arterial streets."

"Lincoln residents have big city expectations for transit but also want front door parking everywhere, but when parking is convenient, transit isn't very attractive"

What strategies would you employ to achieve the goals of the LRTP?

The final exercise that the Focus Groups were asked to complete was to provide feedback on strategies that could help accomplish the goals their group prioritized highest. Most groups were able to work through strategies for at least two goals and all eight goals were covered through the process of facilitating the 10 Focus Groups. The summary below organizes the ideas that were shared during these discussions.



Cost Effectiveness

1. Review and implement design standards that address stormwater, lane size, trails, culverts and right-of-way widths in a practical manner.
2. Direct local funding to local projects and retain federal funds for the major project.
3. Allow for flexibility in funding priorities over time.
4. Fund engineering services salaries with general fund dollars and eliminate paying for snow removal with wheel tax dollars.
5. Provide more upfront design to increase life span of structures.

Cost Effectiveness Total Strategies: 11



Economic Vitality

1. Integrate transit as an asset to development planning.
2. Prioritize existing corridor density to support population growth and business development
3. Prioritize growth areas for expansion of city limits.
4. Increased collaboration with private sector to maximize land use value, function, and integration of technology.
5. Distribute funding to all quadrants of the community that rely on a quality transportation network.

Economic Vitality Total Strategies: 24



Environmental

1. Encourage education and incentives that normalize alternative transportation for commuting to minimize carbon footprint and protect air quality.
2. Make investments that have lowest life-cycle costs and account for the true environmental costs of transportation on the environment.
3. Integrate infrastructure that supports a transition to electric mobility with fleet and transit vehicles.
4. Continue to improve quality, connectivity and access provided by the non-motorized transportation routes
5. Plan for walkable and bikeable neighborhoods with dense tree canopy.

Environmental Total Strategies: 23



Equity

1. Seek out and listen to all voices of the community to involve diverse community stakeholders in meaningful planning decisions from the beginning.
2. Provide more interline ticketing options, connected services and consider wider use of vouchers or free transit services city-wide.
3. Identify and remove connectivity and access gaps for sidewalks, trails and transit.
4. Protect services in the inner city as outward growth occurs.
5. Greater focus on quality infrastructure in aging neighborhoods and those with higher proportions of social disadvantages.

Equity Total Strategies: 25



Livability

1. Strengthen the complete streets policy and expand it into the county growth areas.
2. Provide multi-modal transportation options that support active living and access to services.
3. Test trial transportation innovations and new strategies quicker.
4. Incorporate more bike trails into new and existing neighborhoods for health and wellbeing.
5. Support the desired character of each neighborhood through well designed and maintained multi-modal transportation networks.

Livability Total Strategies: 37



Maintenance

1. Protect maintenance funding with user type fees or taxes to keep up with constant maintenance needs.
2. Use the materials and construction methods that will require the least maintenance over time.
3. Apply equal levels of transportation system maintenance to all areas of the city and county.
4. Apply prioritized levels of maintenance to improve the degraded condition of aging areas and areas where maintenance has been deferred because of limited funding.
5. Communicate about a defined maintenance plan with clear explanation of current and future costs.

Maintenance Total Strategies: 38



Mobility and Reliability

1. Continue to incorporate advanced mobility technologies that can improve operation, reduce congestion, support freight industry and increase personal mobility.
2. Map and eliminate gaps in the bike and pedestrian transportation network.
3. Increase the number of intermodal transfer hubs for transit user and connect a regional transit system with Omaha.
4. Increase frequency and weekly schedules for transit services that connect families to work (all shifts) and essential services.
5. Remove barriers to using transit related to language and low-income households.

Mobility and Reliability Total Strategies: 39



Safety and Security

1. Separate the modes within the on-street transportation network to the extent practicable
2. Reduce speed limits in residential neighborhoods and collectors.
3. Leverage available data to isolate and address the locations with most accidents.
4. Provide more improvements to sidewalk networks and pedestrian crossings.
5. Adopt a Vision Zero policy for all modes of transportation that can be used to evaluate future projects.

Safety and Security Total Strategies: 36

Lincoln MPO Long Range Transportation Plan

PHASE 1: PUBLIC SURVEY

SUMMARY

Public Survey

Community input about transportation is provided to help inform the development and implementation of the LRTP, ensuring the plan meets the current and future transportation and mobility needs of the entire community. The Phase 1 outreach public survey was launched on September 21, 2020 and the English version was translated for Spanish speaking individuals. A broad contact list was asked to visit the LRTP website, consider the information presented in the virtual meeting and/or complete the survey online. A four-week social media push was used to keep attention on the survey opportunity. By October 20th, the online survey had been completed by more than 235 community representatives. A summary of the information learned from the survey is provided below.

Goals

In the public survey a series of follow-up questions were asked to prompt respondents to provide further detail into why they prioritized and ranked the eight goals in the way they did. These responses provided a wide range of information. The results were all categorized in six key themes and showed that planning for a healthy, sustainable, and forward-looking city was something respondents wanted the goals to reflect and best described how they made decisions for which goals to prioritize. Reliability, collaboration between goals, and greater transportation accessibility closely followed as reasoning for the provided rankings.

In total, 135 responses were provided to the question about their reason for the goal ranking. Six key themes, that varied in detail and concern, emerged from the responses and are outlined below.

Goals were ranked in this order because:

- **28%** It prioritizes planning for a healthy, sustainable, and forward-looking city
- **18%** It prioritizes planning for a reliable transportation network
- **16%** It prioritizes planning with a solid foundation for the transportation system and will lead to the success of all other goals
- **15%** It prioritizes accessibility for all users of the transportation system and provides a greater focus to transportation equity
- **13%** It prioritizes the need for safer and increased access to different mobility modes
- **10%** It prioritizes the needed compromise between cost-effectiveness and transportation improvements

Transportation Modes

Survey responses indicated a relative ease of use for each mode of transportation (1 - very easy, 5 - very difficult). This survey question was asked in 2016 when the previous LRTP update was completed. Compared to the previous survey, perceptions about the ease of transportation have remained fairly consistent. The ease of travel by car was highest of all modes; improving from 2.6 in 2016 to 2.3 in 2020. Ease of travel for pedestrians showed the greatest decrease in perceived from 2.4 in 2016 to 2.9 in 2020. The ease of travel by bus and by bike have remained fairly steady between the two surveys. The reason for survey answers were most helpful in understanding how these relative ratings can be improved.

In total, 136 responses were provided to the question about their reason for the ease of travel ranking. Five major themes arose from the responses and are listed below.

Ease of travel was ranked in this order because:

- **34%** Improvements are needed to balance all modes of transportation; some areas of the City have good bicycle/pedestrian options but lack transit connectivity
- **29%** Improvements are needed for persistent road maintenance, operation/design, and capacity issues
- **17%** Improvements are needed to address infrequent service, lack of shelters, and poorly designed routes which make transit difficult and time-consuming
- **11%** Improvements are needed to increase connectivity and access across the City, specifically in being able to efficiently get across town
- **9%** Improvements are needed for disconnected and missing bicycle/pedestrian trails and infrastructure

Transportation Challenges

When respondents were asked to provide more detail as to why they chose specific transportation challenges, the results showed a repeated pattern of concerns. This feedback was organized into three key themes that indicated greater interest in ensuring maintenance and sufficient capacity of existing infrastructure. Safer and more accessible ways to utilize other modal options and creating a city well-equipped to manage growth were mentioned frequently as well.

In total, 124 responses were provided to the question about their reason for selecting these challenges. Three primary reasons were consistently mentioned in responses and are highlighted below.

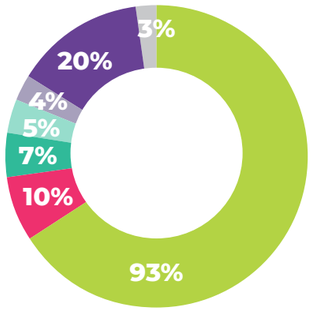
These challenges were selected because:

- **39%** Ensuring maintenance and sufficient capacity of existing infrastructure is vital to the transportation network
- **33%** Safer and more accessible ways to utilize other modal options are needed
- **28%** Creating a city well-equipped to manage growth in a sustainable and inclusive way is important

Who Completed the Survey?

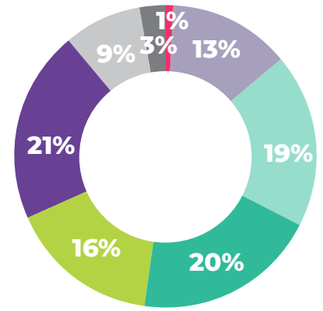
Great effort went into the distribution of the public survey to ensure it was accessible to a wide variety of the Lincoln population. Information detailing respondent's affiliation with Lincoln or Lancaster County, age range, race and ethnicity, annual household income, and ZIP code data are represented here. Gathering an expansive range of comments and ideas is vital in being able to capture an accurate reflection of the diversity of transportation needs within Lincoln.

Affiliation with Lincoln or Lancaster County



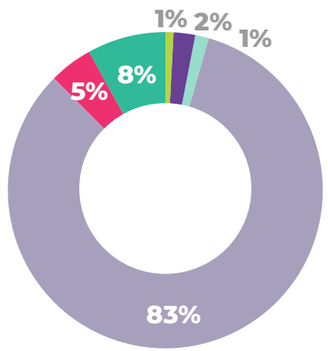
- Resident
- Business owner
- Student
- Other
- Visitor for shopping, dining options
- Visitor for medical appointments, service
- Visitor for recreation, entertainment

Age Range of Respondents



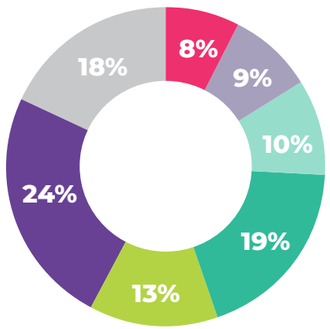
- Younger than 18
- 18 - 24
- 25 - 34
- 35 - 44
- 45 - 54
- 55 - 64
- 65 - 74
- 75 or older

Race and Ethnicity of Respondents



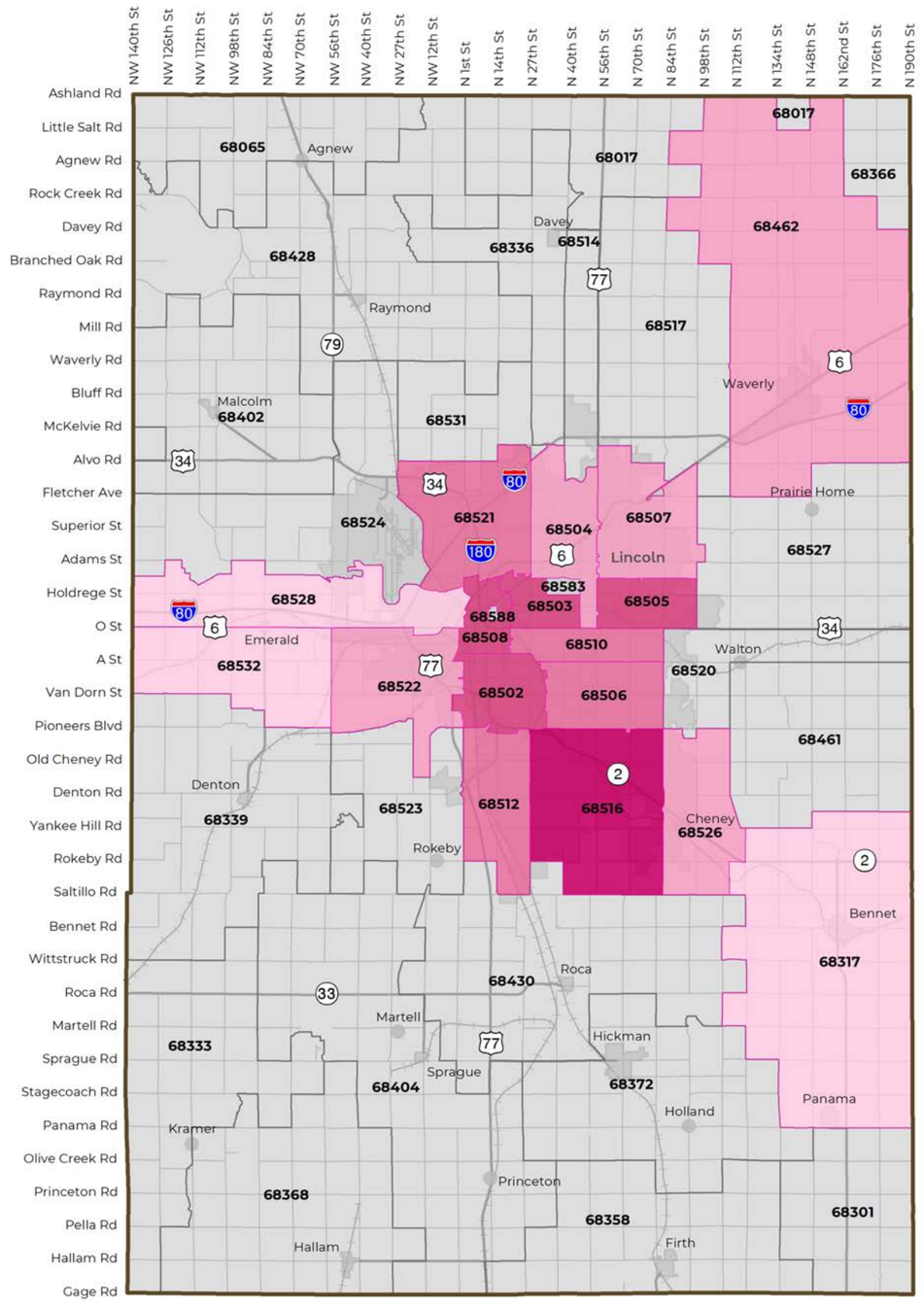
- Asian
- Black or African American
- White or Caucasian
- American Indian and Alaska Native
- Hispanic, Latino, Spanish
- Other

Annual Household Income of Respondents



- Under $15,000
- Between $15,000 - $29,999
- Between $30,000 - $49,999
- Between $50,000 - $74,999
- Between $75,000 - $99,999
- Between $100,000 - $150,000
- Over $150,000

Public Survey Respondent ZIP code Map



ZIP code Map Key

- 1-3 Responses
- 3-7 Responses
- 7-16 Responses
- 16-31 Responses
- 31-45 Responses
- No Data
- MPO Boundary

Lincoln MPO 2050 LRTP

To learn more:

www.LRTPLincolnMPO.com

Attachment B-4 -Scenario Workshop Summary

Scenario Planning Workshop – October 29,2020

Attendees

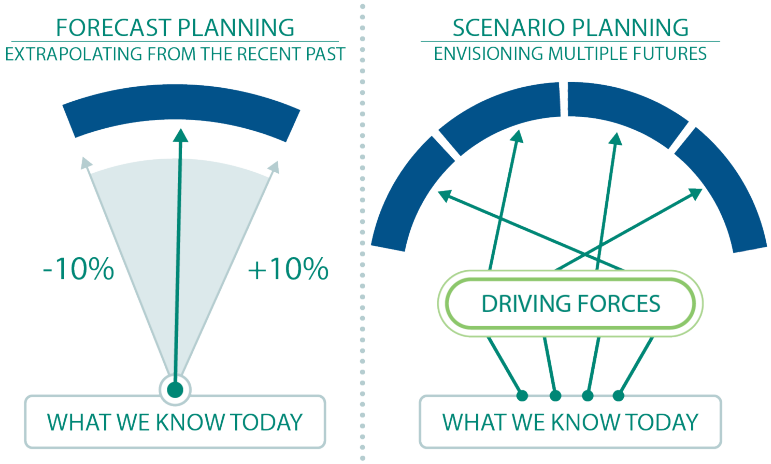
- Allan Zafft, Lincoln-Lancaster Planning Department
- Andrew Thierolf, Lincoln-Lancaster Planning Department
- Brian Praeuner, StarTran
- Chris Schroeder, Lincoln-Lancaster Health Department
- Christopher Prosch, Lincoln Partnership for Economic Development
- Craig Wacker, Nebraska Department of Transportation
- Emily Deeker, University of Nebraska – Lincoln
- Erin Sokolok, Lincoln Transportation and Utilities Department
- Gary Bergstrom, , Lincoln-Lancaster Health Department
- Gerry Doyle, Federal Transit Administration
- Justin Luther, Federal Highway Administration – Nebraska Division
- Kellee Van Bruggen, , Lincoln-Lancaster Planning Department
- Kyle Fischer, Realtors Association of Lincoln
- Larry Legg, Lancaster County Engineering
- Mark Lutjeharms, Lincoln Transportation and Utilities Department
- Paul Barnes, Lincoln-Lancaster Planning Department
- Sara Hartzell, Parks & Recreation Department
- Steve Ingracia, JEO Consulting Group, Inc.
- Thomas Shafer, Lincoln Transportation and Utilities Department
- Todd Wiltgen, Chamber of Commerce
- Wynn Hjermstad, Lincoln Urban Development Department
- Rachel Ackermann, FHU
- Mark Meisinger, FHU
- Jesse Poore, FHU
- Jenny Young, FHU

Scenario Planning Overview

The workshop began with an overview of scenario planning and the intent of the workshop.

Traditional forecast planning projects a future by extrapolating from the recent past and what is known today. Scenario Planning provides a way to explore a range of future scenarios by providing a structured environment to alter assumptions about the future to discover blind spots and identify new opportunities.

Transportation technological advancements, as well as the recent COVID environment, have altered the planning landscape, and extrapolating from the recent past provides limited value for near-term and long-term future planning.



Scenario planning is a valuable tool for evaluating uncertain futures. The Lincoln LRTP scenario planning workshop explored the range of influenced of advanced mobility and transportation technologies in the context of changes resulting from COVID.

Scenario Planning Workshop Objectives

- Imagine the range of influence of unknown forces and the short-term impacts of disruptive and emerging technologies
- Identify common themes and strategies to maximize the ability of the MPO to continue to make progress towards achieving LRTP goals across a range of scenarios by identifying strategies where Lincoln MPO has a high degree of control/influence
- Consider common strategies in developing LRTP project evaluation, resource allocation, and policy recommendations

Long Range Transportation Goals

The 2050 Draft LRTP goals were reviewed with participants to prepare them for breakout group discussions.

- **Maintenance:** A well-maintained transportation system
- **Mobility and System Reliability:** An efficient, reliable, and well-connected transportation system that leverages innovation and technology for moving people and freight
- **Livability and Travel Choice:** A multimodal system that provides travel options to support a more compact, livable urban environment
- **Safety and Security:** A safe and secure transportation system
- **Economic Vitality:** A transportation system that supports economic vitality for residents and businesses
- **Environmental Sustainability:** A transportation system that enhances the natural, cultural, and built environment
- **Funding and Cost Effectiveness:** Collaboration in funding transportation projects that maximizes user benefits
- **Transportation Equity:** Transportation investments developed through an inclusive process that promote equitable outcomes.

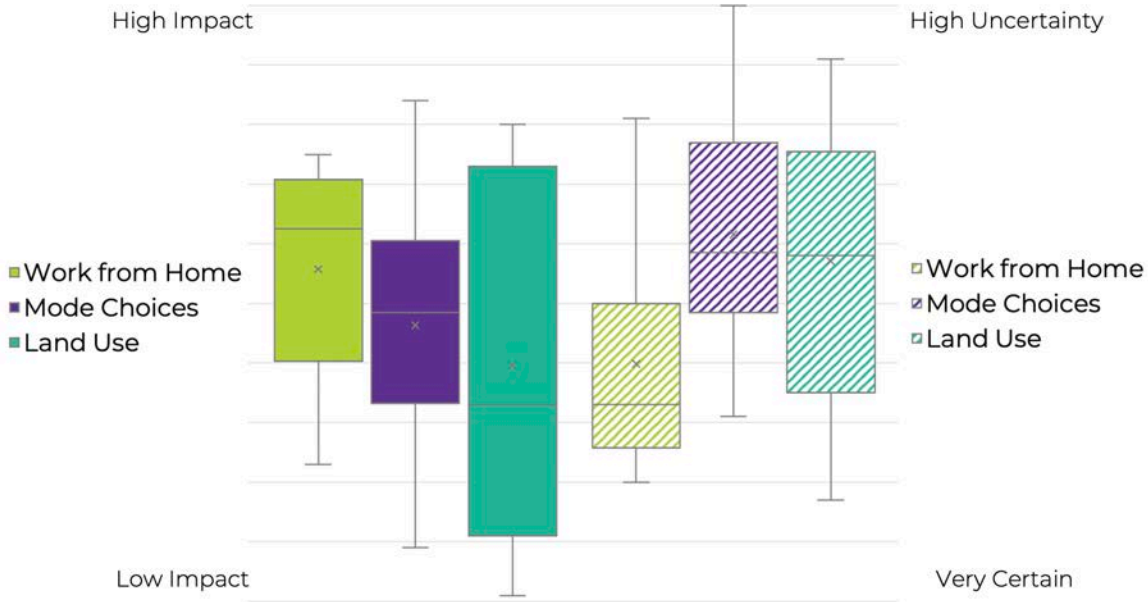
Driving Forces

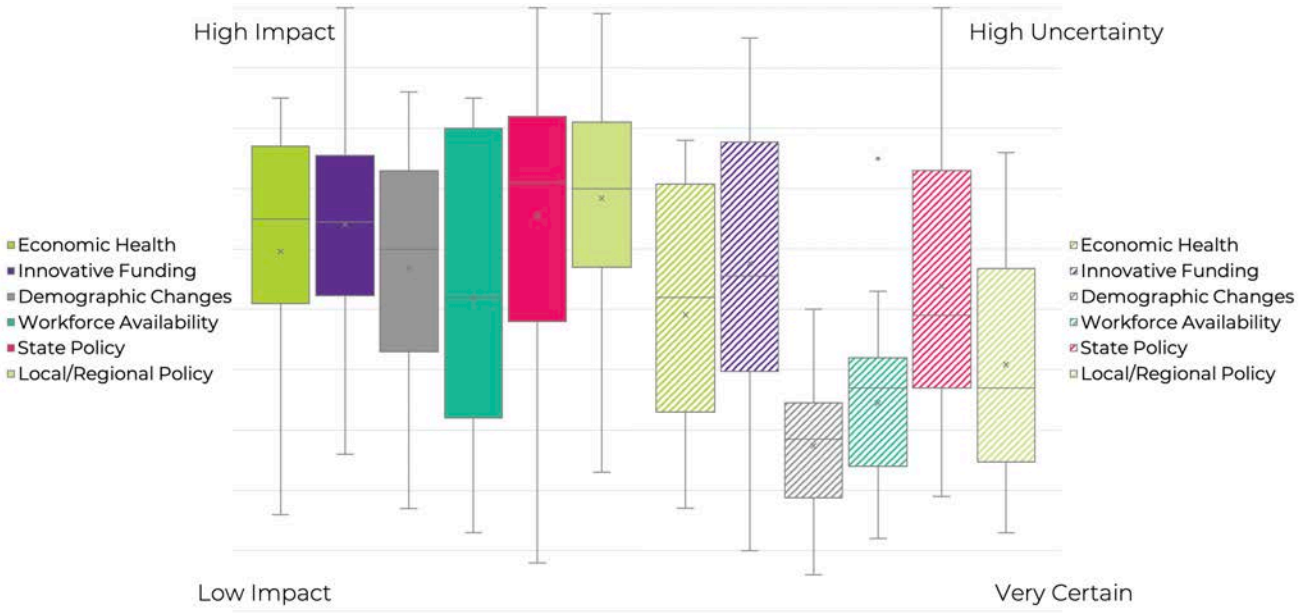
The pre-workshop survey asked participants to consider several key trends/forces that may impact transportation and mobility in the Lincoln/Lancaster area. We asked for input on the level of potential impact of and certainty associated with mobility as a service, transportation electrification, driverless cars, demographic shifts, policy implications, mode choices, land use, work from home, delivery economy, funding and the economy.

Plotting the average values of the responses received for impact and uncertainty of the surveyed trends/forces revealed that driverless cars has the highest level of uncertainty, while the delivery economy has the potential to have the highest impact. The upper right quadrant reflects high impact and high uncertainty.

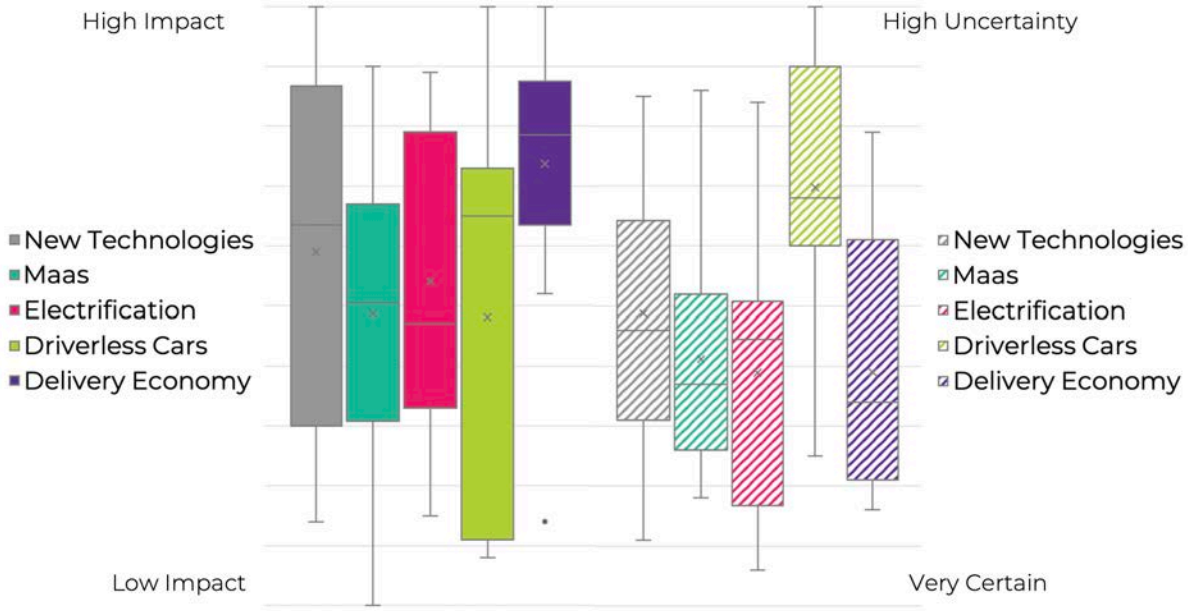
The graphs that follow summarize the survey results showing the range of responses received from participants. The graphs show the minimum, first quartile, median, mean, third quartile, and maximum values for the response received. The larger the box, the greater the range in responses for the given category.

For example, for the COVID-related trends and forces, the impact of the pandemic on land use and where people want to work and live received the largest range of responses, ranging from low impact to moderate, while the future of the work from home trend was viewed as having a higher level of certainty.





The survey also inquired about the impacts of recent technological advances and mobility options that have expanded the realm of trends that could be integrated into transportation planning. There was greater variation in response on perceived level of impact and certainty regarding these forces/trends. Driverless cars were perceived to have the potential for low to moderately high impact and the highest uncertainty of all forces and trends surveyed.

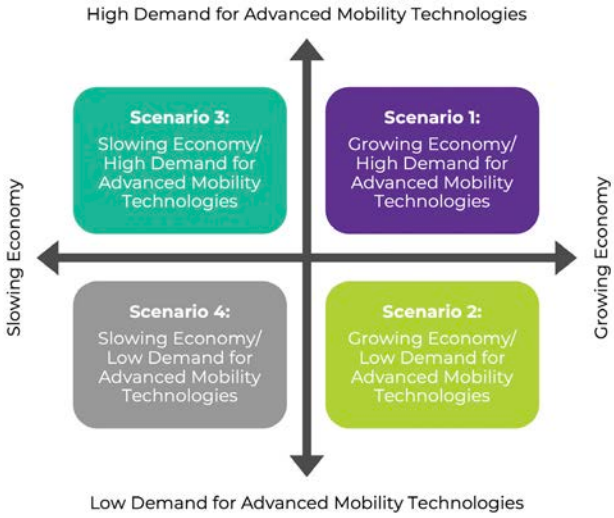


For the scenario planning exercise, two of the key forces/trends were selected from the survey that helped capture a wide range of potential futures. The scenarios looked at (1) health of the economy and (2) demand for advanced mobility technologies including connected, automated, shared and electric forms of moving goods and people.

These two forces/trends were selected to explore the intersection of economic health (a trend that is largely outside the control of the MPO) and demand for advanced mobility technologies (a trend on which the LRTP could have a high degree of influence).

The two trends were plotted on intersecting axes to explore the range of potential scenarios:

- **Economic Health:** Growing Economy vs. Slowing Economy
- **Advanced Mobility Technologies:** High Demand for Advanced Mobility Technologies vs. Low Demand for Advanced Mobility Technologies



These two forces/trends were identified for their ability to capture the range of environments that may result from the uncertainty of several key trends, including how changes to populations, demographics, work force availability, etc.

Participants were given examples of how advanced mobility technologies are changing the way people and goods are moved and how community members engage with transportation and mobility options. Participants were split into four groups and provided a brief narrative of their assigned scenario to set the stage for small group discussion. The scenario descriptions are summarized below.

Scenario 1 – Growing Economy/High Demand for Advanced Mobility Technologies

The COVID/pandemic period has expedited innovation in advanced mobility technologies and across multiple industries leading to a growing economy. The booming economy has decreased the demand for shared mobility, and financial security has increased demand for private transportation. Financial health has increased the demand for individual ownership of connected and automated vehicles, as well as mobility options such as e-bikes, scooters, etc. The growing economy provides a steady revenue stream for the MPO region to invest in the expansion of the transportation system to provide new infrastructure to ensure all transportation options coexist safely and efficiently.

Scenario 2 – Growing Economy/Low Demand for Advanced Mobility Technologies

Transportation behaviors adopted in response to the COVID pandemic have demonstrated the efficiencies and economic benefits of working from home. The economy is flourishing in this new virtual work environment, and a reduction in commuting activities has decreased congestion and transit demand. Low demand has reduced the demand for innovative transportation solutions, and residents use the time saved telecommuting to participate in active bicycle and pedestrian recreation. The growing economy and reduced congestion provide a steady revenue stream for the MPO region to prioritize asset management and prioritize infrastructure investment to meet the growing demand for active transportation.

Scenario 3 – Slowing Economy/High Demand for Advanced Mobility Technologies

The economic slowdown experienced during the COVID/pandemic period continues for 2 to 3 years, reducing revenue and creating a financial strain on state/local governments and household budgets. A growing percentage of the population cannot afford to own a car, generating demand for transit and shared mobility options. Active transportation is the most affordable option for most of the population, and there is a growing demand for e-bikes, scooters, and other affordable mobility options that complement and/or extend range for biking and walking. However, the constrained economic environment reduces the ability for public and private sectors to unilaterally meet demand for these new mobility options.

Scenario 4 – Slowing Economy/Low Demand for Advanced Mobility Technologies

The economic slowdown experienced during the COVID/pandemic period continues for 2 to 3 years, reducing revenue and creating a financial strain on state/local governments and household budgets. The current COVID environment becomes the business-as-usual approach; there is a low demand for transit and a high percentage of residents working from home. Public and private sectors have adopted a risk averse position and public opinion prioritizes asset management.

Small Group Discussions

Ground Rules

Participants were given the following four ground rules for small group discussion to encourage collaborative discussion:

- Suspend your disbelief in possible futures
- Don't get caught up in how the scenario came to pass
- Identify opportunities and strategies to maximize benefits
- Potential negative impacts are NOT foregone conclusions – How can potential pitfalls be avoided?

Opportunities & Implications

The four scenario groups were given a scenario specific Opportunities & Implications worksheet and encouraged to consider:

- How could the conditions in your group's Scenario impact Lincoln/Lancaster County in the next 5 to 10 years?
- What opportunities does your scenario present?
- What pitfalls do you want to be sure to avoid?

The worksheet included prompts related to several of the LRTP goals. The worksheet responses recorded on each groups' worksheet are summarized in **Table 1**.

Developing Strategies & Policies

Following the Opportunities & Implications discussion, the groups were given a Strategies Worksheet and asked to think of scenarios as different hands of cards that they have been dealt, and strategies ways to play their hand.

The worksheets were designed to build on the Strategies & Policies worksheet. The worksheet responses recorded on each groups' worksheet are summarized in **Table 2**.

Table 1. Opportunities & Implications Worksheet Summaries

	Scenario 1 – Growing Economy/High Demand for Advanced Mobility Technologies	Scenario 2 – Growing Economy/Low Demand for Advanced Mobility Technologies	Scenario 3 – Slowing Economy/High Demand for Advanced Mobility Technologies	Scenario 4 – Slowing Economy/Low Demand for Advanced Mobility Technologies
Livability & Travel Choice		• Housing choices may drive land use changes – if more time is spent at home, people may want more space inside/outside • Land use changes could result in need to provide to access new development or development outside of urbanized area	• Opportunity to capitalize in demand for advanced mobility and divert investment from new roads to other modes • Opportunity to generate revenue by "pricing the curb" – with increasing demand from advanced mobility	• Affordable housing needs to be citywide, not just in qualified census tracks; make sure close to jobs, close to transit; demand for affordable and alternative transportation will increase
Mobility & System Reliability	• Increased revenue provides opportunities to invest in trails, Greenlight Lincoln, the East Beltway and expand the transportation network • There is a potential for "rough" transition period to higher percentages of advanced mobility vehicles on the roadway	• Opportunity to separate truck vs bike/ped conflicts • Opportunity to convert excess vehicle capacity to on-street bike uses • Public transit could be outmoded by personal vehicle use, privatization an option if record low transit use continues	• Investment into E-Bikes and Scooters to provide more options • If transit demand is down, can reevaluate bus routes and schedules to reassign resources • Opportunities to expand inter-modal options outside downtown • Collect better info/integration from digital outreach/info about transit needs	• If the new normal includes a lot of people working from home, there may be reduced need for 2+ vehicle households • Reduced commuting demand could provide opportunities to promote biking and walking, trails - outdoor activities

	Scenario 1 – Growing Economy/High Demand for Advanced Mobility Technologies	Scenario 2 – Growing Economy/Low Demand for Advanced Mobility Technologies	Scenario 3 – Slowing Economy/High Demand for Advanced Mobility Technologies	Scenario 4 – Slowing Economy/Low Demand for Advanced Mobility Technologies
Transportation Equity	• There will people who still need shared mobility and transit options – The growing economy provides opportunities to invest additional revenue in diverse options to meet increase demand and meet the mobility needs of the transit dependent • More revenue provides an opportunity to keep transit free in the post-COVID era	• Despite a growing economy, not everyone is able to afford and/or use a bike • Opportunities to capitalize on the barrier to entry into bike ownership being less than vehicle ownership • Need to address the limitations of biking in winter months • Transit could also be important as lower income users would not have the means to work remotely	• A slowing economy may put disadvantaged users at greater risk – need to seek lower cost options for disadvantaged users • Opportunity to maintain or grow the voucher program to ensure equitable access to mobility options	• Not everyone can work from home – these essential works may depend on transit • Increasing transportation budgets risk resulting in more demand for transit but reduced transit service
Economic Vitality			• Potential support for infill • Opportunity to expand on measures implemented during the pandemic (e.g., street closures and expanded sidewalk dining/activity) to increase economic opportunity	• There is an existing lag time in programming projects/service – increased need to prioritize projects during a period of economic recovery and ensure system allows for future possibilities • The growth of the delivery economy could provide opportunities for economic growth.

	Scenario 1 – Growing Economy/High Demand for Advanced Mobility Technologies	Scenario 2 – Growing Economy/Low Demand for Advanced Mobility Technologies	Scenario 3 – Slowing Economy/High Demand for Advanced Mobility Technologies	Scenario 4 – Slowing Economy/Low Demand for Advanced Mobility Technologies
Environmental Sustainability	• Opportunities to leverage the growing economy to support climate goals and invest in transit electrification to reduce GHG emissions • Risk that electrification elsewhere in the country may decrease gas prices and increase demand for ICEs, working against climate goals. • Opportunities to leverage demand for advanced mobility technologies to prioritize green technologies		• Opportunities to leverage high demand for advanced mobility to promote wellness and air quality benefits and reduce VMT	• Opportunity for reduced air pollution with less driving, and more biking and walking • The stay at home order indicated that achieving air quality benefits from reduced commuting and vehicle pollution are attainable. • There are opportunities to promote proven lower emission vehicle options (e.g., hybrids)
Safety & Security	• More mobility options can reduce conflicts within mode types (less traffic congestion) but increase conflicts between mode types.		• Opportunity to rethink the on-street network and provide safer options alternative modes! • Increased alternative mode use can increase the risk of bike/ped crashes due to speed differentials - slower roads for on-street bike network • Ensure safety by enforcing bike rules, enforcement	

	Scenario 1 – Growing Economy/High Demand for Advanced Mobility Technologies	Scenario 2 – Growing Economy/Low Demand for Advanced Mobility Technologies	Scenario 3 – Slowing Economy/High Demand for Advanced Mobility Technologies	Scenario 4 – Slowing Economy/Low Demand for Advanced Mobility Technologies
Funding & Cost Effectiveness	• Opportunities to invest in research to reduce cost barriers • More funding increases ability to maintain and increase quality of the transportation network	• While the economy is growing less vehicle trips/miles would generate less wheel tax and revenue – opportunities to generate revenue in other growth areas	• The slowing economy reduces infrastructure funding; if funding is reallocated or lacking the community suffers	• A slowing economy presents a risk of reduced funding for transit -need to address strategies for what if routes/service hours of transit are reduced?
Maintenance	• Opportunities to leverage new revenue streams to prioritize maintenance and expansion of the transportation system • Reduced congestion from fewer vehicles on the road increases the ease of conducting maintenance	• Less trips could mean less maintenance • Opportunity to address maintenance backlog while ADT is down if new funding sources are found or maintenance costs decrease • Wants versus needs should be clearly defined - funding gap is $28-33M	• Pavement and sidewalk condition for on-street users • Risk of lack of funding increasing the level of deferred maintenance • Slowing Economy = Less money – funding risks for gas tax and sales tax as primary funding for maintenance and accommodating new growth	• Need to maintain infrastructure to support delivery economy – • The future may change who is using the infrastructure (Amazon!) instead of commuters
Other	• Automated driving may smooth traffic; reduce emissions; increase mobility, safety and capacity; and reduce the need to expand the roadway – this could provide opportunities to prioritize different projects.		• Risk of pursuing too many advanced mobility technologies instead of targeting options that align with LRTP goals.	• Public sector needs to identify its role in supporting electric charging stations; retrofitting homes/gas stations

Table 2. Strategies & Policies Worksheet Summaries

	Scenario 1 – Growing Economy/High Demand for Advanced Mobility Technologies	Scenario 2 – Growing Economy/Low Demand for Advanced Mobility Technologies	Scenario 3 – Slowing Economy/High Demand for Advanced Mobility Technologies	Scenario 4 – Slowing Economy/Low Demand for Advanced Mobility Technologies
Livability & Travel Choice		• Re-examine land use, zoning and growth policies to ensure strategic development • Create standards/plan for a bike boulevard system to meet demand for active transportation	• Develop policies/plans to prioritize connections between businesses and essential services (filling the gap) • Create policies/ regulations to ensure that service territories for advanced mobility technologies extend outside the Downtown core.	• Develop policies/plans to strategically place affordable housing close to jobs centers • Develop policies/plans to ensure housing affordability and geographic distribution to ensure housing is close to job centers
Mobility & System Reliability	• Prioritize investment in on-demand transit to ensure that mode-choices are still provided in addition to private transportation.	• Integrate processes to address evaluating freight routes vs bike facilities conflicts in planning and design processes • Develop strategies to accommodate the delivery economy – rules and regulations for operating on the transportation network and vehicle requirements	• Develop strategies to integrate transit routing and intermodal facilities to meet demands/needs and trends. • Prioritize strategies to optimize the fixed route services • Review and update existing policies that serve as barriers to integrating AMT.	• Prioritize pedestrian friendly infrastructure, including sidewalk and trail maintenance • Prioritize completing the bike/ped network to prioritize connections between job centers and low/moderate income and essential workers • Develop a system to streamline information sharing about mobility services and reliability of the transportation system (e.g., website) • Transition to microtransit

	Scenario 1 – Growing Economy/High Demand for Advanced Mobility Technologies	Scenario 2 – Growing Economy/Low Demand for Advanced Mobility Technologies	Scenario 3 – Slowing Economy/High Demand for Advanced Mobility Technologies	Scenario 4 – Slowing Economy/Low Demand for Advanced Mobility Technologies
Transportation Equity		• Develop policies to promote access to affordable housing and transportation.	• Policies to retain or expand vouchers for transit, including options to adopt fare-less transit policies used during the COVID-pandemic	• Adopt policies to provide flexibility to accommodate microtransit and/or alternative transit options to focus on essential workers • Expand equity policies to ensure equitable investment in transportation for low- and moderate-income workers
Economic Vitality			• Develop policies to capitalize on the value the high demand for advanced mobility technologies places on public spaces to fund transportation project	• Develop policies to facilitate partnerships with private sector (e.g., TNCs) to complement and/or provide transit services
Environmental Sustainability	• Leverage the growing economy to support research in advancing carbon neutral transportation options • Provide financial incentives to promote sustainable/ environmentally friendly options, and invest in supporting infrastructure			

	Scenario 1 – Growing Economy/High Demand for Advanced Mobility Technologies	Scenario 2 – Growing Economy/Low Demand for Advanced Mobility Technologies	Scenario 3 – Slowing Economy/High Demand for Advanced Mobility Technologies	Scenario 4 – Slowing Economy/Low Demand for Advanced Mobility Technologies
Safety & Security			• Update regulations to ensure safe interactions between the modes and increase safety awareness for bike/ped	• Develop policies to prioritize walkability and safety with a focus near employment centers (e.g., Walmart)
Funding & Cost Effectiveness		• Identify alternative funding strategies to reduce dependency on the fuel tax revenue. • Support policy changes at the state and federal level to modify policies that determine level of funds based on VMT.	• Funding constraints and limits on funding allocations (Lincoln on the move, gas, sales, federal/state) that may limit active transportation investments as needed. • Develop a policy ensure strategic investment in advanced mobility options that align with LRTP goals and available funding. • Develop alternative funding strategies that reduce dependency on diminishing and/or inconsistent funding sources (e.g., gas and sales taxes)	• Develop policies/ programs to reduce transit costs (e.g., reduced/free transit passes, employee or city-based programs) • Identify relevant and sustainable funding sources • Develop policies to increase funding flexibility to fund critical programs. • Identify alternative funding strategies to reduce dependency on the fuel tax revenue.
Maintenance	• Develop policies to guide intentional planning of maintenance and projects to ensure equitable investment and impact from construction	• Develop policies to ensure budget flexibility to shift funding to meet current needs (e.g., to prioritize maintenance backlog under this scenario)	• Identify alternative funding mechanisms to prevent the continued deferral of maintenance projects.	• Proactive maintenance of system (instead of reactive) - optimize use of limited funds (maybe the expectation of pavement condition is reduced)

	Scenario 1 – Growing Economy/High Demand for Advanced Mobility Technologies	Scenario 2 – Growing Economy/Low Demand for Advanced Mobility Technologies	Scenario 3 – Slowing Economy/High Demand for Advanced Mobility Technologies	Scenario 4 – Slowing Economy/Low Demand for Advanced Mobility Technologies
Current Policies & Regulations	• Review existing policies to identify and remove potential roadblocks to accommodating advanced technologies • Identify new policies required to effectively incorporate new technologies (e.g., drones, scooters, delivery robots) operate on the existing transportation network and align with the LRTP goals.	• Revise the TAP process to streamline accessing federal funding for trail projects • Revisit policies for MPO officials determining federal funding for City/County • Review and update roadway design standards to accommodate evolving vehicle and communications technologies. • Develop autonomous vehicle (V2X) communication standards/guidelines	• Update on-street and rules of the road to determine how best to accommodate new modes (e.g., e-bikes) • Develop policies/ regulations for managing public and private mobility services operating within the ROW (curbside management) • Review and update existing policies to remove barriers to integrating advanced mobility technologies.	

Report Out

At the end of the workshop, each group was asked to identify the top 3 strategies that they felt would most increase the likelihood of success under their Scenario. The top strategies reported under each Scenario are summarized in **Table 3**.

Table 3. Top Strategies

Scenario 1 – Growing Economy/High Demand for Advanced Mobility Technologies	Scenario 2 – Growing Economy/Low Demand for Advanced Mobility Technologies	Scenario 3 – Slowing Economy/High Demand for Advanced Mobility Technologies	Scenario 4 – Slowing Economy/Low Demand for Advanced Mobility Technologies
Prioritize investment in on-demand transit to ensure that mode-choices are still provided in addition to private transportation.	Develop policies to ensure budget flexibility to shift funding to meet current needs.	Develop policies/plans to prioritize connections between businesses and essential services (filling the gap).	Develop policies/plans to ensure housing affordability and geographic distribution to ensure housing is close to job centers.
Develop policies to guide intentional planning of maintenance and projects to ensure equitable investment and impact from construction.	Integrate processes to address evaluating freight routes vs bike facilities conflicts in planning and design processes.	Develop strategies to integrate transit routing and intermodal facilities to meet demands/needs and trends.	Identify alternative funding strategies to reduce dependency on the fuel tax revenue.
Identify new policies required to effectively incorporate new technologies (e.g., drones, scooters, delivery robots) operate on the existing transportation network and align with the LRTP goals.	Develop policies to promote access to affordable housing and transportation.	Identify alternative funding mechanisms to prevent the continued deferral of maintenance projects.	Develop policies to facilitate partnerships with private sector (e.g., TNCs) to complement and/or provide transit services.
	Identify alternative funding strategies to reduce dependency on the fuel tax revenue.	Update regulations to ensure safe interactions between the modes and increase safety awareness for bike/ped.	Develop policies to prioritize walkability and safety with a focus near employment centers (e.g., Walmart).

Testing of Strategies

Limited time was available to test the recommended strategies across all scenarios. A post workshop analysis was conducted to answer the following questions:

- Which strategies are common among all scenarios?
- Which strategies would be beneficial in one scenario but detrimental in another?

Strategies that may be limited to a subset of scenarios have been highlighted with a **CAUTION** note indicating the circumstances under which the strategy could be considered.

Maintenance: A well-maintained transportation system

- Develop policies to guide intentional planning of maintenance and projects to ensure equitable investment and impact from construction.
- Identify sustainable and resilient maintenance funding mechanisms to prevent the continued deferral of maintenance projects.
- Invest in proactive maintenance of system and optimize use of limited funds.

  CAUTION: Prioritizing proactive maintenance may be easier to justify under a growing economy.

Mobility and System Reliability: An efficient, reliable, and well-connected transportation system that leverages innovation and technology for moving people and freight.

- Create standards/plan for a bike boulevard system to meet demand for active transportation.

  CAUTION: Standards and plans may need to extend to include a more diverse set of options under high demand for advanced mobility.
- Develop strategies to accommodate future mobility options and vehicle technologies:
  - Delivery Economy – rules and regulations for operating on the transportation network and vehicle requirements (e.g., drones, scooters, delivery robots)
  - Roadway Design Standards - include vehicle communication (V2X) standards/guidelines to accommodate evolving vehicle and communications technologies
  - Revise Rules and Regulations that currently prohibit or deter advanced mobility technologies.
- Develop policies/regulations for managing public and private mobility services operating within the ROW (curbside management).
- Develop strategies to integrate transit routing and intermodal facilities to meet demands/needs and trends.

Livability and Travel Choice: A multimodal system that provides travel options to support a more compact, livable urban environment

- Re-examine and revise land use, zoning and growth policies to ensure strategic development.
- Develop policies/plans to promote access to affordable housing and transportation, strategically place affordable housing close to jobs centers and prioritize connections between businesses and essential services.
- Prioritize completing the bike/ped network to prioritize connections between job centers and low/moderate income and essential workers

  CAUTION: There is a need to understand the preferred mode of travel for essential workers.

Safety and Security: A safe and secure transportation system.

- Update on-street and rules of the road to determine how best to accommodate and prioritize new modes and user types.
- Update regulations to ensure safe interactions between the modes (including freight) and increase safety awareness for vulnerable road users.
- Develop policies to prioritize walkability and safety with a focus near employment centers.

Economic Vitality: A transportation system that supports economic vitality for residents and businesses.

- Develop policies to facilitate partnerships with private sector (e.g., TNCs) to complement and/or provide transportation services.
- Develop policies to capitalize on the value the high demand for advanced mobility technologies places on public spaces to fund transportation project.

Environmental Sustainability: A transportation system that enhances the natural, cultural, and built environment.

- Provide incentives to promote sustainable/environmentally friendly transportation options, and funding of supporting infrastructure.
- Leverage the growing economy to support research in advancing carbon neutral transportation options.

  CAUTION: Funding research may be easier to justify under a growing economy.

Funding and Cost Effectiveness: Collaboration in funding transportation projects that maximizes user benefits.

- Explore revising existing funding mechanisms to accommodate budgeting and funding flexibility necessary to ensure funding of critical programs.
- Identify new sustainable funding sources and mechanisms to reduce dependency on the fuel tax.

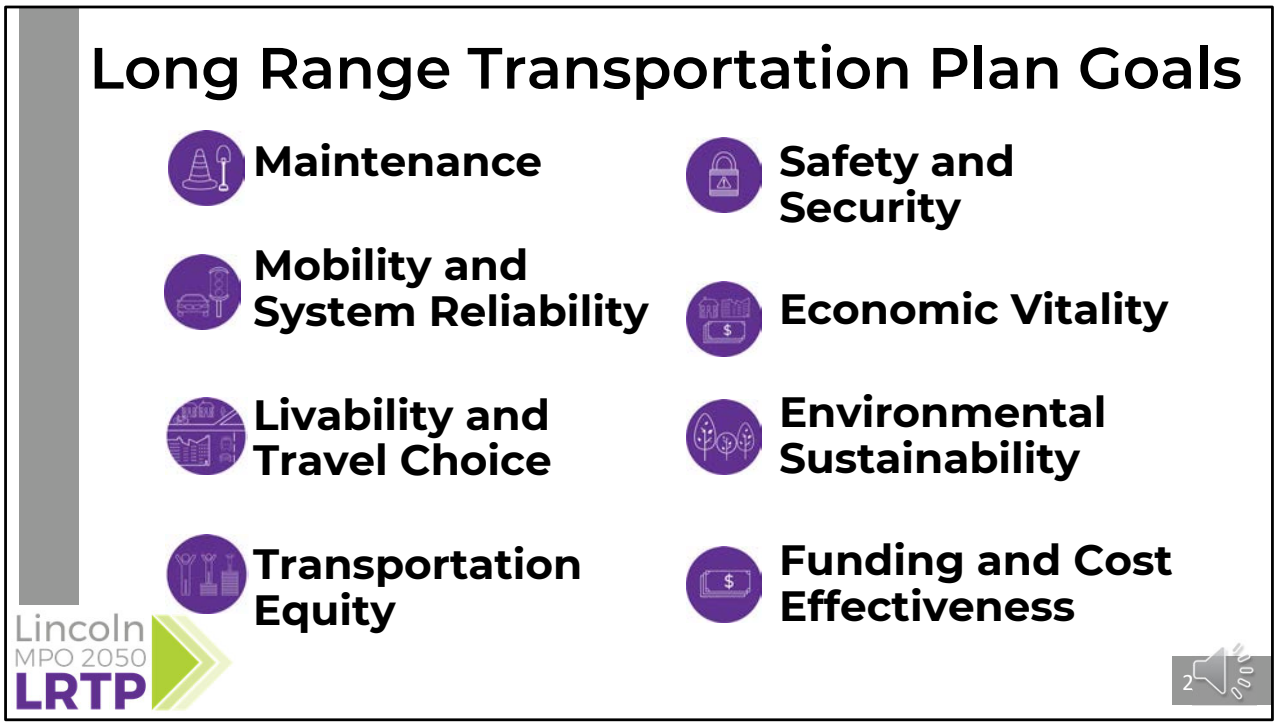
Transportation Equity: Transportation investments developed through an inclusive process that promote equitable outcomes.

- Prioritize investment in on-demand transit to ensure that mode-choices are still provided in addition to private transportation.
- Develop policies/ programs to reduce transit costs (e.g., reduced/free transit passes, employee or city-based programs)
- Create policies/ regulations to ensure that service territories for advanced mobility technologies extend outside the Downtown core.

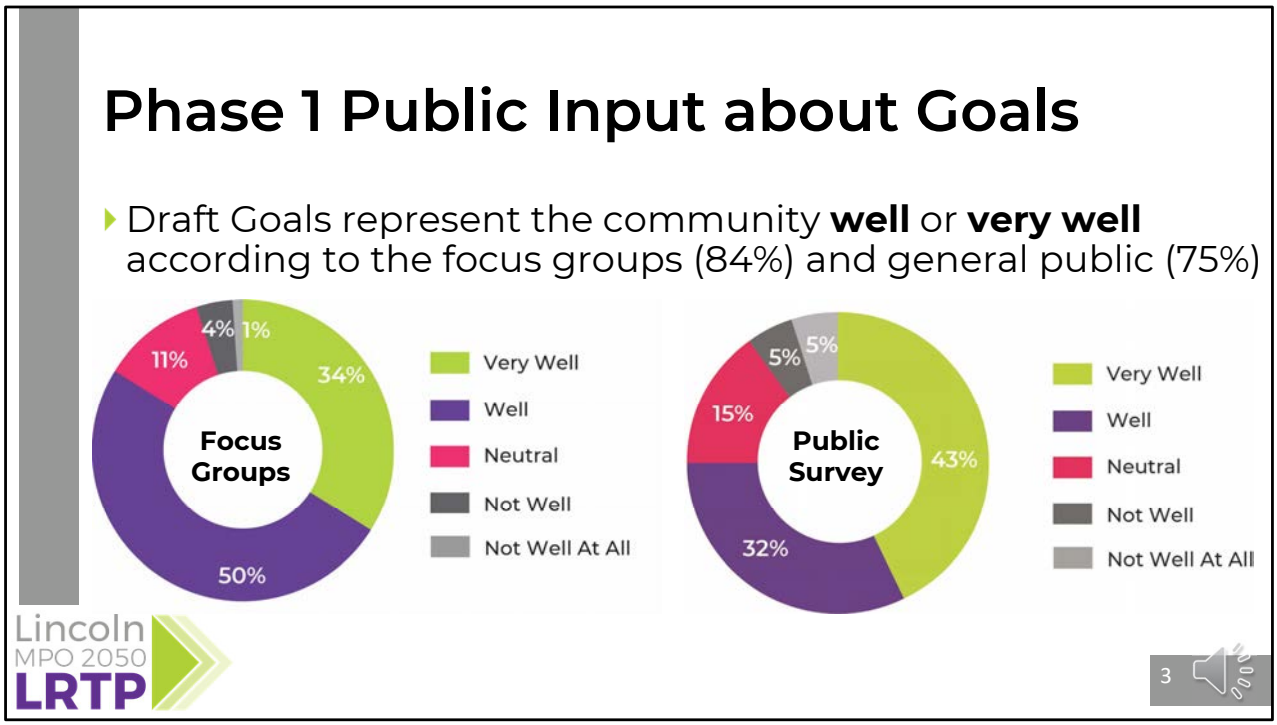
Attachment B-5 – Phase 2 Virtual Presentation and Projects Packet



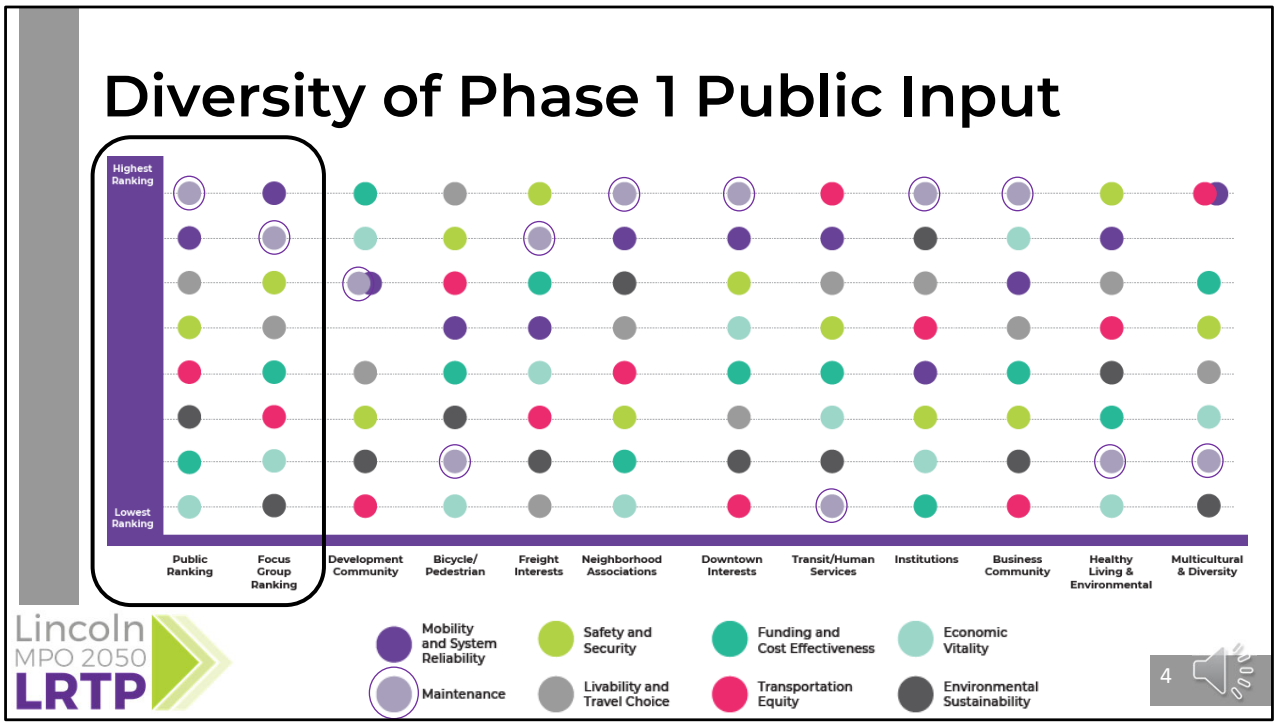
- Hello! Thank you for taking time to learn about important next steps for the Lincoln Metropolitan Planning Organization's 2050 Long Range Transportation Plan (LRTP) – A plan to establish priorities for transportation improvements over the next 30 years!
- The LRTP is informed by public input. In the first phase of outreach, input helped identify the transportation values, issues of concerns, and important trends. This helps the planning team make recommendations about projects and policies the plan should address.
- There are three goals for this presentation:
- First, you will hear a summary of public input received so far.
- Next, we'll provide an overview of how projects are identified for the LRTP and how they are prioritized.
- Finally, we'll share insights about transportation project costs.
- This information will help you to complete the phase two public survey about investment tradeoffs and priority projects.
- Let's get started!
- (55 seconds)



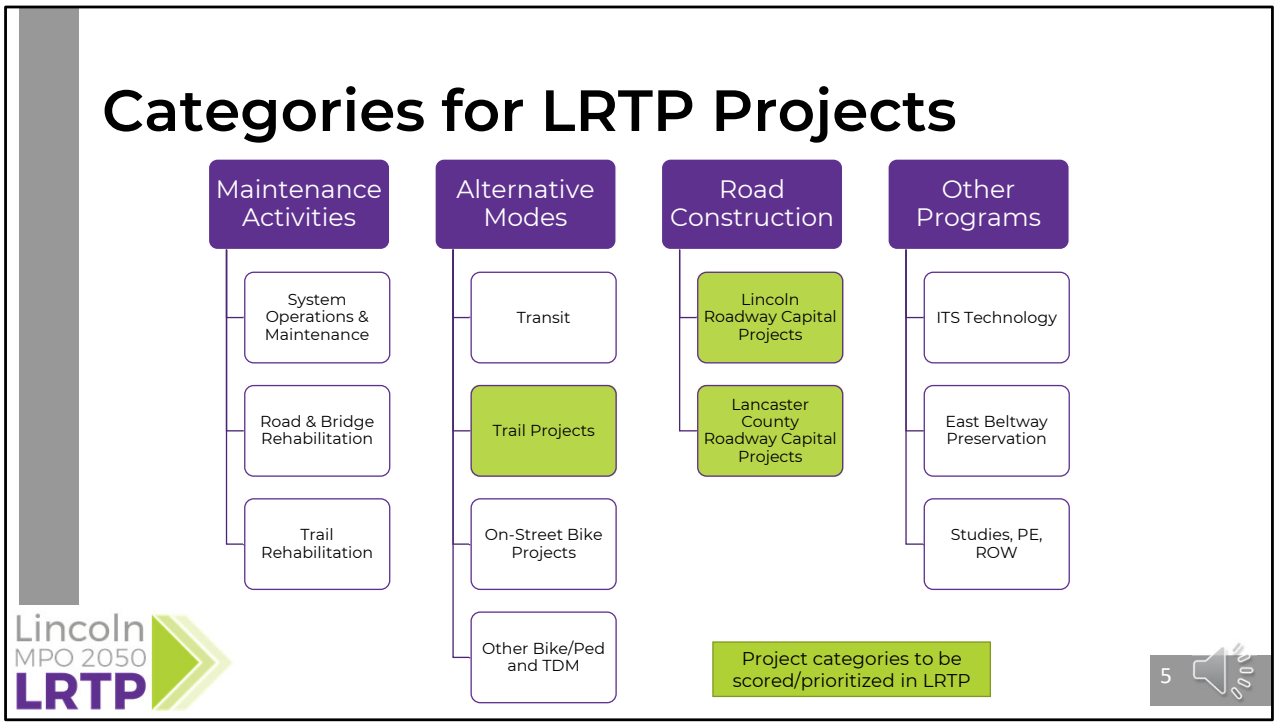
- During phase one outreach, we shared how the LRTP is closely linked to the Comprehensive Plan and that transportation is an important Element of accomplishing the community's vision.
- We shared information about the eight transportation goals listed on this screen and asked the public to give their input about the importance of the goals and which ones were most important.
- These eight goals satisfy the required federal regulations for funding and we wanted to gain the community's input about them.
- (30 seconds)



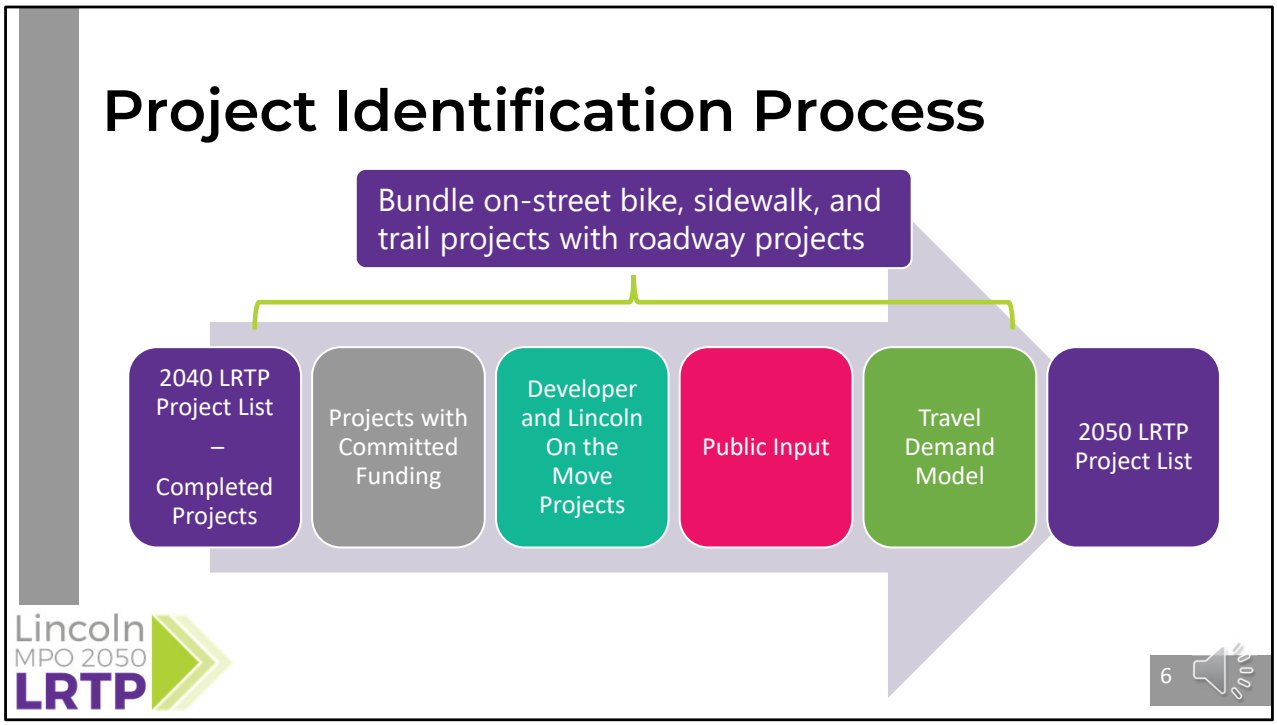
- The LRTP goals are important because they support how transportation projects are identified and prioritized.
- After learning about the eight transportation goals, the public was asked how well they represent the community.
- A majority of focus group participants believe the goals represent the community “well.”
- The majority of people completing the public survey suggest the goals represent the community “very well.”
- While a few indicated the goals do not reflect the community today, the LRTP will help organize steps needed to achieve the goals.
- (35 seconds)



- Many perspectives and ideas were shared during the first phase of public outreach and the diversity of input was an important theme to capture.
- The graphic on the screen was taken from the phase one summary to show how different interest groups prioritize the eight goals.
- The averaged inputs of all focus groups and public survey responses are shared on the right. Each of the ten focus groups also ranked the goals and the results make up the remaining ten columns.
- The goals that ranked the highest priority are shown at the top and the lowest priority are at the bottom. Find a color goal of interest and track it across the chart to see how differently it was prioritized by the different groups.
- It is important to know that each goal informs the LRTP. Although some goals receive higher priority than others, the LRTP is expected to accomplish all goals because all goals are important to the community.
- (55 seconds)



- The multimodal transportation network is supported by many programs, projects and policies that are maintained by the members of the Metropolitan Planning Organization (MPO).
- Many of these initiatives are supported in other documents such as the Transit Development Plan, On-Street Bicycle Plan and Traffic Management Plan which are supported by the LRTP.
- A comprehensive list was developed of projects that may be required in the next 30 years.
- The LRTP project identification and prioritization process focused on three separate categories:
- Trail projects
- City of Lincoln Roadway Projects
- Lancaster County Roadway Projects
- (40 seconds)



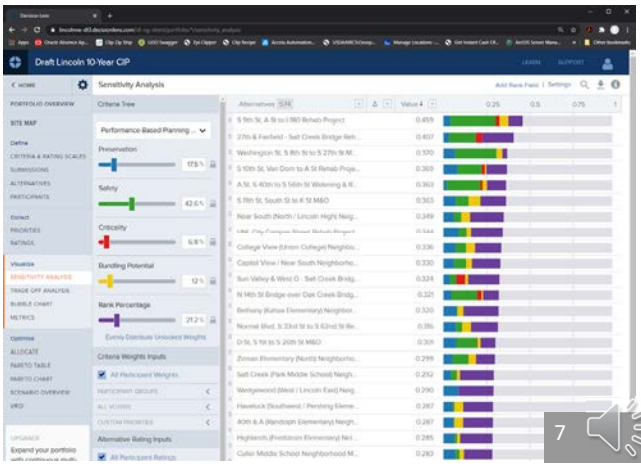
- Development of a comprehensive list of projects required many steps and a subcommittee to complete.
- The first step included removing the completed projects listed in the 2040 LRTP.
- The remaining projects were reviewed to update commitments of funding from Federal, State and local sources.
- The Lincoln Lancaster County Planning Department and Lincoln Transportation and Utilities organized new projects that are developer driven or that are to be funded through Lincoln On the Move which included 50 projects anticipated to be completed by 2025.
- During the first phase of public outreach, project ideas were added to a web map. Each of these recommendations was considered and new project ideas were added to the lists.
- An assessment of corridors that are expected to become congested was also completed with the travel demand model. New projects that would address these corridors were also be added to the list.
- Finally, the list of roadway projects was bundled with adjacent trail projects, on-street bike projects, and sidewalk projects to support the multimodal transportation needs in an efficient and flexible manner.
- This process led to the 2050 LRTP Project lists for prioritization.
- (65 seconds)

Project Prioritization Process

- Based on eight goals



- Using Decision Lens



Lincoln MPO 2050 LRTP

- Once the comprehensive list of projects was created, the next step was to begin evaluating the project priorities.
- It is important that the LRTP direct the highest priority projects to be completed sooner while other projects can wait.
- Software is used to calculate the weighted scores for each project based on the goals they support.
- Projects that support many goals very well are ranked higher than projects that do not.
- And the new transportation equity goal is included in this calculation which will help drive transportation investments toward projects that create equitable outcomes.
- This data driven process allows the Lincoln MPO to ensure transportation funding maximizes the overall benefit to the community.
- (40 seconds)

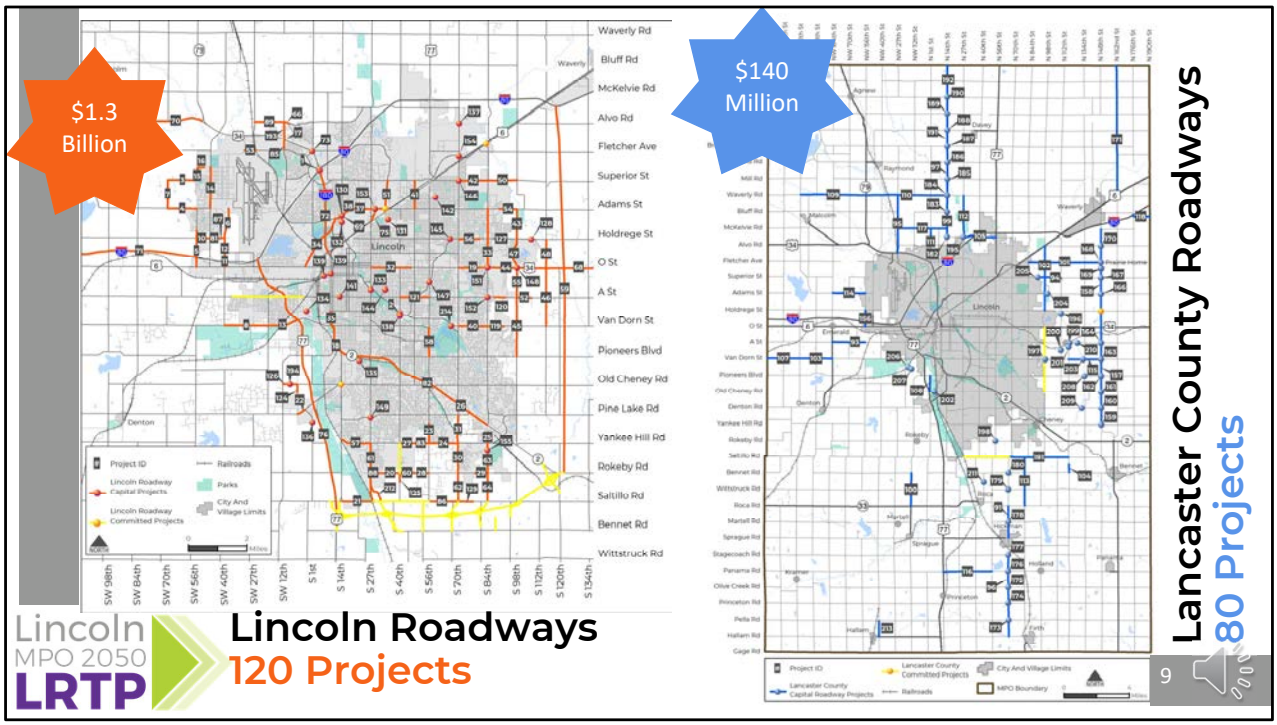
How Are Project Weights Assigned?

	Lincoln Roads	Lancaster County Roads	Trails
Maintenance	17.8	22.1	13.0
Safety & Security	13.5	13.8	13.1
Environmental Sustainability	12.8	12.2	12.4
Mobility & System Reliability	12.4	12.1	12.2
Livability & Travel Choice	11.0	5.8	13.7
Transportation Equity	10.0	6.7	12.2
Funding & Cost Effectiveness	10.0	13.4	7.7
Economic Vitality	7.5	8.9	5.8
Community Input	5.0	5.0	10.0
Total	**100.0**	**100.0**	**100.0**

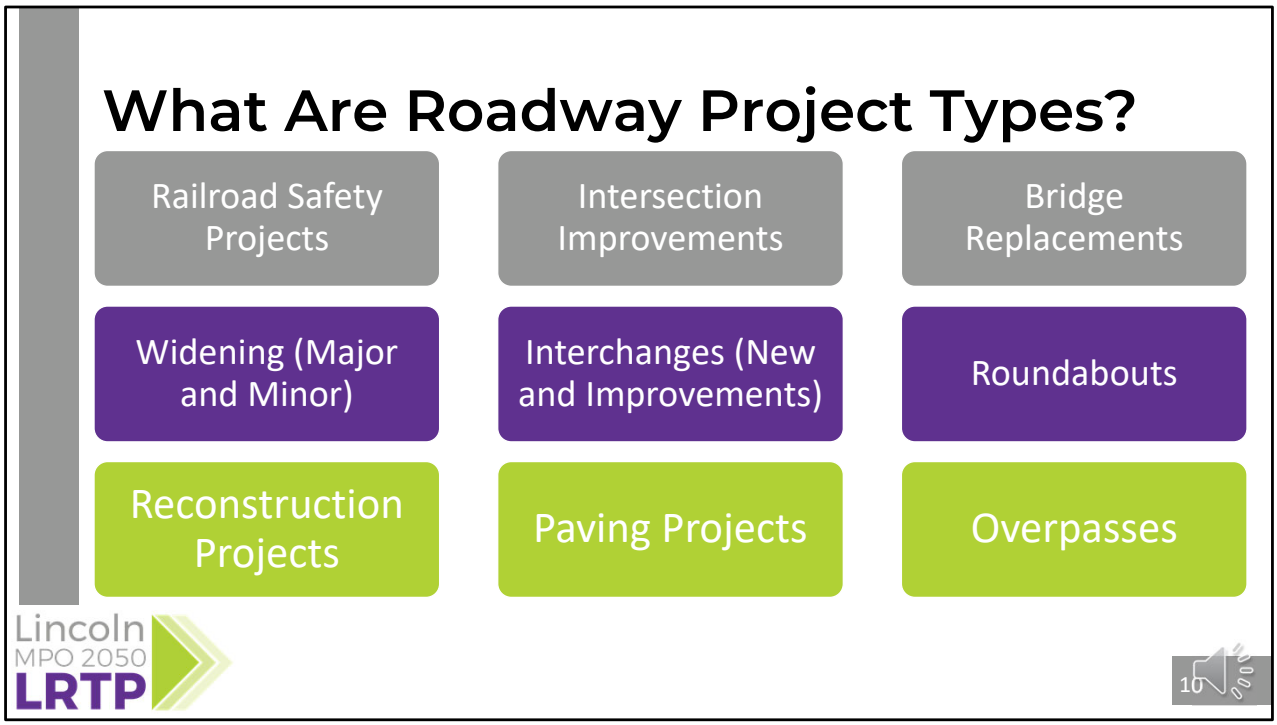
Lincoln MPO 2050 LRTP

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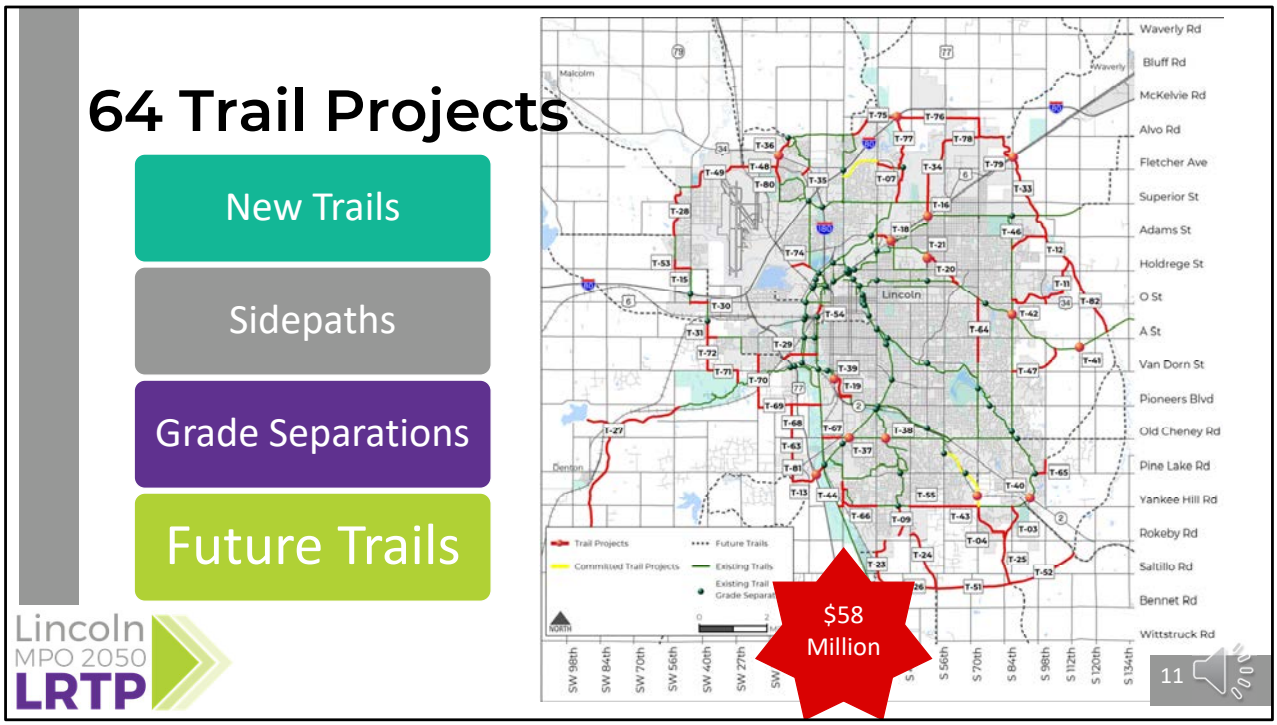
- The Project Oversight Planning Committee represents the Lincoln MPO and reviewed public input about the goals. Their recommended goal weights were added to the recommended weights of the Plan Forward 2050 Community Committee and averages of these committee scores determined the relative weights of each goal.
- The weights were separated for Roadway Capital Improvement projects to reflect the different priorities in the urban vs. rural context.
- The two committees also assigned a score for projects that will receive community support.
- Because roadway projects are heavily supported by available data, a project may receive up to 5.0 community input points in the overall prioritization process.
- Trail projects are also important, have less available data compared to roadways projects, and are more heavily funded by private contributions. As a result, a Trail project may receive up to 10 community input points in the overall prioritization process.
- (50 seconds)



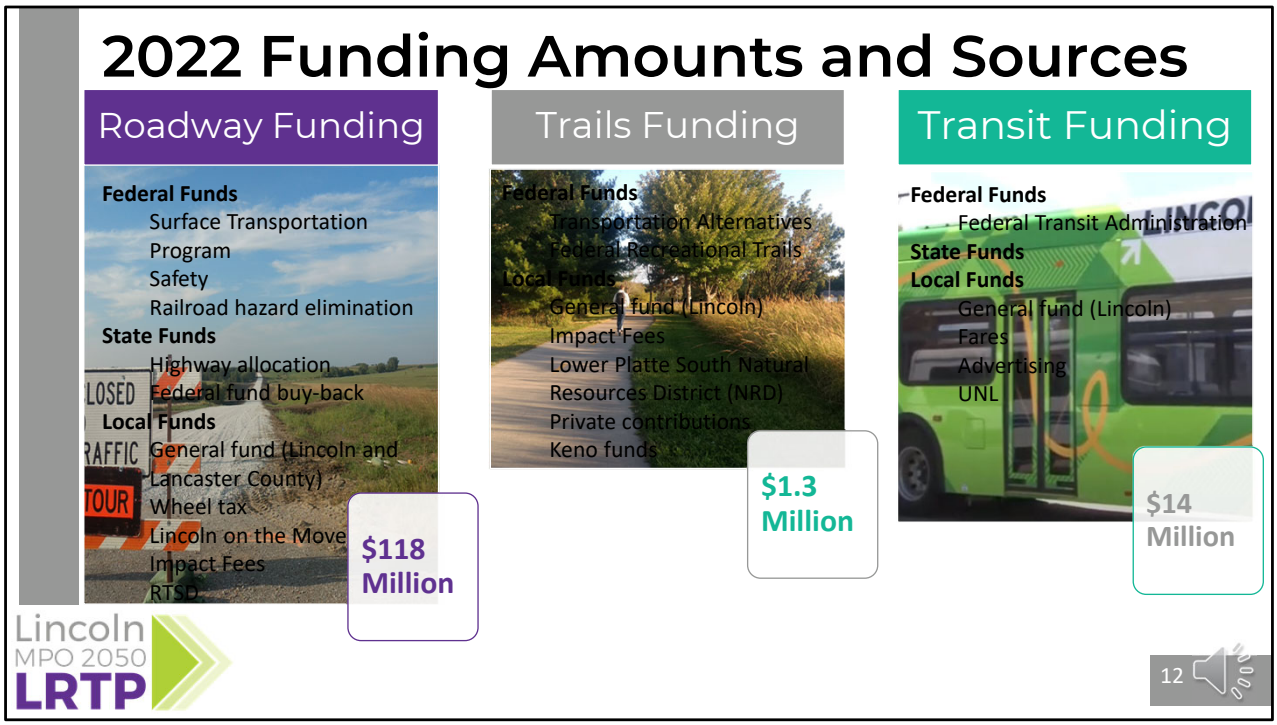
- The Roadway Projects are distributed throughout Lincoln and Lancaster County. A map and project list is available for review on the project website.
- A total of 120 City of Lincoln projects have been identified that would exceed $1.3 Billion to complete if funds were available in 2022.
- 80 projects were identified in Lancaster County that would exceed $140 Million to complete if funds were available.
- Projects that have committed funding but are not complete are included in this list. They represent projects that will be completed in the short term of the fiscally constrained plan.
- Because annual funding is limited, prioritizing Lincoln and Lancaster County projects is critical to supporting growth anticipated to occur within the region.
- (35 seconds)



- There are many project types included in the Roadway Project categories for Lincoln and Lancaster County including:
- Construction of new lanes on existing paved roadways
- Constructing intersection improvements with turn lanes or roundabouts that improve operations.
- Reconstruction of roadways that are in such poor condition that surface maintenance is not possible.
- Repair and Replacement of bridges that have exceeded their useful life or do not meet safe standards for various reasons.
- Construction of safety projects including railroad and intersection safety improvements.
- City, County and State roadway projects are important investments that help maintain a safe and efficient transportation network that supports the goals of the LRTP.
- (40 seconds)



- 64 trail projects have also been defined throughout the community to prioritize within the LRTP.
- Public input strongly suggests that trails support the region's high quality of life, equitable access, and continued growth in active transportation.
- New trails, sidepaths and grade separation projects are all included in this list.
- Each project is important and will become part of the larger trail network envisioned for the community.
- Urban sidepaths are often associated with roadway improvement projects and can be completed before, with or after a roadway project is completed.
- (25 seconds)



- Funding for transportation projects comes from multiple sources shown here.
- The source of the funding typically determines the type of projects that can be constructed.
- Funding from federal, state and local sources is necessary to build and maintain the transportation network.
- Most of the $118 Million of roadway funding projected in 2022 is directed to roadway improvements in the City and County however, several of these funding sources offer flexibility and can be used for a variety of transportation project types.
- When possible, roadway project funding may be bundled with projects listed in the On-Street Bike Plan.
- While other trail projects are funded through specific federal and local sources projected to be $1.3 Million in 2022.
- Transit funding is anticipated to be $14 Million which will continue to fund capital and operational needs similar to recent funding levels.
- These funding amounts are significant but are certainly not enough to build every project listed in the LRTP.
- (50 seconds)

Did You Know It Costs:

Project Type	2022 Estimates
Widen Roadway per mile	$13.4 – 15.3 Million
Two Lane + Center Turn (new) per mile	$8.9 Million
Two Lane + Center Turn (widen) per mile	$2.5 Million
Trail per mile	$380 Thousand
On-Street Bike Facility per mile	$255 Thousand - $2.5 Million
Sidewalk Rehabilitation per mile	$255 Thousand
Street Overlay per mile	$1.9 Million
Transit Route per mile per year	$380 Thousand
System Upgrade per signal	$220 Thousand





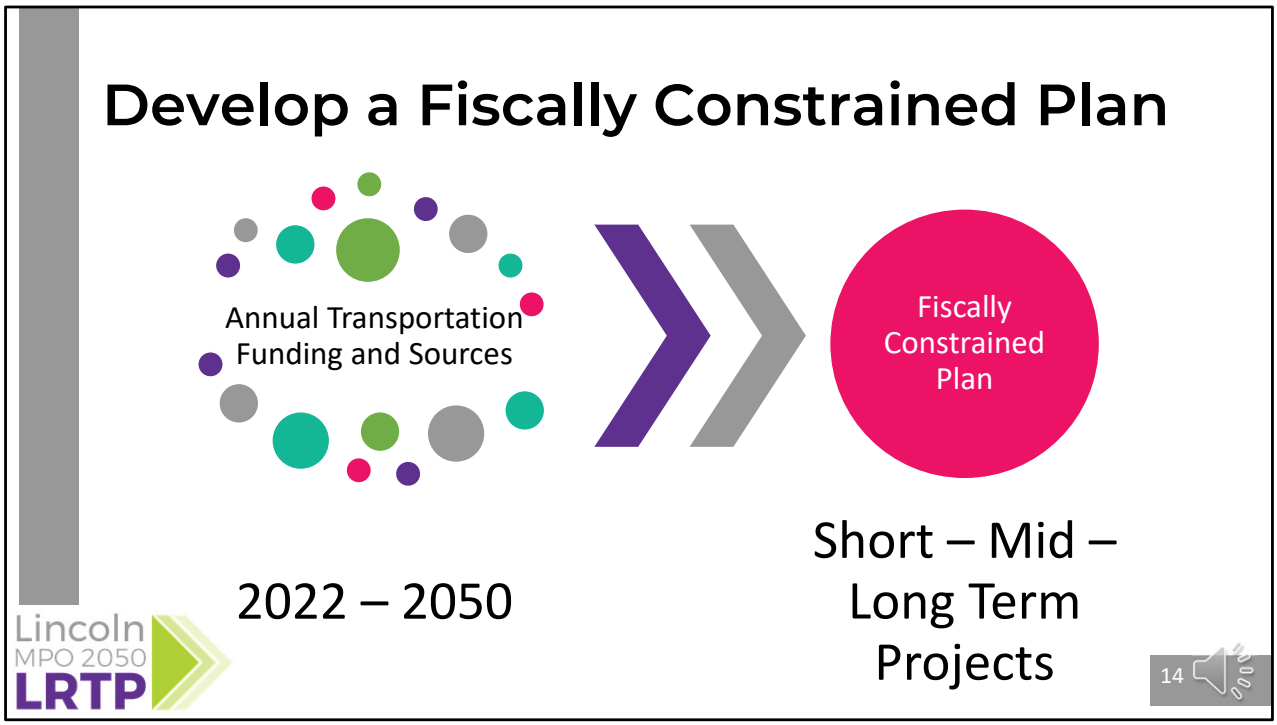




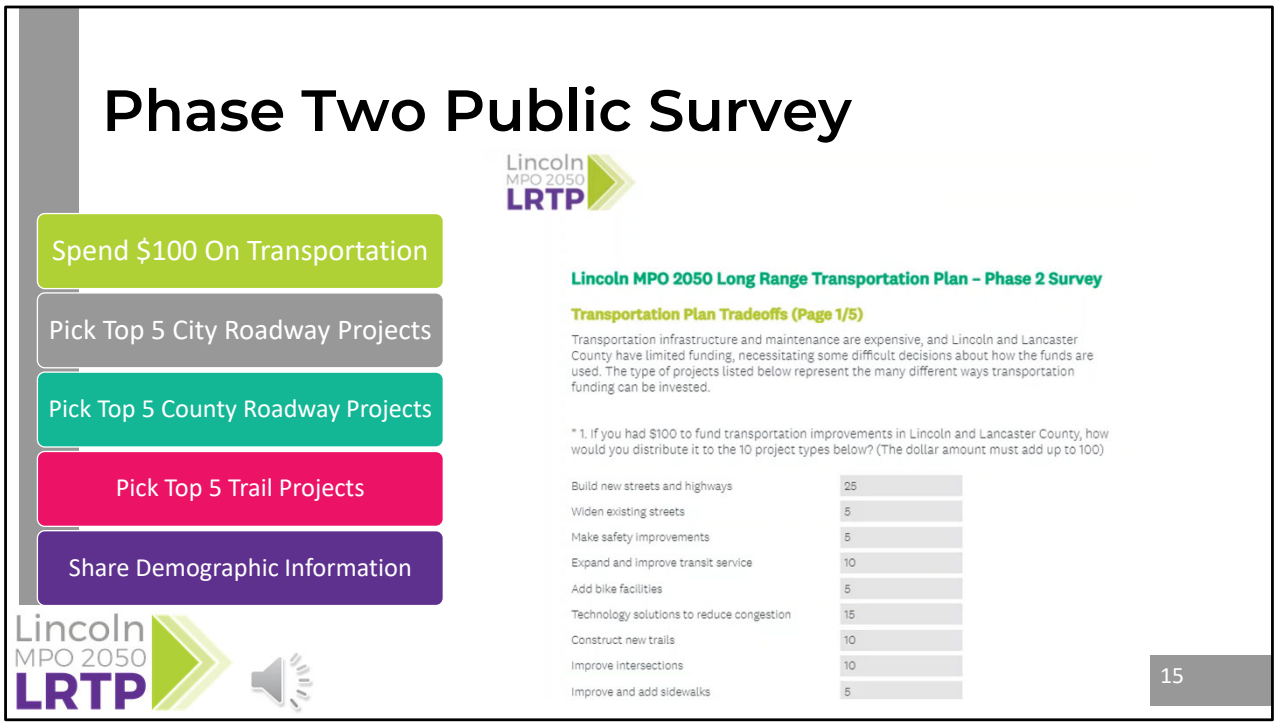
Lincoln MPO 2050 LRTP

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- So how far can limited transportation dollars stretch each year?
- With careful planning and good data driven decisions, the answer may be, “as far as possible.”
- To be more specific though, one thing to remember is projects become more expensive over time as inflation raises the cost of materials and labor.
- In recent years, construction costs have inflated approximately 5% per year according to recent projects bids.
- Project costs increase at a faster pace than revenue increases, which means without additional funding sources, we'll be able to do less in the future.
- The planning level per-mile cost estimates shown in green indicate how far limited funding may go toward completing short term projects.
- Projects recommended to be completed in future years will consider the inflation costs and the future year funding available.
- (40 seconds)



- This LRTP planning process will result in a fiscally constrained transportation plan that organizes projects according to their priority and the funding available between now and 2050. The draft plan will be available for public review during the summer of 2021.
- Project scores and the community priority points explained in this presentation will determine the order of the priority list so projects that have the greatest benefit for the LRTP Goals will be prioritized to complete first.
- The fiscally constrained plan will compare anticipated annual funding against the remaining projects to determine how many projects can be completed by 2050.
- Projects will be organized into short, mid and long term categories to that may be adjusted as priorities change in future years.
- (40 seconds)



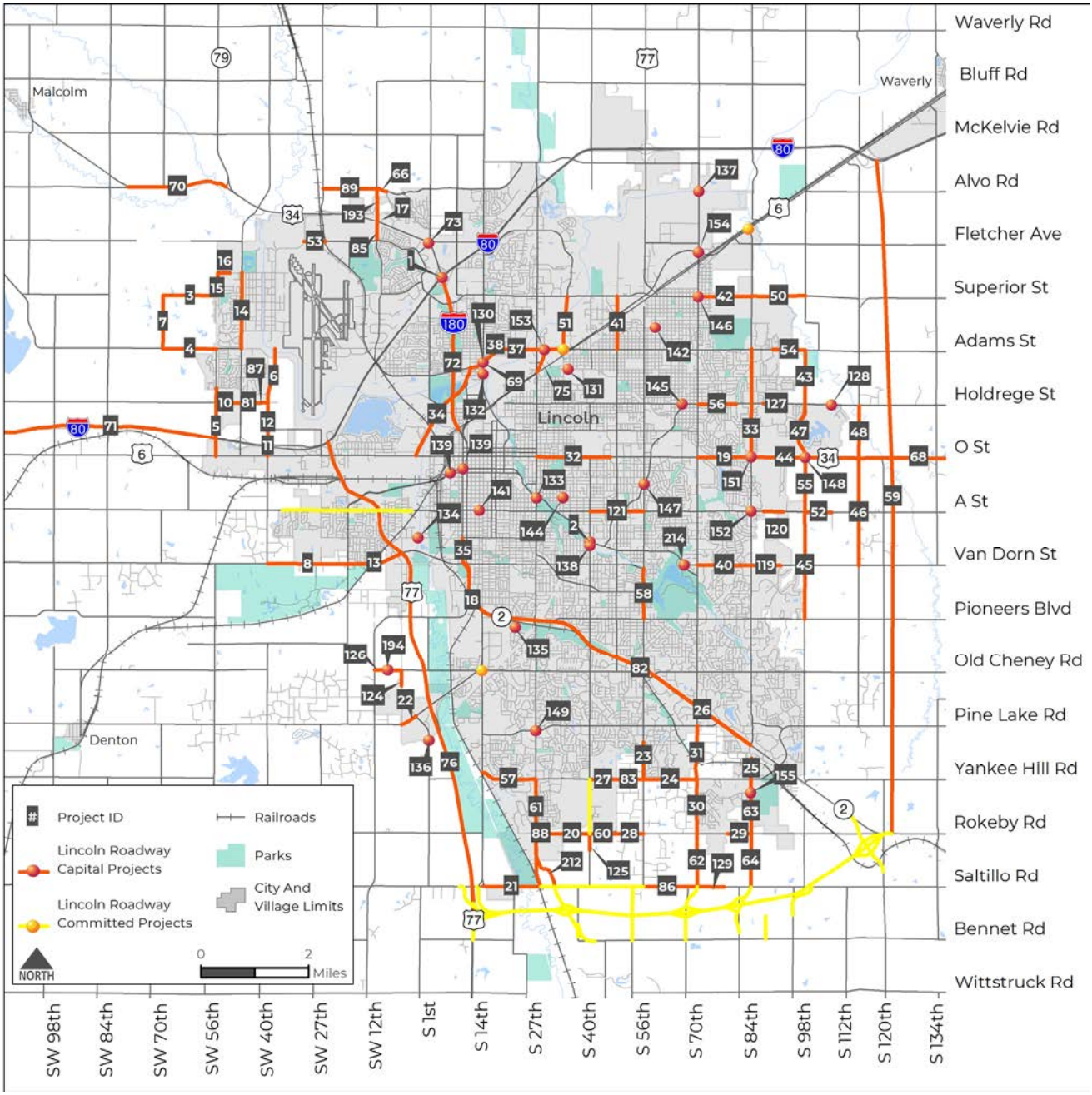
- Now that you know more about transportation projects, funding and costs, you are ready to provide input about these topics.
- The phase 2 survey is provided for you to share input about tradeoffs and priority projects.
- A survey reference with the project maps and lists referenced in this presentation is available to download.
- Think about how you would distribute $100 transportation dollars. Enter amounts you would spend with limited funding available.
- Next, pick the five City of Lincoln Roadway projects that you believe are most important to complete.
- Repeat this on the next screen for the five most important Lancaster County roadway projects.
- Finally, pick the five Trail projects that are most important to complete.
- The final screen will ask for information that helps verify survey results and that the results are representative of the community's diversity.
- (45 seconds)



- Your input will help establish priorities for transportation improvements and inform the selection of projects to be constructed.
- Please complete the public survey available on the website before April 5th and share this opportunity to provide input with others.
- Thank you for taking time to learn about the Lincoln MPO's 2050 LRTP planning process.
- (20 seconds)

2050 LRTP City of Lincoln Project Map

A total of 120 projects were identified within the City of Lincoln. **Which five (5) are most important to you?** Projects range from interchanges, intersections, and roundabouts to new lanes and turn lanes as well as bridge and railroad safety projects. The figure below shows the location and ID of each City of Lincoln project and the list of projects with descriptions is included on the next page.



Review Lincoln projects, descriptions and planning level cost range on next pages

2050 LRTP City of Lincoln Project List

City of Lincoln Roadway Project List				
ID	**Street Name**	**Limits**	**Description**	**Project Cost**
Committed Projects				
Committed	**Saltillo Road**	**S 27th Street to S 56th Street**	**2 lanes + intersection improvements**	**$$**
Committed	**S 40th Street**	**Yankee Hill Road to Rokeby Road**	**3 lane section with raised median and turn lanes as appropriate**	**$$$**
Committed	**West Beltway (US 7**	**I-80 to Saltillo Road**	**Freeway with new interchanges**	**$$$$**
Committed	**W A Street**	**SW 36th Street to SW 5th Street**	**2 lanes + intersection improvements**	**$$$**
Committed	**South Beltway**	**US-77 to Nebraska Hwy 2**	**4 lane freeway**	**$$$$$**
Committed	**N 33rd Street and Cornhusker Hwy**	**N 33rd Street and Cornhusker Hwy**	**Remove three at-grade crossings (RTSD Project)**	**$$$$$**
Committed	**N 84th Street**	**Cornhusker Hwy (US-6)**	**Remove existing traffic signal and construct roundabout**	**$$$**
Committed	**S 14th Street/Warlick/Old Cheney**	**14th/Warlick/Old Cheney**	**Intersection improvements and grade separation**	**$$$$**
We need your input on the following projects – Which 5 are most important to you?				
1	I-80	I-80 and I-180	Major interchange work	$$$$$
2	S 40th Street	Normal Blvd and South Street	Major intersection area work	$$$
3	W Superior Street	NW 70th Street to NW 56th Street	2 lanes + intersection improvements	$$
4	W Adams Street	NW 70th Street to NW 56th Street	2 lanes + intersection improvements	$$
5	NW 56th Street	W Partridge Lane to W "O" Street	2 lanes + intersection improvements	$$
6	NW 38th Street	W Adams Street to W Holdrege Street	2 lanes + intersection improvements	$$
7	NW 70th Street	W Superior Street to W Adams Street	2 lanes + intersection improvements	$$
8	W Van Dorn Street	SW 40th Street to Coddington Avenue	2 lanes + intersection improvements	$$$
10	W Holdrege Street	NW 56th Street to NW 48th Street	2 lanes + intersection improvements	$$
11	NW 40th Street	W Vine Street to US-6, including I-80 Overpass	Overpass	$$$
12	NW 40th Street	W Holdrege Street to W Vine Street	2 lanes + intersection improvements	$
13	W Van Dorn Street	Coddington Avenue to US-77	2 lanes + intersection improvements	$$
14	NW 48th Street	Adams Street to Cuming Street	2 lanes + intersection improvements	$$$
15	NW 56th Street	W Cuming Street to W Superior Street	2 lanes + intersection improvements	$
16	W Cuming Street	NW 56th Street to NW 52nd Street	2 lanes + intersection improvements	$
17	NW 12th Street	Aster Road to Missoula Road	2 lanes + turn lanes	$
18	Nebraska Hwy 2	Van Dorn Street to Old Cheney Road	6 lanes + intersection improvements	$$$$
19	O Street (US-34)	Wedgewood Drive to 98th Street	Intersection Improvements	$$
20	Rokeby Road	S 31st Street to S 40th Street	2 lanes + intersection improvements	$
21	Saltillo Road	S 14th Street to S 27th Street	2 lanes + intersection improvements, reconstruction to address flooding	$$
22	W Denton Road	Amaranth Lane to S Folsom Street	2 additional lanes	$
23	S 56th Street	Thompson Creek Boulevard to Yankee Hill Road	4 lanes + intersection improvements	$$
24	Yankee Hill Road	S 56th Street to S 70th Street	2 lanes + intersection improvements	$$
25	S 84th Street	Amber Hill Road to Yankee Hill Road	4 lanes + intersection improvements	$$
26	Nebraska Hwy 2	Old Cheney Road to S 84th Street	6 lanes + intersection improvements	$$$$
27	Yankee Hill Road	S 40th Street to S 48th Street	2/4 lanes + intersection improvements	$
28	Rokeby Road	S 48th Street to S 56th Street	2 lanes + intersection improvements	$
29	Rokeby Road	S 77th Street to S 84th Street	2 lanes + intersection improvements	$
30	S 70th Street	Yankee Hill Road to Rokeby Road	2 lanes + intersection improvements	$$$
31	S 70th Street	Pine Lake Road to Yankee Hill Road	4 lanes + intersection improvements	$$$
32	O Street (US-34)	Antelope Valley N/S Rdwy. (19th St.) to 46th Stree	Intersection Improvements	$$
33	N 84th Street	O Street to Adams Street	Intersection Improvements	$$$
34	US-6 (Sun Valley)	Cornhusker Hwy (US-6) to WO St.(US-6)	4 lanes + turn lanes	$$$
35	S 9th Street	Van Dorn Street to South Street	3 lanes + intersection improvements	$$
37	Cornhusker Hwy (US-6)	N 20th Street to N 33rd Street	Intersection Improvements per Corridor Enhancement Plan	$
38	Cornhusker Hwy (US-6)	N 11th Street to N 20th Street	Intersection Improvements per Corridor Enhancement Plan	$
40	Van Dorn Street	S 70th Street to S 84th Street	Intersection Improvements	$
41	N 48th Street	Adams Street to Superior Street	4 lanes + intersection improvements	$$$
42	Havelock Avenue	N 70th Street to N 84th Street	2 lanes + intersection improvements	$$
43	N 98th Street	Adams Street to Holdrege Street	2 lanes + intersection improvements	$$
44	O Street (US-34)	84th Street to 120th Street	4 lanes + intersection improvements	$$$
45	S 98th Street	A Street to Pioneers Boulevard	4 lanes + intersection improvements	$$$$

Lincoln MPO 2050 LRTP

Relative Planning Level Cost

$up to $5M **$$**5-10M **$$$**10-25M **$$$$**25-50M **$$$$$**50M and above

2050 LRTP City of Lincoln Project List

City of Lincoln Roadway Project List				
ID	**Street Name**	**Limits**	**Description**	**Project Cost**
46	S 112th Street	US-34 to Van Dorn Street	2 lanes + intersection improvements	$$$
47	N 98th Street	Holdrege Street to O Street	Additional 2 lanes	$$
48	N 112th Street	Holdrege Street to US-34	2 lanes + intersection improvements	$$
50	Havelock Avenue	N 84th Street to N 98th Street	2 lanes + intersection improvements	$$
51	N 33rd Street	Cornhusker Hwy to Superior Street	4 lanes + int. impr. & bridge	$$$
52	A Street	S 98th Street to 105th Street	2 lanes + intersection improvements	$
53	W Fletcher Avenue	NW 31st Street to NW 27th Street	2 lanes + intersection improvements	$
54	Adams Street	N 90th Street to N 98th Street	2 lanes + intersection improvements	$
55	S 98th Street	US-34 (O Street) to A St	4 lanes + intersection improvements	$$$
56	Holdrege Street	N 70th Street to N 80th Street	4 lanes + intersection improvements	$$$
57	Yankee Hill Road	S 14th Street to S 27th Street	Additional 2 lanes	$$
58	S 56th Street	Van Dorn Street to Pioneers Boulevard	4 lanes + intersection improvements	$$$
59	East Beltway	Nebraska Hwy 2 to I-80	New 4 lane divided highway	$$$$$
60	Rokeby Road	S 40th Street to S 48th Street	2 lanes + intersection improvements	$
61	S 27th Street	Yankee Hill Road to Saltillo Road	2 lane realignment + int. impr.	$$$
62	S 70th Street	Rokeby Rd to Saltillo Rd	4 lanes + intersection improvements	$$$
63	S 84th Street	Yankee Hill Road to Rokeby Road	4 lanes + intersection improvements	$$$
64	S 84th Street	Rokeby Road to Saltillo Road	4 lanes + intersection improvements	$$$
66	W Alvo Road	NW 12th Street to Tallgrass Parkway	2 lanes + intersection improvements	$
68	O Street (US-34)	120th Street to east county line	4 lanes + intersection improvements	$$$$
70	US-34	NE-79 to Malcolm Spur	4 lanes + intersection improvements	$$$
71	I-80	Pleasant Dale to NW 56th Street	6 lanes + bridges	$$$$$
72	I-180	I-80 to US-6	Reconstruction + bridges	$$$$$
73	US-34	US-34 and Fletcher Avenue	New interchange	$$$$
75	State Fair Park Dr	Salt Creek Roadway to Cornhusker Hwy	6 lanes + intersection improvements	$$
81	W Holdrege Street	NW 48th Street to Chitwood (east 1/4 mile)	2 lanes + intersection improvements	$
82	Nebraska Hwy 2	S 84th Street to South Street	Corridor Improvements (TBD by Corridor Study)	$$$$$
83	Yankee Hill Road	S 48th Street to S 56th Street	2/4 lanes + intersection improvements	$
85	NW 12th Street	Fletcher Avenue to Aster Road with overpass of US-34	2 lanes + Overpass	$$
86	Saltillo Road	S 56th Street to S 70th Street	2 lanes + intersection improvements	$$
87	W Holdrege Street	NW 48th Street to NW 40th Street	2 lanes + intersection improvements	$
88	Rokeby Road	S 27th Street to S 31st Street	2 lanes + intersection improvements	$
89	W Alvo Road	NW 27th Street to NW 12th Street	2 lanes + intersection improvements	$$
119	Van Dorn Street	S 84th Street to S 91st Street	2 lanes with raised median, roundabouts at 87th St and 93rd St, turn lane improvements at the 91st St	$
120	A Street	S 89th Street to S 93rd Street	2 lanes with raised median, roundabouts at 89th St and 93rd St	$
121	A Street	S 40th Street to S 56th Street	Intersections improvements 40th, 48th and 50th/Cotner and widening of A Street from 40th to 48th for a center turn lane	$$$
124	S Folsom Street	W Old Cheney Road to 1/4 mile south	Paving 1-lane each direction with raised center medians; roundabout at the future Palm Canyon Road intersection, intersection improvements at W Old Cheney and	$
125	S 40th Street	Rokeby Road to 1/4 south	2 lanes with raised median and roundabout 1/4 mile south of Rokeby Rd	$
126	W Old Cheney Road	S Folsom Street to SW12th Street	2 lanes with raised median	$
127	Holdrege Street	87th Street to Cedar Cove	2 lanes with raised median	$
128	Holdrege Street	N 104th Street	Roundabout	$
129	Saltillo Road	S 70th Street to 1/2 mile east	Urban 2 lanes with roundabout and other intersection improvements	$
130	N 14th Street	Cornhusker Hwy	Bridge Replacement	$
131	Huntington Avenue	Dead Mans Run	Bridge Replacement	$

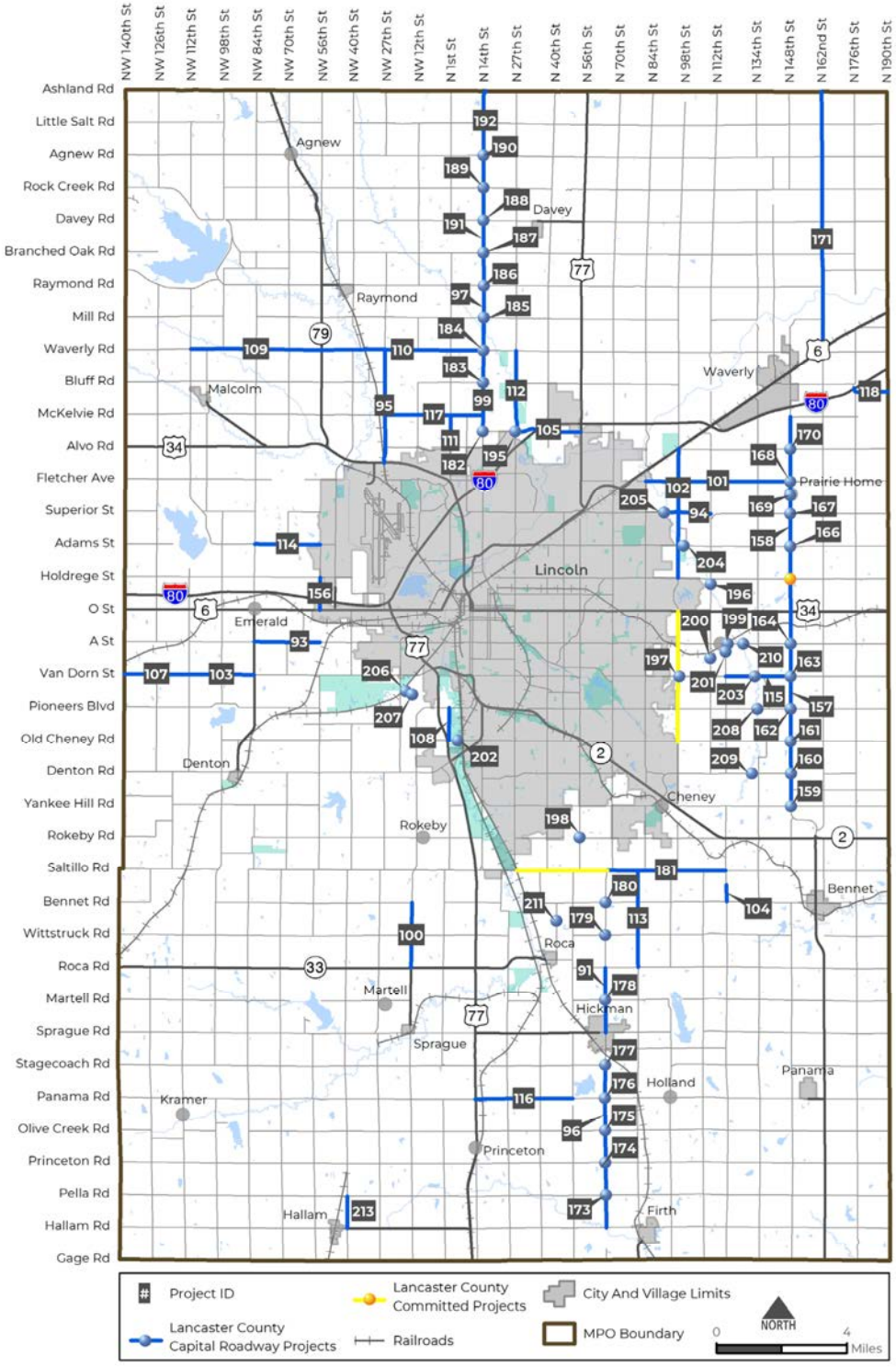
2050 LRTP City of Lincoln Project List

City of Lincoln Roadway Project List

ID	Street Name	Limits	Description	Project Cost
132	N Antelope Valley Pkwy	Oak Creek	Bridge Replacement	$
133	S 27th Street	SE Upper Salt Creek	Bridge Replacement	$
134	W South Street	Salt Creek	Bridge Replacement	$
135	Southwood Drive	Beal Slough	Bridge Replacement	$
136	S 1st Street	Cardwell Branch Salt Creek	Bridge Replacement	$
137	N 70th Street	Salt Creek	Bridge Replacement	$
138	S 40th Street	Antelope Creek	Bridge Replacement	$
139	Rosa Parks Way	K Street and L Street	Bridge Rehab and Preventive Maintenance	$
141	A Street	S 13th Street	Remove existing traffic signal and construct roundabout	$
142	Fremont Street	Touzalin Avenue	Remove existing traffic signal and construct roundabout	$
144	S 33rd Street	D Street	Remove existing traffic signal and construct mini roundabout	$
145	Cotner Boulevard	Starr Street or Holdrege Street	Remove existing traffic signal and construct roundabout	$
146	N 70th Street	Havelock Avenue	Remove existing traffic signal and construct roundabout	$
147	S 56th Street	Cotner Boulevard/Randolph Street	Remove signal and evaluate roundabout or new signal	$
148	O Street (US-34)	98th Street	Construct roundabout with S 98th Street project OR when signal otherwise warranted	$
149	S 27th Street	Pine Lake Road	Intersection Improvement: eastbound right-turn lane	$
151	O Street (US-34)	84th Street	Intersection Improvement: dual eastbound left-turn lanes and eastbound right-turn lane and widening to east; maybe northbound right-turn lane	$
152	S 84th Street	A Street	Intersection Improvements: dual northbound left turn lanes and NB right turn lane	$
153	Cornhusker Hwy (US-6)	State Fair Park Drive	Intersection Improvements: dual westbound left turn lanes	$
154	Cornhusker Hwy (US-6)	N 70th Street / Railroad viaduct	Intersection/viaduct reconfiguration	$$$
155	S 84th Street	Yankee Woods Drive	Roundabout	$
193	NW 12th Street	W Alvo Road to Missoula Road	2 lanes + turn lanes	$
194	W Old Cheney Road	SW 9th Street	Roundabout	$
212	27th Street Realignment	Saltillo Road to Rokeby Road	New Two Lane Road	$$$
214	Normal Boulevard	Van Dorn Street	Intersection improvements	$

2050 LRTP Lancaster County Project Map

A total of 80 projects were identified within Lancaster County. **Which five (5) are most important to you?** Projects range from widening with shoulders, paving, intersection improvements as well as bridge and culvert repair and replacements. The figure below shows the location and ID of each Lancaster County project and the list of projects with descriptions is included on the next page.



Review County projects, descriptions and planning level cost range on next pages

2050 LRTP Lancaster County Project List

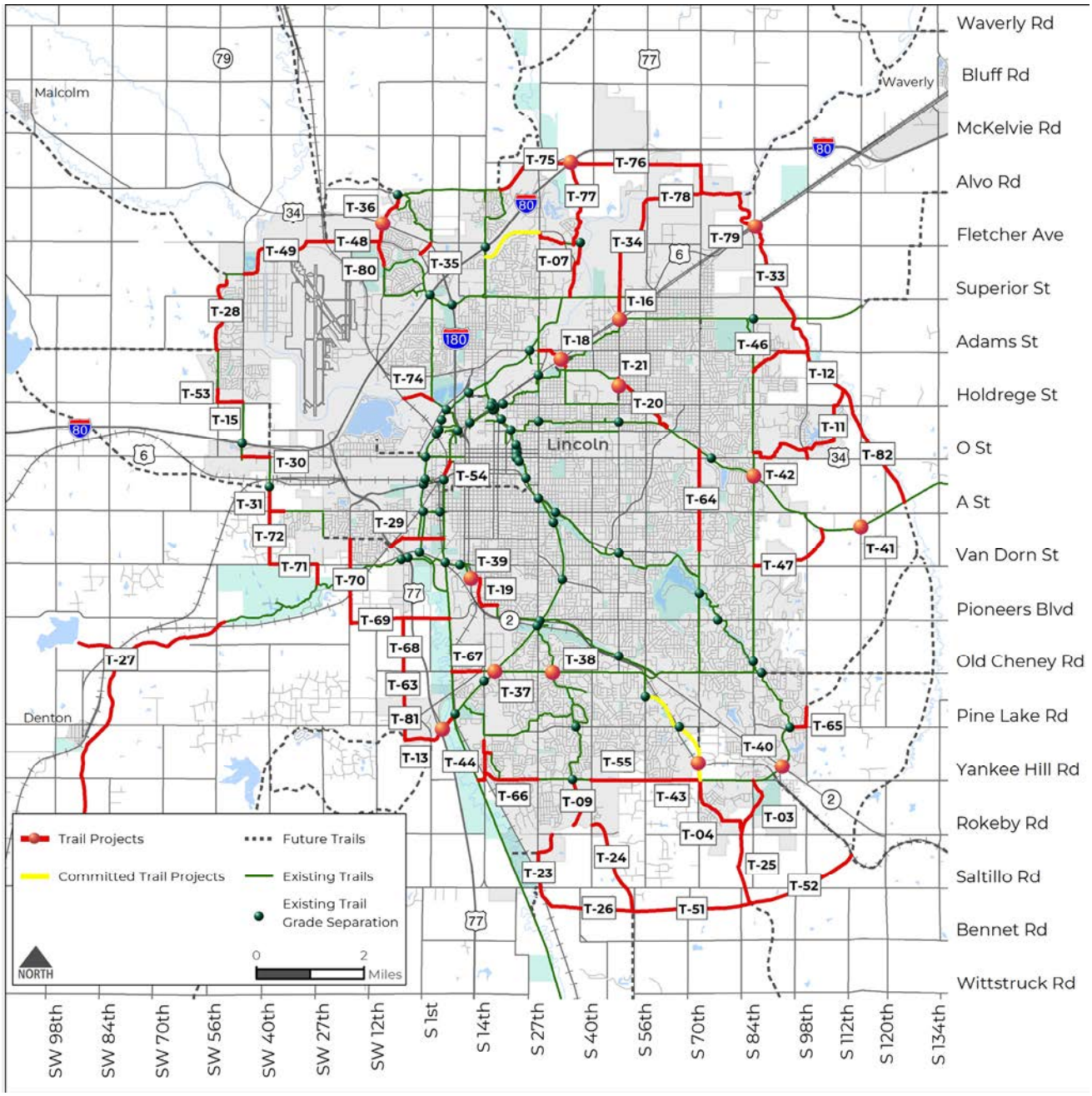
Lancaster County Roadway Project List				
ID	**Street Name**	**Limits**	**Description**	**Project Cost**
Committed Projects				
Committed	**Saltillo Road**	**S 27th Street to S 68th Street**	**Two Lane Widening**	**$$**
Committed	**S 98th Street**	**Old Cheney Road to US-34**	**Programmed Paving**	**$**
Committed	**N 148th Street**	**Holdrege Street**	**Intersection improvements**	**$$**
We need your input on the following projects – Which 5 are most important to you?				
91	S 68th Street	Hickman to Roca Road	Two Lane Widening with Shoulders	$
93	W A Street	SW 84th Street to SW 52nd Street	Programmed Paving	$
94	Havelock Avenue	Stevens Creek to N 112th Street	Potential Paving	$
95	NW 27th Street	Hwy-34 to W Waverly Road	Potential Paving	$
96	S 68th Street	Firth Road to Stagecoach Road	Two Lane Widening with Shoulders	$$
97	N 14th Street	Waverly Road to Raymond Road	Two Lane Widening	$
99	N 14th Street	Arbor Road to Waverly Road	Two Lane Widening	$
100	SW 14th Street	NE-33 to W Bennet Road	Programmed Paving	$
101	Fletcher Avenue	N 84th Street to N 148th Street	Programmed Paving	$$
102	N 98th Street	Holdrege Street to US-6	Potential Paving	$$
103	W Van Dorn Street	SW 112th Street to SW 84th Street	Programmed Paving	$
104	S 120th Street	Bennet Road North 0.5 Miles	Potential Paving	$$
105	Arbor Road	N 27th Street to US-77	Potential Paving	$
107	W Van Dorn Street	SW 140th Street to SW 112th Street	Potential Paving	$
108	S 1st Street	Old Cheney Road to Pioneers Boulevard	Programmed Paving	$
109	W Waverly Road	NW 112th Street to NE-79	Potential Paving	$$
110	W Waverly Road	NE-79 to N 14th Street	Potential Paving	$$
111	N 1st Street	Alvo Road to McKelvie Road	Potential Paving	$
112	N 27th Street	Arbor Road to Waverly Road	Potential Paving	$
114	W Adams Street	NW 84th Street to NW 56th Street	Potential Paving	$
115	Van Dorn Street	S 120th Street to S 148th Street	Potential Paving	$
116	Panama Road	US-77 to S 54th Street	Potential Paving	$
117	McKelvie Road	NW 27th Street to N 14th Street	Potential Paving	$
118	Bluff Road	I-80 to N 190th Street	Potential Paving	$
156	NW 56th Street	W O to W Holdrege Street	Potential Paving	$
157	S 148th Street	Yankee Hill Road to O Street	Two Lane Widening	$
158	N 148th Street	O Street to McKelvie Road	Two Lane Widening	$
159	S 148th Street	Yankee Hill Road	Intersection improvements	$$
160	S 148th Street	Pine Lake Road	Intersection improvements	$$
161	S 148th Street	Old Cheney Road	Intersection improvements	$$
162	S 148th Street	Pioneers Boulevard	Intersection improvements	$$
163	S 148th Street	Van Dorn Street	Intersection improvements	$$
164	S 148th Street	A Street	Intersection improvements	$$
166	N 148th Street	Adams Street	Intersection improvements	$$
167	N 148th Street	Havelock Avenue	Intersection improvements	$$
168	N 148th Street	Fletcher Avenue	Intersection improvements	$$
169	N 148th Street	Prairie Home	Intersection improvements	$
170	N 148th Street	Alvo Road	Intersection improvements	$$
171	N 162nd Street	US-6 to Ashland Road	Potential Paving	$$
173	S 68th Street	Pella Road	Intersection improvements	$$
174	S 68th Street	Princeton Road	Intersection improvements	$$
175	S 68th Street	Olive Creek Road	Intersection improvements	$$
176	S 68th Street	Panama Road	Intersection improvements	$$
177	S 68th Street	Stagecoach Road	Intersection improvements	$$
178	S 68th Street	Martel Road	Intersection improvements	$$
179	S 68th Street	Wittstruck Road	Intersection improvements	$$
180	S 68th Street	Bennett Road	Intersection improvements	$$
181	Saltillo Road	S 68th Street to S 120th Street	Two Lane Widening	$
182	N 14th Street	Arbor Road	Intersection improvements	$$
183	N 14th Street	Bluff Road	Intersection improvements	$$

2050 LRTP Lancaster County Project List

Lancaster County Roadway Project List				
ID	**Street Name**	**Limits**	**Description**	**Project Cost**
184	N 14th Street	Waverly Road	Intersection improvements	$$
185	N 14th Street	Mill Road	Intersection improvements	$$
186	N 14th Street	Raymond Road	Intersection improvements	$$
187	N 14th Street	Branched Oak Road	Intersection improvements	$$
188	N 14th Street	Davey Road	Intersection improvements	$$
189	N 14th Street	Rock Creek Road	Intersection improvements	$$
190	N 14th Street	Agnew Road	Intersection improvements	$$
191	N 14th Street	Raymond Road to Agnew Road	Two Lane Widening	$
192	N 14th Street	Agnew Road to Ashland Rd	Two Lane Widening	$
195	Arbor Road	Bridge F-201 near N 27th Street	Bridge Replacement	$
196	N 112th Street	Bridge J-126 near Holdrege Street	Bridge Replacement	$
197	Van Dorn Street	Bridge K-37 near S 98th Street	Replace CBC	$$
198	S 56th Street	Bridge P-92 near Rokeby Road	Replace with CBC	$
199	A Street	Bridge J-47 near S 120th Street	Replace with CCS	$$
200	S 112th Street	Bridge J-135 near A Street	Replace with CBC	$$
201	S 120th Street	Bridge J-138 near A Street	Replace with CBC	$$
202	Old Cheney Road	Bridge O-37 near S 1st Street	Bridge Replacement	$
203	Van Dorn Street	Bridge J-22 near S 134th Street	Bridge Replacement	$
204	Adams Street	Bridge K-123 near N 102nd Street	Bridge Replacement	$
205	Havelock Avenue	Bridge K-144 near N 98th Street	Bridge Replacement	$
206	SW 16th Street	Bridge O-1 near W Calvert Street	Replace CB	$
207	SW 15th Street	Bridge O-140 near W Stockwell Street	Replace CB	$
208	Pioneers Blvd	Bridge Q-72 near S 138th Street	Bridge Replacement	$
209	Pine Lake Road	Bridge Q-110 near S 134th Street	Bridge Replacement	$
210	A Street	Bridge J-46 near S 134th Street	Bridge Replacement	$
211	S 46th Street	Bridge S-59 near Bennet Road	Replace CB	$$
213	SW 42nd Street	W Hallam Road to W Pella Road	Concrete construction	$$

2050 LRTP Trail Project Map

A total of 64 trail projects were identified within the planning area. **Which are most important to you?** Projects range from new trails and sidepaths (trails alongside roadways) to grade separations. The figure below shows the location and ID of each trail project and the list of projects with descriptions is included on the nest page.



2050 LRTP Trail Project List

Lincoln and Lancaster County Trail Project List				
ID	**Trail Name**	**Limits**	**Description**	**Project Cost**
Committed	**Landmark Fletcher**	**Fletcher Ave from N 27th St to N 14th St**	**Sidepath**	**$$**
Committed	**Beal Slough Trail**	**S 56th St and London Rd to S 70th St and Yan**	**New Trail**	**$$$**
We need your input on the following projects – Which 5 are most important to you?				
T-03	Woodlands	Jensen Park to Rokeby Rd	New Trail	$$
T-04	Woodlands	Rokeby Rd to S 70th St to Yankee Hill Rd	New Trail	$$
T-07	Landmark Fletcher	33rd St & Superior St to 27th St	New Trail; Sidepath	$$
T-09	Wilderness Hills	Yankee Hill Rd to Rokeby Rd and S 40th St	New Trail	$$$
T-11	Waterford	N 84th St to Stevens Creek	New Trail	$$
T-12	Stevens Creek	Murdock Trail to Waterford Trail	New Trail	$$$
T-13	Cardwell Branch Trail	GPTN Connector to Folsom Trail	New Trail	$$
T-15	W Holdrege Street Trail	NW 48th St to NW 56th St	Sidepath	$
T-16	N 48th Street Trail	Murdock Trail to Superior St	Sidepath	$
T-18	Deadmans Run Trail	Murdock Trail to Cornhusker Hwy and Railroad	New Trail and Grade Separation	$
T-19	Boosalis - Bison Connector	Van Dorn St to S 17th St/Burnam St	Sidepath	$
T-20	Deadmans Run Trail	N 48th St to Mo Pac Trail	New Trail	$$
T-21	East Campus Trail	Leighton St to Holdrege St	New Trail	$
T-23	S 27th Street Connector	Rokeby Rd to South Beltway	New Trail	$$
T-24	S 56th Street Connector	Rokeby Rd to South Beltway	New Trail	$$$
T-25	S 84th Street Connector	Rokeby Rd to South Beltway	New Trail	$$
T-26	South Beltway Trail - Phase I	S 27th St to S 56th St	New Trail	$$$
T-27	Greenway Corridor Trail/Haines Branch	Pioneers Park Nature Center to Spring Creek Prairie Audubon Center	New Trail	$$$$$
T-28	NW 56th Street Trail	W Adams St to W Superior St	New Trail	$$
T-29	South Street	Folsom St to Jamaica Trail	Sidepath	$$
T-30	O Street	SW 40th St to SW 48th St	Sidepath	$
T-31	W A Street Connector	A Street from SW 36th to SW 40th; SW 40th from A St to F St	Sidepath	$
T-33	Stevens Creek	Murdock trail to Hwy 6	New Trail	$$$
T-34	N 48th Street/Bike Park Trail	Superior St to N 56th St	New Trail; Sidepath	$$
T-35	N 1st Street	N 1st St crossing of Hwy 34	Sidepath	$
T-36	NW 12th Street	W Fletcher Ave to Aster St with US 34 grade separated crossing	Sidepath; Grade Separation	$
T-37	Rock Island	Old Cheney grade separated crossing	Grade Separation	$$$
T-38	Tierra Williamsburg	Old Cheney grade separated crossing	Grade Separation	$$$
T-39	10th Street Trail	Hwy 2 intersection improvements	Crossing Improvements	$$$
T-40	S 91st Street Trail	Hwy 2 grade separated crossing	Grade Separation	$$$
T-41	Mo Pac Trail	S 112th Street grade separated crossing	Grade Separation	$$$
T-42	Mo Pac Trail	S 84th Street grade separated crossing	Grade Separation	$$$
T-43	Yankee Hill Rd	S 56th St to S 70th St	Sidepath	$
T-44	S 14th Street & Yankee Hill Connector (w/RTSD project)	South LPS Property Line to Yankee Hill	Sidepath	$
T-46	Prairie Village Trail	N 84th St to Stevens Creek, South of Adams	New Trail; Sidepath	$$
T-47	Van Dorn Trail	S 84th St and Van Dorn to S 106th and MoPac Trail	New Trail	$$$
T-48	Air Park Connector - Phase I	NW 13th St to NW 27th St	Sidepath	$$
T-49	Air Park Connector - Phase II	NW 27th St to NW 48th St	Sidepath	$$
T-51	South Beltway Trail - Phase II	S 56th St to S 84th St	New Trail	$$$$

Relative Planning Level Cost

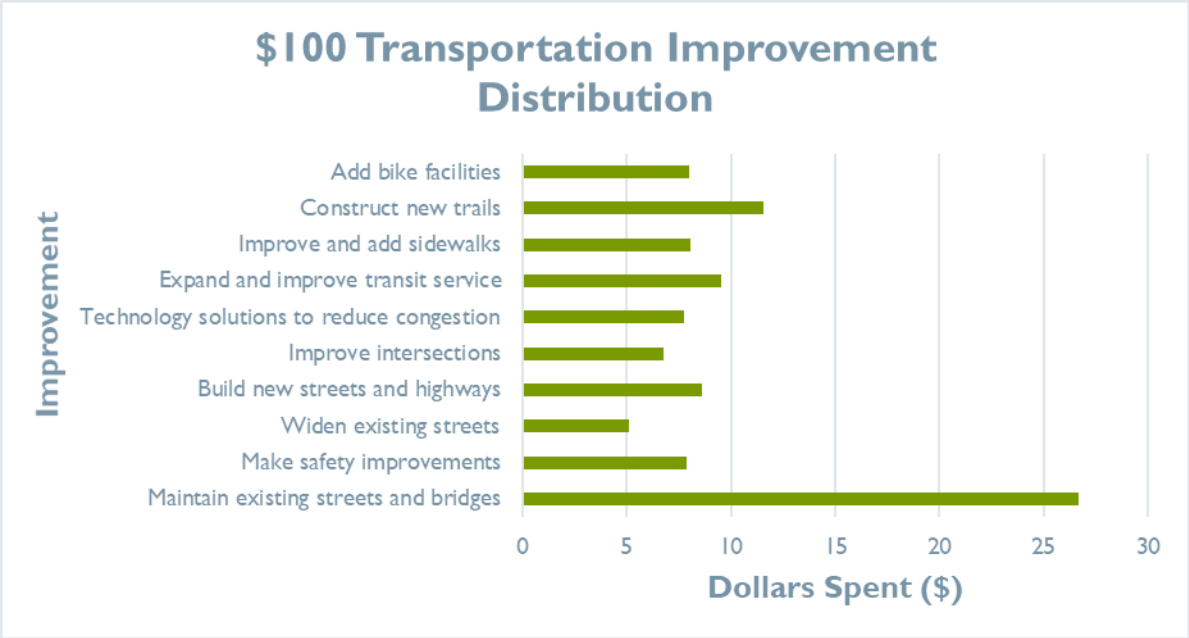
$up to $0.5M **$$**0.5-1.0M **$$$**1.0-2.0M **$$$$**2.0-4.0M **$$$$$**4.0M and above

2050 LRTP Trail Project List

Lincoln and Lancaster County Trail Project List				
ID	**Trail Name**	**Limits**	**Description**	**Project Cost**
T-52	South Beltway Trail - Phase III	S 84th Street to Hwy 2	New Trail	$$$$
T-53	NW 56th Street Trail	W Holdrege to W Partridge	Sidepath	$
T-54	Chris Buetler Trail - Jamaica North	J Street to N Street	New Trail	$
T-55	Yankee Hill Road	S 40th St to S 56th St	Sidepath	
T-63	Folsom Street	W Old Cheney south 1/2 mile	Sidepath	$
T-64	S 70th Street Connector	Old Post Rd to MoPac Trail	Sidepath	$$
T-65	Pine Lake Rd/S 98th St	Billy Wolff Trail to Napa Ridge Dr	Sidepath	$
T-66	Yankee Hill Road	S 14th St to S 27th St	Sidepath	$
T-67	Old Cheney Rd	Warlick Blvd to Jamaica North	Sidepath	$
T-68	Folsom St	Old Cheney to Pioneers Blvd	Sidepath	$
T-69	Pioneers Blvd	Jamaica North Trail to Coddington Ave	Sidepath	$$
T-70	Coddington Ave	Pioneers Blvd to South St	Sidepath	$$
T-71	Van Dorn St	SW 40th St to Prairie Corridor Trail	Sidepath	$$
T-72	SW 40th St	Van Dorn St to W A Street	Sidepath	$
T-74	Oak Creek Trail	Saline Wetlands Nature Center to N 1st St	New Trail	$
T-75	Arbor Road Trail	N 14th St to I-80 with grade sparation at I-80	Sidepath and Grade Separation	$$
T-76	Arbor Road Trail	I-80 to Salt Creek Trail	Sidepath	$$$$
T-77	Little Salt Creek Trail	Arbor Rd to Landmark Fletcher	New Trail	$$$
T-78	Salt Creek Trail	N 56th St to Stevens Creek	New Trail	$$
T-79	Stevens Creek Trail	Salt Creek Trail to Cornhusker Hwy with grade separation of Cornhuster Hwy	New Trail	$$$
T-80	NW 12th Street	NW 10th St to W Fletcher Ave	Sidepath	$
T-81	Folsom Street Connector	1/2 mile north of W Denton Rd to Cardwell	Trail	$$
T-82	Stevens Creek	Waterford Trail to MoPac Trail	New Trail	$$$

Attachment B-6 – Phase 2 Online Survey

Phase 2 Online Survey Summary



On the question why funding was distributed, users said the following:

Phase 2 Online Survey

Please share why you chose to distribute the funding the way you did.

I see large potholes on the streets in Lincoln. We have to leave early when we go to places in Lincoln because of the stop lights.

I think that it is very important to make multi-modal transportation options available across the community.

Many streets in Lincoln are severely damaged and far too narrow. The sidewalks are filled with cracks which need to be remedied. Bike trails/facilities are always a welcome assset to any community.

Biking and walking is important

Transit could be better. It's a chicken-and-egg scenario. I've enjoyed GREAT transit in cities the same size and larger than Lincoln, and I wonder why it is that our system continues to lag behind others. Even though buses are free right now, it takes FOREVER to get from Point A to Point B, and it seems odd that Gold's is the center when that is not the population center. Why not have two hubs? I would love to take the bus to work, but I won't spend 90+ minutes for a 25-minute drive (Air Park to the Trade Center).

We need to maintain our current streets better, add new street to a growing city and improve access to more biking throughout the city!!

I've lived in Lincoln for 60 years. In that whole time the leadership has been to afraid to widen streets. All arterial streets should of been 4 lane 40-50 years ago. Stop continuing to build around the core and leave us to travel on roads made for 1940's traffic.

The East Beltway should be a high priority now. It will reduce traffic on our streets by syphoning south and west Omaha traffic away from Lincoln. Reducing congestion affects everyday driving. Lincoln needs to get ahead in developing new streets.

1.Technology and Safety would be a waste bc it will end up like the flashing arrows everyone is confused about

2. Very little people use public transit

3. Bike and trails are also not that desired. We have plenty of options for now and have a huge big enormous need for better streets (repair and new wider streets). The public officials are trying to spend money on things that are not required! It's like a comparison of essential needs to live vs buying a hot tub. I'm a very active person too and would love trails, but our cars are getting destroyed by the horrible roads. No more libraries either!!!!

Our goal should be to reduce auto traffic as much as possible. It helps quality of life, pollution and community wellness.

The greatest need in our community at this time is to maintain and improve existing roads.

The city's main job is roads, safety, and aiding those who can't take care of themselves. Decisions need to be made around these functions.

Traffic is getting heavier and debris/cracks are building on the sides of the roads.

Lincoln has a huge walking & biking community that wants to utilize non petroleum transportation and since the start of the pandemic, even more people are flocking to their bikes, so I think it's important to encourage that. Some of the reasons people have been hesitant to bike more is safety and ease of use. We need to make safer connections to trails, shoulders on roadways that are used for biking, increase driver awareness of bikes and safety around bikes, and make sidewalks safer and easier for walkers, runners, strollers and wheelchairs.

Increasing bike trails, improving safety for cyclists, and increasing accessibility for new cyclists important to improving traffic for all. Helps reduce congestion on streets. Helps improve fitness and mental health. Helps reduce emissions and improves the environment.

I'm someone who is a pedestrian quite a lot of the time (running, walking, and biking) and I answered this question from that perspective. I feel that improving existing roadways should be a primary focus, from road resurfacing to intersection safety. As a major user of the trails system, I see how much use those systems receive and feel that Lincoln's trails are one of it's major draws for new residents. Adding and improving sidewalks would be a tremendous benefit to pedestrians and make the city more navigable to those without vehicular transportation. I think expanding and improving public transit is a no-brainer and yet another aspect we should invest into attract and retain residents, as well as support those already in our community to need and rely on these services. I'd like to see public transit be easier for people in general, which can really only be accomplished through expansion. Having said that, though, I'm not sure what the data look like regarding ridership and whether or not expansion is warranted at this time.

We need to break from the car-centric culture that is making us fatter, sicker and less community-oriented. Prioritize pedestrians, cyclists and mass transit for a better future.

Drivers in Lincoln are terrible at minding cyclists. We need safer options for crossing intersections and separated bike lanes

We need to make our road something enjoyable to drive on. When relatives come to visit, it's always about the potholes, the poor road conditions and the poor flow of traffic. It is important to keep traffic flowing and improve the intersections. Sidewalks are a hazard in many areas and need to improve the safety overall.

Please add a turn off lane (left turn) going in to Holmes Park Road North (coming from the Van Dorn St. heading towards downtown). There are usually 3-6 fender benders there each year - consistently the lat 5 years at least!

Streets are bad, bikes are good.

Encourage riding bikes as an alternative to traffic, reduce congestion (it takes an insane amount of time to go 8 miles some days), and improve mass transit to offer alternatives to car congestion.

We need to first of all maintain existing streets.

Biking is my mode of transportation and I don't trust drivers

so many people use the paths now

Resurface N st bike path. Groves cut way to deep making it almost impossible to ride. Very rough.

Safety is important. Building more while not improving safety of current facilities is not a good strategy imo. More transit and more bike facilities and trails will continue to encourage alternate transportation.

All of these are important. Maintaining current infrastructure is most important. Using technology and improving bike infrastructure is second as it can help get traffic off roads.

Some of these are so vague, I can't really say whether I'd support them or not. What does improve intersections mean? To me, it would mean getting rid of beg lights, letting cyclists move when motorists have the green. Turning traffic has a yellow arrow and a prompt to watch for cyclists.

Maintaining roads and continue to provide trails are priorities

Improving traffic flow/congestion by improving existing streets, and adding new streets is essential as Lincoln keeps growing.

It is all about transportation of people and products. Right now maintenance is lacking in many of the major arterials. Some streets could be widened if that street is handling X amount of daily traffic. Public transit could be improved so that one vehicle handles more people and limits many vehicles hauling 1 or 2 people.

There’s a large portion of Lincoln’s community who rely on busses and the system needs to be overhauled and made more reliable. Sidewalk and street infrastructure are constantly in disrepair, especially in the area I live in, South Salt Creek. Better maintenance in Lincoln’s original neighborhoods needs to come over improvements in the newer, more affluent areas.

We already have so many giant streets that are empty most of the time. Why waste money maintaining all that asphalt???

I am an avid biker and believe making it easier to ride would help promote riding as an alternative to driving, especially as e-bikes become more popular. This could help ease congestion and lines up with the LRTP and Climate Action Plan.

Trails are a vital component to Lincoln's transportation system. Lincoln has a great trails system that you can utilize to actually get somewhere, but it can be better, and safer.

Maintaining and building new streets to continue economic growth for our community. I believe this then leads to increased funding and opportunities to spend more in other areas.

I hope our city can grow within its existing boundaries and limit the amount of new roadways required. I think it 's more important to maintain what we already have and to improve the availability and increased use of our trail system and public transit service.

It's not as much about adding new as maintaining what is there

Because I see street maintenance lagging behind in Lincoln. This past year, with COVID, streets were not used as much with fewer commuters, but the existing streets are in horrible condition. Fixing potholes with bandaids is not any way to run this.

The city of Lincoln is far behind in quality of paved roads when compare to cities with comparable populations. With more bike facilities around the county the number of people using this mode of transportation will increase

Maintain existing is a lot cheaper than rebuilding when they fall apart

Transit in Lincoln won't be viable until it the time to get somewhere via transit and via car are even roughly comparable. Right now it may take me 20 min to get somewhere via car and 90 min via bus. That cannot work.

I ranked it based off what I feel is most important for the long term sustainability of our transportation network as well as where I feel the need is greatest

i'd love to take the bus instead of my car but the bus schedule is just not convenient. widening roads just leads to more car on the road. it's not sustainable. thank you

Street widening results in more sprawl and allows people to own bigger vehicles, which cause congestion and increased emissions. Improving transit services can allow for more stop locations and more frequent stops which can reduce total travel time making some instances of commuting faster via bus.

We need to invest in all modes of travel and maintain what we have first, and there is little value and too much disruption to widen existing streets.

I believe expanding the transit system and having more walkways would reduce the stress on streets, bridges, trails, etc.

Lincoln can and should be more walkable and bike-able. If we want to improve traffic and congestions we need to add more safe options for other forms of transportation.

Encourage mass transit use to reduce pollution, reduce congestion on the roads. Current road infrastructure creates traffic congestion and it takes too long to drive through Lincoln. Current roads in Lincoln are in need of repair and pose a safety issue. One must swerve to avoid pot holes and pot holes have the potential to damage one's car

I chose maintenance and safety first, then added streets, then added extras like bike and tech.

Maintaining what we own is the most cost effective way to utilize available dollars.

Maintenance and alternate transport infrastructure should be the higher priorities.

We need to keep on top of repairs. Widening A Street from 70th west

We need more priorities for Lincoln to be more walkable, bikeable, and for more people to be comfortable with public transportation. Most people I talk to would walk places or bike there if it was closer to them and waking wasn't so dangerous on certain busy roadways. I myself find driving stressful and dangerous during rush hour, and try to walk and bike to as many places as I am capable of. I would ride the bus to my work, but there is not an easily accessible route to get there in less than an hour. So that's why I prioritized the higher funding areas that I did. New streets, widened streets, or more infrastructure tailored to cars wouldn't promote the more eco-friendly commuting options or the need for changing infrastructure with climate change. These eco-friendly options would also promote public health, mental health, and reduce emissions. We wouldn't need to put as much energy in building new roads or reducing congestion with technology if more people walked, biked, or took public transportation.

More pavement means more cars, which means more pavement, which means more cars, which means ... a round-about with no exit! So we need better public transportation. I can't even have my son easily get home on a public bus from St. Joe's to 84th and Pioneers without a long, long walk in a short amount of time or way too much time just to get to a bus stop.

The city needs to make itself more amenable to walk/bike/bus transport options. Our city's sprawl and its concomitant dependence on motorized transit is economically and ecologically suicidal. With looming issues of energy supply (reduced EROEI in oil), as well as climate change, there is simply no way Lincoln can continue with the "business as usual." It simply is not practicable. Further, the automobile directly causes millions of pollution and collision related deaths around the world every year; we cannot fall prey to the false hope of EV or autonomous technology; healthy, safe streets are car-free streets. Moreover, dependence on the automobile is a cause for social malaise; cars are an anonymous, segregating, community destroying technology; for more on this, I recommend, "Energy and Equity," by Ivan Illich.

The state of disrepair of Lincoln streets is a problem that has gotten worse over time, so this is my top priority. Improving and adding sidewalks makes the city more family friendly. The same goes for trails and bike facilities. Transit services serve the needs of poor people who can't afford other forms of transportation. I would rather improve what we have than build new or widen existing streets.

You cant seem to keep up with what you already have. Roads are horrible and too much fraud/waste of funds.

Our existing streets and bridges must be maintained and be safe. The community is growing and this requires new streets and highways. Trails and good sidewalks connect our neighborhoods and provide a higher quality of life.

Roads are terrible

Public transportation is going to be critical to resolving issues of congestion, and negative environmental conditions. Maintaining the existing roads and bridges is critical to developing an effective public transportation system. Efficient and pedestrian friendly intersections is necessary to complete the final link in public transportation systems. Standard roundabouts meet this need in lower traffic areas; however, in high traffic areas, roundabouts should include pedestrian tunnels from the outer edge to the center area, so that pedestrians can easily travel to any of the pedestrian walkways leading to and from the intersection. Good design should facilitate a high level of safety, but existing systems will need to be upgraded to meet this need. Advanced technologies need to be investigated, since they could increase the efficiency of moving people through the community, and may well reduce a significant portion of current transportation needs. Trails and bike facilities would be a good next step, once these other improvements are in place. Widening existing streets will not solve

congestion, or improve the efficiency of streets, since such changes will simply in crease the attractiveness of moving further from the city center, and therefore will increase the amount of traffic demand on these streets. You can not pave your way out of congestion. Finally, building new roads and highways may not be necessary it the outward expansion of the city is limited, either by creating a desirable condensed city environment, or through zoning that restricts the nbrate of outward growth. A focused utilization of tax revenue on revitalizing and building human scale neighborhoods closer to the core of the city would do much to solve the problems being examined in this study.

Maintaining what we have in place already is important however, roads in the areas of town that are growing, especially with new schools being built need to be widened to accommodate the inevitable increase in traffic. Safety and technology solutions are almost as important. I'm a big believer and user of the trail network and would like to see more options in extreme southeast Lincoln. I understand the need for transit services however, I see a lot of empty buses running continuous routes in parts of town that maybe should be cut back on.

Repair for existing streets & bridges has been put off for too long, now we need to replace, rather than repair. Roads are too expensive and we can't keep up with repairs, so we must look at alternarives--increased transit, bike lanes, moving traffic esp. during the 8am and 5pm times by improving intersections (round-abouts DO work), and technology.

Safety should be our first and foremost responsibility when allocating our money, with safety in mind, I don't think any money should go to "widening" our streets because it is proven all this does is encourage people to drive faster and makes our streets less safe.

Improving existing large infrastructure while adding new, low cost, high density amenities seems more cost effective.

i'd love to have new everything, but we have a lot of existing things to maintain

We've got enough streets and widening them won't solve problems. Getting people to walk, bike, or transit will solve congestion problems and be more socially equitable. Additionally, Lincoln is not significantly congested, particularly post covid. Let's put our money on the future, not the vehicular past.

Residents expect their tax dollars to result in well maintained streets that are safe and not overly congested. Investments should also be made in new roads and highways as growth dictates. I personally utilize trails a lot and desire more of them.

If roads are not maintained they deteriorate so the (repair/replace) cost goes up. Lincoln has always struggled with movement of traffic, especially north and south and safe travel of bicycles, pedestrians with automobile traffic is always a concern.

We have plenty of roads and they are plenty wide – just need to maintain them. More and safer routes and infrastructure for bike commuting would reduce car traffic and wear on the roads.

I think we need to maintain what we have before we add new. I also gave more funding to things that I think would either extend the life of we currently have, or use it better.

safety is a must and necessary for our community.

it is important to improve existing streets in addition to adding new ones. By adding bike facilities and paths we may contribute to less traffic congestion.

Potholes are a major issue, so maintaining existing streets is a top priority for residents like myself. The next most important priority is expanding and improving the transit system; there are a lot of residents who do not drive, do not own a car, or who would rather choose a more eco-friendly option than driving

their personal vehicle, if the transit system were more convenient. Bus routes are good, but there should be more buses so that wait times could be cut down. This is especially true for university students. On some bus routes, students who miss the bus would have to wait a full hour before another bus comes, potentially resulting in missing class or being extremely late.

We don't need more streets, just better, safer connections. Maintenance and measures to improve congestion should include safer crossings (like a bike/walk bridge on the Rock Island trail from the Antelope Park side of A Street to the Children's Zoo). Widening streets just makes people want to go faster. Tackling traffic bottlenecks so traffic can move more smoothly and safely, so it goes at an even pace is better than stop and go speeding. Improving transit service could include light rail where you can take your bike along. And bike services should include more and better bike parking spaces.

Building public transport and bike infrastructure is the future, due to preference by younger generations and climate change.

Maintenance of existing streets & bridges is necessary and will garner public support/appreciation. Ideally, this care-taking of current roadways/bridges should provide support for the remaining projects.

I believe expanding and improving the transit service is important for providing transportation for those who can't afford vehicles or reducing our carbon print by those who want to use public transportation.

Maintain existing infrastructure we had already builit. Proactively build new roads to support growth. Widen existing roads to handle increased traffic.

Road funds need to go to roads. i.e Wheel tax

While all of these seem important, I want to prioritize safety (add and improve sidewalks, maintenance, improvements, etc.) and a climate change mitigation (reducing congestion, construct new trails, expand transit, add bike facilities, etc.)

I think we need to move to more public and bike transit, while maintaining the infrastructure we currently have.

Public transportation is a low payout investment. Our buses have low ridership.

It’s important to do all of these things. We need to maintain and improve existing streets, while preparing for growth. Improving traffic flow is very important. Mass transit must improve. Bike lanes and trails are important, but a smaller amount of money can go far for bike trail compared to roads.

Take care of what we have and build roads for future growth.

I feel like maintenance is the priority each year so that the system we have in place is stays safe and lasts a long as possible. Rather than adding more roads and encouraging more cars, I'd like to see better public transit and better alternative transit which includes making more of Lincoln walkable with sidewalks.

A better public transit services will attract more people to riding buses, getting less cars off the city streets and creating less damage to our existing infrastructure.

Our bike and transit systems sorely lack investment. Sidewalks are always important.

I love using the bike trails but inner city streets are so bumpy and congested, especially s. 56th.

Infrastructure improvements tend to be very car focused, but there are many people in our community who rely on sidewalk and bicycle infrastructure to get around. I think it's important to bubble those needs up. While I drive, my husband bikes or walks to get where he needs to go for the most part.

We need to use technology to improve efficiencies; transit services are needed, especially for elderly and disabled--and to encourage more use to protect the environment. Safety is clear; this includes maintaining streets and bridges--for safety.

We need more road to serve the expansion of the city's footprint, which is necessary for population growth and affordable housing needs. We, of course, need to take care of the infrastructure we have. I also believe in having additional options for moving around the city in bikes and transit, but I remain skeptical that meaningful numbers of Lincolnites want to use these modes of transportation.

We have very poorly maintained alleys and potholes in some neighborhoods that are very bad. There are neighborhoods in Lincoln with gravel streets and no sidewalks, namely the one across the street from the Lincoln Zoo next to Antelope park. Until every neighborhood in our city has quality streets and sidewalks, I think we shouldn't focus as much on new development. There is no point in having excellent or developing infrastructure if it is not going to be maintained.

Safety biggest priority and then expanding trails for alternate transportation, less emissions, walkability

Focus should be on getting car/truck traffic out of the city - south beltway is a great start, but the east one should come next. From there, the focus should be on making the city as bicycle friendly as possible. The trail system we have is a great start, but as your survey identified, there's a lot more to be done there.

Outdoor activities are an important area for a healthy city. Streets take a beating in our midwestern climate...we need to keep them functional.

existing streets are in awful shape. get the old money out of 27th and expand it by the country club

The safety of our roads and bridges is number 1. After that the continuous expansion of our Bus and Bike routes. Then new roads and facilities. There is no reason to add new if we can't maintain and improve.

As much as possible, we must be very cognizant that an increasingly sprawling city will only exacerbate traffic problems and CO2 emissions. Creating a city that is walkable, bikeable, and offers public transportation that is easy to use will help reduce the impacts of traffic and climate change down the road.

I believe COVID, gas prices, and other factors will push many people to use alternate means of transportation.

We have enough streets. We need to keep them repaired and open. Make more bike trails that link together so cyclists can stay away from cars.

Lincoln is in DESPERATE need for street surface repair. They over promise doing this and extremely underperformed doing it. The new construction of streets are poor quality workmanship.

You cannot get Lincoln. 48th, 70th, 84th, there's no uncontested quick way to get across our city without hitting major lights and some of those go down to 35mph! How is it that we are so close to Omaha but we are so so so far behind their road infrastructure? I would hope we could learn from them and make major improvements.

Streets are deteriorating at a rapid rate. Patchwork is a short term program. Spend our tax money and fix it right the first time.

Too many unmaintained roads and we need more outpost spaces for activities like jogging

Portions of the city are in decay and falling further behind. Many streets have not seen resurfacing in 40-50 years. Sidewalk deterioration is generally ignored.

In my experience, it always feels like the lights are doing the wrong things. Just simple technology to make smart traffic decisions could greatly improve travel within the city.

Maintenance and safety are vital. Modal diversity is vital. New streets and highways should come with income from expansion revenue.

Getting from one side of Lincoln to the other side is a nightmare. Lights are not synchronized, speed limits make no sense. Improve safety and maintaining ALL roads is imperative. Giving bike riders more options makes financial sense as it takes cars off the roads also. With the pandemic and people working differently , transit needs should be evaluated.

These weighted priorities reflect my personal preferences.

There should be no question what we need to do in this city. The streets, transportation and safety have been neglected for so log we are ashamed of our city. We do not need a plan for 30 years from now. we need a plan for the next 4 years. Were is it. I do not feel safe in this city. The number of unregistered vehicles using out streets is appalling. Were is our Mayor at?

The streets in this town are a total disgrace from years and years of neglect thanks to our major who wanted to spend money on pretty things. People who visit this town say they are the roughest streets they have ever driven on!! Some say it is like driving in town on and old wagon going over ruts in the road.

Maintaining existing streets and bridges is the top priority. Safety is a close 1B priority.

Streets are in horrible shape. Widen 27th & 48th streets!!! Widen Old Cheney west of 14th and include bridge over train tracks!

Expanding public transportation and fixing the sidewalks and other infrastructure we already have would be the most efficient and cost-effective way to improve life in Lincoln. Public transportation is currently inadequate. Bus stops are far apart and riders need to go downtown to transfer between buses. Sidewalks are non-existent or obstructed in many parts of town. Let's improve the transit and infrastructure we have before moving on to other projects.

Everything needs help, but we have to start with maintaining our streets and then as a growing city, building new ones. Hopefully new infrastructure $s from DC will happen.

Current conditions of streets and bridges.

Focus on making making streets safer, more pedestrian friendly. Make Public transit more accessible and start working on eliminating the last mile. Consider re routing routes and avoiding a single hub. Wider streets aren't safer streets

Need smarter transportation not more & wider roads

We should make public transit, and pedestrian traffic more desirable.

Widening streets serves no benefit to the community that could not otherwise be accomplished, and amplifies a variety of problems over the course of its implementation. Wider streets reduces congestion, but only temporarily, as traffic volumes fill the space over time, and eventually congestion would return at even greater values. Increasing the footprint of auto-only spaces reduces the space available for other projects, including but not limited to transportation infrastructure (residential areas, business, public spaces, etc.), which decreases quality of life in other areas, and limits accessibility to other projects. Making safety improvements is a broad category, with many possible means to achieve

'safer' conditions. While I don't know what such 'improvements' are, it strikes me as a category worth investigating (not that anything I'm saying here matters whatsoever, it's a survey...) Intersections are often a high-risk area. Just the other day there was a fatality between two drivers in an intersection. However, design changes in intersections will likely incur a brief period of readjustment on part of drivers (see short term impacts of implementing a round-a-bout). The adjustment required to implement positive changes (see long term impacts of implementing a round-a-bout), may not be one most drivers are willing or capable of stomaching. Technology solutions to reduce congestion sounds nice. Again, vague enough to sound nice while encompassing an otherwise unpalatable solution? Perhaps. However, perhaps more reactive intersections, brighter traffic lights, roadway line manipulation to subtly alter driver's behaviors, etc, could offer interesting solutions. Worth investigating. Improving or adding sidewalks attempts to make a horse drink before you even lead them to the pond. While access to quality sidewalks may encourage a population to use them, when the overarching construction of the city caters so heavily to automobiles, what is the benefit of creating shiny new slabs of concrete to walk on, when there's so little point to walking on them? Granted, health benefits of walking, and encouraging leisure are nothing to scoff at, but there are more effective ways of decreasing the barrier to entry than putting more sidewalks in the gaps between roadways.

If we're worried about congestion, increased use, and condition of our roads then the best option would to encourage people to limit how many cars are on the road. Let's improve the public transit so it's more accessible and reaches more of the city so people won't have to use their car to get around everywhere. I feel a lot safer and better about my impact on the world when I ride the local bus verses getting behind the wheel of a car. I also think we could really use a public train.

I live near downtown and think a lot of people could benefit from expanding transit service - if buses would come by more than 1x per hour and routes were expanded - it could be cheaper than driving, service working class residents, and get more cars off the street. I would also be in favor of a rail system, even a train between Lincoln and Omaha. I also see a lot of streets in central Lincoln in total disrepair and think existing infrastructure should be one of our foremost priorities.

Bus schedules and stops need to be expanded so low-income and ecologically-minded people can take better advantage of shared rides. A public campaign should be launched in tandem to encourage ridership.

Although everything is important, street-highways, sidewalks and technology is the most important to me.

Prioritizing bicycle infrastructure for the long term health well our citizens, reduce traffic congestion on our streets, improve the quality of life for the residents of Lincoln.

I think we need to focus on building up and improving the existing infrastructure.

The existing infrastructure should be improved first.

These are the most pressing needs as traffic is a very significant issue for the City that needs to be addressed.

we need to get caught up on maintenance and repairs of streets we have.

Use what you have

Maintenance of existing infrastructure desperately needs improvement. Safety issues not only impact the number and severity of accidents, they also impact everyone's insurance rates. Improving intersections is a safety concern. Improving sidewalks improves walkability (a health and transportation issue) and the ability for those with disabilities to get around. Lincoln's sidewalks need a critical injection of funding. Trails and bike facilities are important elements of public transportation, but tend

to focus too much moderate to high income areas. Low-income people who will likely use these amenities the most generally do not have the necessary infrastructure in the their neighborhoods. Public transit, particularly all-electric, needs to expand routes, availability all week long, and reliability. Public transit should be measured against how much is saved in roadwork, lives not injured or lost, pollution reductions, and cost-savings to households that no longer need to include car costs into their budgets. Building new streets and highways fuels urban sprawl and encourages the most expensive type of residential housing with most of the costs passed on to taxpayers. Profits are absorbed by developers. Widening streets is super expensive and typically ruins established neighborhoods. Technological advancements should be taken more seriously to control traffic volumes, reduce need for more roadway building, and reduce air pollution.

with the increase, streets are becoming crowded, and intersections need more safety devises,

The $ are based on relative costs of the infrastructure. I feel like people in Lincoln will remain very car-centric, so don't support a lot of additional spending on transit, unless it is grant funded with small local match. I feel that improving and adding sidewalks should be an owner / developer cost.

We need to maintain what we currently have prior to expanding.

For climate, for health, for vitality and continued progress in our community -we must do more to encourage transportation comfortably in ways outside of our cars and take care of what we have. NOT widening roads!!

Better public transportation keeps several of the other road projects from being needed or from being as expensive.

There are several areas of Lincoln that don’t have sidewalks and really need it for example going south on 14th and Old Cheney. There are some areas that get congested such as 14th and Old Cheney intersection and where 40th and 48th streets are one lane. Safety is very important and maintenance of the roads are important.

Safety should always be top priority when facilities are created and maintained. Next would be maintaining existing infrastructure while improving other mode share so that we do not need to widen streets or add new ones as we've increased capacity in what we have, using it more efficiently. More people through the same shared spaces lowers costs for all modes.

I believe we should set aside a fixed percent for maintenance of the existing infrastructure each year, I consider that the base spend. I somewhat arbitrarily put that at 50% without knowing the magnitude of the need. The balance of the spend I would allocate across the other, more discretionary items.

because the most of the roads are {expletive}. plus i already pay more than $100 in wheel tax. your failing

The global trend is to make cities more walkable. We’ve built cities around cars long enough. So many places I walk/bike to end up being very unfriendly to pedestrians as they often lack proper sidewalks, curb cutouts, etc.

There needs to be improvements to what we already have in place.

Tech can solve traffic problems. Trails are amazing and good, need bike improvements.

East Beltway

Its time to repair our streets they are in horrible condition. We dont need new downtown or Haymarket expenses until the current streets are fixed elsewhere. Same thing for trails and bike paths. Fix our streets first.

Our existing streets are our biggest problem right now. They have been neglected for far too long.

Mostly equal across all. However I reduced new trails and improving/new sidewalks because I believe these should be put on contractors/developers and not the city. New sidewalks should be built when the corresponding house is built.

These are the priorities based on my use of streets, trails, and transit. I don't use public transit so that is not a priority just like bike facilities.

Keep up maintenance for cars but increase mobility for those without cars or those who choose to travel in carbon-reducing ways.

Sidewalks disrepair often meets or exceeds the streets. Our city does not have a congestion problem outside of the Haymarket on game days.

These seemed important to me.

The inner city roadways and neighborhoods are falling apart , to much money goes to build new sub divisions and new roadways to serve the new school sites.

Many streets, including Cornhusker Hwy Between 40th and 84th, are in complete disrepair and have been for years. Maintaining these key streets also intersects with other goals such as congestion, intersections and safety.

Our existing streets are absolute, total garbage.

Star tran stinks. Not every route needs to start and end downtown. Also Lincoln has failed to maintain the roads that exist and until they do that, it's pointless to build more. More bike lanes are not necessary no matter what the current mayor's idiotic plan is to bring the 'green new deal' to our town

build out the on street bike network. get more people out of cars for short trips to work, school and errands.

Improve the condition of the streets.

On the question asking public to select five most important Lincoln Roadway projects, users selected the following which included City of Lincoln and NDOT highway projects:

NDOT Highway Project ID - Name - Description	% Voted	# Voted
ID 76 West Beltway (US 77): I-80 to Saltillo Road - Freeway with new interchanges	15.25%	27
ID 1 I-80: I-80 and I-180 - Major interchange work	11.30%	20
ID 78 South Beltway (UNDER CONSTRUCTION): US-77 to Nebraska Hwy 2 - 4 lane freeway	7.34%	13
ID 34 US-6 (Sun Valley): Cornhusker Hwy (US-6) to WO St.(US-6) - 4 lanes + turn lanes	5.08%	9
ID 73 US-34: US-34 and Fletcher Avenue - New interchange	5.08%	9
ID 71 I-80: Pleasant Dale to NW 56th Street - 6 lanes + bridges	4.52%	8

ID 44 O Street (US-34): 84th Street to 120th Street - 4 lanes + intersection improvements	2.82%	5
ID 72 I-180: I-80 to US-6 - Reconstruction + bridges	2.82%	5
ID 70 US-34: NE-79 to Malcolm Spur - 4 lanes + intersection improvements	1.13%	2
ID 68 O Street (US-34): 120th Street to east county line - 4 lanes + intersection improvements	0.56%	1
City of Lincoln Project ID - Name - Description	**% Voted**	**# Voted**
ID 2 S 40th Street: Normal Blvd and South Street - Major intersection area work	27.68%	49
ID 59 East Beltway: Nebraska Hwy 2 to I-80 - New 4 lane divided highway	27.68%	49
ID 21 Saltillo Road: S 14th Street to S 27th Street - 2 lanes + intersection improvements, reconstruction to address flooding	18.64%	33
ID 18 Nebraska Hwy 2: Van Dorn Street to Old Cheney Road - 6 lanes + intersection improvements	18.08%	32
ID 37 Cornhusker Hwy (US-6): N 20th Street to N 33rd Street - Intersection Improvements per Corridor Enhancement Plan	11.30%	20
ID 121 A Street: S 40th Street to S 56th Street - Intersections improvements 40th, 48th and 50th/Cotner and widening of A Street from 40th to 48th for a center turn lane	11.30%	20
ID 58 S 56th Street: Van Dorn Street to Pioneers Boulevard - 4 lanes + intersection improvements	10.73%	19
ID 35 S 9th Street: Van Dorn Street to South Street - 3 lanes + intersection improvements	10.17%	18
ID 82 Nebraska Hwy 2: S 84th Street to South Street - Corridor Improvements (TBD by Corridor Study)	9.60%	17
ID 141 A Street: S 13th Street - Remove existing traffic signal and construct roundabout	9.60%	17
ID 32 O Street (US-34): Antelope Valley N/S Rdwy. (19th St.) to 46th Street - Intersection Improvements	9.04%	16
ID 38 Cornhusker Hwy (US-6): N 11th Street to N 20th Street - Intersection Improvements per Corridor Enhancement Plan	8.47%	15
ID 24 Yankee Hill Road: S 56th Street to S 70th Street - 2 lanes + intersection improvements	7.91%	14

ID 41 N 48th Street: Adams Street to Superior Street - 4 lanes + intersection improvements	7.91%	14
ID 130 N 14th Street: Cornhusker Hwy - Bridge Replacement	7.91%	14
ID 139 Rosa Parks Way: K Street and L Street - Bridge Rehab and Preventive Maintenance	7.34%	13
ID 133 S 27th Street: SE Upper Salt Creek - Bridge Replacement	6.78%	12
ID 26 Nebraska Hwy 2: Old Cheney Road to S 84th Street - 6 lanes + intersection improvements	6.21%	11
ID 132 N Antelope Valley Pkwy: Oak Creek - Bridge Replacement	6.21%	11
ID 27 Yankee Hill Road: S 40th Street to S 48th Street - 2/4 lanes + intersection improvements	5.65%	10
ID 51 N 33rd Street: Cornhusker Hwy to Superior Street - 4 lanes + int. impr. & bridge	5.65%	10
ID 79 S 14th Street/Warlick/Old Cheney (ON HOLD): 14th/ Warlick/ Old Cheney - Intersection improvements and grade separation	5.08%	9
ID 57 Yankee Hill Road: S 14th Street to S 27th Street - Additional 2 lanes	5.08%	9
ID 138 S 40th Street: Antelope Creek - Bridge Replacement	5.08%	9
ID 8 W Van Dorn Street: SW 40th Street to Coddington Avenue - 2 lanes + intersection improvements	4.52%	8
ID 83 Yankee Hill Road: S 48th Street to S 56th Street - 2/4 lanes + intersection improvements	4.52%	8
ID 147 S 56th Street: Cotner Boulevard/Randolph Street - Remove signal and evaluate roundabout or new signal	4.52%	8
ID 123 N 33rd Street and Cornhusker Hwy: N 33rd Street and Cornhusker Hwy - Remove three at-grade crossings (RTSD Project)	3.95%	7
ID 14 NW 48th Street: Adams Street to Cuming Street - 2 lanes + intersection improvements	3.95%	7
ID 23 S 56th Street: Thompson Creek Boulevard to Yankee Hill Road - 4 lanes + intersection improvements	3.95%	7
ID 30 S 70th Street: Yankee Hill Road to Rokeby Road - 2 lanes + intersection improvements	3.95%	7
ID 31 S 70th Street: Pine Lake Road to Yankee Hill Road - 4 lanes + intersection improvements	3.95%	7

ID 40 Van Dorn Street: S 70th Street to S 84th Street - Intersection Improvements	3.95%	7
ID 56 Holdrege Street: N 70th Street to N 80th Street - 4 lanes + intersection improvements	3.95%	7
ID 61 S 27th Street: Yankee Hill Road to Saltillo Road - 2 lane realignment + int. impr.ID	3.95%	7
ID 134 W South Street: Salt Creek - Bridge Replacement	3.95%	7
ID 144 S 33rd Street: D Street - Remove existing traffic signal and construct mini roundabout	3.95%	7
ID 49 Saltillo Road: S 27th Street to S 56th Street - 2 lanes + intersection improvements	3.39%	6
ID 5 NW 56th Street: W Partridge Lane to W "O" Street - 2 lanes + intersection improvements	3.39%	6
ID 13 W Van Dorn Street: Coddington Avenue to US-77 - 2 lanes + intersection improvements	3.39%	6
ID 25 S 84th Street: Amber Hill Road to Yankee Hill Road - 4 lanes + intersection improvements	3.39%	6
ID ID 33 N 84th Street: O Street to Adams Street - Intersection Improvements	3.39%	6
ID 45 S 98th Street: A Street to Pioneers Boulevard - 4 lanes + intersection improvements	3.39%	6
ID 47 N 98th Street: Holdrege Street to O Street - Additional 2 lanes	3.39%	6
ID 55 S 98th Street: US-34 (O Street) to A St - 4 lanes + intersection improvements	3.39%	6
ID 86 Saltillo Road: S 56th Street to S 70th Street - 2 lanes + intersection improvements	3.39%	6
ID 149 S 27th Street: Pine Lake Road - Intersection Improvement: eastbound right-turn lane	3.39%	6
ID 3 W Superior Street: NW 70th Street to NW 56th Street - 2 lanes + intersection improvements	2.82%	5
ID 20 Rokeby Road: S 31st Street to S 40th Street - 2 lanes + intersection improvements	2.82%	5
ID 4 W Adams Street: NW 70th Street to NW 56th Street - 2 lanes + intersection improvements	2.26%	4

ID 7 NW 70th Street: W Superior Street to W Adams Street - 2 lanes + intersection improvements	2.26%	4
ID 10 W Holdrege Street: NW 56th Street to NW 48th Street - 2 lanes + intersection improvements	2.26%	4
ID 11 NW 40th Street: W Vine Street to US-6, including I-80 Overpass - Overpass	2.26%	4
ID 28 Rokeby Road: S 48th Street to S 56th Street - 2 lanes + intersection improvements	2.26%	4
ID 43 N 98th Street: Adams Street to Holdrege Street - 2 lanes + intersection improvements	2.26%	4
ID 151 O Street (US-34): 84th Street - Intersection Improvement: dual eastbound left-turn lanes and eastbound right-turn lane and widening to east; maybe northbound right-turn lane	2.26%	4
ID 212 27th Street Realignment: Saltillo Road to Rokeby Road - New Two Lane Road	2.26%	4
ID 19 O Street (US-34): Wedgewood Drive to 98th Street - Intersection Improvements	1.69%	3
ID 42 Havelock Avenue: N 70th Street to N 84th Street - 2 lanes + intersection improvements	1.69%	3
ID 53 W Fletcher Avenue: NW 31st Street to NW 27th Street - 2 lanes + intersection improvements	1.69%	3
ID 62 S 70th Street: Rokeby Rd to Saltillo Rd - 4 lanes + intersection improvements	1.69%	3
ID 85 NW 12th Street: Fletcher Avenue to Aster Road with overpass of US-34 - 2 lanes + Overpass	1.69%	3
ID 120 A Street: S 89th Street to S 93rd Street - 2 lanes with raised median, roundabouts at 89th St and 93rd St	1.69%	3
ID 135 Southwood Drive: Beal Slough - Bridge Replacement	1.69%	3
ID 137 N 70th Street: Salt Creek - Bridge Replacement	1.69%	3
ID 152 S 84th Street A Street - Intersection Improvements dual northbound left turn lanes and NB right turn lane	1.69%	3
ID 77 W A Street: SW 36th Street to SW 5th Street - 2 lanes + intersection improvements	1.13%	2

ID 143 N 84th Street: Cornhusker Hwy (US-6) - Remove existing traffic signal and construct roundabout	1.13%	2
ID 6 NW 38th Street: W Adams Street to W Holdrege Street - 2 lanes + intersection improvements	1.13%	2
ID 22 W Denton Road: Amaranth Lane to S Folsom Street - 2 additional lanes	1.13%	2
ID 46 S 112th Street: US-34 to Van Dorn Street - 2 lanes + intersection improvements	1.13%	2
ID 48 N 112th Street: Holdrege Street to US-34 - 2 lanes + intersection improvements	1.13%	2
ID 50 Havelock Avenue: N 84th Street to N 98th Street - 2 lanes + intersection improvements	1.13%	2
ID 60 Rokeby Road: S 40th Street to S 48th Street - 2 lanes + intersection improvements	1.13%	2
ID 64 S 84th Street: Rokeby Road to Saltillo Road - 4 lanes + intersection improvements	1.13%	2
ID 75 State Fair Park Dr: Salt Creek Roadway to Cornhusker Hwy - 6 lanes + intersection improvements	1.13%	2
ID 124 S Folsom Street: W Old Cheney Road to 1/4 mile south - Paving one lane in each direction with raised center medians; roundabout at the future Palm Canyon Road intersection and intersection improvements at W Old Cheney and S Folsom	1.13%	2
ID 128 Holdrege Street: N 104th Street Roundabout	1.13%	2
ID 129 Saltillo Road: S 70th Street to 1/2 mile east Urban - 2 lanes with roundabout and other intersection improvements	1.13%	2
ID 131 Huntington Avenue: Dead Mans Run - Bridge Replacement	1.13%	2
ID 145 Cotner Boulevard: Starr Street or Holdrege Street - Remove existing traffic signal and construct roundabout	1.13%	2
ID 148 O Street (US-34): 98th Street - Construct roundabout with S 98th Street project OR when signal otherwise warranted	1.13%	2
ID 194 Old Cheney Road: SW 9th Street Roundabout	1.13%	2
ID 29 Rokeby Road: S 77th Street to S 84th Street - 2 lanes + intersection improvements	0.56%	1

ID 54 Adams Street: N 90th Street to N 98th Street - 2 lanes + intersection improvements	0.56%	1
ID 63 S 84th Street: Yankee Hill Road to Rokeby Road - 4 lanes + intersection improvements	0.56%	1
ID 66 W Alvo Road: NW 12th Street to Tallgrass Parkway - 2 lanes + intersection improvements	0.56%	1
ID 81 W Holdrege Street: NW 48th Street to Chitwood (east 1/4 mile) - 2 lanes + intersection improvements	0.56%	1
ID 87 W Holdrege Street: NW 48th Street to NW 40th Street - 2 lanes + intersection improvements	0.56%	1
ID 119 Van Dorn Street: S 84th Street to S 91st Street - 2 lanes with raised median, roundabouts at 87th St and 93rd St, turn lane improvements at the 91st St	0.56%	1
ID 125 S 40th Street: Rokeby Road to 1/4 south - 2 lanes with raised median and roundabout 1/4 mile south of Rokeby Rd	0.56%	1
ID ID 136 S 1st Street: Cardwell Branch Salt Creek - Bridge Replacement	0.56%	1
ID 153 Cornhusker Hwy (US-6): State Fair Park Drive - Intersection Improvements: dual westbound left turn lanes	0.56%	1
ID 154 Cornhusker Hwy (US-6): N 70th Street / Railroad viaduct - Intersection/viaduct reconfiguration	0.56%	1
ID 155 S 84th Street: Yankee Woods Drive Roundabout	0.56%	1
ID 67 S 40th Street: Yankee Hill Road to Rokeby Road - 3 lane section with raised median and turn lanes as appropriate	0.00%	0
ID 12 NW 40th Street: W Holdrege Street to W Vine Street - 2 lanes + intersection improvements	0.00%	0
ID 15 NW 56th Street: W Cuming Street to W Superior Street - 2 lanes + intersection improvements	0.00%	0
ID 16 W Cuming Street: NW 56th Street to NW 52nd Street - 2 lanes + intersection improvements	0.00%	0
ID 17 NW 12th Street: Aster Road to Missoula Road - 2 lanes + turn lanes	0.00%	0
ID 52 A Street: S 98th Street to 105th Street - 2 lanes + intersection improvements	0.00%	0
ID 88 Rokeby Road: S 27th Street to S 31st Street - 2 lanes + intersection improvements	0.00%	0

ID 89 W Alvo Road: NW 27th Street to NW 12th Street - 2 lanes + intersection improvements	0.00%	0
ID 122 S 40th Street: NE-2 to Clifford Drive (north of Pioneers Blvd) - Resurface and widen to a three-lane roadway section	0.00%	0
ID 126 W Old Cheney Road: S Folsom Street to SW12th Street - 2 lanes with raised median	0.00%	0
ID 127 Holdrege Street: 87th Street to Cedar Cove - 2 lanes with raised median	0.00%	0
ID 142 Fremont Street: Touzalin Avenue - Remove existing traffic signal and construct roundabout	0.00%	0
ID 146 N 70th Street: Havelock Avenue - Remove existing traffic signal and construct roundabout	0.00%	0
ID 193 NW 12th Street: W Alvo Road to Missoula Road - 2 lanes + turn lanes	0.00%	0
ID 141 Rokeby Road: S 31st Street to S. 40th Street	0.00%	0

On the question asking users to share their reasoning for the selected Lincoln Roadway projects, users said the following:

Phase 2 Online Survey

Would you like to share any reason why you believe the selected Lincoln Roadway projects best support the LRTP Goals?

Open-Ended Response

West Beltway needs to be completed after the South Beltway.

Frequently use

East Belt will improve traffic all around the city by keeping lots of cars off the interior of Lincoln,

They support my goals. Again to me you need to 4 lane all the major arterial streets. That was not a choice.

Providing south and east lincoln options to exit the city quickly reducing city congestion

The answer isn't always a round a bout especially when we don't have alot of money to spend.

Saltillo is notoriously dangerous. Expanding lanes does not reduce traffic and divides neighborhoods.

I love roundabouts

Need to focus on improving existing streets in the heart of the city. Not focus on improving arterials that may serve new development. Should be increasing impact fees to fund the improvement of arterials for new developments.

This is a completely incomprehensible way to ask people to evaluate these projects. How about putting stop signs in neighborhoods and plowing the snow instead of trying to analyze the garbage data you'll get from this question?

The South end of town always gets all the funding, new businesses etc.

14th and Cornhusker bridge is dangerous

They have been in need of repair for ten years or more.

Tried to pick areas that are strategic and impactful.

Those are some of the most dangerous areas for cyclists who must use the streets.

It's too difficult to understand what is actually happening on any of these projects - I can't answer the question. I just selected the top-5 so I could move on with the survey I am shocked at the number of projects looking to add lanes?? We already have new taxes to cover road maintenance we can't currently afford, but now we are going to build more roads we can't afford to maintain?

Areas for growth and maintenance.

Bridges need replaced and the other for flooding

You have a lot of things here that seem to be kind of insignificant overall. And a lot of good ones. I just picked ones I thought would affect the most people.

Hwy 34 improvements will allow for more balanced growth to the northwest

They best serve the existing and future needs for traffic congestion and safety.

I don't feel qualified to speak to those goals, but think I may have checked more than five places for improvements to happen, based primarily on familiarity with areas. I am not able to read the map.

I want to see more improvements focused in the Lincoln's core. A lot of attention goes to south Lincoln it seems. Everyone from throughout Lincoln (and elsewhere) uses these roadways.

Having traffic going around the city should lessen the traffic and wear on city streets.

Difficult to sort through so many options; chose some that would most directly impact me.

A street is dangerous every morning, and it has an impact on 70th and 84th street intersections. Need to be creative in how we move traffic through those areas. There is room for a round-about (with some land acquisition).

I just picked bridge replacements because it doesn't add any new infrastructure; every road which is expanded or created is not really consistent or realistic with respect to our coming energy and environmental related problems.

This was hard to do - too many choices and detail to consider without enough context. I chose the ones that directly impact us.

Quit with the roundabout garbage. No one likes them and they are a huge fund suck.

The Beltway needs to be finished to move heavy interstate traffic out of the City. The 14 th street bridge is a critical arterial connecting the university, downtown and NW Lincoln. The three at grade rail crossings near 33rd and Cornhusker need to be eliminated. During heavy rains the Saltillo area between 14 and 27th become impassable and lastly, there should be no gravel roads inside the City limits. I assume there are others and I know 112th and Van Dorn is not currently in the City limits but given the growth in that area, it will be soon.

Southeast Lincoln is one of the fastest growing parts of town. With the eventual completion of a high school, traffic is only going to increase. This along with the eventual completion of the south beltway and the area is ripe for rapid expansion. This would increase the economic vitality of the area; be cost effective as costs are only going to increase every year; and will support the livability and travel choice. The west bypass project is long overdue, especially if it eliminates the stoplights along the route. Doing so would increase the safety and security, economic vitality, mobility and system reliability, and cost effectiveness.

I tried to pick areas that are most traveled. I notice the outskirts of Lincoln are heavily represented. Again, existing streets get ignored. A round-about would work nicely at 13th & A & keep traffic flowing, HOWEVER, A St. 17th west to Folsom badly needs resurfacing!

These locations are automobile oriented and they present an opportunity to improve walkability. Also a big fan of round abouts.

I think supporting the east and west beltways will help with traffic flow around the city.

None

there are too few trails in northeast quadrant of the city

ID 10 and ID 81 are areas that are growing, with new schools, institutions, and residences being built, so the city should prioritize developing those roads. ID 144 and ID 133 are areas that get very congested during rush hour.

Too many to really apply objective reasoning. Mainly selected areas that with which we are familiar. Without more data it is impossible for us to provide truly valid selections.

What is 214?

While it is perhaps debatable that they are the best, I am familiar with these because I live near and use them regularly. (I don't feel qualified to comment about about areas I don't regularly use.) The intersection at 56th & Cotner is the worst and I always avoid it. I hope there is a better solution on the way.

East Beltway should be the #1 legislative priority for our senators. Additionally ANYONE who is thinking about the future of LIncoln infrastructure should have this as a #1 Priority

Growth and commerce will take off if complete beltway around the City is completed with improved access thereto.

Most of the items I selected are safety issues (bad intersections or flooding).

It decreases congestion and makes the roads safer and quicker

They waste less money than the beltways.

Population growth and addition of new development in the area.

Hard to completely evaluate since many of these are important...that is quite a list!

In neighborhoods such as 13th & A and 33rd & D, roundabouts make much more sense than the ridiculous, poorly timed existing stoplights. I am in favor of roundabouts. With the other choices (widening)-- these roads are already so high traffic and frustrating to navigate.

Overwhelming. So much to do! Cornhusker Hwy needs a lot of work.

Cheaper east bypass than the East Beltway. Would route traffic from I-80 south on 84th or 70th to Adams, east to 98th, then south to Hwy 2. Do it before the southeast corner of Lincoln fills up with neighborhoods.

Whatever is decided should be fairly spread throughout the city. The North side needs attention. With a new HS in the NW section- traffic and roads need to be addressed. There are many roads that need attention on the north side, that move many vehicles daily that clearly have been neglected for years.

picking from force fed projects is not asking what I think they need to do. Fix the work street n this city! Randolph St! Widen e 40th street handle the traffic.

How about widening 27th and 48th streets?

I-180 interchange is a pain. Roundabouts are often safer. and increase traffic flow.

Way to much scrolling!!! Couldn't you do hot links from the map?

Poor neighborhoods deserve safer roads and intersections.

Fletcher needs a lot of work. It's one of the main roadways from central Lincoln to north Lincoln.

I think we need to focus on constructing roads and bridges to last, and supporting existing infrastructure. I focus on central Lincoln because there are few moneyed interests willing to advocate for this part of the city, although many people live here and rely on its infrastructure.

Beltway is super important to reduce truck Traffic inside city limits. Yankee Hill 14th - 27th is substandard compared to the surrounding roadways.

Almost every major US city has a beltway system, except for our city. We are years behind other municipalities in in the beltway concept it's time Lincoln joined the the 2020s

Supports new northwest high school. Supports core neighborhoods. Reconstructing Randolph near LHS is not listed. If we didn't have the old brick streets peeking through the asphalt, we wouldn't have a street on Randolph. Core neighborhood needs need to be investigated and ranked much higher.

major arterial streets need to be repaired an widens

I focused on the south 70th street corridor. We have seen with Norris school how narrow, 2 line roads with narrow shoulders can result in casualties for teen drivers. We must improve the 70th Street corridor to allow safe passage for students to the new high school. Also focused on the Rokeby Road corridor. As town grows south this could become a major east/west corridor, but a mile of this roadway doesn't exist. Get a two lane version of this road pushed through and protect the ROW for expansion before land costs really increase in that area. Already have improved or plan to improve eastern portions of this roadway where development is relatively sparse. Why are projects 10, 20, 24, 27, 29, 83, 119, 120, 124, 128, 194 on the survey? They are already planned to be addressed by LOTM according to the City website. Hwy 2 / Project 18, 82, 26 - wait until the south beltway is complete to evaluate new traffic. If I could chose one more project, it would be #57.

focus on safety rather than motorist convenience is key

I tried to pick the areas where I felt there is congestion. I also didn’t choose roundabouts because I feel those are confusing and not safe

I didn't feel it was fair to chose the roads I frequent so I chose the ones that seemed to improve controlled flooding or improved the whole corridor.

Reduce traffic on the interior streets (North/ South arteries)

Actually, I had a difficult time choosing only 5!!

Please do NOT widen 48th St. at Adams. You have killed University Place as a neighborhood. We need traffic CALMING here, not invitations to drive faster.

Hwy 2, especially around 27th Street backs up and needs a lot of work. 27th should also be 4 lanes north of Hwy 2, why is this not in the plan? Politics?

North Lincoln needs it!

On the question asking public to select five most important Lancaster Roadway projects, users selected the following:

Lancaster County Project ID - Name - Description	% Voted	# Voted
ID 91 S 68th Street Hickman to Roca Road - Two Lane Widening with Shoulders	20.13%	32
ID 92 Saltillo Road S 27th Street to S 68th Street - Two Lane Widening	18.87%	30
ID 181 Saltillo Road: S 68th Street to S 120th Street - Two Lane Widening	18.24%	29
ID 108 S 1st Street: Old Cheney Road to Pioneers Boulevard - Programmed Paving	13.84%	22
ID 102 N 98th Street Holdrege Street to US-6 - Potential Paving	13.21%	21
ID 93 W A Street SW 84th Street to SW 52nd Street - Programmed Paving	12.58%	20
ID 202 Old Cheney Road: Bridge O-37 near S 1st Street - Bridge Replacement	12.58%	20
ID 105 Arbor Road: N 27th Street to US-77 - Potential Paving	11.95%	19
ID 95 NW 27th Street Hwy-34 to W Waverly Road - Potential Paving	10.69%	17
ID 156 NW 56th Street: W O to W Holdrege Street - Potential Paving	10.06%	16
ID 94 Havelock Avenue Stevens Creek to N 112th Street - Potential Paving	9.43%	15
ID 197 Van Dorn Street: Bridge K-37 near S 98th Street - Replace CBC	9.43%	15
ID 205 Havelock Avenue: Bridge K-144 near N 98th Street - Bridge Replacement	9.43%	15
ID 195 Arbor Road: Bridge F-201 near N 27th Street - Bridge Replacement	8.18%	13
ID 206 SW 16th Street: Bridge O-1 near W Calvert Street - Replace CB	7.55%	12
ID 157 S 148th Street: Yankee Hill Road to O Street - Two Lane Widening	6.92%	11

ID 101 Fletcher Avenue N 84th Street to N 148th Street - Programmed Paving	6.92%	11
ID 204 Adams Stree:t Bridge K-123 near N 102nd Street - Bridge Replacement	6.92%	11
ID 161 S 148th Street: Old Cheney Road - Intersection improvements	6.29%	10
ID 182 N 14th Street: Arbor Road - Intersection improvements	5.66%	9
ID 98 S 98th Street Old Cheney Road to US-34 - Programmed Paving	5.03%	8
ID 96 S 68th Street Firth Road to Stagecoach Road - Two Lane Widening with Shoulders	5.03%	8
ID 97 N 14th Street Waverly Road to Raymond Road - Two Lane Widening	5.03%	8
ID 99 N 14th Street Arbor Road to Waverly Road - Two Lane Widening	5.03%	8
ID 163 S 148th Street: Van Dorn Street - Intersection improvements	5.03%	8
ID 196 N 112th Street: Bridge J-126 near Holdrege Street - Bridge Replacement	5.03%	8
ID 198 S 56th Street: Bridge P-92 near Rokeby Road - Replace with CBC	5.03%	8
ID 203 Van Dorn Street: Bridge J-22 near S 134th Street - Bridge Replacement	5.03%	8
ID 107 W Van Dorn Street: SW 140th Street to SW 112th Street - Potential Paving	4.40%	7
ID 114 W Adams Street: NW 84th Street to NW 56th Street Potential Paving	4.40%	7
ID 158 N 148th Street: O Street to McKelvie Road - Two Lane Widening	4.40%	7
ID 159 S 148th Street: Yankee Hill Road - Intersection improvements	4.40%	7
ID 178 S 68th Street: Martel Road - Intersection improvements	4.40%	7
ID 200 S 112th Street: Bridge J-135 near A Street - Replace with CBC	4.40%	7
ID 208 Pioneers Blvd: Bridge Q-72 near S 138th Street - Bridge Replacement	4.40%	7
ID 213 SW 42nd Street: W Hallam Road to W Pella Road - Concrete construction	4.40%	7
ID 103 W Van Dorn Street SW 112th Street to SW 84th Street - Programmed Paving	3.77%	6
ID 111 N 1st Street: Alvo Road to McKelvie Road Potential Paving	3.77%	6

ID 115 Van Dorn Street: S 120th Street to S 148th Street - Potential Paving	3.77%	6
ID 160 S 148th Street: Pine Lake Road - Intersection improvements	3.77%	6
ID 162 S 148th Street: Pioneers Boulevard - Intersection improvements	3.77%	6
ID 179 S 68th Street: Wittstruck Road - Intersection improvements	3.77%	6
ID 112 N 27th Street: Arbor Road to Waverly Road Potential Paving	3.14%	5
ID 116 Panama Road: US-77 to S 54th Street - Potential Paving	3.14%	5
ID 167 N 148th Street: Havelock Avenue - Intersection improvements	3.14%	5
ID 180 S 68th Street: Bennett Road Intersection improvements	3.14%	5
ID 186 N 14th Street: Raymond Road - Intersection improvements	3.14%	5
ID 209 Pine Lake Road: Bridge Q-110 near S 134th Street - Bridge Replacement	3.14%	5
ID 100 SW 14th Street NE-33 to W Bennet Road - Programmed Paving	2.52%	4
ID 104 S 120th Street: Bennet Road North 0.5 Miles - Potential Paving	2.52%	4
ID 117 McKelvie Road: NW 27th Street to N 14th Street - Potential Paving	2.52%	4
ID 164 S 148th Street: A Street - Intersection improvements	2.52%	4
ID 168 N 148th Street: Fletcher Avenue - Intersection improvements	2.52%	4
ID 177 S 68th Street: Stagecoach Road - Intersection improvements	2.52%	4
ID 199 A Street: Bridge J-47 near S 120th Street - Replace with CCS	2.52%	4
ID 109 W Waverly Road: NW 112th Street to NE-79 - Potential Paving	1.89%	3
ID 110 W Waverly Road: NE-79 to N 14th Street - Potential Paving	1.89%	3
ID 165 N 148th Street : Holdrege Street - Intersection improvements	1.89%	3
ID 171 N 162nd Street: US-6 to Ashland Road - Potential Paving	1.89%	3
ID 185 N 14th Street: Mill Road - Intersection improvements	1.89%	3
ID 189 N 14th Street: Rock Creek Road - Intersection improvements	1.89%	3
ID 191 N 14th Street: Raymond Road to Agnew Road - Two Lane Widening	1.89%	3
ID 192 N 14th Street: Agnew Road to Ashland Rd - Two Lane Widening	1.89%	3
ID 207 SW 15th Street: Bridge O-140 near W Stockwell Street - Replace CB	1.89%	3
ID 210 A Street: Bridge J-46 near S 134th Street - Bridge Replacement	1.89%	3

ID 211 S 46th Street: Bridge S-59 near Bennet Road - Replace CB	1.89%	3
ID 166 N 148th Street: Adams Street - Intersection improvements	1.26%	2
ID 173 S 68th Street Pella Road - Intersection improvements	1.26%	2
ID 176 S 68th Street: Panama Road - Intersection improvements	1.26%	2
ID 183 N 14th Street: Bluff Road - Intersection improvements	1.26%	2
ID 184 N 14th Street: Waverly Road Intersection improvements	1.26%	2
ID 187 N 14th Street: Branched Oak Road - Intersection improvements	1.26%	2
ID 118 Bluff Road: I-80 to N 190th Street - Potential Paving	0.63%	1
ID 170 N 148th Street: Alvo Road - Intersection improvements	0.63%	1
ID 174 S 68th Street Princeton Road - Intersection improvements	0.63%	1
ID 175 S 68th Street Olive Creek Road - Intersection improvements	0.63%	1
ID 188 N 14th Street: Davey Road - Intersection improvements	0.63%	1
ID 190 N 14th Street: Agnew Road - Intersection improvements	0.63%	1
ID 201 S 120th Street: Bridge J-138 near A Street - Replace with CBC	0.63%	1
ID 169 N 148th Street: Prairie Home - Intersection improvements	0.00%	0

On the question asking users to share their reasoning for the selected Lancaster County projects, users said the following:

Phase 2 Online Survey

Would you like to share any reason why you believe the selected Lancaster County projects best support the LRTP Goals?

Saltillo is well traveled and therefore widening the lanes would be beneficial

Frequently use

The Hickman area need lots of road improvements since its the fast growing city in Nebraska! Bridges in lancaster need to be more of a prioty in Lancaster. To many roads are closed in rural areas because of this problem!

I didn't pick any because (but you forced me to) I do not live in the county and their big issue is lack of funding. If you can afford to live out there you can afford to pay the taxes to upkeep the roads.

How about we look at roads around the new high schools. Maybe someone can have some sense and plan for future traffic and safety. I know that won't happen and someone will decide to wait until the schools are built THEN decide to start road construction.

Leave the gravel, fix the bridges.
Need to make access in East Lincoln better to Cornhusker.
Add shoulders to make these roads safer for cyclists.
The south end of the county always gets priority.

14th street needs a bike lane to connect to Oak Creek trail. Major connection Great American Bike Trail.

Again, this is a crazy question that I can't answer without more details on the projects. I just selected the first five again to move through the survey. But why all these county projects that just make it easier for sprawl around Lincoln???
Support of east beltway
Bridges need replaced

148th Street needs to be widened and safety projects at intersections is needed for truck traffic instead of building the East Beltway. That is too expensive and an improved 148th Street will work for much less cost.
I don't use county roads enough to have any sort of preference.

I rarely drive on county roads, so I'm not prepared to judge the priorities. It would seem that bridges are a major concern.
All MPO monies should be spent close to the City of Lincoln.

There are so many needs for bridge replacement, paving and safer intersections. Have to start somewhere.

I just picked bridge replacement so no one dies on a collapsing bridge; but also because adding new roads is basically not consistent with our current understanding of climate science.

With the exception of NW 56 near the new high school (which need good streets for the kids to drive on), I am familiar with these roads, travel them frequently, they seem to carry a lot of traffic.
Reduce dust.
I picked items that built on projects that have a close-by project in progress.
None

please balance your projects between different areas of the city! South Lincoln will most likely get most of the online votes but these projects should be equitably distributed

These are developing areas where a populations, especially new immigrant populations are moving to. We need better roads from these areas into Lincoln city center.
See city project response.
I don't regularly use any of these roads so I don't have a preference.
Same as previous comment.
Create safety and better access
Improve areas so that the East Beltway is not considered "necessary".
I don't travel County roads frequently enough to feel equipped to provide a response to this.
I don't feel I have the right expertise to have answered this or the last question.
All important.
Trying to make a viable north-south route on 98th St.
Heavily traveled

You need an east west on the south side of Lincoln to meet up with the beltway. Pioneers is the perfect Street but I see no improvement for any such street
Widen 148th to 4 lanes
Way to much scrolling!!! Couldn't you do hot links from the map? Who designed this!

I'm not familiar enough with these areas to make a judgment.
None- these are not important to me.
I have no idea...
Those projects closest to Lincoln with the heaviest traffic should be focused on.
major transportation streets

If paved, 98th St. can become the defacto East Beltway if we can't afford the official East Beltway. As with prior page, I think safety of student drivers is very important and support the 68th St. improvements that support student driver safety. With the future data center, the area around Arbor Rd. will develop quickly and paved road is important. Complete paving of Van Dorn to 148th to create another E/W paved corridor.
I haven't traveled on a lot of these roads so I don't know what they need
Not as familiar with these locations.
Not much comment/opinion on county matters

On the question asking public to select five most important Trail projects, users selected the following:

Trail Project ID - Name - Description	% Voted	# Voted
ID T-19 Boosalis - Bison Connector: Van Dorn St to S 17th St/Burnam St - Sidepath	27.27%	42
ID T-27 Greenway Corridor Trail/Haines Branch: Pioneers Park Nature Center to Spring Creek Prairie Audubon Center - New Trail	24.03%	37
ID T-54 Chris Buetler Trail - Jamaica North Connector: J Street to N Street - New Trail	22.08%	34
ID T-20 Deadmans Run Trail: N 48th St to Mo Pac Trail - New Trail	18.83%	29
ID T-39 10th Street Trail: Hwy 2 intersection improvements - Crossing Improvements	14.94%	23
ID T-18 Deadmans Run Trail: Murdock Trail to Cornhusker Hwy and Railroad grade separation - New Trail and Grade Separation	13.64%	21
ID T-07 Landmark Fletcher: 33rd St & Superior St to 27th St - New Trail; Sidepath	12.99%	20
ID T-38 Tierra Williamsburg: Old Cheney grade separated crossing - Grade Separation	12.99%	20
ID T-21 East Campus Trail: Leighton St to Holdrege St - New Trail	12.34%	19
ID T-29 South Street: Folsom St to Jamaica Trail - Sidepath	12.34%	19
ID T-09 Wilderness Hills: Yankee Hill Rd to Rokeby Rd and S 40th St - New Trail	11.69%	18

ID T-47 Van Dorn Trail: S 84th St and Van Dorn to S 106th and MoPac Trail - New Trail	11.04%	17
ID T-82 Stevens Creek: Waterford Trail to MoPac Trail - New Trail	10.39%	16
ID T-04 Woodlands: Rokeby Rd to S 70th St to Yankee Hill Rd - New Trail	9.74%	15
ID T-43 Yankee Hill Rd: S 56th St to S 70th St - Sidepath	9.74%	15
ID T-64 S 70th Street Connector: Old Post Rd to MoPac Trail - Sidepath	9.74%	15
ID T-67 Old Cheney Rd: Warlick Blvd to Jamaica North - Sidepath	9.74%	15
ID T-28 NW 56th Street Trail: W Adams St to W Superior St - New Trail	9.09%	14
ID T-37 Rock Island: Old Cheney grade separated crossing - Grade Separation	9.09%	14
ID T-55 Yankee Hill Road: S 40th St to S 56th St - Sidepath	9.09%	14
ID T-23 S 27th Street Connector: Rokeby Rd to South Beltway - New Trail	8.44%	13
ID T-74 Oak Creek Trail: Saline Wetlands Nature Center to N 1st St - New Trail	8.44%	13
ID T-11 Waterford: N 84th St to Stevens Creek - New Trail	7.14%	11
ID T-25 S 84th Street Connector: Rokeby Rd to South Beltway - New Trail	7.14%	11
ID T-26 South Beltway Trail - Phase I: S 27th St to S 56th St - New Trail	7.14%	11
ID T-03 Woodlands: Jensen Park to Rokeby Rd - New Trail	6.49%	10
ID T-16 N 48th Street Trail: Murdock Trail to Superior St - Sidepath	6.49%	10
ID T-36 NW 12th Street: W Fletcher Ave to Aster St with US 34 grade separated crossing - Sidepath; Grade Separation	6.49%	10
ID T-66 Yankee Hill Road: S 14th St to S 27th St - Sidepath	6.49%	10
ID T-34 N 48th Street/Bike Park Trail: Superior St to N 56th St - New Trail; Sidepath	5.84%	9
ID T-35 N 1st Street: N 1st St crossing of Hwy 34 - Sidepath	5.84%	9
ID T-48 Air Park Connector - Phase I: NW 13th St to NW 27th St - Sidepath	5.84%	9
ID T-24 S 56th Street Connector: Rokeby Rd to South Beltway - New Trail	5.19%	8
ID T-31 W A Street Connector: A Street from SW 36th to SW 40th; SW 40th from A St to F St - Sidepath	5.19%	8
ID T-33 Stevens Creek: Murdock trail to Hwy 6 - New Trail	5.19%	8

ID T-44 S 14th Street & Yankee Hill Connector (w/RTSD project): South LPS Property Line to Yankee Hill - Sidepath	5.19%	8
ID T-75 Arbor Road Trail: N 14th St to I-80 with grade sparation at I-80 - Sidepath and Grade Separation	5.19%	8
ID T-13 Cardwell Branch Trail: GPTN Connector to Folsom Trail - New Trail	4.55%	7
ID T-42 Mo Pac Trail: S 84th Street grade separated crossing - Grade Separation	4.55%	7
ID T-49 Air Park Connector - Phase II :NW 27th St to NW 48th St - Sidepath	4.55%	7
ID T-12 Stevens Creek Murdock Trail to Waterford Trail - New Trail	3.90%	6
ID T-30 O Street: SW 40th St to SW 48th St - Sidepath	3.90%	6
ID T-51 South Beltway Trail - Phase II: S 56th St to S 84th St - New Trail	3.90%	6
ID T-53 NW 56th Street Trail: W Holdrege to W Partridge - Sidepath	3.90%	6
ID T-71 Van Dorn St: SW 40th St to Prairie Corridor Trail - Sidepath	3.90%	6
ID T-77 Little Salt Creek Trail: Arbor Rd to Landmark Fletcher - New Trail	3.90%	6
ID T-70 Coddington Ave: Pioneers Blvd to South St - Sidepath	3.25%	5
ID T-72 SW 40th St: Van Dorn St to W A Street - Sidepath	3.25%	5
ID T-52 South Beltway Trail - Phase III: S 84th Street to Hwy 2 - New Trail	2.60%	4
ID T-69 Pioneers Blvd: Jamaica North Trail to Coddington Ave - Sidepath	2.60%	4
ID T-80 NW 12th Street: NW 10th St to W Fletcher Ave - Sidepath	2.60%	4
ID T-15 W Holdrege Street Trail: NW 48th St to NW 56th St - Sidepath	1.95%	3
ID T-40 S 91st Street Trail: Hwy 2 grade separated crossing - Grade Separation	1.95%	3
ID T-41 Mo Pac Trail: S 112th Street grade separated crossing - Grade Separation	1.95%	3
ID T-63 Folsom Street: W Old Cheney south 1/2 mile - Sidepath	1.95%	3
ID T-65 Pine Lake Rd/S 98th St: Billy Wolff Trail to Napa Ridge Dr - Sidepath	1.95%	3
ID T-68 Folsom St: Old Cheney to Pioneers Blvd - Sidepath	1.95%	3
ID T-76 Arbor Road Trail: I-80 to Salt Creek Trail - Sidepath	1.95%	3
ID T-78 Salt Creek Trail: N 56th St to Stevens Creek - New Trail	1.95%	3

ID T-79 Stevens Creek Trail: Salt Creek Trail to Cornhusker Hwy with grade separation of Cornhuster Hwy - New Trail	1.95%	3
ID T-46 Prairie Village Trail: N 84th St to Stevens Creek, South of Adams - New Trail; Sidepath	0.65%	1
ID T-81 Folsom Street Connector: 1/2 mile north of W Denton Rd to Cardwell Branch Trail - Trail	0.65%	1
ID T-61 Beal Slough Trail: S 56th St and London Rd to S 70th St and Yankee Hill - New Trail	0.00%	0
ID T-45 Landmark Fletcher: Fletcher Ave from N 27th St to N 14th St - Sidepath	0.00%	0

On the question asking users to share their reasoning for the selected Trail projects, users said the following:

Phase 2 Online Survey

Would you like to share any reason why you believe the selected Trail projects best support the LRTP Goals?

any improved trails or new trails is a win

Needed connections

Jamaica Connector would finish an interior link that is missing, Haines branch would add a great new trail Southwest out of Lincoln, and we need to take advantage of the south beltway project!

I live in this area

Don’t spend money on non essentials at this point when our roads are not even drivable.

These are selfish choices because these are the areas I ride. Completing any of these projects would be a good investment because they will reduce auto traffic and reduce the need to do more expensive road projects.

Yankee Hill has dangerous bike access.

I'm a fan of the general principle of building out from the existing network - better connections to the trails we already have are more important than adding random trails in the suburbs.

Did not see a plan to build a bridge of Cotner on the Mo-Pac. The Old Cheney -Jamaica trail crossing is very congested.

Saline wetlands area is underutilized

T-54 Connects Marysville KS to Omaha.

I's like to mention an important like that's missing here. NW Fletcher where it curves into NW 27th by Kawasaki is an important, yet dangerous way out to Airpark or the gravel of N27th. It's not quite T-36 or T-48. There needs to be a sidepath or shoulder.

Again: These questions are impossible?! Please do something to improve safe bike/ped access to Van Dorn Park! Also provide better infrastructure for people who actually commute!

ease of use

I'm a South Central resident of Lincoln and use the trail system extensively for bike commuting and bike recreation. I also use the trail system for walking. I feel the quadrant of Lincoln that is most under served by the current trail system is the northwest. I would like to see trail projects that would connect the center of Lincoln to the northwest part of Lincoln prioritized to bring more equity to this wonderful feature of Lincoln - our trail system.

Maintain what is there

Need to focus on these important completions of larger loops of the existing trail system. Next focus is to continue to expand the trail system with new growth.

More trails please!

I do not use the trails and believe that those who do should make decisions about the priorities.

Improved connectivity and some safety improvements.

I have lived in North Lincoln and now live in South Lincoln. In general, North Lincoln deserves more resources. The walking and bikeability up north is not very good, so that part of town needs to have a priority in some new trails. In South Lincoln, I chose the option to add a tunnel or bridge so people can easily cross Old Cheney Road. I regularly take the Rock Island Trail and it is actually super dangerous to cross. I've seen way to many people with close calls crossing there. Having to cross 4 lanes when people are going 45 mph is just not safe. Sometimes I have to wait to cross for a couple of minutes. It's also a high traffic area, so I think it could definitely improve the safety and the comfort level of drivers and people on the trail. I'd love to click more boxes, but I also hope there's eventually an easy route from the Jamaica trail directly to the Haymarket or downtown Lincoln.

The rock island-old cheney crossing one is super important. That crossing is always very stressful and dangerous. I put the 33rd and superior to 27th new trail on there because when I lived up north at Northridge Heights that area had a dearth of trails; made it tough to bike to UNL. I think getting some more trails that link up to nature is really important; people need to have easy, bike friendly access to nature; the only way to get people to care about the broader environment is to get them experience in the outdoors.

Simply tried to choose something in different areas of the City.

Important to make connections to complete the existing networks, working from the center out.

None

Many immigrant community members live in these areas and need safe bike trails to ride on.

Safe operations for bicycle transportation in high traffic areas.

I'm very enthusiastic about the Prairie Corridor Trail and look forward to using it. I don't see any new trails near where I live but I always hope that someday a trail will come closer to 56th & A Streets

Spend least amount of money to connect existing trails.

They connect neighborhoods that don’t have much access to trail networks right now

Do all of them please. Trails are more than recreation. They are transportation. We do not have an adequate network.

I think Trail projects should be prioritized based on how they help facilitate daily travel and commutes rather than focusing on how they might support recreation in wealthier neighborhoods on the outskirts of town.

Lot of good projects here. The "Haines Branch" trail should be a top priority -- this will be a very popular attraction. The "Chris Beutler" connection trail should also get underway ASAP.

Connecting existing trails is important. It's tough to get north/south through the city. The only n/s is Rock Island. Needs to be improvements around 56th St. north/south.

T-43 and T-66 (plus a little T-44) would connect Billy Wolfe to Jamaica North and Mo Pac and create an entire circle around Lincoln! T-27 would be a dream-come-true nature trail.

Trail projects should be put on hold until street improvements are completed.

Heavily traveled cycling and hiking area of substantial future growth

Biking/walking is pretty dangerous in these areas

Way to much scrolling!!! Couldn't you do hot links from the map? Who designed this?

I bike a lot in central Lincoln, and it can be hard to get from one trail to another - I think these goals would help bikers trying to traverse the main part of the city.

Beltway

Emphasize core neighborhoods.

connect existing trails

I really appreciate trails that provide connectivity for the High School and College age students who bike. In general, I feel connectivity of existing trails is more important than building new. You can get more return on investment by providing connectivity of existing than building segmented new trails.

Safety and equity are important points. Cont improvements with Haines branch will encourage local economy.

I haven't been on any trail or bicycle paths that I feel need improved but it required me to make selections

I chose connectors so that we can maximize what we have and make it all connected. I love new trails tho! #yestoallthethings!

Focus on continuity of the existing trail network with in the city proper.

Fix the roads and bridges first and divert all trail and bike path money to our horrible roads.

Grade seperation is badly needed. Also needed is grade seperation across north leg of 27th and Hwy 2, I, personally, and my wife have both almost been hit multiple times at this intersection and crossing in particular

connectors

Making internal community trail connections should be a priority and will drive need and success for perimeter improvements.

Attachment B-7 – Phase 3 Open House Content

Lincoln MPO 2050 LRTP
Lincoln-Lancaster County 2050 Long Range Transportation Plan

VISION AND GOALS

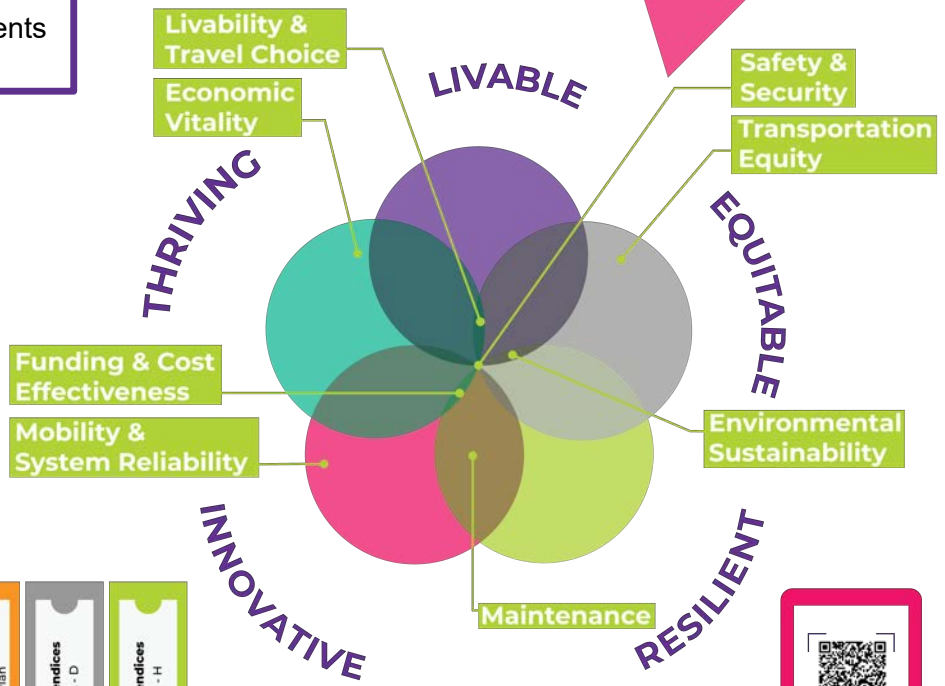
www.lrtplincolnmpo.com

The Lincoln and Lancaster County transportation network supports the movement of people, goods, and services within and through the area. It is essential for the growing community to properly maintain and expand the multimodal transportation network in a manner that supports existing residents and new growth envisioned by PlanForward.

The Lincoln Metropolitan Planning Organization (MPO) 2050 Long Range Transportation Plan (LRTP) provides the blueprint for the area's transportation planning process over the next 29 years. Updates are completed every five years as a collaborative effort among the City of Lincoln, Lancaster County, Nebraska Department of Transportation (NDOT), StarTran and other agencies. The LRTP meets all federal requirements and the goals of the LRTP integrate with PlanForward themes.



The transportation system will support a complete community and the essential needs of its members by pursuing eight goals. Transportation Equity is a new goal added to the 2050 LRTP.



ECONOMIC VITALITY
A transportation system that supports economic vitality for residents and businesses.

MAINTENANCE
A well-maintained transportation system.

ENVIRONMENTAL SUSTAINABILITY
A transportation system that enhances the natural, cultural, and built environment.

MOBILITY & SYSTEM RELIABILITY
An efficient, reliable, and well-connected transportation system that leverages innovation and technology for moving people and freight.

FUNDING & COST EFFECTIVENESS
Collaboration in funding transportation projects that maximizes user benefits.

LIVABILITY & TRAVEL CHOICE
A multi-modal system that provides travel options to support a more compact, livable urban environment.

TRANSPORTATION EQUITY
Transportation investments developed through an inclusive process that promotes equitable outcomes.

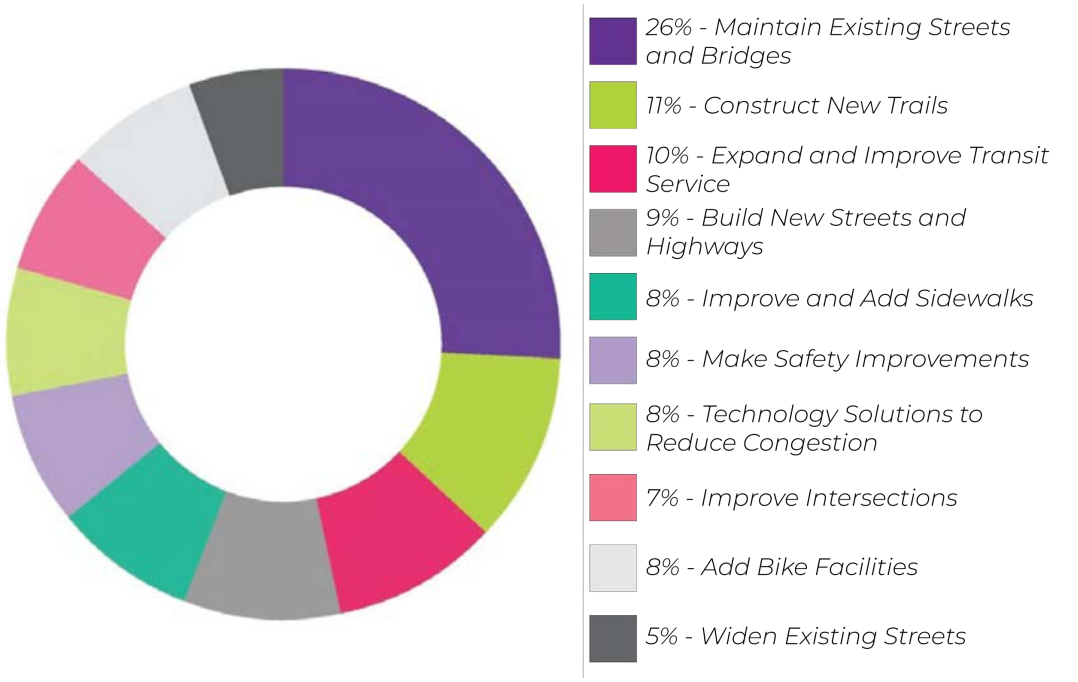
SAFETY & SECURITY
A safe and secure transportation system.

The Draft 2050 LRTP is available to review on-line as part of the Virtual Meeting.

Lincoln MPO 2050 LRTP
Lincoln-Lancaster County 2050 Long Range Transportation Plan

COMMUNITY INPUT

Community members were asked in a survey, *"If you had $100 to fund transportation improvements in Lincoln, how would you spend it?"* With a total of 203 responses, the top choice of the community was to ***maintain existing streets and bridges.*** The community's responses, however, reinforced the need for a balanced approach to funding transportation in Lincoln; many participants expressed that all categories are important.



Information gathered throughout the LRTP community engagement process revealed several recurring themes:

- ***Technology*** generates both excitement and some concern; it should improve travel efficiency but must also improve safety for all users, not just cars.
- As Lincoln experiences continued ***growth*** (both infill development and new development in the fringe areas), the transportation network needs to support evolving travel needs, including access to transportation options like biking, walking, and riding transit.
- Ongoing ***maintenance*** remains top priority for the public.
- ***Environmental*** awareness has emerged as a new key theme of the community, stemming from the Lincoln Climate Action Plan and the community's understanding of transportation's role in achieving sustainability goals.
- ***Equity*** is a desired focus for guiding transportation planning and decisions; access to transit system and safe streets that accommodate all modes is important for underserved and overburdened communities.
- Additional ***funding*** is needed to construct and maintain the multimodal transportation system.
- Desire for ***Complete Streets*** is an emerging theme to support more active transportation, specifically the on-street bike network and trail system.
- ***Travel patterns*** experienced a significant change during the COVID-19 pandemic; although these changes were not perceived to be permanent, some aspects are anticipated to continue, and planning for future travel demands should reflect these shifting behaviors.

Lincoln MPO 2050 LRTP
Lincoln-Lancaster County 2050 Long Range Transportation Plan

REVENUES AND COSTS

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Transportation revenues expected over the 29-year time horizon of the Long Range Transportation Plan (LRTP) are significant but will not be enough to cover the cost of the transportation needs in Lincoln and Lancaster County. Careful consideration of investment strategies is needed to maintain the transportation system and to make the system function as efficiently as possible, given these funding limitations. Various revenue sources will be used to fund transportation projects and programs, including federal, state, local, and private resources. The funding sources and amounts listed are expected to be used to implement the LRTP recommendations.

Funding Program	Revenue ($M) Forecast (2022-2050)
NDOT Highways Program (Federal and State)	$418.96
Rural Roads Program (30% of Surface Transportation Block Grant Program, Highway Safety Improvement Program, Highway Allocation Funds, Federal Fund Purchase Program, General Revenues, and Keno Funds)	$854.99
Urban Roads Program (70% of Surface Transportation Block Grant Program, Highway Safety Improvement Program, Coronavirus Response and Relief Supplemental Approapriations Act 2021, Highway Allocation Funds, Highway Allocation Bonds, Federal Fund Purchase Program, City Wheel Tax, Lincoln on the Move, Arterial Street Impact Fees, and General Revenues)	$2,280.11
Rail Crossing Program (Rail Hazard Elimination-STBG, State Train Mile Tax, and Railroad Transportation Safety District)	$239.10
Transit Program (Federal Transit Administration Funds: operations, capital enhanced mobility, and rural assistance as well as State Transit Funds, Fares, Advertising and UNL Contracts, and General Revenues)	$754.00
Trails, Bicycle, and Pedestrian Program (Transit Alternatives Set Aside, Lower Platte South Natural Resource District, Trail Impact Fees, Private Contributions, Keno Funds, and General Revenues)	$68.28

A significant proportion of transportation funding is considered committed and restricted for designated purposes.

THE COST OF TRANSPORTATION PROJECTS

While $4.6 billion over 29 years seems like a lot of money, transportation projects are expensive! The information provided explains the stereotypical costs for transportation improvements.



CONSTRUCTION COSTS

Construction costs are expected to increase annually. Based on historic and recent construction **cost inflation rates**, the LRTP accounts for a temporary rapid increase of **10% annual inflation in the first 5 years and 7% in the next 5 years.** Then the **inflation rate is assumed** to normalize at 5% annual **inflation in the remaining** years through 2050.

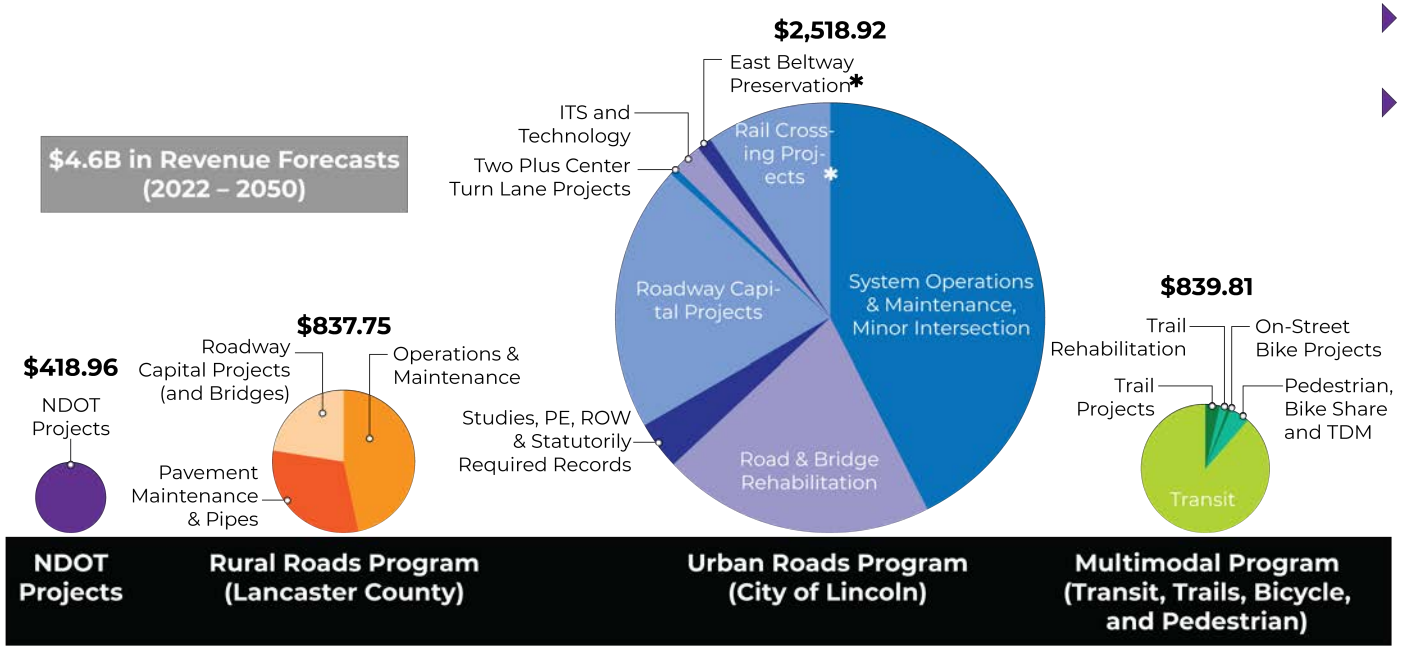
That means a project that costs $1 million today would cost $5.7 million in 2050!

Lincoln MPO 2050 LRTP
Lincoln-Lancaster County 2050 Long Range Transportation Plan

FISCALLY CONSTRAINED PLAN

www.lrtplincolnmpo.com

The process of developing the Long Range Transportation Plan (LRTP) ensures that the transportation revenues are allocated to address needs that best support the combination of transportation goals. Although available funding levels will limit the ability to address all needs identified in the LRTP, the funding strategy and recommended resource allocation will optimize available funds and enable a functional transportation system. The resource allocation is detailed in the Fiscally Constrained Plan, as documented in Chapter 7 of the LRTP. Projects on the adjacent displays are included based on their ranking and the total amount of available funding. Projects that exceed the amount of funding available are presented on the Illustrative Plan list. If additional funding becomes available, projects would be selected by rank on this plan of currently unfunded projects.



*Collaborative programs of Lincoln and Lancaster County

What if we had more funding?

Continuation of **1/4 cent** sales tax through 2050

- **$380 million** additional revenue
- Construct **30 additional** roadway capital projects OR
- Rehabilitate and **additional 210** lane miles of roadways OR
- Provide more adequate funding to address transit, pedestrians, or bicycle needs

Increase to **1/2 cent** sales tax through 2050

- **$760 million** additional revenue
- Construct **60 additional** roadway capital projects OR
- Rehabilitate and **additional 420** lane miles of roadways OR
- Provide more adequate funding to address transit, pedestrians, or bicycle needs

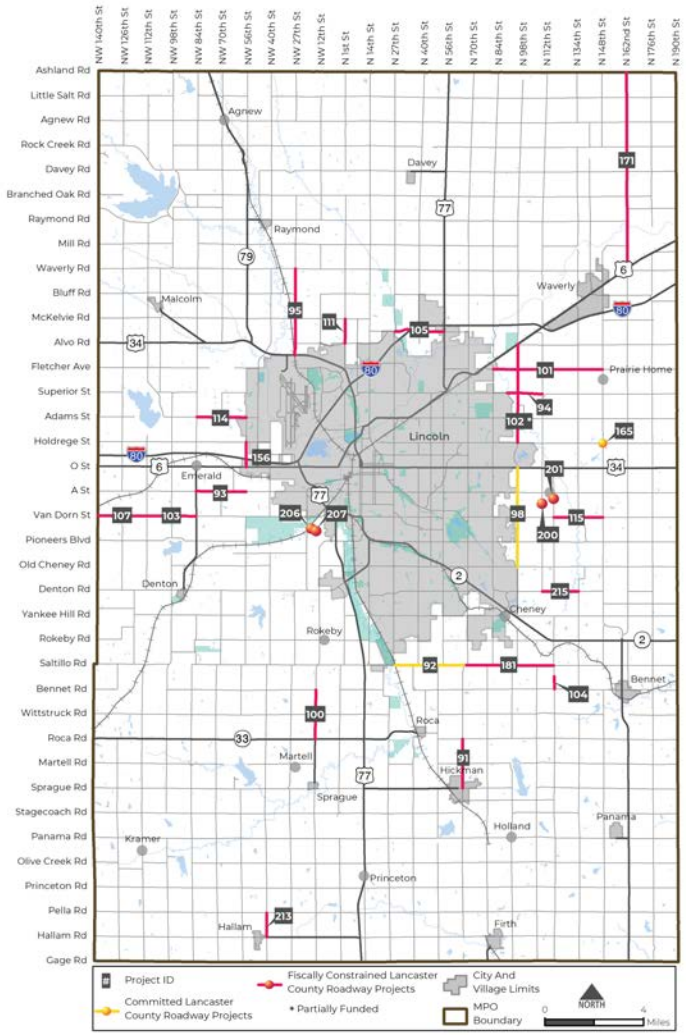
Transportation funding is spent efficiently when projects can be bundled. Bundling can include sidewalk improvements, adding bike lanes, and constructing sidepaths with roadway improvements. When available, other funding opportunities such as competetive grants may be pursued.

Transportation revenues expected over the next 29 years is significant but will not be enough to cover the cost of all transportation needs in Lincoln and Lancaster County. Approximately $4.6 billion must be organized to meet the many transportation project and program needs identified by the plan.

Lincoln MPO 2050 LRTP
Lincoln-Lancaster County 2050 Long Range Transportation Plan

LANCASTER COUNTY ROADWAY PROJECTS

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Rank	Project ID	Street Name	Limits	Description	Project Cost (2021$)
Committed	165	N 148th Street	Holdrege Street	Intersection improvements	$650,000
Committed	98	S 98th Street	Old Cheney Road to US-34	Programmed Paving	$2,600,000
Committed	92	Saltillo Road	S 27th Street to S 68th Street	Two Lane Widening	$7,500,000
1	104	S 120th Street	Bennet Road North 0.5 Miles	Potential Paving	$650,000
2	156	NW 56th Street	W O to W Holdrege Street	Potential Paving	$1,200,000
3	100	SW 14th Street	NE-33 to W Bennet Road	Programmed Paving	$1,300,000
4	103	W Van Dorn Street	SW 112th Street to SW 84th Street	Programmed Paving	$1,300,000
5	105	Arbor Road	N 27th Street to US-77	Paving and Bridge Replacement of Bridge F-201 near N 27th Street	$5,930,000
6	107	W Van Dorn Street	SW 140th Street to SW 112th Street	Potential Paving	$1,300,000
7	213	SW 42nd Street	W Hallam Road to W Pella Road	Potential Paving	$920,000
8	101	Fletcher Avenue	N 84th Street to N 148th Street	Programmed Paving	$5,000,000
9	95	NW 27th Street	Hwy-34 to W Waverly Road	Potential Paving	$4,550,000
10	93	W A Street	SW 84th Street to SW 52nd Street	Programmed Paving	$2,600,000
11	206	SW 16th Street	Bridge O-1 near W Calvert Street	Replace CB	$168,000
12	94	Havelock Avenue	Stevens Creek to N 112th Street	Potential Paving	$1,820,000
13	207	SW 15th Street	Bridge O-140 near W Stockwell Street	Replace CB	$168,000
14	201	S 120th Street	Bridge J-138 near A Street	Replace with CBC	$612,000
15	111	N 1st Street	Alvo Road to McKelvie Road	Potential Paving	$1,300,000
17	181	Saltillo Road	S 68th Street to S 120th Street	Two Lane Widening	$2,450,000
18	171	N 162nd Street	US-6 to Ashland Road	Potential Paving	$5,530,000
19	200	S 112th Street	Bridge J-135 near A Street	Replace with CBC	$612,000
20	114	W Adams Street	NW 84th Street to NW 56th Street	Potential Paving	$2,600,000
21	91	S 68th Street	Hickman to Roca Road	Two Lane Widening with Shoulders	$2,000,000
22	115	Van Dorn Street	S 120th Street to S 148th Street	Potential Paving	$2,600,000
23	215	Pine Lake Road	S 112th Street to S 134th Street	Grading and Pavement; bridge Q-110 near S 134th St	$3,188,000
24	102	N 98th Street	Holdrege Street to US-6	Potential Paving	$7,700,000

The LRTP identifies 95 capital projects in the county, with project costs totaling over $160 million in 2021 dollars. With approximately $188 million allocated to rural capital projects, 26 of these projects could be constructed when accounting for construction cost inflation over time.

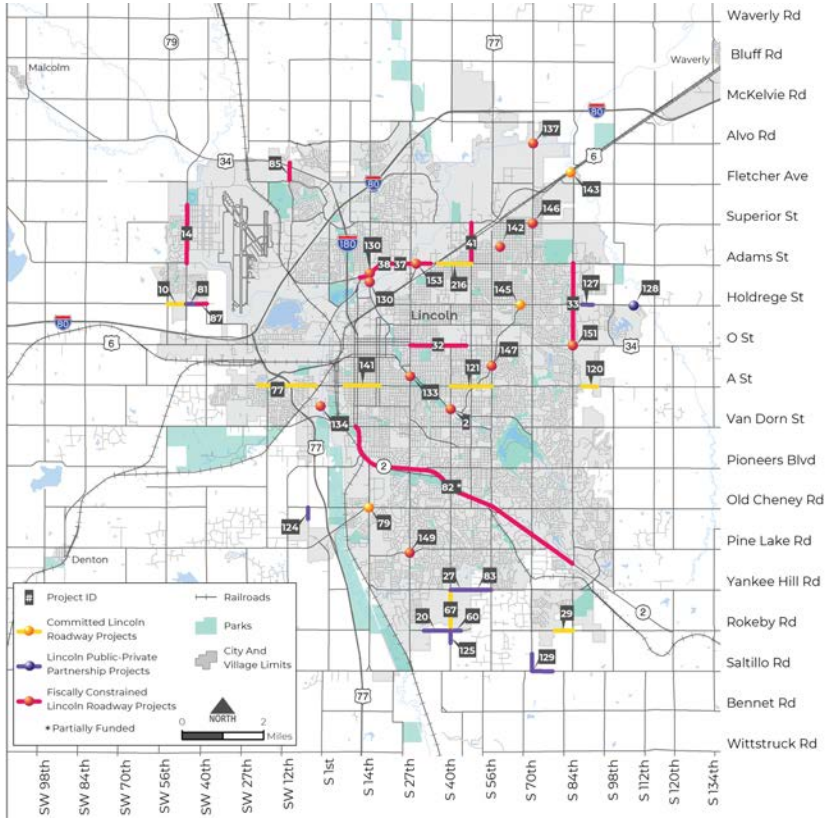
Explore the Fiscally Constrained project list of the LRTP

Lincoln MPO 2050 LRTP
Lincoln-Lancaster County 2050 Long Range Transportation Plan

CITY OF LINCOLN ROADWAY PROJECTS

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The LRTP identifies 105 capital roadway projects with project costs totaling over $1 billion in 2021 dollars. The $500 million allocation to roadway capital projects consists solely of committed funds; that is, no flexible funds are included due to the funding shortfall.



NDOT Highways Program

The Fiscally Constrained Plan includes two NDOT projects shown on the Virtual Meeting maps with committed funding:

- South Beltway (under construction) – Project ID 78 ($255 million)
- West Beltway (US 77) from I-80 to Saltillo Road – Project ID 76 ($38.2 million)

The $500 million would fund 41 projects when accounting for construction cost inflation. This includes 11 projects with committed funding that are anticipated to be constructed within the next four years, and 10 public-private partnership (PPP) projects, which are expected to be constructed during the LRTP planning horizon.

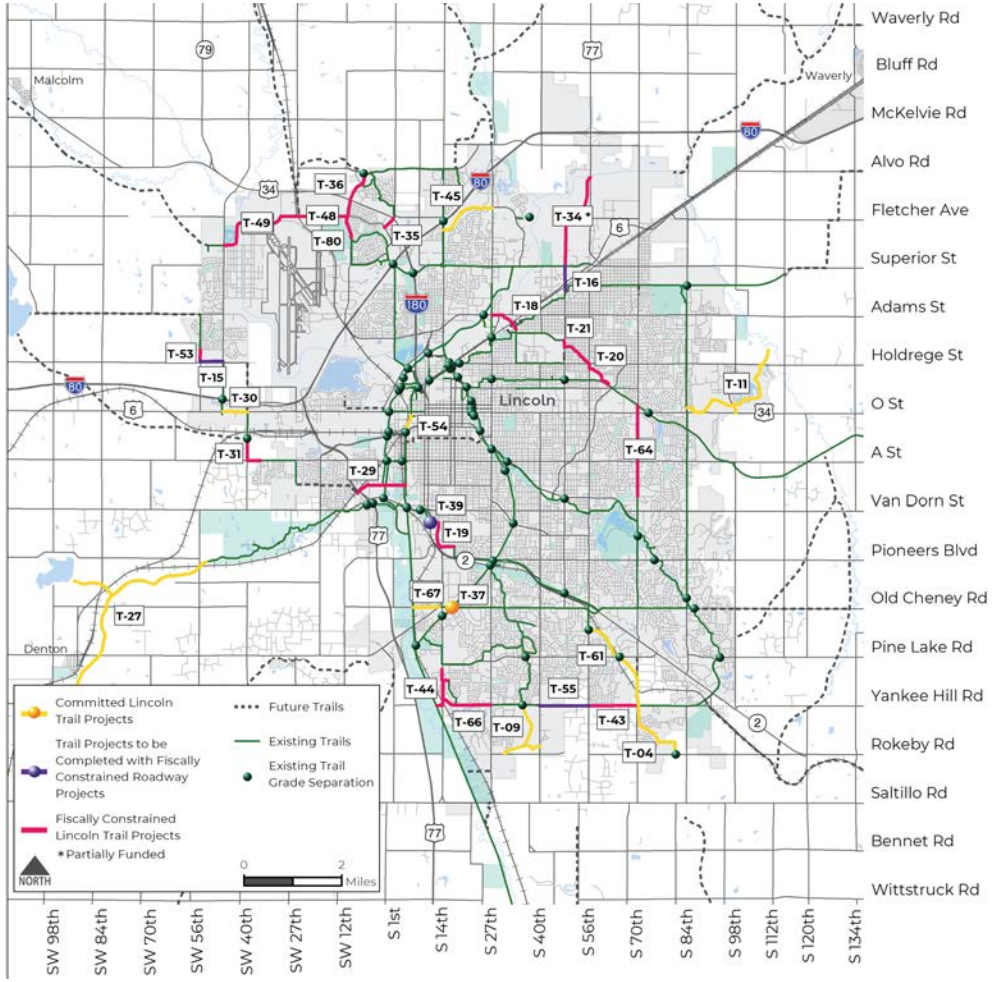
Explore the Fiscally Constrained project list of the LRTP

Rank	Project ID	Street Name	Limits	Description	Project Cost (2021)
Committed	121	A Street	S 40th Street to S 56th Street	Intersection improvements 40th, 48th and 50th/Cotner and widening of A Street from 40th to 48th for a center turn lane	$10,500,000
Committed	79	S 14th Street/ Warlick/Old Cheney	14th/Warlick/Old Cheney	Intersection improvements	$26,400,000
Committed	145	Cotner Boulevard	O Street to Starr Street	Intersection improvements at Starr and Holdrege, pavement repair, and mill and overlay	$6,671,000
Committed	141	A Street	S 6th Street to S 17th Street	Intersections improvements at 13th and 17th and widening from 6th to 17th for a center turn lane	$6,586,000
Committed	77	W A Street	SW 36th Street to SW 24th Street	2 lanes + intersection improvements	$14,000,000
Committed	67	S 40th Street	Yankee Hill Road to Rokeby Road	3 lane section with raised median and turn lanes as appropriate	$14,000,000
Committed	143	N 84th Street	Cornhusker Hwy (US-6)	Intersection improvements	$5,500,000
Committed	216	Adams Street	N 36th Street to N 48th Street	Widening for a center turn lane and pavement rehabilitation	$3,010,000
Committed	10	W Holdrege Street	NW 56th Street to NW 48th Street	2 lanes + intersection improvements	$4,700,000
Committed	29	Rokeby Road	S 77th Street to S 84th Street	2 lanes + intersection improvements	$3,500,000
Committed	120	A Street	S 89th Street to S 93rd Street	2 lanes with raised median, roundabouts at 89th St and 93rd St	$3,000,000
PPP	20	Rokeby Road	S 31st Street to S 40th Street	2 lanes + intersection improvements	$3,000,000
PPP	27	Yankee Hill Road	S 40th Street to S 48th Street	2 lanes + intersection improvements	$5,700,000
PPP	60	Rokeby Road	S 40th Street to Snapdragon Road	2 lanes + intersection improvements	$2,152,000
PPP	81	W Holdrege Street	NW 48th Street to Chitwood Lane (east ¼ mile)	2 lanes + intersection improvements	$2,000,000
PPP	83	Yankee Hill Road	S 48th Street to S 56th Street	2 lanes + intersection improvements	$2,200,000
PPP	124	S Folsom Street	W Old Cheney Road to ¼ mile south	Paving one lane in each direction with raised center medians; roundabout at the future Palm Canyon Road intersection and intersection improvements at W Old Cheney and S Folsom	$2,400,000
PPP	125	S 40th Street	Rokeby Road to 1/4 south	2 lanes with raised median and roundabout 1/4 mile south of Rokeby Rd	$3,400,000
PPP	127	Holdrege Street	87th Street to Cedar Cove	2 lanes with raised median	$2,300,000
PPP	128	Holdrege Street	N 104th Street	Roundabout	$1,600,000
PPP	129	Saltillo Road	S 70th Street to 1/2 mile east	Roadway and intersection improvements including on S 7th St from Saltillo Rd to Carger Ln	$7,095,000
1	130	N 14th Street	Cornhusker Hwy (and N Antelope Valley Pkwy and Oak Creek)	Bridge Replacements	$10,000,000
2	37	Cornhusker Hwy (US-6)	N 20th Street to N 33rd Street	Intersection Improvements per Corridor Enhancement Plan	$1,200,000
3	41	N 48th Street	Adams Street to Superior Street	4 lanes + intersection improvements	$14,100,000
4	38	Cornhusker Hwy (US-6)	N 11th Street to N 20th Street	Intersection Improvements per Corridor Enhancement Plan	$975,000
5	87	W Holdrege Street	Chitwood Lane to NW 40th Street	2 lanes + intersection improvements	$1,950,000
6	32	O Street (US-34)	Antelope Valley N/S Rdwy. (19th St.) to 46th Street	Intersection Improvements	$6,840,000
7	146	N 70th Street	Havelock Avenue	Remove existing traffic signal and construct roundabout	$2,000,000
8	153	Cornhusker Hwy (US-6)	State Fair Park Drive	Intersection Improvements: dual westbound left turn lanes	$760,000
9	151	O Street (US-34)	84th Street	Intersection Improvement: dual eastbound left-turn lanes and eastbound right-turn lane and widening to east; maybe northbound right-turn lane	$2,280,000
10	134	W South Street	Salt Creek	Bridge Replacement	$3,200,000
11	142	Fremont Street	Touzalin Avenue	Remove existing traffic signal and construct roundabout	$2,700,000
12	2	S 40th Street	Normal Blvd and South Street	Major intersection area work	$10,000,000
13	33	N 84th Street	O Street to Adams Street	Intersection Improvements	$15,200,000
14	149	S 27th Street	Pine Lake Road	Intersection Improvement: eastbound right-turn lane	$760,000
15	133	S 27th Street	SE Upper Salt Creek	Bridge Replacement	$4,500,000
16	14	NW 48th Street	Adams Street to Cuming Street	2 lanes + intersection improvements	$10,000,000
17	137	N 70th Street	Salt Creek	Bridge Replacement	$3,000,000
18	85	NW 12th Street	Fletcher Avenue to Aster Road with overpass of US-34	2 lanes + Overpass	$9,370,000
19	147	S 56th Street	Cotner Boulevard/ Randolph Street	Remove signal and evaluate roundabout or new signal	$2,750,000
20	82	Nebraska Hwy 2	S 84th Street to Van Dorn Street	Corridor Improvements (TBD by Corridor Study)	$50,000,000

Lincoln MPO 2050 LRTP
Lincoln-Lancaster County 2050 Long Range Transportation Plan

LINCOLN TRAILS PROJECTS

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Explore the Fiscally Constrained project list of the LRTP

Approximately $28 million in revenue is anticipated for Trail Projects through committed or restricted funding sources. Due to funding shortfalls, no flexible funds are allocated to Trail Projects. The LRTP identifies 64 Trail Projects with costs totaling $59 million. The $28 million allocation would fund 31 projects (including 10 Trail Projects with committed funding in the TIP or Capital Improvement Program or other agreements) when accounting for construction cost inflation. Thirty-three projects would remain unfunded.

Project ID	Trail Name	Limits	Description	Project Cost (2021$)
Funded/Committed Trail Projects				
T-45	Landmark Fletcher	Fletcher Ave from N 27th St to N 14th St	Sidepath	$990,000
T-61	Beal Slough Trail	S 56th St and London Rd to S 70th St and Yankee Hill	New Trail	$1,480,000
T-54	Chris Buetler Trail - Jamaica North Connector	J Street to N Street	New Trail	$250,000
T-04	Woodlands	Rokeby Rd to S 70th St to Yankee Hill Rd	New Trail	$950,000
T-09	Wilderness Hills	Yankee Hill Rd to Rokeby Rd and S 40th St	New Trail	$1,200,000
T-11	Waterford	N 84th St to Stevens Creek	New Trail	$900,000
T-30	W. O Street	SW 40th St to SW 48th St	Sidepath	$260,000
T-27	Greenway Corridor Trail/Haines Branch	Pioneers Park Nature Center to Spring Creek Prairie Audubon Center	New Trail	$4,500,000
T-37	Rock Island	Old Cheney grade separated crossing	Grade Separation	$1,200,000
T-67	Old Cheney Rd	Warlick Blvd to Jamaica North	Sidepath	$250,000
Trail Projects to be Completed with Fiscally Constrained Roadway Projects				
T-16	N 48th Street Trail	Murdock Trail to Superior St	Sidepath	$200,000
T-55	Yankee Hill Road	S 40th St to S 56th St	Sidepath	$350,000
T-15	W Holdrege Street Trail	NW 48th St to NW 56th St	Sidepath	$250,000
T-39	10th Street Trail	Hwy 2 intersection improvements	Crossing Improvements	$2,200,000
Priority Trail Projects				
T-19	Boosalis - Bison Connector	Van Dorn St to S 17th St/Burnam St	Sidepath	$300,000
T-44	S 14th Street & Yankee Hill Connector (w/RTSD project)	South LPS Property Line to Yankee Hill	Sidepath	$400,000
T-21	East Campus Trail	Leighton St to Holdrege St	New Trail	$150,000
T-31	W A Street Connector	A Street from SW 36th to SW 40th; SW 40th from A St to F St	Sidepath	$120,000
T-48	Air Park Connector - Phase I	NW 13th St to NW 27th St	Sidepath	$600,000
T-29	South Street	Folsom St to Jamaica Trail	Sidepath	$750,000
T-20	Deadmans Run Trail	N 48th St to Mo Pac Trail	New Trail	$550,000
T-66	Yankee Hill Road	S 14th St to S 27th St	Sidepath	$350,000
T-43	Yankee Hill Rd	S 56th St to S 70th St	Sidepath	$350,000
T-64	S 70th Street Connector	Old Post Rd to MoPac Trail	Sidepath	$700,000
T-53	NW 56th Street Trail	W Holdrege to W Partridge	Sidepath	$100,000
T-18	Deadmans Run Trail	Murdock Trail to Cornhusker Hwy and Railroad grade separation	New Trail and Grade Separation	$300,000
T-80	NW 12th Street	NW 10th St to W Fletcher Ave	Sidepath	$200,000
T-35	N 1st Street	N 1st St crossing of Hwy 34	Sidepath	$400,000
T-49	Air Park Connector - Phase II	NW 27th St to NW 48th St	Sidepath	$900,000
T-36	NW 12th Street	W Fletcher Ave to Aster St with US 34 grade separated crossing	Sidepath; Grade Separation	$400,000
T-34	N 48th Street/Bike Park Trail	Superior St to N 56th St	New Trail; Sidepath	$900,000

The Lincoln-Lancaster County 2050 Comprehensive Plan is a roadmap to **"plan forward",** not only in time, but in concept, to envision a community that is:



Lancaster County's population is assumed to reach nearly 440,000 persons by the year 2050 — that's over 117,000 more people than the County's year 2020 population base of 322,608 persons, with 107,000 of those new residents in Lincoln.





Continued investment within the city ensures that our existing neighborhoods and commercial areas remain vibrant and desirable locations.



A complete neighborhood is one where residents can get the goods and services to meet daily needs within 15 minutes of their residence including a variety of housing options, grocery stores and other commercial services, quality public schools, public open spaces and recreational facilities, affordable active transportation options, and civic amenities.

PlanForward commits Lincoln and Lancaster County to a sustainable growth framework that will conserve and efficiently utilize our economic, social, and environmental resources so that the welfare of future generations is not compromised.





Complete Neighborhoods action step: **"Retain and encourage a mix of housing in existing and new neighborhoods in order to provide a mix of housing types at a variety of price points."**



Parks and Recreation action step: **“Identify opportunities to acquire and develop Neighborhood Parks in established neighborhoods that are deficient in Neighborhood Park resources, particularly in those neighborhoods where indicators of vulnerability are higher.”**



In the Public Visioning Survey, **“Safe streets for all”** was selected as the most important element to creating an ideal neighborhood.

In the Public Visioning Survey, **“Good jobs / job opportunities”** was selected as the element that most-positively contributes to quality of life in a community.




Public survey comment: “Preservation of agriculture is a critical item for 2050.”

Public survey comment: ***"In 2050 I would like to see affordable housing for all ages with transit and no need for a car."***





Transportation and Economic Health action step:
"Expand operational alternatives that create public/private partnerships with large companies to increase employee transit ridership."



Transportation Equity action step: **“Expand and maintain infrastructure for all modes of transportation serving overburdened and underserved populations.”**



Focus Group participant quote:
"Economic vitality is critical to funding for roads so strategies that insure we have appropriate transportation access to businesses is critical."

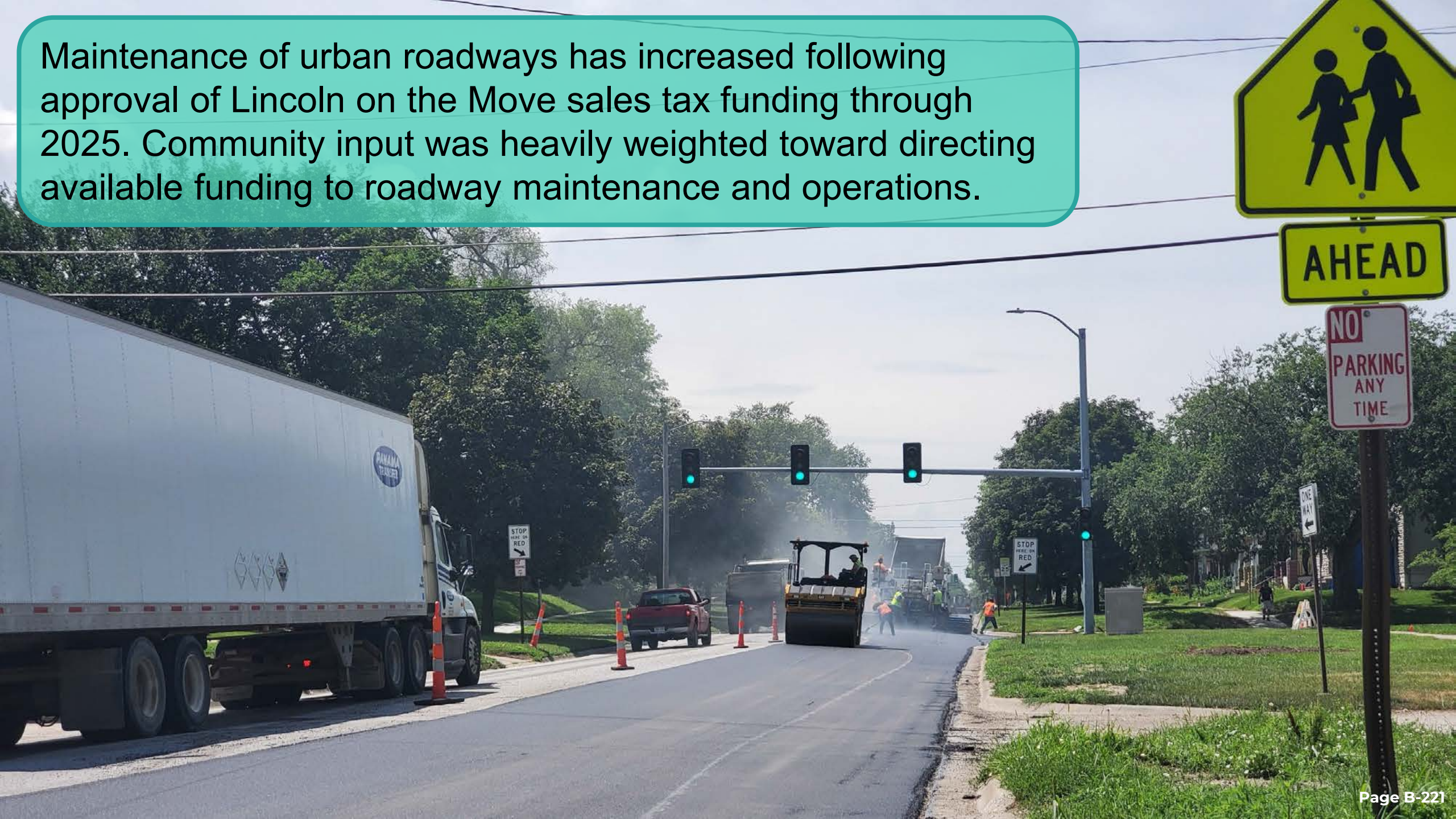


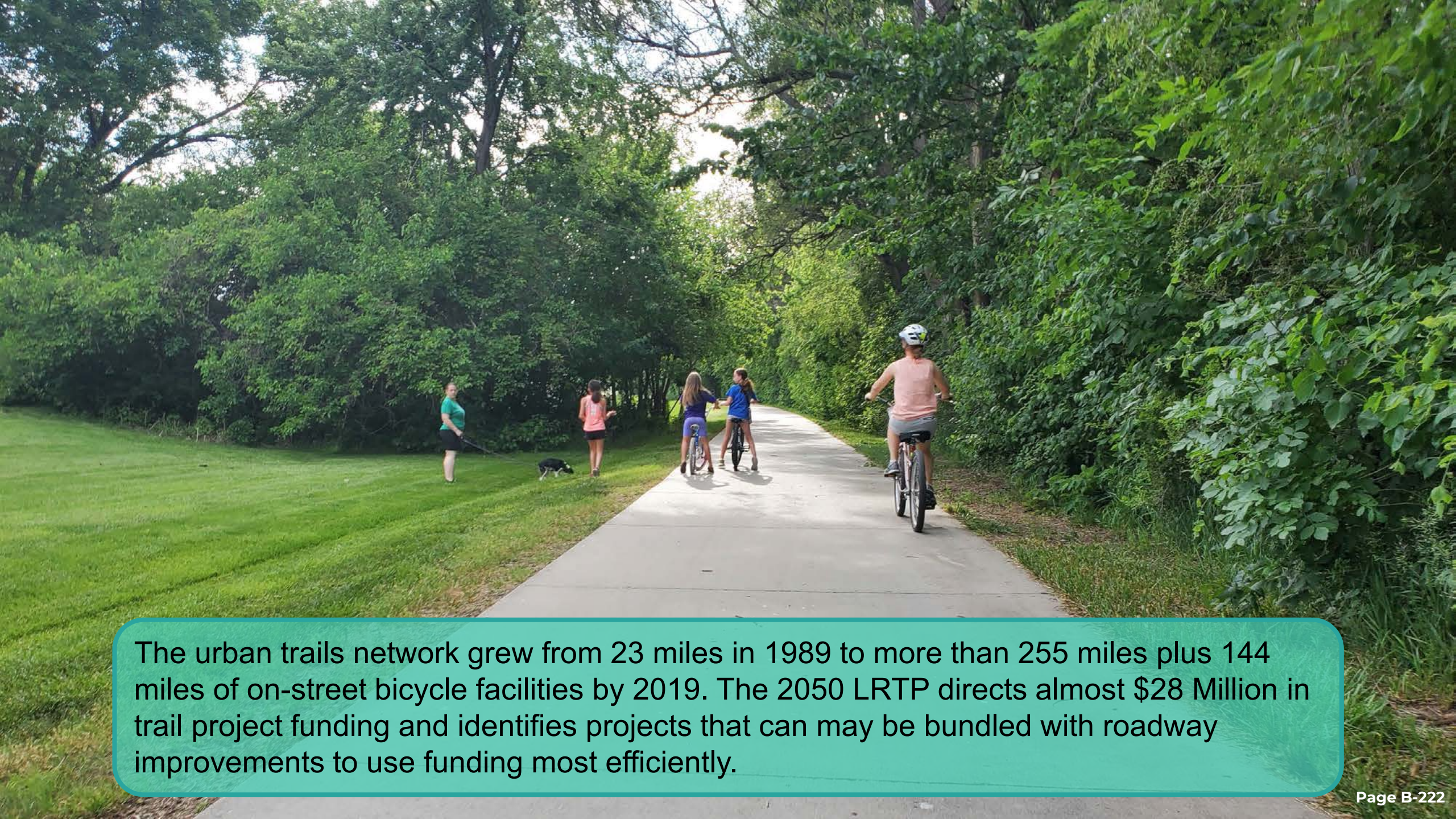
The 2050 LRTP identifies $500 Million for Urban Roadway, $188 Million for County Roadway, and $293 Million for NDOT Highway projects. Project needs exceed the forecasted available funding and flexible funding is directed to meet the communities desire to address roadway maintenance and operations.

Transportation Safety Policy: “Strive to reduce transportation-related deaths and injuries, especially for vulnerable users (pedestrians, bicyclists, motorcycle users, the elderly, youth, and individuals with disabilities).”



Maintenance of urban roadways has increased following approval of Lincoln on the Move sales tax funding through 2025. Community input was heavily weighted toward directing available funding to roadway maintenance and operations.





The urban trails network grew from 23 miles in 1989 to more than 255 miles plus 144 miles of on-street bicycle facilities by 2019. The 2050 LRTP directs almost $28 Million in trail project funding and identifies projects that can may be bundled with roadway improvements to use funding most efficiently.



Complete Streets action step: **“Enhance neighborhoods by adding safe and accessible connections to transit, multiuse trails, sidewalks and bicycle facilities.”**



Lincoln has two shared micromobility programs that provide low-cost transportation alternatives compared to personal vehicle ownership and use. Shared mobility is also being used with StarTran's on-demand service, VanLNK, as well as with private ride hailing service providers to help diversify the transportation options available for the community.


Focus Group participant quote: *“I would like to see a little more consideration up front regarding construction and design to increase life span of structures.”*



APPENDIX C
Land Use Forecasts

Notes – Land Use by TAZ for 2035 and 2050

2035

Residential

- TAZ area currently has 95.4% county households. That percentage is applied to the 2035 projection:
  - 156,955 * 95.4% = 149,735
  - 182,845 * 95.4% = 174,434
- The total residential number includes existing, vacant, remaining, potential, and infill units.
- Existing
  - Assume 100% of these remain.
  - 130,047 units. Reduce by 5.5% to account for vacant units = 122,634 households.
- Vacant
  - Platted residential lots that are currently vacant. A majority of these are new final plats in developing areas.
  - Assume 100% of these are built out.
  - 3,161 units.
- Remaining
  - Approved lots (CUPs, PUDs, etc) that aren't yet platted.
  - Assume 90% build out for closest tracts, 40-50% for intermediate tracts, and 20% for farthest tracts.
  - 12,982 units with build out factor applied.
- Potential
  - Land shown as residential on FLU with no approvals.
  - Assume 4 du's/acre.
  - Assume 0% of these are built out.
- Infill
  - Adding roughly 27,000 total households, assume 25% infill = 6,800 infill units.
  - Assume all infill is MF.
  - Infill units added at the major redevelopment nodes from LPlan 2040, plus some additional obvious areas (like 33rd & Superior).
  - 2,000 units added downtown. Roughly 1,300 units were built there over past 10 years.
  - 500 units added to Gateway.

Commercial

- Existing sq ft 62,827,240; existing county population 320,670 = 195.9 commercial sq ft per county resident.
- 379,781 county residents in 2035 = 74,408,557 commercial sq ft, including light industrial.
- The total commercial number includes existing, vacant, remaining, and potential units.
- Existing
  - Slightly reduce existing retail to 95% build out across all tracts.
  - Slightly reduce existing office to 95% build out across all tracts.
  - Keep service at 100% existing.
  - Keep "other" commercial at 100% existing.
  - Keep Light Industrial at 100% existing.

- Vacant
  - Vacant commercially-zoned land with no other approvals, with a factor of 20,000 sq ft per acre applied (this is an existing DATS assumption).
  - Existing ratio of commercial types. These ratios are applied to the assumptions for vacant land.

        - Retail: 22%
        - Office: 27%
        - Service: 21%
        - Other: 4%
        - Light Industrial: 26%
    - Assume 20% build out for all commercial types, including Light Industrial.
- Remaining
    - Approved in plans (PUDs, UPs, etc) but not yet platted or built.
    - Assume a 20% build out factor for all commercial types.
    - Assume 26% of "commercial unspecified" in approved plans is Light Industrial.
- Potential
    - Shown as commercial on FLU with no approved plans.
    - Used existing ratio to determine commercial types.
    - Assume a 20% build out factor for all commercial types.

Industrial

- Existing land use of 3,347 acres, 320,670 county population = 0.0104 industrial acres per county resident.
- 379,781 county residents in 2035 = 3,964 industrial acres
- Existing
    - Assume all existing acres remain.
- Potential
    - For each tract, take FLU acres – ELU acres to get "potential" acres.
        - There are 8,109 undeveloped FLU industrial acres.
    - Applied a 10% build out to the potential acres.
    - 3,970 acres with build out factor applied.

Schools

- Increased all schools by 5%.
- Add six elementary schools with 550 students each.
- Added two middle school with 800 students each, one in south, one in east.
- Added the two high schools currently in development with 2,200 students each.
- University
    - Increased UNL by 7.50%.
    - Applied the same growth percentage for Nebraska Wesleyan University and Union College.
    - Increased BryanLGH College of Health Sciences to 700 students.

Parks

- Added a 10-acre park to each tract identified for development.

2050

Residential

- TAZ area currently has 95.4% county households. That percentage is applied to the 2050 projection:
    - 182,845 * 95.4% = 174,434
- Existing, Vacant, Remaining
    - Assume 100% build out.
    - 146,748 units.

Notes – Land Use by TAZ for 2035 and 2050

- Potential
    - Assume 4 du's/acre.
    - Use existing ratios to determine housing type:
        - SFD: 40%
        - SFA: 10%
        - DUP: 5%
        - MF: 45%
    - Assume 55% build out based on current FLU.
    - Add 100 units to each tract in our new growth areas
    - Total potential of 15,975.
- Infill
    - Adding roughly 25,000 total residential units, assuming 25% infill = 6,000 infill units (12,800 total over 30 years).
    - Assume all infill is MF.
    - Infill numbers increased for the same tracts as 2035.
    - Also added additional units across all "core" tracts (TAZs #1-75)
        - 5 SFD, 4 SFA, 10 MF

Commercial

- Using same ratio of 195.9 commercial sq ft per county resident.
    - 439,258 county residents in 2050 = 86,061,583 commercial sq ft, including light industrial.
- Existing
    - Same numbers as 2035
- Vacant
    - Assume 35% build out for all commercial types.
- Remaining
    - Approved in plans (PUDs, UPs, etc) but not yet platted or built.
    - Assume a 35% build out factor for all commercial types.
    - Assume 26% of "commercial unspecified" is Light Industrial.
- Potential
    - Assume a 45% build out factor for all commercial types based on existing FLU.
    - Commercial: Added 75,000 sq ft to new tracts shown in growth areas (327,340). The square footage was distributed across commercial uses based on the existing ratios.
    - Light Industrial: Added 75,000 sq ft to new tracts shown in growth areas (223,436,448,461,462).

Industrial

- Using the same ratio of 0.0104 industrial acres per county resident.
    - 439,258 county residents in 2050 = 4,585 industrial acres
- Existing
    - Assume all existing acres remain.
- Potential
    - Applied a 15% build out to potential acres.
    - Added 200 acres in southwest growth area to match our proposed FLU.
    - 4,586 acres with build out factor applied.

Schools

- Increased all schools by 5%.
- Add six additional elementary schools with 550 students each.

Notes – Land Use by TAZ for 2035 and 2050

- Added two additional middle schools with 800 students each.
- Added two additional high schools. Southwest, East.
- University
    - Increased UNL by 15%. This growth is consistent with the enrollment growth indicated in UNL strategic plan (N2025 Strategic Plan).
    - Applied the same growth percentage for Nebraska Wesleyan University and Union College.
    - Increased BryanLGH College of Health Sciences to 1,000 students.

Parks

- Added a 10 acre park to each tract identified for development.

Base Year Land Use by TAZ

	Single Family Residential				Single Family Residential	Multi-family Residential	Total Residential		Industrial		Students					Commercial				
TAZ	SUM_ESFD	SUM_ESFA	SUM_EDup	SUM_EMob	SingleFamily	Multi Family	Total Residential	SUM_ParkAcres	SUM_IndAcres	Light Industrial	Elementary	Secondary	CommCollege	University	TotalStudents	Retail	Office	Service	Other Comm	TotalCommercial
1	0	0	0	0	0	0	0	0	55	258890	0	0	0	0	0	4824	35654	8634	0	49112
2	266	2	0	0	267	0	267	2	154	108701	271	0	0	0	271	1675	52154	32106	0	85935
3	205	5	4	0	214	13	227	0	0	0	0	0	0	0	0	0	0	0	0	0
4	404	0	70	0	473	76	549	13	6	0	0	0	0	0	0	48291	1988	24713	0	74992
5	281	0	53	17	351	216	567	2	55	759282	98	42	0	0	140	171553	94359	81995	0	347907
6	465	0	42	0	507	234	741	8	7	0	0	0	0	0	0	4291	39993	59260	11458	115002
7	602	15	8	0	625	55	679	0	0	0	463	0	0	0	463	12176	10487	2072	0	24735
8	522	0	64	0	586	51	637	0	0	0	0	1758	0	0	1758	7921	58286	1596	0	67803
9	151	0	98	0	249	605	854	0	1	0	0	0	0	2107	2107	71874	143259	23024	384784	622941
10	565	0	60	0	626	240	866	0	0	0	0	473	0	0	473	3805	7648	0	0	11453
11	265	0	15	0	280	35	315	1	29	265235	0	0	0	0	0	0	0	56700	0	56700
12	213	0	11	0	224	351	575	8	21	64378	0	0	0	0	0	3800	19700	64691	0	88191
13	166	28	49	0	244	13	257	6	14	0	0	0	0	0	0	0	16104	23552	18589	58245
14	315	4	68	0	387	100	487	31	9	0	0	0	0	0	0	6050	2275	8297	0	16622
15	383	26	144	0	552	139	691	1	2	0	477	0	0	0	477	42069	25465	3516	45947	116997
16	218	0	79	0	298	98	396	0	4	0	0	0	0	0	0	31729	9122	20193	0	61044
17	58	0	30	0	88	37	125	0	22	29729	0	0	0	0	0	0	81594	31071	0	112665
18	183	0	11	0	195	146	340	0	2	0	0	0	0	0	0	6731	7768	19295	0	33794
19	142	9	30	0	181	178	359	16	6	51074	0	0	0	0	0	6076	5262	552	0	11890
20	0	0	0	0	0	97	97	0	12	0	0	0	0	0	0	21346	293065	78987	0	393398
21	0	0	0	0	0	164	164	0	0	0	0	0	0	0	0	128344	264733	99758	0	492835
22	0	0	0	0	0	0	0	0	0	0	0	0	0	2442	2971	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	7593	2974	0	0	17620	0	17620
24	0	0	0	0	0	0	0	0	0	0	0	0	0	5215	5942	0	5365	0	0	5365
25	0	0	0	0	0	117	117	0	0	0	0	0	0	5797	5942	0	0	0	0	0
26	24	34	2	0	60	149	209	15	0	0	0	0	0	0	2971	3460	151881	15273	0	170614
27	48	0	19	0	67	290	357	0	0	0	0	0	0	0	0	34689	0	0	145987	180676
28	116	12	36	0	164	383	547	0	0	0	0	0	0	0	0	40757	19112	2855	0	62724
29	243	0	87	0	330	55	385	0	0	0	0	0	0	0	0	36380	0	22149	0	58529
30	266	2	60	0	329	29	358	10	0	0	506	48	0	0	554	1907	9701	0	7312	18920
31	270	0	127	0	397	264	661	0	0	0	0	0	0	0	0	31454	82090	24923	0	138467
32	1	0	0	0	1	0	1	0	0	0	0	0	0	4341	5200	0	61716	0	41172	102888
33	408	0	42	0	450	158	608	0	4	0	0	0	0	0	0	3368	1800	2810	17369	25347
34	304	2	34	0	340	233	574	2	0	0	0	0	0	0	0	41824	100098	45892	0	187814
35	1	0	0	0	1	431	432	0	0	0	0	0	0	0	0	435276	113719	105347	0	654342
36	205	10	2	0	217	624	841	0	0	0	0	666	0	0	666	427034	221617	150968	0	799619
37	198	11	2	0	211	879	1,090	0	0	0	105	335	0	0	440	65836	21797	16994	85541	190168
38	472	13	6	50	541	33	574	0	1	0	323	0	0	0	323	67444	15649	36095	0	119188
39	360	0	13	0	373	164	538	26	0	0	0	0	0	0	0	18756	21641	2432	0	42829
40	702	8	6	0	715	62	778	0	1	0	337	0	0	0	337	54490	25216	6872	0	86578
41	411	28	0	0	439	136	576	253	0	0	0	0	0	0	0	4479	0	10295	0	14774
42	673	26	17	0	716	119	835	10	0	0	570	700	0	0	1270	9281	19140	21678	0	50099
43	770	1	59	0	830	200	1,030	0	0	0	0	0	0	0	0	0	17280	6540	6171	29991
44	341	13	0	0	354	147	502	8	0	0	35	0	0	0	35	110798	24310	94570	6207	235885
45	411	43	0	0	455	0	455	0	0	0	265	82	0	0	347	0	33124	1512	39978	74614
46	498	0	6	0	504	198	701	9	0	0	0	0	0	0	0	23865	17123	20955	0	61943
47	5	0	0	0	5	0	5	0	2	33450	0	0	0	0	0	331417	251936	111756	0	695109
48	208	91	43	0	342	438	781	0	0	0	0	0	0	0	0	7536	42646	88417	0	138599
49	392	11	0	0	404	0	404	15	0	0	0	0	0	0	0	4029	28381	4118	0	36528
50	322	177	2	0	501	0	501	25	0	0	0	0	0	0	0	54570	54127	25253	0	133950
51	329	0	0	0	329	5	334	0	0	0	0	1111	0	0	1111	0	32892	0	104384	137276
52	255	0	0	0	255	0	255	0	0	0	312	0	0	0	312	60266	97730	21903	0	179899
53	227	0	6	0	232	0	232	9	0	0	0	591	0	0	591	54913	8787	2301	0	66001
54	494	3	11	0	508	4	512	3	0	0	0	0	0	0	0	130783	34263	10767	0	175813
55	426	11	87	0	524	27	552	0	0	0	0	0	0	0	0	5614	109622	76208	0	191444
56	406	0	151	0	558	44	602	0	0	0	0	0	0	0	0	78860	46710	6345	0	131915
57	280	0	21	0	301	4	304	0	1	0	401	0	0	569	970	11528	30013	410257	39112	490910
58	302	4	4	0	310	15	325	5	0	0	0	0	0	0	0	11506	30629	232693	0	274828
59	570	38	19	0	627	251	878	1	0	0	100	0	0	0	100	13719	101661	11134	16334	142848
60	334	8	19	0	360	17	377	23	0	0	0	0	0	0	0	17740	126623	11117	0	155480
61	590	0	155	0	745	0	745	0	0	0	501	0	0	0	501	26319	10928	0	0	37247
62	406	11	119	0	537	21	558	0	0	0	193	102	0	0	295	15712	40184	4172	21768	81836
63	324	0	112	0	436	161	596	47	0	0	0	0	0	0	0	71531	82619	0	0	154150
64	411	0	147	0	558	57	615	16	6	34957	0	0	0	0	0	61058	0	22446	0	83504
65	34	0	2	0	36	141	177	0	0	12414	0	2304	0	0	2304	0	0	0	0	0
66	221	0	70	0	291	430	721	31	0	0	0	0	0	0	0	2008	11111	3646	0	16765
67	80	0	49	0	129	382	511	0	0	0	0	0	0	0	0	0	27607	0	0	27607
68	69	4	34	0	107	1,298	1,405	0	0	0	0	0	593	0	593	8007	44858	23090	23495	99450
69	3	0	0	0	3	238	241	0	10	61632	0	0	0	0	0	10828	58363	13961	0	83152
70	106	0	57	0	163	384	546	24	4	0	393	0	0	0	393	18581	39324	8340	0	66245
71	21	17	6	0	43	80	124	2	2	0	0	0	0	0	0	65589	44023	76176	0	185788
72	1	0	2	0	3	200	203	4	2	0	0	0	0	0	0	28014	85039	32855	0	145908
73	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	16326	62173	0	0	78499
74	0	0	0	0	0	189	189	1	0	0	0	0	0	0	0	150731	226912	34942	0	412585
75	0	0	0	0	0	0	0	0	2	82615	0	0	0	0	0	0	86807	122391	0	209198
76	0	0	0	0	0	348	348	0	0	0	0	0	0	0	0	13135	256165	101349	0	370649
77	0	0	0	0	0	38	38	0	1	0	0	0	0	0	0	0	667050	92505	57129	816684
78	0	0	0	0	0	148	148	0	0	0	0	0	0	0	0	33542	186776	36929	39180	296427
79	0	0	0	0	0	25	25	0	0	0	0	0	0	0	0	1606	226281	9902	0	237789
80	0	0	0	0	0	22	22	1	0	0	0	0	0	0	0	9694	71677	50161	0	131532
81	0	0	0	0	0	65	65	1	0	0	123	42	0	0	165	2024	338283	34958	6480	381745
82	0	0	0	0	0	9	9	0	1	0	0	0	0	0	0	21314	22066	0	0	43380
83	4	0	2	0	6	355	361	0	0	0	0	0	0	0	0	9536	672023	0	0	681559
84	1	0	0	0	1	306	307	0	0	0	0	0	0	0	0	0	117632	0	0	117632
85	77	0	100	0	177	1,228	1,404	1	0	0	303	0	0	0	303	12071	65011	0	0	77082
86	114	0	76	0	190	1,018	1,208	1	0	0	444	0	0	0	444	30832	7832	33938	0	72602
87	218	2	26	0	247	58	304	12	6	0	0	854	0	0	854	4350	15455	0	0	19805
88	13	0	0	0	13	70	83	0	4	246179	0	0	0	0	0	1250	147079	0	0	148329
89	0	0	0	0	0	454	454	0	9	246878	0	0	0	0	0	13023	132260	29210	0	174493
90	62	0	0	0	62	0	62	0	36	320776	0	0	0	0	0	0	10949	0	0	10949
91	296	0	79	0	375	1	376	1	1	0	0	0	0	0	0	474	6433	770	0	7677
92	23	0	11	0	34	0	34	29	61	11842	0	0	0	0	0	0	12000	84339	0	96339
93	2	0	0	0	2	0	2	58	6	0	0	0	0	0	0	0	76198	146354	0	222552
94	464	0	134	0	598	318	917	0	6	0	0	0	0	0	0	34905	138676	7560	0	181141
95	361	0	34	0	395	97	492	1	10	0	265	0	0	0	265	10437	44584	0	0	55021
96	481	0	66	0	547	23	570	16	0	0	143	902	0	0	1045	10000	21049	0	15680	46729
97	348	0	229	0	576	529	1,106	1	0	0	535	0	0	0	535	53763	47463	0	0	101226

Base Year Land Use by TAZ

	Single Family Residential				Single Family Residential	Multi-family Residential	Total Residential		Industrial		Students					Commercial				
TAZ	SUM_ESFD	SUM_ESFA	SUM_EDup	SUM_EMob	SingleFamily	Multi Family	Total Residential	SUM_ParkAcres	SUM_IndAcres	Light Industrial	Elementary	Secondary	CommCollege	University	TotalStudents	Retail	Office	Service	Other Comm	TotalCommercial
98	632	0	172	0	804	184	988	21	0	0	0	0	0	0	0	28261	20822	4574	0	53657
99	578	0	11	0	590	29	619	16	0	0	458	0	0	0	458	50978	50326	2079	0	103383
100	575	0	9	0	584	4	588	8	0	0	0	0	0	0	0	2146	21194	29999	0	53339
101	75	0	0	0	75	0	75	43	0	0	0	0	0	0	0	0	0	0	0	0
102	541	0	40	0	581	0	581	0	0	0	0	0	0	0	0	0	3583	0	0	3583
103	282	11	59	0	352	0	352	2	0	0	234	2163	0	0	2397	0	50492	0	35177	85669
104	609	2	57	0	667	30	697	8	0	0	4	0	0	0	4	35028	20930	58812	0	114770
105	360	60	13	0	434	198	632	11	0	0	111	118	0	0	229	22084	18191	8960	59544	108779
106	225	2	43	0	270	369	640	7	1	0	370	0	0	0	370	100702	11223	34322	0	146247
107	425	0	38	0	463	91	554	19	0	0	0	762	0	0	762	74590	20439	0	0	95029
108	713	44	21	0	778	0	778	22	0	0	622	0	0	0	622	125107	64241	3546	0	192894
109	523	45	34	0	602	280	882	0	0	0	0	0	0	0	0	160913	18854	15451	0	195218
110	401	0	6	0	406	20	426	0	0	0	392	6	0	0	398	0	25647	0	4011	29658
111	1	0	0	0	1	173	174	0	10	0	0	0	0	0	0	82764	152998	68524	0	304286
112	722	6	98	0	826	48	874	28	0	0	0	0	0	0	0	14653	16210	21111	0	51974
113	4	0	0	168	172	0	172	0	98	201154	0	0	0	0	0	332602	18746	212094	0	563442
114	141	55	17	65	278	236	514	0	47	111095	0	0	0	0	0	39826	27838	299007	0	366671
115	0	0	0	0	0	0	0	68	105	685382	0	0	0	0	0	10122	50329	168666	0	229117
116	0	0	0	0	0	612	612	0	13	110724	0	0	0	0	0	788747	30054	63795	0	882596
117	222	56	0	0	278	964	1,242	4	0	0	0	0	0	0	0	76077	31876	120528	0	228481
118	1	0	0	0	1	0	1	0	48	164520	0	0	0	0	0	0	0	158629	0	158629
119	0	0	0	0	0	0	0	0	145	972097	0	0	0	0	0	0	2520	57420	0	59940
120	0	0	0	0	0	0	0	0	92	110446	0	0	0	0	0	0	0	2400	0	2400
121	0	0	0	0	0	0	0	0	155	310465	0	0	0	0	0	41416	27361	500301	0	569078
122	0	0	0	83	83	0	83	0	6	56331	0	0	0	0	0	3746	158235	145555	0	307536
123	0	0	0	0	0	0	0	0	60	98598	0	0	0	0	0	145079	26870	321060	0	493009
124	11	0	0	0	11	11	23	18	16	81712	0	0	0	0	0	10111	13348	25314	0	48773
125	172	6	9	0	187	132	319	18	1	0	0	0	0	0	0	90503	2760	34191	0	127454
126	372	11	19	0	403	26	429	43	0	0	793	0	0	0	793	0	8288	0	8318	16606
127	316	9	17	0	342	425	767	0	12	37169	0	0	0	0	0	12008	25172	49151	0	86331
128	272	113	11	0	397	132	529	0	5	40200	667	0	0	0	667	52489	173118	191291	0	416898
129	184	121	0	177	482	174	656	0	0	0	0	0	0	0	0	50921	7544	0	0	58465
130	362	63	11	0	437	246	682	0	0	0	0	850	0	0	850	0	0	9584	0	9584
131	465	86	2	0	553	192	745	11	0	0	0	0	0	0	0	13807	0	1124	33382	48313
132	118	105	0	0	223	68	291	0	0	0	0	0	0	0	0	0	16372	1400	5208	22980
133	291	111	8	0	409	0	409	64	0	0	45	92	0	0	137	0	55753	0	16060	71813
134	47	17	4	243	311	77	388	49	0	0	0	0	0	0	0	25253	0	0	0	25253
135	0	0	0	0	0	0	0	0	80	0	0	0	0	0	0	0	588599	0	0	588599
136	277	4	6	0	286	80	367	5	4	0	512	0	0	0	512	30097	2776	20703	0	53576
137	581	100	15	664	1,361	393	1,754	0	0	0	0	0	0	0	0	0	0	4151	0	4151
138	0	0	0	0	0	0	0	0	0	132888	0	0	0	0	0	7325	27270	21072	0	55667
139	0	0	0	0	0	0	0	0	209	2711991	0	0	0	0	0	24361	372658	328345	0	725364
140	816	89	0	0	904	408	1,313	48	0	0	495	0	0	0	495	34663	29513	14917	0	79093
141	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0
142	2	0	0	0	2	0	2	114	166	0	0	0	0	0	0	3494	0	0	0	3494
143	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
144	0	0	0	0	0	0	0	5	0	0	738	0	0	0	738	0	16380	6144	0	22524
145	267	112	648	0	1,028	0	1,028	18	0	0	0	0	0	0	0	0	0	0	0	0
146	1	0	0	0	1	147	148	79	5	0	0	0	0	0	0	0	0	5497	0	5497
147	407	29	26	1	464	4	468	0	64	280302	427	0	0	0	427	29097	76467	229363	0	334927
148	2	0	0	0	2	10	12	0	16	178655	0	0	0	0	0	33953	33752	178778	0	246483
149	334	305	11	70	720	535	1,255	3	1	0	0	0	0	0	0	86043	6540	52425	0	145008
150	800	53	4	0	857	191	1,048	11	0	0	0	0	0	0	0	15723	2448	1394	0	19565
151	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	20252	191370	0	211622
152	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	8028	0	3988	0	12016
153	54	38	21	0	112	123	235	6	0	0	0	0	0	0	0	0	19504	26429	0	45933
154	72	52	15	0	139	210	349	56	41	469460	0	0	0	0	0	2962	0	30671	0	33633
155	0	0	0	0	0	0	0	0	52	86596	0	0	0	0	0	0	26896	205237	0	232133
156	1,011	58	25	134	1,228	0	1,228	9	0	0	0	0	0	0	0	88349	9092	2386	0	99827
157	150	25	0	1	176	0	176	0	7	0	0	0	0	0	0	4007	0	10127	0	14134
158	135	0	0	1	136	0	136	0	0	0	0	0	0	0	0	0	0	0	0	0
159	541	30	0	0	572	113	685	0	0	0	0	0	0	0	0	0	0	6773	0	6773
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13044	0	0	0	13044
161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
162	0	0	0	0	0	0	0	0	154	1732714	0	0	0	0	0	57586	358668	189164	30224	635642
163	560	335	13	0	908	77	986	35	0	0	549	0	0	0	549	23811	54133	7111	0	85055
164	260	117	0	0	377	189	566	0	0	0	0	0	0	0	0	0	37759	11703	0	49462
165	68	0	0	0	68	0	68	101	0	0	0	0	0	0	0	0	85824	0	0	85824
166	253	0	11	0	265	86	351	228	9	0	0	0	0	0	0	0	112470	48196	0	160666
167	0	0	0	0	0	0	0	91	71	77875	0	0	0	0	0	18816	30428	768160	0	817404
168	87	0	15	2	104	0	104	131	0	0	0	0	0	0	0	0	0	0	0	0
169	23	0	0	0	23	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0
170	35	0	0	0	35	0	35	0	0	0	0	0	0	0	0	0	9845	0	0	9845
171	16	0	0	0	16	0	16	607	62	188875	0	0	0	0	0	0	0	5206	9265	14471
172	27	0	0	2	29	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0
173	125	0	0	0	125	0	125	0	0	0	0	0	0	0	0	0	15960	0	0	15960
174	61	0	0	0	61	0	61	0	0	0	0	0	0	0	0	0	0	0	0	0
175	48	0	0	0	48	0	48	0	0	0	0	0	0	0	0	0	0	0	0	0
176	63	32	6	0	101	254	355	4	0	0	812	0	0	0	812	172427	32910	125974	0	331311
177	613	32	138	0	783	134	918	107	0	0	90	2	0	0	92	23456	26580	0	0	50036
178	15	96	0	0	112	486	597	10	0	0	0	0	0	0	0	142636	390616	35214	0	568466
179	380	0	0	0	380	0	380	6	0	0	499	0	0	0	499	0	35745	0	0	35745
180	709	207	0	0	916	11	927	18	0	0	0	0	0	0	0	20423	55758	50651	0	126832
181	22	34	0	0	56	0	56	290	0	0	0	0	0	0	0	15760	88093	0	0	103853
182	215	37	0	0	251	533	784	12	0	0	0	0	0	0	0	70171	68491	14489	0	153151
183	258	139	0	0	397	253	650	0	0	0	0	0	0	0	0	123904	9390	48896	0	182190
184	30	0	0	0	30	0	30	14	3	0	0	0	0	0	0	246944	147675	25741	233665	654025
185	259	96	0	0	355	139	494	4	0	0	0	0	0	0	0	0	159235	3752	22000	184987
186	64	117	0	0	181	0	181	2	0	0	0	0	0	0	0	31100	59646	20344	0	111090
187	327	104	0	0	431	0	431	0	0	0	0	0	0	0	0	0	79976	39700	0	119676
188	53	32	0	0	85	0	85	0	0	0	0	0	0	0	0	0	344082	12049	0	356131
189	50	0	0	0	50	0	50	0	0	0	266	0	0	0	266	0	44081	0	0	44081
190	163	0	0	0	163	207	370	2	0	0	0	0	0	0	0	0	450188	0	0	450188
191	242	62	4	0	308	0	308	0	0	0	0	0	0	0	0	2718	8230	3651	0	14599
192	114	184	0	0	299	125	423	0	0	0	315	0	0	0	315	4418	0	6100	65741	76259
193	225	231	0	0	455	298	753	0	0	0	0	0	0	0	0	173607	0	0	0	173607
194	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Base Year Land Use by TAZ

	Single Family Residential				Single Family Residential	Multi-family Residential	Total Residential		Industrial		Students					Commercial				
TAZ	SUM_ESFD	SUM_ESFA	SUM_EDup	SUM_EMob	SingleFamily	Multi Family	Total Residential	SUM_ParkAcres	SUM_IndAcres	Light Industrial	Elementary	Secondary	CommCollege	University	TotalStudents	Retail	Office	Service	Other Comm	TotalCommercial
195	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
196	4	0	0	0	4	0	4	0	21	289617	0	0	0	0	0	5373	0	0	0	5373
197	1	0	0	0	1	0	1	32	2	0	0	0	0	0	0	0	0	0	0	0
198	2	0	0	0	2	0	2	153	0	0	0	0	0	0	0	0	0	0	0	0
199	8	0	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
200	13	0	0	0	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
201	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
202	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
203	42	0	0	0	42	0	42	0	0	0	0	0	0	0	0	0	0	0	0	0
204	0	0	0	0	0	525	525	0	0	0	0	0	0	0	0	594578	0	67893	10314	672785
205	54	0	0	0	54	0	54	0	0	0	0	0	0	0	0	129542	0	24533	0	154075
206	467	0	0	0	467	234	701	0	0	0	680	0	0	0	680	0	0	152069	0	152069
207	284	101	2	0	387	98	485	0	0	0	0	0	0	0	0	0	184749	150432	0	335181
208	221	30	19	0	270	170	440	0	0	0	0	0	0	0	0	24773	83422	102567	0	210762
209	5	0	0	0	5	0	5	28	0	0	0	0	0	0	0	0	0	0	0	0
210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1979	0	0	1979
211	6	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
212	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
213	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
214	8	0	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
215	31	0	0	0	31	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0
216	39	0	0	0	39	0	39	0	1	0	0	0	0	0	0	0	2206	1860	6965	11031
217	610	93	25	0	727	0	727	1	13	97699	0	0	0	0	0	0	0	0	0	0
218	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	116231	240490	24116	0	380837
219	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
220	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
221	111	0	0	0	111	0	111	0	0	0	0	0	0	0	0	0	0	0	0	0
222	9	0	0	1	9	0	9	0	4	0	0	0	0	0	0	0	0	66640	0	66640
223	10	0	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
224	46	0	0	0	46	0	46	0	0	0	0	0	0	0	0	0	0	0	0	0
225	357	6	0	0	363	127	490	0	0	0	0	0	0	0	0	28649	26130	33881	5772	94432
226	469	0	0	0	469	0	469	0	0	0	611	0	0	0	611	69170	21691	0	0	90861
227	274	0	115	0	389	333	722	1	0	0	0	0	0	0	0	119398	27224	16055	0	162677
228	234	0	25	0	259	40	299	6	0	0	0	0	0	0	0	18635	27111	490791	0	536537
229	242	17	172	0	431	157	588	0	0	0	11	7	0	886	904	20841	57580	0	353588	432009
230	668	43	11	0	723	194	917	14	0	0	412	0	0	0	412	108778	27900	6787	0	143465
231	117	0	49	0	166	314	480	0	14	6741	0	0	0	0	0	174906	52059	209801	0	436766
232	431	26	0	0	456	0	456	0	0	0	0	0	0	0	0	0	0	0	0	0
233	347	13	0	0	360	0	360	20	0	0	337	140	0	0	477	0	81036	0	0	81036
234	399	273	0	0	672	338	1,010	0	0	0	0	0	0	0	0	14544	0	5072	0	19616
235	691	72	11	0	774	8	782	0	0	0	443	0	0	0	443	9724	122631	4828	0	137183
236	314	19	13	0	346	0	346	0	0	0	505	0	0	0	505	60187	54478	2033	0	116698
237	13	0	0	0	13	6	19	0	0	0	0	0	0	0	0	0	70676	1904	0	72580
238	255	0	72	0	327	769	1,096	0	1	0	495	0	0	0	495	125743	3526	15504	0	144773
239	0	0	0	0	0	0	0	0	147	2014504	0	0	0	0	0	0	0	0	0	0
240	65	0	0	0	65	0	65	46	0	0	0	2218	0	0	2218	0	18366	0	0	18366
241	192	2	0	0	194	199	393	19	0	0	0	0	0	0	0	196772	179928	344420	0	721120
242	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	358417	47012	26620	0	432049
243	100	52	25	0	177	743	919	4	0	0	0	0	0	0	0	0	25316	13058	0	38374
244	384	34	0	0	418	172	590	0	0	0	315	168	0	0	483	31757	81819	2733	0	116309
245	152	0	0	0	152	0	152	0	0	0	0	1104	0	0	1104	152978	34844	18994	0	206816
246	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	443948	61644	55869	0	561461
247	261	0	0	0	261	118	379	0	0	0	0	0	0	0	0	0	0	0	0	0
248	421	4	0	0	424	0	424	0	0	0	0	0	0	0	0	0	0	0	0	0
249	148	72	2	0	222	24	246	0	0	0	0	0	0	0	0	68746	40031	53232	8187	170196
250	83	162	0	0	245	0	245	34	0	0	0	0	0	0	0	0	14946	4787	0	19733
251	45	0	0	0	45	0	45	0	0	0	0	0	0	0	0	0	62971	41583	0	104554
252	271	36	0	0	307	193	500	0	0	0	311	332	0	0	643	0	53414	0	131316	184730
253	270	88	0	0	358	0	358	0	0	0	674	0	0	0	674	0	5704	0	0	5704
254	98	76	0	0	174	80	254	43	0	0	0	0	0	0	0	107410	23364	96869	0	227643
255	221	158	32	0	411	536	947	211	0	0	0	0	0	0	0	0	0	47266	30440	77706
256	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	26451	0	3476	0	29927
257	726	17	0	0	743	221	964	242	14	74125	407	170	0	0	577	7500	306826	23368	37324	375018
258	389	23	2	0	414	0	414	0	0	0	0	0	0	0	0	51182	56172	74079	0	181433
259	13	62	0	0	76	0	76	0	38	326969	0	0	0	0	0	83691	4900	90203	0	178794
260	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
261	0	51	0	0	51	0	51	0	0	0	0	2202	0	0	2202	0	55058	51181	0	106239
262	2	0	0	0	2	0	2	0	12	159350	0	2006	0	0	2006	21612	236463	73678	0	331753
263	11	0	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
264	15	0	0	0	15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0
265	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
266	144	1	4	0	148	0	148	0	0	0	0	0	0	0	0	0	0	0	0	0
267	6	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
268	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
269	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
270	29	0	0	0	29	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0
271	9	0	0	1	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
272	6	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
273	26	0	0	0	26	590	615	0	0	0	0	0	0	0	0	0	6876	0	0	6876
274	143	0	0	0	143	0	143	9	0	0	0	0	0	0	0	0	3464	0	0	3464
275	122	69	6	0	197	0	197	0	0	0	0	0	0	0	0	452721	42958	111871	0	607550
276	6	0	0	0	6	0	6	157	0	0	0	0	0	0	0	0	0	0	0	0
277	24	0	0	0	24	0	24	140	0	0	0	0	0	0	0	0	0	0	0	0
278	32	0	0	0	32	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0
279	7	0	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
280	7	0	0	0	7	0	7	0	0	0	0	0	0	0	0	0	3072	156767	0	159839
281	69	0	0	0	69	0	69	0	0	0	0	0	0	0	0	0	0	0	0	0
282	13	0	0	0	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
283	497	42	28	0	567	46	613	0	76	319285	0	0	0	0	0	21504	31120	15405	2070	70099
284	636	15	32	0	683	72	755	0	54	339589	604	997	0	0	1601	59128	27064	22133	0	108325
285	0	0	0	0	0	0	0	0	128	682888	0	0	0	0	0	31564	3800	14937	0	50301
286	11	0	0	1	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
287	25	0	0	0	25	0	25	0	2	0	0	0	0	0	0	0	3869	0	0	3869
288	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
289	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
290	380	49	0	0	429	215	644	0	0	0	0	0	0	0	0	25185	24184	97064	0	146433
291	198	11	0	0	209	114	323	0	0	0	0	0	9412	0	9412	0	21045	0	0	21045

Base Year Land Use by TAZ

	Single Family Residential				Single Family Residential	Multi-family Residential	Total Residential		Industrial		Students					Commercial				
TAZ	SUM_ESFD	SUM_ESFA	SUM_EDup	SUM_EMob	SingleFamily	Multi Family	Total Residential	SUM_ParkAcres	SUM_IndAcres	Light Industrial	Elementary	Secondary	CommCollege	University	TotalStudents	Retail	Office	Service	Other Comm	TotalCommercial
292	51	19	0	0	70	82	152	0	0	0	0	0	0	0	0	0	0	29361	0	29361
293	121	18	0	1	140	0	140	0	0	0	0	0	0	0	0	0	0	0	0	0
294	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
295	39	0	0	0	39	0	39	0	14	107345	0	0	0	0	0	0	0	24600	0	24600
296	29	0	0	0	29	0	29	0	3	0	0	0	0	0	0	0	0	0	0	0
297	39	2	0	0	41	0	41	0	0	0	0	0	0	0	0	0	0	12079	0	12079
298	38	0	0	0	38	0	38	0	5	0	0	0	0	0	0	0	0	0	0	0
299	7	0	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
300	18	1	0	0	19	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0
301	212	89	4	0	304	197	501	0	0	0	0	841	0	0	841	33652	11449	0	0	45101
302	406	16	0	0	422	0	422	0	0	0	0	0	0	0	0	0	10459	0	24301	34760
303	95	41	2	0	138	0	138	0	0	0	0	0	0	0	0	44559	29344	29611	0	103514
304	350	191	0	0	541	0	541	6	0	0	0	0	0	0	0	15472	35401	33781	0	84654
305	76	0	0	0	76	0	76	0	0	0	0	0	0	0	0	0	0	2520	0	2520
306	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
307	26	0	0	0	26	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0
308	35	0	0	0	35	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0
309	11	0	0	0	11	0	11	0	0	0	0	0	0	0	0	0	12066	0	0	12066
310	708	59	2	0	768	0	768	0	0	0	486	0	0	0	486	0	0	0	0	0
311	147	38	0	0	185	174	359	0	0	0	0	0	0	0	0	0	14982	119587	0	134569
312	3	174	0	0	177	0	177	0	0	0	0	0	0	0	0	55936	0	131393	6986	194315
313	179	8	8	0	194	218	412	1	0	0	0	0	0	0	0	0	0	3687	0	3687
314	8	0	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
315	17	0	0	0	17	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0
316	52	0	0	0	52	0	52	0	0	0	0	0	0	0	0	0	0	0	0	0
317	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
318	27	0	0	0	27	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0
319	14	0	0	0	14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0
320	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
321	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
322	10	0	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
323	14	0	0	0	14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0
324	3	0	0	0	3	0	3	165	0	0	0	480	0	0	480	0	0	0	0	0
325	469	10	0	0	479	0	479	0	0	0	0	0	0	0	0	0	0	0	0	0
326	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
327	16	0	0	0	16	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0
328	95	0	0	0	95	0	95	0	0	0	0	0	0	0	0	0	0	0	15400	15400
329	133	0	0	0	133	0	133	0	0	0	0	0	0	0	0	0	0	0	0	0
330	447	74	6	0	526	0	526	2	0	0	494	0	0	0	494	0	16717	0	21242	37959
331	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	469727	15225	54364	20811	560127
332	271	28	0	0	300	181	481	0	0	0	0	0	0	0	0	13800	62194	16066	0	92060
333	317	0	0	0	317	0	317	0	0	0	0	0	0	0	0	0	0	31848	0	31848
334	177	142	0	0	318	91	409	8	0	0	0	0	0	0	0	22773	47438	167433	16192	253836
335	34	0	0	0	34	0	34	0	0	0	0	0	0	0	0	0	0	0	0	0
336	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	19963	0	19963
337	0	0	0	0	0	120	120	0	0	0	0	0	0	0	0	0	0	22307	0	22307
338	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
339	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
340	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
341	26	0	0	0	26	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0
342	0	0	2	0	2	355	357	0	0	0	0	0	0	0	0	276613	0	34025	0	310638
343	178	236	0	0	414	72	486	0	0	0	0	0	0	0	0	215674	0	4831	0	220505
344	210	61	0	0	271	0	271	0	0	0	0	0	0	0	0	103582	25839	25740	0	155161
345	261	78	6	0	345	0	345	11	0	0	0	0	0	0	0	112322	67423	17377	1500	198622
346	260	2	0	0	262	0	262	0	0	0	0	0	0	0	0	0	0	0	0	0
347	411	103	8	0	522	0	522	0	0	0	0	0	0	0	0	0	0	0	0	0
348	240	28	0	0	268	53	321	0	0	0	0	0	0	0	0	12343	0	0	0	12343
349	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	161706	0	32927	0	194633
350	206	32	2	0	240	266	507	0	0	0	0	0	0	0	0	115145	46735	12336	0	174216
351	257	21	2	0	280	108	387	0	0	0	0	0	0	0	0	13760	250994	0	36485	301239
352	323	9	0	0	333	113	446	0	0	0	0	0	0	0	0	137194	0	12213	0	149407
353	100	65	0	0	165	167	333	0	0	0	0	0	0	0	0	0	85945	8853	4363	99161
354	3	0	0	0	3	0	3	18	20	0	0	0	0	0	0	6392	0	6755	0	13147
355	29	0	0	0	29	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0
356	2	0	0	0	2	0	2	0	21	0	0	0	0	0	0	0	1792	93608	0	95400
357	6	0	0	0	6	0	6	266	0	0	0	0	0	0	0	0	0	0	0	0
358	3	0	0	0	3	0	3	211	0	0	0	0	0	0	0	0	0	0	0	0
359	7	0	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
360	5	0	0	0	5	0	5	0	10	23968	0	0	0	0	0	0	2884	0	0	2884
361	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
362	26	0	0	0	26	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0
363	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
364	23	0	0	0	23	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0
365	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
366	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
367	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
368	7	0	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
369	14	0	0	0	14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0
370	35	0	0	0	35	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0
371	47	0	0	0	47	0	47	0	0	0	0	0	0	0	0	0	0	0	0	0
372	39	0	0	0	39	0	39	0	0	0	0	0	0	0	0	0	0	0	0	0
373	5	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
374	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
375	5	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
376	60	0	0	0	60	21	81	61	0	0	0	0	0	0	0	0	0	2137	0	2137
377	6	0	0	1	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
378	249	71	2	0	321	190	511	4	0	0	0	862	0	0	862	65716	0	21322	0	87038
379	2	0	0	0	2	0	2	105	0	0	0	0	0	0	0	0	0	0	0	0
380	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
381	47	18	0	0	65	0	65	0	5	24430	0	0	0	0	0	1680	0	65450	0	67130
382	2	0	0	0	2	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0
383	0	0	0	0	0	0	0	63	0	0	0	0	0	0	0	54272	0	117085	0	171357
384	14	15	0	0	29	0	29	0	0	0	0	0	0	0	0	57428	52662	11817	0	121907
385	230	273	15	0	518	341	859	0	0	0	0	0	0	0	0	3768	9853	6940	0	20561
386	148	0	0	0	148	287	436	0	0	0	0	0	0	0	0	0	0	2782	0	2782
387	355	8	2	0	365	0	365	6	0	0	0	0	0	0	0	20406	0	10762	0	31168
388	213	147	0	0	360	0	360	12	0	0	0	0	0	0	0	133105	68368	15943	0	217416

Base Year Land Use by TAZ

	Single Family Residential				Single Family Residential	Multi-family Residential	Total Residential		Industrial		Students					Commercial				
TAZ	SUM_ESFD	SUM_ESFA	SUM_EDup	SUM_EMob	SingleFamily	Multi Family	Total Residential	SUM_ParkAcres	SUM_IndAcres	Light Industrial	Elementary	Secondary	CommCollege	University	TotalStudents	Retail	Office	Service	Other Comm	TotalCommercial
389	110	66	0	0	176	0	176	0	0	0	0	0	0	0	0	0	95726	20151	0	115877
390	194	198	0	0	392	26	419	0	0	0	0	0	0	0	0	0	0	0	0	0
391	127	8	0	0	134	0	134	0	0	0	0	0	0	0	0	0	66312	20115	0	86427
392	49	0	0	0	49	0	49	0	0	0	0	0	0	0	0	0	0	0	0	0
393	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	32083	0	0	32083
394	75	0	0	0	75	0	75	0	0	0	0	0	0	0	0	0	0	0	0	0
395	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
396	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
397	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
398	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	125363	0	12261	0	137624
399	33	32	0	0	65	85	150	0	0	0	0	0	0	0	0	0	0	0	0	0
400	472	47	0	0	519	0	519	0	0	0	0	0	0	0	0	0	0	0	0	0
401	170	25	0	0	195	1	196	0	0	0	0	0	0	0	0	0	0	0	0	0
402	1	0	0	0	1	0	1	148	0	0	0	0	0	0	0	0	0	0	0	0
403	242	165	0	0	407	255	662	143	0	0	0	0	0	0	0	0	146788	63298	29742	239828
404	300	60	30	0	390	213	603	0	17	180070	0	0	0	0	0	12000	0	3621	0	15621
405	703	1	15	0	719	0	719	3	0	0	0	0	0	0	0	0	0	0	0	0
406	18	11	0	0	29	0	29	0	0	0	879	0	0	0	879	0	0	4090	0	4090
407	32	0	0	0	32	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0
408	13	0	0	0	13	0	13	0	74	3600	0	0	0	0	0	26508	0	62571	0	89079
409	25	0	0	0	25	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0
410	54	0	0	3	57	0	57	0	11	0	0	0	0	0	0	7729	0	17158	0	24887
411	564	76	2	0	642	0	642	2	11	24000	0	0	0	0	0	60343	0	4914	0	65257
412	3	0	0	0	3	0	3	0	44	0	0	0	0	0	0	0	0	44000	0	44000
413	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
414	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
415	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
416	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	3068	0	3068
417	19	0	0	1	20	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
418	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
419	13	0	0	0	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
420	17	0	0	0	17	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0
421	4	0	0	1	5	0	5	0	4	0	0	0	0	0	0	0	0	0	0	0
422	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
423	51	0	0	1	52	0	52	0	0	0	0	0	0	0	0	0	0	0	0	0
424	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
425	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
426	8	0	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
427	160	27	0	0	187	0	187	0	0	0	831	0	0	0	831	0	0	0	0	0
428	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
429	24	0	0	0	24	0	24	0	3	0	0	0	0	0	0	0	0	0	0	0
430	0	0	0	0	0	0	0	0	128	0	7	4	0	0	11	0	444389	0	5508	449897
431	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
432	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
433	23	0	0	0	23	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0
434	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
435	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
436	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
437	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
438	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
439	2	0	0	0	2	0	2	77	0	0	0	0	0	0	0	0	0	0	0	0
440	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
441	265	0	0	0	265	0	265	0	0	0	0	0	0	0	0	0	0	0	0	0
442	0	0	0	0	0	0	0	0	38	0	0	0	0	0	0	0	0	0	0	0
443	12	0	0	0	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
444	20	0	0	0	20	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
445	6	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
446	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
447	4	0	0	9	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
448	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
449	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
450	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
451	5	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
452	10	0	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
453	46	0	0	0	46	0	46	0	0	0	0	0	0	0	0	0	0	0	0	0
454	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	3444	0	3444
455	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
456	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
457	19	0	0	0	19	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0
458	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
459	19	0	0	0	19	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0
460	48	0	0	0	48	0	48	0	0	0	0	0	0	0	0	0	312	0	0	312
461	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
462	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
463	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
464	281	104	9	0	394	43	438	0	0	0	216	55	0	0	271	0	18100	7415	33240	58755
465	94	0	0	0	94	0	94	10	0	0	0	0	0	0	0	0	0	0	0	0
466	269	2	0	0	271	0	271	4	0	0	0	0	0	0	0	0	22294	0	0	22294
467	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
468	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
469	38	0	0	0	38	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0
470	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
471	8	21	0	0	28	0	28	214	0	0	0	0	0	0	0	0	0	0	0	0
472	5	0	0	0	5	0	5	0	0	0	0	0	0	0	0	7010	0	38452	0	45462
473	1	0	0	1	2	0	2	0	9	0	0	0	0	0	0	0	10369	0	0	10369
474	8	0	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
475	12	0	0	0	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
476	16	0	0	0	16	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0
477	5	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
478	18	0	0	0	18	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0
479	10	0	0	1	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
480	8	0	0	1	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
481	20	0	0	0	20	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
482	52	0	0	1	53	0	53	296	2	0	0	0	0	0	0	0	0	572	0	572
483	11	0	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
484	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
485	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0

Base Year Land Use by TAZ

	Single Family Residential				Single Family Residential	Multi-family Residential	Total Residential		Industrial		Students					Commercial				
TAZ	SUM_ESFD	SUM_ESFA	SUM_EDup	SUM_EMob	SingleFamily	Multi Family	Total Residential	SUM_ParkAcres	SUM_IndAcres	Light Industrial	Elementary	Secondary	CommCollege	University	TotalStudents	Retail	Office	Service	Other Comm	TotalCommercial
486	110	0	0	0	110	0	110	0	0	0	0	0	0	0	0	0	0	0	0	0
487	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
488	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20363	0	0	0	20363
489	99	1	0	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0
490	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
491	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
492	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	16429	1782	0	18211
493	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
494	15	0	0	0	15	0	15	0	0	0	0	0	0	0	0	0	4320	0	0	4320
495	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
496	11	0	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
497	58	0	0	0	58	0	58	0	0	0	0	0	0	0	0	0	0	0	0	0
498	8	0	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
499	1	0	0	0	1	0	1	514	0	0	0	0	0	0	0	0	0	0	0	0
500	7	0	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
501	5	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
502	180	0	0	1	180	0	180	117	0	0	0	0	0	0	0	0	0	0	0	0
503	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
504	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
505	70	0	0	0	70	0	70	0	1	0	0	0	0	0	0	0	5408	2520	2892	10820

2035 Land Use by TAZ

	Single Family Residential				Single Family Residential	Multi-family Residential	Total Residential		Industrial		Students					Commercial				
TAZ	SUM_ESFD	SUM_ESFA	SUM_EDup	SUM_EMob	SingleFamily	Multi Family	Total Residential	SUM_ParkAcres	SUM_IndAcres	Light Industrial	Elementary	Secondary	CommCollege	University	TotalStudents	Retail	Office	Service	Other Comm	TotalCommercial
1	0	0	0	0	0	0	0	0	80	258,890	0	0	0	0	0	4,583	33,871	8,634	0	47,088
2	276	2	0	0	277	0	277	2	176	108,701	283	0	0	0	283	2,708	46,939	32,106	7,312	89,065
3	209	8	4	0	221	13	234	0	0	0	0	0	0	0	0	0	0	0	0	0
4	410	0	70	0	479	76	555	13	7	0	0	0	0	0	0	45,876	1,889	24,713	0	72,478
5	287	0	53	17	357	216	573	2	57	760,322	102	44	0	0	146	163,855	90,721	82,835	160	337,571
6	473	6	42	0	521	234	755	8	8	0	0	0	0	0	0	4,076	37,993	59,260	39,112	140,442
7	612	15	8	0	635	55	689	0	0	0	484	0	0	0	484	11,567	9,963	2,072	0	23,602
8	522	0	64	0	586	51	637	0	0	0	0	1,837	0	0	1,837	13,377	55,372	1,596	16,334	86,679
9	155	0	98	0	253	605	858	0	0	0	0	0	0	2,265	2,265	68,280	136,096	23,024	0	227,400
10	573	0	60	0	634	240	874	0	0	0	0	494	0	0	494	3,855	7,266	0	0	11,121
11	267	0	15	0	282	35	317	1	31	265,235	0	0	0	0	0	0	0	56,700	0	56,700
12	217	0	11	0	228	351	579	8	23	64,378	0	0	0	0	0	3,610	18,715	64,691	0	87,016
13	172	28	49	0	250	13	263	6	18	0	0	0	0	0	0	0	15,299	23,552	21,768	60,619
14	319	4	68	24	415	100	515	31	11	0	0	0	0	0	0	5,748	2,161	8,297	0	16,206
15	393	26	144	28	590	139	729	1	3	0	498	0	0	0	498	39,966	24,192	3,516	0	67,673
16	222	0	79	0	302	98	400	0	4	1,040	0	0	0	0	0	31,023	9,746	21,033	160	61,961
17	66	0	30	0	96	37	133	0	24	29,729	0	0	0	0	0	0	77,514	31,071	0	108,585
18	199	0	11	1	212	146	357	0	0	0	0	0	0	0	0	6,394	7,380	19,295	0	33,069
19	148	9	30	6	193	178	371	16	1	51,074	0	0	0	0	0	5,772	4,999	552	0	11,323
20	0	0	0	0	0	97	97	0	20	2,080	0	0	0	0	0	22,039	280,572	93,635	320	396,566
21	0	0	0	0	0	164	164	0	0	3,359	0	0	0	0	0	123,687	253,656	101,438	27,456	506,237
22	0	0	0	0	0	0	0	0	0	0	0	0	0	2,626	2,626	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	8,162	8,162	0	0	17,620	0	17,620
24	0	0	0	0	0	0	0	0	0	0	0	0	0	5,606	5,606	0	5,097	0	0	5,097
25	0	0	0	36	36	117	153	0	0	0	0	0	0	6,231	6,231	0	0	0	0	0
26	40	36	2	0	78	149	227	15	0	3,120	0	0	0	0	0	5,927	139,933	17,793	480	164,133
27	60	0	19	0	79	290	369	0	0	0	0	0	0	0	0	32,955	0	0	0	32,955
28	124	12	36	0	172	383	555	0	0	0	0	0	0	0	0	38,719	18,156	2,855	0	59,731
29	251	0	87	0	338	55	393	0	0	1,040	0	0	0	0	0	35,441	1,080	22,989	160	59,670
30	274	2	60	0	337	29	366	10	0	0	529	50	0	0	579	1,812	9,216	0	57,129	68,157
31	280	0	127	0	407	264	671	0	0	1,040	0	0	0	0	0	30,761	79,066	25,763	39,340	174,930
32	1	0	0	0	1	0	1	0	0	0	0	0	0	4,667	4,667	0	58,630	0	0	58,630
33	412	0	47	34	493	158	651	0	4	3,660	0	0	0	0	0	5,840	4,950	5,330	2,016	18,136
34	318	2	34	0	354	233	588	2	0	0	0	0	0	0	0	39,733	95,438	45,892	6,480	187,543
35	1	0	0	195	196	431	627	0	0	7,280	0	0	0	0	0	419,672	127,951	111,227	1,120	659,971
36	206	10	6	153	375	624	999	0	0	12,250	0	696	0	0	696	411,202	217,502	155,168	20,866	804,738
37	199	15	2	0	216	879	1,095	0	0	0	110	350	0	0	460	62,544	20,707	16,994	0	100,245
38	474	13	6	50	543	33	576	0	0	0	338	0	0	0	338	64,072	14,867	36,095	0	115,033
39	376	0	13	17	406	164	571	26	0	3,380	0	0	0	0	0	19,578	22,719	4,112	4,020	50,429
40	706	8	6	0	719	62	782	0	0	0	352	0	0	0	352	51,766	23,955	6,872	0	82,593
41	411	28	0	0	439	136	576	253	0	0	0	0	0	0	0	5,215	0	10,295	0	15,510
42	678	28	17	5	728	119	847	10	0	0	596	732	0	0	1,327	8,817	18,183	21,678	0	48,678
43	782	1	59	0	842	200	1,042	0	0	0	0	0	0	0	0	0	16,416	6,540	0	22,956
44	342	13	0	0	355	147	503	8	0	6,900	37	0	0	0	37	110,898	26,795	97,408	14,040	249,140
45	411	43	0	0	455	0	455	0	0	0	277	86	0	0	363	0	31,468	1,512	0	32,980
46	513	0	6	0	519	198	716	9	0	0	0	0	0	0	0	22,672	16,358	20,955	0	59,985
47	5	0	0	300	305	500	805	0	2	106,733	0	0	0	0	0	328,846	239,339	119,245	208,574	896,004
48	208	148	43	0	399	438	838	0	0	0	0	0	0	0	0	9,392	44,141	90,264	0	143,797
49	392	13	0	0	406	0	406	15	0	0	0	0	0	0	0	3,828	26,962	4,118	0	34,908
50	340	185	2	0	527	0	527	25	0	2,426	0	0	0	0	0	51,842	51,421	25,253	22,585	151,100
51	331	0	0	0	331	5	336	0	0	0	0	1,161	0	0	1,161	0	31,247	0	0	31,247
52	255	0	0	0	255	0	255	0	0	8,875	326	0	0	0	326	57,253	92,844	21,903	25,259	197,259
53	227	0	6	0	232	0	232	9	0	0	0	618	0	0	618	52,167	8,348	2,301	0	62,816
54	508	3	11	0	522	4	526	3	0	1,814	0	0	0	0	0	125,124	33,630	11,607	2,362	172,723
55	426	13	99	0	538	27	566	0	0	0	0	0	0	0	0	5,333	104,229	76,208	0	185,770
56	428	0	151	0	580	44	624	0	0	0	0	0	0	0	0	74,917	44,375	11,413	0	130,705
57	284	0	21	0	305	4	308	0	0	0	419	0	0	700	1,119	10,952	28,520	419,257	35,177	493,906
58	313	7	4	12	336	15	351	5	0	995	0	0	0	0	0	10,931	29,098	288,203	2,831	331,062
59	579	38	19	0	636	251	887	1	0	0	105	0	0	0	105	13,033	103,514	11,664	59,544	187,755
60	336	8	19	0	362	17	379	23	0	0	0	0	0	0	0	16,853	121,502	11,117	0	149,472
61	598	0	155	0	753	0	753	0	0	0	524	0	0	0	524	25,003	10,382	0	0	35,385
62	408	11	119	0	539	21	560	0	0	0	202	107	0	0	308	14,926	38,175	4,172	0	57,273
63	326	0	112	0	438	161	598	47	0	0	0	0	0	0	0	67,954	78,488	0	0	146,443
64	411	0	147	0	558	57	615	16	6	34,957	0	0	0	0	0	58,005	0	22,446	39,978	120,429
65	34	0	2	0	36	141	177	0	0	12,414	0	2,408	0	0	2,408	0	0	0	104,384	104,384
66	221	0	70	0	291	430	721	31	0	0	0	0	0	0	0	1,908	10,555	3,646	4,011	20,120
67	80	0	49	0	129	382	511	0	0	0	0	0	0	0	0	0	26,227	0	0	26,227
68	71	4	34	0	109	1,298	1,407	0	0	0	0	0	700	0	700	7,607	42,615	23,090	0	73,312
69	3	0	0	93	96	538	634	0	0	65,688	0	0	0	0	0	42,501	66,269	16,481	3,144	128,394
70	108	0	57	0	165	684	848	24	2	0	411	0	0	0	411	17,652	37,358	8,340	0	63,350
71	21	17	6	0	43	380	424	2	0	0	0	0	0	0	0	62,310	41,822	79,776	0	183,907
72	1	0	2	0	3	500	503	4	0	4,160	0	0	0	0	0	30,133	85,107	36,215	640	152,095
73	0	0	0	0	0	300	300	1	0	0	0	0	0	0	0	15,510	59,064	0	0	74,574
74	0	0	0	0	0	489	489	1	0	0	0	0	0	0	0	143,794	215,566	34,942	0	394,303
75	0	0	0	245	245	300	545	0	0	87,243	0	0	0	0	0	7,000	82,467	122,391	13,172	225,030
76	0	0	0	0	0	648	648	0	0	0	0	0	0	0	0	12,478	243,357	101,349	0	357,184
77	0	0	0	0	0	338	338	0	0	0	0	0	0	0	0	0	633,698	92,505	0	726,203
78	0	0	0	0	0	448	448	0	0	0	0	0	0	0	0	31,865	177,437	36,929	0	246,231
79	0	0	0	0	0	325	325	0	0	1,040	0	0	0	0	0	2,406	216,047	10,742	160	229,355
80	0	0	0	0	0	222	222	1	0	0	0	0	0	0	0	9,209	68,093	50,161	0	127,463
81	0	0	0	0	0	265	265	1	0	0	129	44	0	0	172	1,923	321,369	34,958	0	358,250
82	0	0	0	0	0	209	209	0	0	17,680	0	0	0	0	0	20,248	20,963	0	50,320	91,531
83	4	0	2	0	6	355	361	0	0	0	0	0	0	0	0	9,059	638,422	0	0	647,481
84	1	0	0	0	1	306	307	0	0	0	0	0	0	0	0	0	111,750	0	8,318	120,068
85	79	0	100	0	179	1,228	1,406	1	0	0	317	0	0	0	317	11,467	61,760	0	0	73,228
86	116	0	76	0	192	1,018	1,210	1	0	0	464	0	0	0	464	29,290	7,440	33,938	0	70,669
87	234	2	26	0	263	58	320	12	2	0	0	892	0	0	892	4,133	14,682	0	0	18,815
88	13	0	0	0	13	70	83	0	6	246,179	0	0	0	0	0	1,188	139,725	0	0	140,913
89	0	0	0	0	0	454	454	0	10	255,198	0	0	0	0	0	21,612	134,287	35,930	1,280	193,109
90	64	0	0	0	64	0	64	0	43	327,016	0	0	0	0	0	5,280	16,882	5,040	960	28,162
91	302	18	79	0	399	1	400	1	1	62	0	0	0	0	0	471	6,111	1,622	178	8,382
92	25	0	11	0	36	0	36	29	69	11,842	0	0	0	0	0	0	11,400	84,339	0	95,739
93	2	0	0	0	2	0	2	58	12	1,628	0	0	0	0	0	0	72,388	146,354	38,014	256,757
94	488	0	134	0	622	318	941	0	7	0	0	0	0	0	0	33,160	131,742	7,560	5,208	177,670
95	387	0	34	0	421	97	518	1	6	2,080	277	0	0	0	277	11,675	44,515	1,680	16,380	74,250
96	485	0	66	0	551	23	574	16	0	0	149	943	0	0	1,092	9,500	19,997	0	0	29,497
97	350	0	229	2	580	529	1,110	1	0	0	559	0	0	0	559	51,075	45,090	0	0	96,165

2035 Land Use by TAZ

	Single Family Residential				Single Family Residential	Multi-family Residential	Total Residential		Industrial		Students					Commercial				
TAZ	SUM_ESFD	SUM_ESFA	SUM_EDup	SUM_EMob	SingleFamily	Multi Family	Total Residential	SUM_ParkAcres	SUM_IndAcres	Light Industrial	Elementary	Secondary	CommCollege	University	TotalStudents	Retail	Office	Service	Other Comm	TotalCommercial
98	638	0	172	0	810	184	994	21	0	0	0	0	0	0	0	26,848	19,781	4,574	0	51,203
99	578	0	11	0	590	29	619	16	0	0	479	0	0	0	479	48,429	47,810	2,079	0	98,318
100	586	0	9	0	595	4	599	8	0	0	0	0	0	0	0	2,039	20,134	29,999	0	52,172
101	88	0	0	0	88	0	88	43	0	0	0	0	0	0	0	0	0	0	0	0
102	541	0	40	0	581	0	581	0	0	0	0	0	0	0	0	0	3,404	0	0	3,404
103	296	11	59	0	366	0	366	2	0	0	245	2,260	0	0	2,505	0	47,967	0	0	47,967
104	615	2	57	0	673	30	703	8	0	3,808	4	0	0	0	4	35,917	23,124	61,332	2,437	122,809
105	363	69	13	3	449	198	647	11	0	0	116	123	0	0	239	21,980	17,291	8,960	0	48,230
106	236	2	43	0	281	369	651	7	0	0	387	0	0	0	387	95,667	10,662	34,322	0	140,651
107	447	0	38	32	517	91	608	19	0	1,965	0	796	0	0	796	70,861	19,417	0	5,591	95,869
108	721	44	21	0	786	0	786	22	0	0	650	0	0	0	650	118,852	61,029	3,546	0	183,427
109	523	47	34	0	604	680	1,284	0	0	0	0	0	0	0	0	152,867	17,911	15,451	0	186,230
110	401	0	6	0	406	20	426	0	0	158	410	6	0	0	416	0	24,365	0	450	24,815
111	1	0	0	0	1	173	174	0	10	0	0	0	0	0	0	78,626	151,669	68,524	0	298,818
112	722	6	98	0	826	48	874	28	2	0	0	0	0	0	0	13,920	15,624	21,111	0	50,655
113	4	0	0	168	172	0	172	0	110	208,763	0	0	0	0	0	381,296	21,771	214,614	13,257	630,937
114	154	63	19	122	358	236	594	0	50	121,495	0	0	0	0	0	46,635	37,246	307,407	147,587	538,875
115	0	0	0	0	0	0	0	68	110	685,382	0	0	0	0	0	9,616	47,813	168,666	11,458	237,552
116	0	0	0	0	0	612	612	0	15	187,737	0	0	0	0	0	778,350	65,891	91,515	126,791	1,062,547
117	222	57	0	109	388	964	1,352	4	0	2,297	0	0	0	0	0	76,073	32,442	122,208	938	231,661
118	1	0	0	0	1	0	1	0	65	278,920	0	0	0	0	0	96,800	118,800	251,029	17,600	484,229
119	0	0	0	0	0	0	0	0	165	972,097	0	0	0	0	0	0	2,394	57,420	0	59,814
120	0	0	0	0	0	0	0	0	121	110,446	0	0	0	0	0	0	0	2,400	0	2,400
121	0	0	0	0	0	0	0	0	163	310,465	0	0	0	0	0	39,345	25,993	500,301	18,589	584,228
122	10	0	0	83	93	0	93	0	10	259,131	0	0	0	0	0	87,159	252,923	225,355	311,200	876,637
123	0	0	0	0	0	0	0	0	61	115,238	0	0	0	0	0	151,905	42,807	334,500	43,732	572,944
124	11	0	0	0	11	11	23	18	17	82,752	0	0	0	0	0	10,485	13,761	26,154	160	50,560
125	184	6	9	0	199	132	331	18	0	6,240	0	0	0	0	0	92,324	9,102	41,683	960	144,069
126	372	11	23	0	407	26	433	43	0	0	829	0	0	0	829	0	7,874	0	0	7,874
127	325	9	17	9	360	425	785	0	0	38,209	0	0	0	0	0	12,288	24,993	49,991	6,367	93,639
128	299	115	11	26	452	132	584	0	0	69,142	697	0	0	0	697	89,770	192,762	212,291	18,546	513,369
129	191	121	0	177	489	174	663	0	0	1,478	0	0	0	0	0	49,282	8,247	840	1,407	59,776
130	378	77	15	16	487	246	732	0	0	0	0	888	0	0	888	0	5	9,584	0	9,589
131	495	88	2	0	585	192	777	11	0	0	0	0	0	0	0	13,117	0	1,124	0	14,241
132	161	105	0	8	274	68	342	0	0	0	0	0	0	0	0	0	15,553	3,840	0	19,393
133	393	120	8	0	520	0	520	64	0	0	47	96	0	0	143	0	52,965	0	0	52,965
134	53	17	4	643	717	77	794	49	0	20,384	0	0	0	0	0	23,990	0	3,280	58,016	85,286
135	0	0	0	0	0	0	0	0	81	0	0	0	0	0	0	0	559,169	0	0	559,169
136	287	56	6	0	348	80	429	5	2	5,200	535	0	0	0	535	32,992	8,037	24,903	800	66,732
137	593	100	15	672	1,381	393	1,774	0	0	0	0	0	0	0	0	0	0	4,151	30,224	34,375
138	0	0	0	0	0	0	0	0	11	138,088	0	0	0	0	0	11,359	31,307	25,272	800	68,737
139	0	0	0	0	0	0	0	0	224	2,792,071	0	0	0	0	0	90,903	452,727	393,025	12,320	948,975
140	816	89	0	0	904	408	1,313	48	0	3,923	517	0	0	0	517	32,930	28,037	14,917	11,165	87,049
141	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
142	2	0	0	0	2	0	2	114	255	0	0	0	0	0	0	3,319	0	0	0	3,319
143	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
144	0	0	0	0	0	0	0	5	0	0	771	0	0	0	771	0	15,561	6,144	0	21,705
145	306	112	648	0	1,067	0	1,067	18	0	0	0	0	0	0	0	0	0	0	0	0
146	1	0	0	172	173	147	320	79	2	175,760	0	0	0	0	0	154,917	182,520	147,457	27,040	511,934
147	448	29	26	1	505	4	509	0	72	285,502	446	0	0	0	446	32,042	78,044	233,563	46,747	390,396
148	4	0	0	0	4	10	14	0	22	235,496	0	0	0	0	0	79,775	90,384	224,138	10,578	404,876
149	364	309	11	70	754	535	1,289	3	0	6,240	0	0	0	0	0	87,021	12,693	57,465	960	158,139
150	1,717	293	5	0	2,015	191	2,206	11	0	0	0	0	0	0	0	14,937	2,326	2,394	9,265	28,921
151	0	0	0	0	0	0	0	0	58	52,780	0	0	0	0	0	32,560	59,199	222,450	46,620	360,829
152	0	0	0	0	0	0	0	0	43	0	0	0	0	0	0	7,627	0	3,988	0	11,615
153	59	53	21	0	132	123	255	6	0	1,040	0	0	0	0	0	880	21,676	27,269	160	49,985
154	76	52	15	0	143	210	353	56	41	469,460	0	0	0	0	0	2,814	1,060	32,211	0	36,085
155	0	0	0	0	0	0	0	0	56	86,596	0	0	0	0	0	0	25,551	205,237	0	230,788
156	1,044	58	47	134	1,284	0	1,284	9	0	4,160	0	0	0	0	0	92,712	13,957	5,746	640	113,055
157	164	57	0	538	759	0	759	0	22	72,572	0	0	0	0	0	65,214	75,363	68,743	11,165	220,485
158	155	0	0	1	156	0	156	0	0	0	0	0	0	0	0	0	0	0	0	0
159	549	30	0	12	592	113	705	0	0	0	0	0	0	0	0	0	0	6,773	0	6,773
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12,392	0	0	0	12,392
161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
162	0	0	0	0	0	0	0	0	162	1,753,388	0	0	0	0	0	67,049	355,855	200,956	19,643	643,503
163	561	339	13	0	913	77	991	35	0	6,240	574	0	0	0	574	35,854	74,060	12,151	960	123,024
164	272	119	8	0	399	189	588	0	0	4,160	0	0	0	0	0	3,520	49,426	15,063	640	68,649
165	68	0	0	0	68	0	68	101	0	2,080	0	0	0	0	0	1,760	83,693	1,680	320	87,453
166	253	0	11	0	265	86	351	228	0	0	0	0	0	0	0	0	106,847	48,196	233,665	388,708
167	0	0	0	0	0	0	0	91	89	77,875	0	0	0	0	0	17,875	28,907	768,160	85,541	900,483
168	131	0	15	2	148	0	148	131	0	2,080	0	0	0	0	0	1,760	2,160	2,200	22,320	28,440
169	23	0	0	0	23	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0
170	42	0	0	0	42	0	42	0	0	0	0	0	0	0	0	0	9,353	0	0	9,353
171	29	0	0	0	29	0	29	607	62	188,875	0	0	0	0	0	0	0	5,206	0	5,206
172	29	0	0	2	30	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0
173	149	0	0	0	149	0	149	0	0	0	0	0	0	0	0	0	15,162	0	0	15,162
174	88	0	0	0	88	0	88	0	0	0	0	0	0	0	0	0	0	0	0	0
175	50	0	0	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0
176	70	32	6	25	133	254	387	4	0	9,290	849	0	0	0	849	172,168	36,833	144,554	86,581	440,136
177	616	32	138	0	786	134	921	107	0	2,689	94	2	0	0	96	22,283	25,251	0	7,654	55,188
178	17	96	0	0	114	486	599	10	0	29,329	0	0	0	0	0	146,064	384,045	45,294	49,875	625,279
179	382	0	0	0	382	0	382	6	0	0	521	0	0	0	521	0	43,066	0	0	43,066
180	716	217	0	0	933	11	944	18	0	375	0	0	0	0	0	19,402	60,122	52,977	1,069	133,570
181	26	43	0	0	69	0	69	290	0	0	0	0	0	0	0	14,972	83,688	0	0	98,660
182	224	37	20	3	283	533	816	12	0	0	0	0	0	0	0	81,030	65,066	14,489	0	160,586
183	295	176	0	1	472	253	725	0	0	5,200	0	0	0	0	0	126,063	12,981	51,746	9,200	199,990
184	30	0	0	0	30	0	30	14	0	29,941	0	0	0	0	0	247,237	148,931	32,461	62,818	491,447
185	271	103	0	1	375	139	514	4	0	0	0	0	0	0	0	0	151,273	3,752	0	155,025
186	93	203	0	0	296	0	296	10	0	34,246	0	0	0	0	0	48,025	79,344	37,984	38,670	204,023
187	360	125	0	0	485	0	485	0	0	1,040	0	0	0	0	0	880	85,518	46,414	160	132,972
188	71	40	0	0	111	0	111	10	0	17,680	0	0	0	0	0	14,960	471,825	26,329	13,034	526,148
189	161	0	0	0	161	0	161	0	0	0	278	0	0	0	278	0	41,877	0	0	41,877
190	405	4	0	0	409	207	616	2	0	2,080	0	0	0	0	0	0	449,742	0	5,920	455,662
191	250	62	4	611	928	0	928	0	0	0	0	0	0	0	0	2,582	7,819	3,651	0	14,052
192	257	242	0	80	580	125	704	10	0	76,960	329	0	0	0	329	82,684	85,670	68,260	11,840	248,454
193	433	237	0	77	746	298	1,044	0	0	11,440	0	0	0	0	0	234,413	35,880	9,240	1,760	281,293
194	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

2035 Land Use by TAZ

	Single Family Residential				Single Family Residential	Multi-family Residential	Total Residential		Industrial		Students					Commercial				
TAZ	SUM_ESFD	SUM_ESFA	SUM_EDup	SUM_EMob	SingleFamily	Multi Family	Total Residential	SUM_ParkAcres	SUM_IndAcres	Light Industrial	Elementary	Secondary	CommCollege	University	TotalStudents	Retail	Office	Service	Other Comm	TotalCommercial
195	3	0	0	0	3	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0
196	6	0	0	0	6	0	6	0	39	289,617	0	0	0	0	0	5,104	0	0	0	5,104
197	2	0	0	0	2	0	2	32	2	0	0	0	0	0	0	0	0	0	0	0
198	2	0	0	0	2	0	2	153	0	0	0	0	0	0	0	0	0	0	0	0
199	8	0	0	0	8	0	8	0	15	0	0	0	0	0	0	0	0	0	0	0
200	15	0	0	0	15	0	15	10	0	0	0	0	0	0	0	0	0	0	0	0
201	9	0	0	0	9	0	9	10	0	0	550	0	0	0	550	0	0	0	6,965	6,965
202	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
203	44	0	0	0	44	0	44	0	0	0	0	0	0	0	0	0	0	0	0	0
204	0	114	0	52	166	525	691	0	0	118,580	0	0	0	0	0	651,089	121,070	150,213	63,097	985,469
205	58	0	0	0	58	0	58	0	0	15,662	0	0	0	0	0	135,760	11,880	33,773	13,775	195,188
206	497	0	0	0	497	234	731	0	0	0	711	0	0	0	711	0	114	152,069	0	152,183
207	297	104	2	2	405	98	503	0	0	0	0	0	0	0	0	0	178,695	150,432	0	329,127
208	221	32	19	0	272	170	442	0	0	2,080	0	0	0	0	0	25,294	103,511	104,247	320	233,372
209	5	0	0	0	5	0	5	28	0	0	0	0	0	0	0	0	0	0	0	0
210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,880	0	5,772	7,652
211	6	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
212	3	0	0	0	3	0	3	0	29	0	0	0	0	0	0	0	0	0	0	0
213	2	0	0	0	2	0	2	10	0	0	0	0	0	0	0	0	0	0	0	0
214	8	0	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	353,588	353,588
215	34	0	0	0	34	0	34	0	0	0	0	0	0	0	0	3,000	0	1,000	0	4,000
216	47	0	0	0	47	0	47	0	2	0	0	0	0	0	0	0	2,096	6,180	0	8,276
217	638	219	25	0	881	0	881	1	14	126,819	0	0	0	0	0	24,640	30,240	23,520	21,849	100,249
218	0	0	0	473	473	0	473	0	0	77,156	0	0	0	0	0	165,219	313,344	53,516	121,598	653,678
219	3	0	0	0	3	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0
220	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
221	529	0	0	0	529	0	529	0	0	0	0	0	0	0	0	0	0	0	0	0
222	9	0	0	1	9	0	9	0	26	32,793	0	0	0	0	0	27,748	34,054	93,127	5,045	159,974
223	11	0	0	0	11	0	11	0	0	520	0	0	0	0	0	0	0	0	1,480	1,480
224	62	0	0	0	62	0	62	0	0	0	0	0	0	0	0	0	0	0	0	0
225	358	6	0	16	380	127	507	0	0	9,026	0	0	0	0	0	28,097	26,316	34,721	22,890	112,023
226	469	0	0	0	469	0	469	0	0	0	638	0	0	0	638	65,712	20,606	0	0	86,318
227	286	0	115	0	401	333	734	1	0	0	0	0	0	0	0	113,428	25,863	16,055	0	155,346
228	254	0	25	0	279	40	319	6	0	1,040	0	0	0	0	0	18,583	26,835	491,631	160	537,210
229	250	17	172	0	439	157	596	0	0	0	11	7	0	952	971	19,799	54,701	0	0	74,500
230	669	43	11	2	726	194	920	14	0	0	431	0	0	0	431	103,339	26,587	6,787	0	136,713
231	117	0	49	0	166	314	480	0	17	6,949	0	0	0	0	0	166,161	49,456	209,801	592	426,010
232	502	27	0	0	528	0	528	0	0	0	0	0	0	0	0	0	0	0	0	0
233	352	13	0	0	365	0	365	20	0	0	352	146	0	0	498	0	76,984	0	0	76,984
234	408	283	0	36	727	338	1,065	0	0	0	0	0	0	0	0	13,817	0	31,072	0	44,889
235	751	72	11	0	834	8	842	0	0	0	463	0	0	0	463	10,498	116,499	4,828	0	131,825
236	314	19	13	0	346	0	346	0	0	0	528	0	0	0	528	57,178	51,754	2,033	8,187	119,152
237	13	0	0	0	13	6	19	0	0	0	0	0	0	0	0	0	67,142	1,904	0	69,046
238	261	0	72	0	333	769	1,102	0	0	1,807	517	0	0	0	517	120,336	4,430	16,344	2,343	143,453
239	0	0	0	0	0	0	0	0	180	2,014,504	0	0	0	0	0	0	0	0	0	0
240	65	0	0	0	65	0	65	46	0	0	0	2,318	0	0	2,318	0	17,448	0	131,316	148,764
241	192	2	0	0	194	199	393	19	0	0	0	0	0	0	0	186,933	170,932	344,420	0	702,285
242	0	0	0	0	0	0	0	0	0	11,821	0	0	0	0	0	355,650	53,244	30,823	19,644	459,362
243	100	52	31	30	213	743	955	4	0	0	0	0	0	0	0	0	24,050	14,900	30,440	69,390
244	412	34	0	0	446	172	618	0	0	0	329	176	0	0	505	30,169	77,728	2,733	0	110,630
245	158	0	0	0	158	0	158	0	0	0	0	1,154	0	0	1,154	145,329	40,533	18,994	37,324	242,180
246	0	0	0	0	0	0	0	0	0	31,119	0	0	0	0	0	422,631	59,642	56,709	85,769	624,750
247	267	0	0	0	267	118	385	0	0	0	0	0	0	0	0	0	0	0	0	0
248	436	4	0	0	439	0	439	0	0	0	0	0	0	0	0	0	0	0	0	0
249	235	211	2	0	448	24	472	0	0	21,485	0	0	0	0	0	80,269	56,389	67,512	13,550	217,720
250	103	166	0	0	269	0	269	34	0	6,240	0	0	0	0	0	5,280	23,738	28,312	960	58,290
251	84	0	0	0	84	0	84	0	0	3,120	0	0	0	0	0	2,640	75,062	44,103	480	122,285
252	272	36	0	3	311	193	504	0	0	0	325	347	0	0	672	0	50,743	0	0	50,743
253	270	88	0	0	358	0	358	0	0	0	704	0	0	0	704	0	5,419	0	0	5,419
254	133	76	0	0	209	80	289	43	0	6,020	0	0	0	0	0	107,079	35,473	99,389	8,734	250,675
255	231	187	32	0	450	536	986	211	0	0	0	0	0	0	0	0	0	47,266	0	47,266
256	0	0	0	0	0	0	0	1	0	8,250	0	0	0	0	0	25,128	0	3,476	23,482	52,086
257	726	17	0	120	863	221	1,084	242	16	220,632	425	178	0	0	603	127,685	608,059	138,448	33,380	907,572
258	391	24	2	0	417	0	417	0	0	14,924	0	0	0	0	0	61,294	70,053	84,519	11,677	227,543
259	20	68	0	0	89	400	489	0	45	326,969	0	0	0	0	0	79,506	4,655	90,203	0	174,364
260	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
261	0	51	0	0	51	400	451	0	2	151,778	0	2,301	0	0	2,301	128,892	189,452	151,141	98,782	568,267
262	2	0	0	0	2	0	2	0	18	159,350	0	2,096	0	0	2,096	20,531	224,640	73,678	0	318,849
263	11	0	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
264	15	0	0	0	15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0
265	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
266	520	1	4	0	525	0	525	0	10	0	0	0	0	0	0	0	0	0	0	0
267	6	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
268	4	0	0	226	230	0	230	0	0	0	0	0	0	0	0	0	0	0	0	0
269	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
270	40	0	0	0	40	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0
271	11	0	0	1	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
272	6	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
273	44	0	0	72	116	590	705	0	0	691	0	0	0	0	0	0	6,532	0	1,965	8,498
274	366	0	0	0	366	0	366	9	0	0	0	0	0	0	0	0	3,291	0	2,070	5,361
275	129	74	6	0	209	0	209	0	0	64,480	0	0	0	0	0	484,645	107,770	163,951	9,920	766,286
276	7	0	0	0	7	0	7	157	0	0	0	0	0	0	0	0	0	0	0	0
277	24	0	0	0	24	0	24	140	0	0	0	0	0	0	0	0	0	0	0	0
278	32	0	0	0	32	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0
279	11	0	0	0	11	0	11	0	34	0	0	0	0	0	0	0	0	0	0	0
280	7	0	0	0	7	0	7	0	9	0	0	0	0	0	0	0	2,918	156,767	0	159,685
281	73	0	0	0	73	0	73	0	0	0	0	0	0	0	0	0	0	0	0	0
282	13	0	0	0	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
283	670	45	52	37	804	46	851	0	89	319,285	0	0	0	0	0	20,429	29,564	15,405	0	65,398
284	771	15	40	0	826	72	898	0	61	339,589	631	1,042	0	0	1,673	56,172	25,711	22,133	384,784	488,799
285	0	0	0	0	0	0	0	0	133	682,888	0	0	0	0	0	29,986	3,610	14,937	0	48,533
286	13	0	0	1	14	0	14	0	0	12,361	0	0	0	0	0	0	0	0	35,183	35,183
287	28	0	0	0	28	0	28	0	2	0	0	0	0	0	0	0	3,676	0	0	3,676
288	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,600	0	4,920	0	14,520
289	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
290	386	53	0	0	439	215	654	0	0	21,803	0	0	0	0	0	37,056	37,075	116,513	25,654	216,298
291	206	11	2	4	223	114	337	0	7	2,392	0	0	12,000	0	12,000	0	44,993	3,000	6,808	54,801

2035 Land Use by TAZ

	Single Family Residential				Single Family Residential	Multi-family Residential	Total Residential		Industrial		Students					Commercial				
TAZ	SUM_ESFD	SUM_ESFA	SUM_EDup	SUM_EMob	SingleFamily	Multi Family	Total Residential	SUM_ParkAcres	SUM_IndAcres	Light Industrial	Elementary	Secondary	CommCollege	University	TotalStudents	Retail	Office	Service	Other Comm	TotalCommercial
292	282	110	0	0	392	82	474	0	0	0	0	0	0	0	0	0	0	31,749	0	31,749
293	478	129	0	1	608	0	608	0	0	2,080	0	0	0	0	0	1,760	2,160	1,680	320	5,920
294	11	0	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
295	43	0	0	0	43	0	43	0	20	107,345	0	0	0	0	0	0	0	24,600	0	24,600
296	39	0	0	0	39	0	39	0	0	151	0	0	0	0	0	140	0	0	429	569
297	55	25	0	0	80	0	80	0	0	0	0	0	0	0	0	0	0	12,079	24,301	36,380
298	55	0	0	0	55	0	55	0	0	0	0	0	0	0	0	0	0	0	0	0
299	9	0	0	0	9	0	9	10	0	0	0	0	0	0	0	0	0	0	0	0
300	283	1	0	506	789	0	789	10	0	20,480	0	0	0	0	0	17,329	23,268	31,044	3,151	74,792
301	219	89	4	2	313	197	510	0	0	0	0	879	0	0	879	31,969	10,877	0	0	42,846
302	416	31	0	0	447	0	447	0	0	0	0	0	0	0	0	0	14,436	0	0	14,436
303	125	41	10	16	192	0	192	0	0	10,428	0	0	0	0	0	49,371	38,051	36,331	7,278	131,031
304	433	192	0	0	625	0	625	6	0	13,517	0	0	0	0	0	14,698	33,631	33,781	38,472	120,583
305	103	0	0	0	103	0	103	0	0	0	0	0	0	0	0	600	0	2,520	0	3,120
306	11	0	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
307	27	0	0	0	27	0	27	0	0	0	0	0	0	0	0	0	1,960	0	6,986	8,946
308	42	0	0	0	42	0	42	0	0	0	0	0	0	0	0	0	0	0	0	0
309	15	0	0	0	15	0	15	0	0	0	0	0	0	0	0	0	11,463	0	0	11,463
310	914	73	2	0	988	0	988	0	0	0	508	0	0	0	508	0	0	0	0	0
311	288	44	0	0	332	174	506	0	0	84,313	0	0	0	0	0	65,120	97,476	181,747	32,767	377,110
312	3	191	0	0	194	0	194	0	0	26,651	0	0	0	0	0	75,955	27,276	150,713	11,452	265,396
313	235	31	8	0	273	218	491	1	0	0	0	0	0	0	0	0	0	3,687	0	3,687
314	19	0	0	0	19	0	19	0	18	0	0	0	0	0	0	0	0	0	0	0
315	20	0	0	0	20	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
316	56	0	0	0	56	0	56	0	0	0	0	0	0	0	0	0	0	0	0	0
317	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
318	35	0	0	0	35	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0
319	14	0	0	0	14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0
320	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
321	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
322	11	0	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
323	16	0	0	0	16	0	16	0	0	6,165	0	0	0	0	0	5,216	6,402	4,979	16,348	32,946
324	3	0	0	0	3	0	3	165	0	12,558	550	502	0	0	1,052	10,626	13,041	10,143	1,932	35,741
325	852	10	0	0	862	0	862	0	0	5,301	0	0	0	0	0	4,485	5,505	4,281	22,057	36,329
326	336	0	0	427	763	0	763	0	0	0	0	2,200	0	0	2,200	0	0	0	20,811	20,811
327	31	0	0	0	31	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0
328	101	0	0	0	101	0	101	10	0	0	0	0	0	0	0	0	0	0	0	0
329	161	0	0	0	161	0	161	10	0	0	0	0	0	0	0	0	0	0	16,192	16,192
330	453	74	6	0	532	0	532	2	0	1,040	516	0	0	0	516	880	16,961	840	160	18,841
331	0	0	0	0	0	400	400	0	0	12,936	0	0	0	0	0	448,140	20,193	54,364	36,818	559,516
332	272	28	4	0	305	181	486	0	0	1,654	0	0	0	0	0	13,110	59,884	16,566	4,706	94,267
333	318	0	0	0	318	0	318	0	0	0	0	0	0	0	0	0	530	31,848	0	32,378
334	195	144	56	0	394	91	485	8	0	9,360	0	0	0	0	0	29,554	74,274	174,993	1,440	280,261
335	40	0	0	0	40	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0
336	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	28,363	0	28,363
337	167	0	0	173	340	120	460	0	0	34,788	0	0	0	0	0	7,040	11,087	29,027	76,612	123,766
338	3	0	0	0	3	0	3	10	0	8,817	550	0	0	0	550	7,461	9,157	7,122	1,357	25,096
339	9	0	0	0	9	0	9	0	6	29,808	0	800	0	0	800	25,222	30,955	24,076	4,586	84,838
340	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	1,500	1,500
341	334	0	0	0	334	0	334	10	0	2,600	0	0	0	0	0	0	0	0	7,400	7,400
342	0	0	2	92	94	355	449	0	0	31,656	0	0	0	0	0	278,398	27,580	47,465	45,298	398,741
343	180	249	0	0	429	72	501	0	0	17,068	0	0	0	0	0	211,050	7,560	10,711	28,980	258,301
344	218	61	0	0	279	0	279	0	0	15,805	0	0	0	0	0	103,683	31,027	30,780	28,182	193,672
345	261	78	6	0	345	0	345	11	0	1,040	0	0	0	0	0	107,586	65,132	18,217	160	191,095
346	260	2	2	0	264	0	264	0	0	1,040	0	0	0	0	0	880	1,080	840	36,645	39,445
347	411	105	8	0	524	0	524	0	0	0	0	0	0	0	0	0	0	0	0	0
348	253	40	0	0	293	53	346	0	0	0	0	0	0	0	0	11,726	0	0	4,363	16,089
349	0	0	0	0	0	0	0	0	0	364	0	0	0	0	0	156,585	0	34,843	1,036	192,464
350	206	36	2	0	244	266	511	0	0	11,235	0	0	0	0	0	122,788	51,191	17,376	15,178	206,533
351	307	21	2	100	430	108	537	0	0	18,584	0	0	0	0	0	19,232	246,004	5,880	33,293	304,409
352	323	9	0	0	333	113	446	0	0	17,687	0	0	0	0	0	146,908	19,960	26,493	2,741	196,101
353	100	66	0	120	286	167	454	0	0	3,848	0	0	0	0	0	880	99,236	9,693	8,152	117,961
354	3	0	0	0	3	0	3	18	29	0	0	0	0	0	0	6,072	0	6,755	0	12,827
355	29	0	0	0	29	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0
356	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	1,702	93,608	0	95,310
357	6	0	0	0	6	0	6	266	0	0	0	0	0	0	0	0	0	0	0	0
358	4	0	0	0	4	0	4	211	0	0	0	0	0	0	0	0	0	0	0	0
359	11	0	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
360	9	0	0	0	9	0	9	0	10	23,968	0	0	0	0	0	0	2,740	0	0	2,740
361	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
362	29	0	0	0	29	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0
363	10	0	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
364	23	0	0	0	23	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0
365	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
366	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
367	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
368	7	0	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
369	14	0	0	0	14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0
370	35	0	0	0	35	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0
371	54	0	0	0	54	0	54	0	0	0	0	0	0	0	0	0	0	0	0	0
372	42	0	0	0	42	0	42	0	0	0	0	0	0	0	0	0	0	0	0	0
373	6	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
374	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
375	8	0	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
376	65	0	0	17	82	21	103	61	0	0	0	0	0	0	0	3,180	1,440	2,437	0	7,057
377	7	0	0	1	8	0	8	0	0	780	0	0	0	0	0	0	0	0	2,220	2,220
378	402	273	2	0	676	190	866	4	0	19,760	0	901	0	0	901	73,870	34,040	32,242	19,840	159,992
379	2	0	0	0	2	0	2	105	0	0	0	0	0	0	0	0	0	0	0	0
380	0	0	0	0	0	0	0	0	28	0	0	0	0	0	0	0	0	0	0	0
381	334	24	0	0	358	0	358	0	0	42,370	0	0	0	0	0	11,276	11,880	74,690	20,260	118,106
382	2	0	0	0	2	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0
383	0	0	0	0	0	0	0	63	0	71,760	0	0	0	0	0	112,278	74,520	175,045	11,040	372,883
384	59	49	0	0	108	0	108	0	7	11,960	0	0	0	0	0	62,477	59,749	19,377	8,840	150,443
385	234	274	15	0	523	341	864	0	0	0	0	0	0	0	0	3,580	9,360	6,940	0	19,880
386	158	0	0	1	159	287	447	0	0	12,480	0	0	0	0	0	10,560	12,960	12,862	1,920	38,302
387	367	8	2	0	377	0	377	6	0	22,638	0	0	0	0	0	32,586	16,200	23,362	22,431	94,578
388	213	147	0	0	360	0	360	12	0	41,920	0	0	0	0	0	148,450	93,150	36,943	49,310	327,853

2035 Land Use by TAZ

	Single Family Residential				Single Family Residential	Multi-family Residential	Total Residential		Industrial		Students					Commercial				
TAZ	SUM_ESFD	SUM_ESFA	SUM_EDup	SUM_EMob	SingleFamily	Multi Family	Total Residential	SUM_ParkAcres	SUM_IndAcres	Light Industrial	Elementary	Secondary	CommCollege	University	TotalStudents	Retail	Office	Service	Other Comm	TotalCommercial
389	156	68	0	0	224	0	224	0	0	10,733	0	0	0	0	0	7,920	100,660	27,711	5,347	141,638
390	295	200	0	224	719	26	746	0	0	0	0	0	0	0	0	0	0	0	0	0
391	135	8	0	0	142	0	142	0	0	24,960	0	0	0	0	0	21,212	118,408	40,275	3,840	183,735
392	55	59	0	0	114	0	114	10	0	1,872	0	0	0	0	0	0	6,000	0	5,328	11,328
393	263	0	0	0	263	0	263	0	0	0	0	0	0	0	0	0	30,479	0	0	30,479
394	85	0	0	0	85	0	85	10	0	0	0	0	0	0	0	0	0	0	0	0
395	2	0	0	0	2	0	2	10	0	12,011	0	0	0	0	0	10,163	12,473	9,701	1,848	34,184
396	0	0	0	0	0	0	0	10	0	27,096	0	0	0	0	0	22,928	28,139	21,886	4,169	77,121
397	3	0	0	0	3	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0
398	40	0	0	120	160	0	160	0	0	12,206	0	0	0	0	0	119,095	0	12,261	34,741	166,097
399	453	88	0	657	1,198	85	1,283	0	0	4,186	0	0	0	0	0	0	0	0	11,914	11,914
400	500	292	0	0	792	0	792	0	0	0	0	0	0	0	0	0	0	0	29,742	29,742
401	184	25	0	0	209	1	210	0	0	0	0	0	0	0	0	0	0	0	0	0
402	1	0	0	0	1	0	1	148	0	0	0	0	0	0	0	0	0	0	0	0
403	246	165	0	0	411	255	666	143	0	0	0	0	0	0	0	0	139,449	63,298	0	202,747
404	329	70	30	0	429	213	642	0	18	181,110	0	0	0	0	0	12,280	1,445	4,761	160	18,646
405	858	2	15	0	875	0	875	3	0	0	0	0	0	0	0	0	0	0	0	0
406	22	11	0	0	33	0	33	0	0	0	919	0	0	0	919	0	0	5,420	0	5,420
407	35	0	0	0	35	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0
408	13	0	0	0	13	0	13	0	24	5,680	0	0	0	0	0	26,943	2,160	64,251	320	93,674
409	27	0	0	0	27	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0
410	56	0	0	3	59	0	59	0	9	5,200	0	0	0	0	0	11,743	5,400	22,411	800	40,353
411	613	86	2	275	976	0	976	2	20	45,459	0	0	0	0	0	87,511	25,485	22,247	3,301	138,544
412	5	0	0	0	5	0	5	0	78	50,185	0	0	0	0	0	42,464	52,115	84,534	7,721	186,835
413	2	0	0	0	2	0	2	0	0	10,581	0	2,200	0	0	2,200	206,953	130,988	9,546	1,628	349,115
414	1	0	0	0	1	0	1	0	9	21,993	0	0	0	0	0	18,610	22,839	17,764	3,384	62,596
415	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
416	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	3,068	0	3,068
417	19	0	0	1	20	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
418	6	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
419	18	0	0	0	18	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0
420	18	0	0	0	18	0	18	0	0	0	0	0	0	0	0	0	0	1,200	0	1,200
421	6	0	0	1	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
422	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
423	51	0	0	1	52	0	52	0	0	0	0	0	0	0	0	0	0	0	0	0
424	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
425	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
426	8	0	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
427	491	29	0	0	520	0	520	0	0	0	868	0	0	0	868	0	0	0	0	0
428	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
429	25	0	0	0	25	0	25	0	3	0	0	0	0	0	0	0	0	0	0	0
430	0	0	0	0	0	0	0	0	145	880	7	4	0	0	11	0	422,170	0	8,014	430,183
431	1	0	0	0	1	0	1	0	30	0	0	0	0	0	0	0	0	0	0	0
432	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
433	23	0	0	0	23	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0
434	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
435	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
436	13	0	0	0	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
437	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
438	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
439	2	0	0	0	2	0	2	77	0	0	0	0	0	0	0	0	0	0	0	0
440	13	0	0	0	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
441	802	0	0	0	802	0	802	0	0	0	550	0	0	0	550	0	0	0	0	0
442	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
443	12	0	0	0	12	0	12	10	0	0	550	800	0	0	1,350	0	0	0	0	0
444	22	0	0	0	22	0	22	10	0	0	0	0	0	0	0	0	0	0	0	0
445	6	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
446	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
447	4	0	0	9	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
448	9	0	0	0	9	0	9	10	0	0	0	0	0	0	0	0	0	0	0	0
449	13	0	0	0	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
450	10	0	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
451	5	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
452	10	0	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
453	46	0	0	0	46	0	46	0	0	0	0	0	0	0	0	0	0	0	0	0
454	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	3,444	0	3,444
455	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
456	13	0	0	0	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
457	19	0	0	0	19	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0
458	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
459	21	0	0	0	21	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0
460	66	0	0	0	66	0	66	0	0	0	0	0	0	0	0	0	296	0	0	296
461	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
462	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
463	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
464	645	104	9	340	1,099	43	1,142	0	0	33,275	226	57	0	0	283	0	17,195	7,415	127,947	152,557
465	98	20	0	0	118	0	118	10	0	4,076	0	0	0	0	0	0	12,000	0	11,600	23,600
466	367	57	0	0	424	0	424	4	0	9,145	0	0	0	0	0	7,738	30,676	7,386	1,407	47,207
467	1	0	0	0	1	0	1	10	0	14,810	0	0	0	0	0	12,532	15,380	11,962	2,278	42,152
468	5	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
469	41	0	0	0	41	0	41	0	0	0	0	0	0	0	0	0	0	0	0	0
470	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
471	133	33	0	0	165	0	165	214	0	0	0	0	0	0	0	0	0	0	0	0
472	5	0	0	0	5	0	5	0	0	14,560	0	0	0	0	0	20,980	15,120	50,212	2,240	88,552
473	1	0	0	1	2	0	2	0	15	1,040	0	0	0	0	0	880	10,931	840	160	12,811
474	8	0	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
475	12	0	0	0	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
476	18	0	0	0	18	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0
477	5	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
478	31	0	0	0	31	0	31	0	0	0	0	0	0	0	0	0	0	4,000	0	4,000
479	11	0	0	1	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
480	8	0	0	1	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
481	23	0	0	0	23	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0
482	67	0	0	1	68	0	68	296	0	0	0	0	0	0	0	0	0	572	0	572
483	12	0	0	0	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
484	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
485	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0

2035 Land Use by TAZ

	Single Family Residential				Single Family Residential	Multi-family Residential	Total Residential		Industrial		Students					Commercial				
TAZ	SUM_ESFD	SUM_ESFA	SUM_EDup	SUM_EMob	SingleFamily	Multi Family	Total Residential	SUM_ParkAcres	SUM_IndAcres	Light Industrial	Elementary	Secondary	CommCollege	University	TotalStudents	Retail	Office	Service	Other Comm	TotalCommercial
486	116	0	0	0	116	0	116	0	0	0	0	0	0	0	0	0	0	0	0	0
487	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
488	0	0	0	0	0	0	0	0	2	177,840	0	0	0	0	0	112,625	114,480	89,040	209,360	525,505
489	236	1	0	0	237	0	237	0	0	0	0	0	0	0	0	0	0	0	0	0
490	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
491	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
492	4	0	0	0	4	0	4	0	0	3,704	0	0	0	0	0	3,134	19,454	4,774	570	27,931
493	2	0	0	0	2	0	2	0	0	3,737	550	0	0	0	550	3,162	3,881	3,018	575	10,636
494	47	0	0	0	47	0	47	0	0	260	0	0	0	0	0	420	4,344	427	740	5,931
495	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
496	11	0	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
497	73	0	0	0	73	0	73	0	0	0	0	0	0	0	0	0	0	0	0	0
498	8	0	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
499	1	0	0	0	1	0	1	514	0	0	0	0	0	0	0	0	0	0	0	0
500	7	0	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
501	5	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
502	228	0	0	1	229	0	229	117	0	0	0	0	0	0	0	0	0	0	0	0
503	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
504	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
505	74	0	2	0	76	0	76	0	1	0	0	0	0	0	0	0	5,138	4,782	2,892	12,811

2050 Land Use by TAZ

	Single Family Residential				Single Family Residential	Multi-family Residential	Total Residential		Industrial		Students					Commercial				
TAZ	SUM_ESFD	SUM_ESFA	SUM_EDup	SUM_EMob	SingleFamily	Multi Family	Total Residential	SUM_ParkAcres	SUM_IndAcres	Light Industrial	Elementary	Secondary	CommCollege	University	TotalStudents	Retail	Office	Service	Other Comm	TotalCommercial
1	5	4	0	0	9	10	0	0	92	258,890	0	0	0	0	0	4,583	33,871	8,634	0	47,088
2	281	6	0	0	286	10	296	2	187	108,701	297	0	0	0	297	3,546	46,939	32,106	7,312	89,903
3	376	52	24	0	453	206	659	0	0	0	0	0	0	0	0	0	0	0	0	0
4	415	4	70	0	488	86	574	13	7	0	0	0	0	0	0	45,876	1,889	24,713	0	72,478
5	292	4	53	17	366	226	592	2	57	761,102	108	46	0	0	154	164,515	91,531	83,465	280	339,791
6	478	10	42	0	530	244	774	8	8	0	0	0	0	0	0	4,076	37,993	59,260	39,112	140,442
7	617	19	8	0	644	65	708	0	0	0	508	0	0	0	508	11,567	9,963	2,072	0	23,602
8	527	4	64	0	595	61	656	0	0	0	0	1,929	0	0	1,929	17,766	55,372	1,596	16,334	91,068
9	160	4	98	0	262	615	877	0	0	0	0	0	0	2423	2,423	68,280	136,096	23,024	0	227,400
10	578	4	60	0	643	250	893	0	0	0	0	519	0	0	519	4,035	7,266	0	0	11,301
11	272	4	15	0	291	45	336	1	32	265,235	0	0	0	0	0	0	0	56,700	0	56,700
12	222	4	11	0	237	361	598	8	24	64,378	0	0	0	0	0	3,610	18,715	64,691	0	87,016
13	177	32	49	0	259	23	282	6	20	0	0	0	0	0	0	0	15,299	23,552	21,768	60,619
14	324	8	68	24	424	110	534	31	12	0	0	0	0	0	0	5,748	2,161	8,297	0	16,206
15	398	30	144	28	599	149	748	1	4	0	523	0	0	0	523	39,966	24,192	3,516	0	67,673
16	227	4	79	0	311	108	419	0	4	1,820	0	0	0	0	0	31,683	10,556	21,663	280	64,181
17	71	4	30	0	105	47	152	0	25	29,729	0	0	0	0	0	0	77,514	31,071	0	108,585
18	204	4	11	1	221	156	376	0	0	0	0	0	0	0	0	6,394	7,380	19,295	0	33,069
19	153	13	30	6	202	188	390	16	1	51,074	0	0	0	0	0	5,772	4,999	552	0	11,323
20	5	4	0	0	9	107	116	0	24	3,640	0	0	0	0	0	23,359	282,192	104,621	560	410,732
21	5	4	0	0	9	174	183	0	0	5,879	0	0	0	0	0	125,007	255,276	102,698	30,426	513,407
22	5	4	0	0	9	10	19	0	0	0	0	0	0	2808	2,808	0	0	0	0	0
23	5	4	0	0	9	10	19	0	0	0	0	0	0	8732	8,732	0	0	17,620	0	17,620
24	5	4	0	0	9	10	19	0	0	0	0	0	0	5997	5,997	0	5,097	0	0	5,097
25	5	4	0	36	45	127	172	0	0	0	0	0	0	6667	6,667	0	0	0	0	0
26	45	40	2	0	87	159	246	15	0	5,460	0	0	0	0	0	7,907	142,363	19,683	840	170,793
27	65	4	19	0	88	300	388	0	0	0	0	0	0	0	0	32,955	0	0	0	32,955
28	129	16	36	0	181	393	574	0	0	0	0	0	0	0	0	38,719	18,156	2,855	0	59,731
29	256	4	87	0	347	65	412	0	0	1,820	0	0	0	0	0	36,101	1,890	23,619	280	61,890
30	279	6	60	0	346	39	385	10	0	0	555	53	0	0	608	1,812	9,216	0	57,129	68,157
31	285	4	127	0	416	274	690	0	0	1,820	0	0	0	0	0	31,421	79,876	26,393	39,460	177,150
32	6	4	0	0	10	10	20	0	0	0	0	0	0	4992	4,992	0	58,630	0	0	58,630
33	417	4	47	34	502	168	670	0	4	6,405	0	0	0	0	0	7,820	7,380	7,220	3,529	25,948
34	323	6	34	0	363	243	607	2	0	0	0	0	0	0	0	39,733	95,697	45,892	6,480	187,801
35	6	4	0	195	205	441	646	0	0	12,740	0	0	0	0	0	424,292	142,890	115,637	1,960	684,779
36	211	14	6	153	384	634	1,018	0	0	21,438	0	731	0	0	731	415,342	222,726	158,318	36,515	832,902
37	204	19	2	0	225	889	1,114	0	0	0	115	368	0	0	483	62,544	20,707	16,994	0	100,245
38	479	17	6	50	552	43	595	0	0	0	354	0	0	0	354	64,072	14,867	36,095	0	115,033
39	381	4	13	17	415	174	590	26	0	5,915	0	0	0	0	0	20,898	24,339	5,372	7,035	57,644
40	711	12	6	0	728	72	801	0	0	0	370	0	0	0	370	51,766	23,955	6,872	0	82,593
41	416	32	0	0	448	146	595	253	0	0	0	0	0	0	0	5,935	0	10,295	0	16,230
42	683	32	17	5	737	129	866	10	0	0	625	768	0	0	1,394	8,817	18,183	21,678	0	48,678
43	787	5	59	0	851	210	1,061	0	0	0	0	0	0	0	0	0	16,416	6,540	0	22,956
44	347	17	0	0	364	157	522	8	0	12,076	38	0	0	0	38	115,128	29,570	99,536	24,569	268,803
45	416	47	0	0	464	10	474	0	0	0	291	90	0	0	381	0	31,468	1,512	0	32,980
46	518	4	6	0	528	208	735	9	0	0	0	0	0	0	0	22,672	16,427	20,955	0	60,054
47	10	4	0	300	314	800	1,114	0	3	161,695	0	0	0	0	0	322,775	239,339	124,862	365,004	1,051,980
48	213	152	43	0	408	448	857	0	0	0	0	0	0	0	0	11,067	46,862	91,649	0	149,578
49	397	17	0	0	415	10	425	15	0	0	0	0	0	0	0	3,828	26,962	4,118	0	34,908
50	345	189	2	0	536	10	546	25	0	4,246	0	0	0	0	0	51,842	51,421	25,253	27,764	156,279
51	336	4	0	0	340	15	355	0	0	0	0	1,219	0	0	1,219	0	31,247	0	0	31,247
52	260	4	0	0	264	10	274	0	0	15,531	342	0	0	0	342	57,253	92,844	21,903	44,204	216,203
53	232	4	6	0	241	10	251	9	0	0	0	648	0	0	648	52,167	8,348	2,301	0	62,816
54	513	7	11	0	531	14	545	3	0	3,174	0	0	0	0	0	125,784	34,440	12,237	4,134	176,595
55	431	17	99	0	547	37	585	0	0	0	0	0	0	0	0	5,333	104,295	76,208	0	185,836
56	433	4	151	0	589	54	643	0	0	0	0	0	0	0	0	74,917	44,375	15,214	0	134,506
57	289	4	21	0	314	14	327	0	0	0	440	0	0	1000	1,440	10,952	28,526	426,007	35,177	500,662
58	318	11	4	12	345	25	370	5	0	1,740	0	0	0	0	0	10,931	29,098	329,836	4,953	374,817
59	584	42	19	0	645	261	906	1	0	0	110	0	0	0	110	13,033	108,715	12,062	59,544	193,354
60	341	12	19	0	371	27	398	23	0	0	0	0	0	0	0	16,853	122,410	11,117	0	150,380
61	603	4	155	0	762	10	772	0	0	0	550	0	0	0	550	25,003	10,382	0	0	35,385
62	413	15	119	0	548	31	579	0	0	0	212	112	0	0	324	14,926	38,175	4,172	0	57,273
63	331	4	112	0	447	171	617	47	0	0	0	0	0	0	0	67,954	78,488	0	0	146,443
64	416	4	147	0	567	67	634	16	6	34,957	0	0	0	0	0	58,005	0	22,446	39,978	120,429
65	39	4	2	0	45	151	196	0	0	12,414	0	2,528	0	0	2,528	0	0	0	104,384	104,384
66	226	4	70	0	300	440	740	31	0	0	0	0	0	0	0	1,908	10,555	3,646	4,011	20,120
67	85	4	49	0	138	392	530	0	0	0	0	0	0	0	0	0	26,227	0	0	26,227
68	76	8	34	0	118	1,308	1,426	0	0	0	0	0	900	0	900	7,607	42,615	23,090	0	73,312
69	3	0	0	93	96	738	834	0	0	68,730	0	0	0	0	0	66,661	74,387	18,371	5,502	164,921
70	108	0	57	0	165	884	1,048	24	2	0	431	0	0	0	431	17,652	37,358	8,340	0	63,350
71	21	17	6	0	43	680	724	2	0	0	0	0	0	0	0	62,310	41,822	82,476	0	186,607
72	1	0	2	0	3	800	803	4	0	7,280	0	0	0	0	0	32,773	88,347	38,735	1,120	160,975
73	0	0	0	0	0	600	600	1	0	0	0	0	0	0	0	15,510	59,064	0	0	74,574
74	0	0	0	0	0	789	789	1	0	0	0	0	0	0	0	144,244	215,566	34,942	0	394,753
75	0	0	0	245	245	500	745	0	0	90,714	0	0	0	0	0	12,250	82,467	122,391	23,051	240,159
76	0	0	0	0	0	948	948	0	0	0	0	0	0	0	0	12,478	243,357	101,349	0	357,184
77	0	0	0	0	0	638	638	0	0	0	0	0	0	0	0	0	600,345	92,505	0	692,850
78	0	0	0	0	0	748	748	0	0	0	0	0	0	0	0	31,865	177,437	36,929	0	246,231
79	0	0	0	0	0	625	625	0	0	1,820	0	0	0	0	0	3,066	216,857	11,372	280	231,575
80	0	0	0	0	0	522	522	1	0	0	0	0	0	0	0	9,209	68,093	50,161	0	127,463
81	0	0	0	0	0	565	565	1	0	0	135	46	0	0	181	1,923	321,369	34,958	0	358,250
82	0	0	0	0	0	509	509	0	0	30,940	0	0	0	0	0	20,248	20,963	0	88,060	129,271
83	4	0	2	0	6	355	361	0	0	0	0	0	0	0	0	9,059	604,821	0	0	613,880
84	1	0	0	0	1	306	307	0	0	0	0	0	0	0	0	0	111,750	0	8,318	120,068
85	79	0	100	0	179	1,228	1,406	1	0	0	332	0	0	0	332	11,467	61,760	0	0	73,228
86	116	0	76	0	192	1,018	1,210	1	0	0	487	0	0	0	487	29,290	7,440	33,938	0	70,669
87	234	2	26	0	263	58	320	12	2	0	0	937	0	0	937	4,133	14,682	0	0	18,815
88	13	0	0	0	13	70	83	0	7	246,179	0	0	0	0	0	1,188	139,725	0	0	140,913
89	0	0	0	0	0	454	454	0	11	261,438	0	0	0	0	0	28,542	140,767	40,970	2,240	212,519
90	64	0	0	0	64	0	64	0	47	331,696	0	0	0	0	0	9,240	21,742	8,820	1,680	41,482
91	302	18	79	0	399	1	400	1	1	109	0	0	0	0	0	486	6,111	2,261	311	9,169
92	25	0	11	0	36	0	36	29	73	11,842	0	0	0	0	0	0	11,400	84,339	0	95,739
93	2	0	0	0	2	0	2	58	15	2,848	0	0	0	0	0	0	72,388	146,354	41,489	260,231
94	488	0	134	0	622	318	941	0	7	0	0	0	0	0	0	33,160	131,742	7,560	5,208	177,670
95	387	0	34	0	421	97	518	1	6	3,640	291	0	0	0	291	12,995	46,135	2,940	16,620	78,690
96	485	0	66	0	551	23	574	16	0	0	157	990	0	0	1,147	9,500	19,997	0	0	29,497
97	350	0	229	2	580	529	1,110	1	0	0	587	0	0	0	587	51,075	45,090	0	0	96,165

2050 Land Use by TAZ

	Single Family Residential				Single Family Residential	Multi-family Residential	Total Residential		Industrial		Students					Commercial				
TAZ	SUM_ESFD	SUM_ESFA	SUM_EDup	SUM_EMob	SingleFamily	Multi Family	Total Residential	SUM_ParkAcres	SUM_IndAcres	Light Industrial	Elementary	Secondary	CommCollege	University	TotalStudents	Retail	Office	Service	Other Comm	TotalCommercial
98	638	0	172	0	810	184	994	21	0	0	0	0	0	0	0	26,848	19,781	4,574	0	51,203
99	578	0	11	0	590	29	619	16	0	0	503	0	0	0	503	48,429	47,810	2,079	0	98,318
100	586	0	9	0	595	4	599	8	0	0	0	0	0	0	0	2,039	20,134	29,999	0	52,172
101	88	0	0	0	88	0	88	43	0	0	0	0	0	0	0	0	0	0	0	0
102	541	0	40	0	581	0	581	0	0	0	0	0	0	0	0	0	3,404	0	0	3,404
103	296	11	59	0	366	0	366	2	0	0	257	2,373	0	0	2,630	0	47,967	0	0	47,967
104	615	2	57	0	673	30	703	8	0	6,663	4	0	0	0	4	37,897	25,554	63,222	4,265	130,937
105	363	69	13	3	449	198	647	11	0	0	122	129	0	0	251	22,730	17,298	8,960	0	48,987
106	236	2	43	0	281	369	651	7	0	0	406	0	0	0	406	95,667	10,662	34,322	0	140,651
107	447	0	38	32	517	91	608	19	0	3,438	0	836	0	0	836	70,861	19,417	0	9,785	100,063
108	721	44	21	0	786	0	786	22	0	0	682	0	0	0	682	118,852	61,029	3,546	0	183,427
109	528	51	34	0	613	880	1,493	0	0	0	0	0	0	0	0	152,867	17,911	15,451	0	186,230
110	401	0	6	0	406	20	426	0	0	277	430	7	0	0	437	0	24,365	0	787	25,152
111	1	0	0	0	1	173	174	0	11	0	0	0	0	0	0	78,626	156,409	68,524	0	303,559
112	722	6	98	0	826	48	874	28	3	0	0	0	0	0	0	13,920	15,792	21,111	0	50,823
113	4	0	0	168	172	0	172	0	115	214,470	0	0	0	0	0	430,289	24,742	216,504	23,199	694,734
114	154	63	19	122	358	236	594	0	51	129,295	0	0	0	0	0	53,235	45,346	313,707	148,787	561,075
115	0	0	0	0	0	0	0	68	113	685,382	0	0	0	0	0	9,616	47,813	168,666	11,458	237,552
116	0	0	0	0	0	612	612	0	15	245,497	0	0	0	0	0	760,692	93,896	112,305	221,884	1,188,778
117	222	57	0	109	388	964	1,352	4	0	4,020	0	0	0	0	0	78,923	34,062	123,468	1,641	238,094
118	1	0	0	0	1	0	1	0	74	364,720	0	0	0	0	0	169,400	207,900	320,329	30,800	728,429
119	0	0	0	0	0	0	0	0	175	972,097	0	0	0	0	0	0	2,394	57,420	0	59,814
120	0	0	0	0	0	0	0	0	135	110,446	0	0	0	0	0	0	0	2,400	0	2,400
121	0	0	0	0	0	0	0	0	167	310,465	0	0	0	0	0	39,345	25,993	500,301	18,589	584,228
122	10	0	0	83	93	0	93	0	12	411,231	0	0	0	0	0	149,859	329,873	285,205	544,600	1,309,537
123	0	0	0	0	0	0	0	0	61	127,718	0	0	0	0	0	162,465	55,767	344,580	45,652	608,464
124	11	0	0	0	11	11	23	18	17	83,532	0	0	0	0	0	11,145	14,571	26,784	280	52,780
125	184	6	9	0	199	132	331	18	0	10,920	0	0	0	0	0	97,083	13,962	47,303	1,680	160,028
126	372	11	23	0	407	26	433	43	0	0	870	0	0	0	870	0	7,874	0	0	7,874
127	325	9	17	9	360	425	785	0	0	38,989	0	0	0	0	0	12,948	25,803	50,621	6,487	95,859
128	299	115	11	26	452	132	584	0	0	90,849	732	0	0	0	732	119,699	213,987	228,041	27,827	589,554
129	191	121	0	177	489	174	663	0	0	2,587	0	0	0	0	0	49,963	9,057	1,470	2,462	62,951
130	378	77	15	16	487	246	732	0	0	0	0	933	0	0	933	0	9	9,584	0	9,593
131	506	91	3	0	601	205	805	11	0	0	0	0	0	0	0	13,117	0	1,124	0	14,241
132	164	106	0	8	278	71	349	0	0	0	0	0	0	0	0	0	15,553	5,670	0	21,223
133	393	120	8	0	520	0	520	64	0	0	49	101	0	0	150	0	52,965	0	0	52,965
134	53	17	4	714	788	77	865	49	0	35,672	0	0	0	0	0	23,990	0	5,740	101,528	131,258
135	0	0	0	0	0	0	0	0	81	0	0	0	0	0	0	0	529,739	0	0	529,739
136	287	56	6	0	348	80	429	5	2	9,100	562	0	0	0	562	36,292	12,087	28,053	1,400	77,832
137	593	100	15	672	1,381	393	1,774	0	0	0	0	0	0	0	0	0	0	4,151	30,224	34,375
138	0	0	0	0	0	0	0	0	16	141,988	0	0	0	0	0	14,659	35,357	28,422	1,400	79,837
139	0	0	0	0	0	0	0	0	231	2,852,131	0	0	0	0	0	141,723	508,120	441,535	21,560	1,112,938
140	816	89	0	0	904	408	1,313	48	0	6,865	543	0	0	0	543	32,930	28,037	14,917	19,538	95,422
141	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
142	2	0	0	0	2	0	2	114	299	0	0	0	0	0	0	3,319	0	0	0	3,319
143	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
144	70	18	9	0	97	79	176	5	0	0	810	0	0	0	810	0	15,561	6,144	0	21,705
145	337	120	652	0	1,109	34	1,142	18	0	0	0	0	0	0	0	0	0	0	0	0
146	1	0	0	172	173	147	320	79	2	307,580	0	0	0	0	0	271,104	319,410	253,927	47,320	891,761
147	448	29	26	1	505	4	509	0	76	289,402	469	0	0	0	469	35,342	82,094	236,713	47,347	401,496
148	4	0	0	0	4	10	14	0	25	278,127	0	0	0	0	0	115,415	134,124	258,158	18,511	526,209
149	364	309	11	70	754	535	1,289	3	0	10,920	0	0	0	0	0	90,981	17,553	61,245	1,680	171,459
150	1,873	315	5	0	2,193	191	2,384	11	0	0	0	0	0	0	0	14,937	2,326	3,144	9,265	29,671
151	0	0	0	0	0	0	0	0	63	92,365	0	0	0	0	0	56,980	89,169	245,760	81,585	473,494
152	0	0	0	0	0	0	0	0	59	0	0	0	0	0	0	7,627	0	3,988	0	11,615
153	66	55	22	0	143	131	274	6	0	1,820	0	0	0	0	0	1,540	24,036	27,899	280	53,755
154	76	52	15	0	143	210	353	56	42	469,460	0	0	0	0	0	2,814	1,855	33,366	0	38,035
155	0	0	0	0	0	0	0	0	58	86,596	0	0	0	0	0	0	25,551	205,237	0	230,788
156	1,048	59	51	134	1,292	0	1,292	9	0	7,280	0	0	0	0	0	99,297	17,947	8,266	1,120	126,630
157	240	81	9	633	963	82	1,045	0	30	136,247	0	0	0	0	0	119,093	141,488	120,173	20,961	401,714
158	155	0	0	1	156	0	156	0	0	0	0	0	0	0	0	0	0	0	0	0
159	549	30	0	12	592	113	705	0	0	0	0	0	0	0	0	0	0	6,773	0	6,773
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12,392	0	0	0	12,392
161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
162	0	0	0	0	0	0	0	0	165	1,768,894	0	0	0	0	0	76,306	349,261	209,800	34,375	669,742
163	561	339	13	0	913	77	991	35	0	10,920	602	0	0	0	602	45,779	91,034	15,931	1,680	154,424
164	272	119	8	0	399	189	588	0	0	7,280	0	0	0	0	0	6,160	59,592	17,583	1,120	84,455
165	68	0	0	0	68	0	68	101	0	3,640	0	0	0	0	0	3,080	85,313	2,940	560	91,893
166	253	0	11	0	265	86	351	228	0	0	0	0	0	0	0	0	106,847	48,196	233,665	388,708
167	0	0	0	0	0	0	0	91	98	77,875	0	0	0	0	0	17,875	28,907	768,160	85,541	900,483
168	174	11	20	2	207	48	255	131	0	3,640	0	0	0	0	0	3,080	3,780	3,850	22,560	33,270
169	95	18	9	0	122	81	203	0	0	0	0	0	0	0	0	0	0	0	0	0
170	42	0	0	0	42	0	42	10	0	0	0	0	0	0	0	0	9,353	0	0	9,353
171	29	0	0	0	29	0	29	607	62	188,875	0	0	0	0	0	0	0	5,206	0	5,206
172	29	0	0	2	31	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0
173	155	0	0	0	155	0	155	0	0	0	0	0	0	0	0	0	15,162	0	0	15,162
174	94	0	0	0	94	0	94	0	0	0	0	0	0	0	0	0	0	0	0	0
175	144	24	12	0	180	106	286	0	0	0	0	0	0	0	0	0	0	0	0	0
176	70	32	6	25	133	254	387	4	0	16,257	891	0	0	0	891	178,440	41,009	158,489	102,211	480,148
177	616	32	138	0	786	134	921	107	0	4,706	99	2	0	0	101	22,283	25,251	0	13,395	60,929
178	17	96	0	0	114	486	599	10	0	51,326	0	0	0	0	0	153,984	393,765	52,854	87,281	687,885
179	382	0	0	0	382	0	382	6	0	0	548	0	0	0	548	0	49,896	0	0	49,896
180	716	217	0	0	933	11	944	18	0	657	0	0	0	0	0	19,402	65,485	54,722	1,870	141,480
181	26	43	0	0	69	0	69	290	0	0	0	0	0	0	0	14,972	83,688	0	0	98,660
182	224	37	20	3	283	533	816	12	0	0	0	0	0	0	0	91,806	65,066	14,489	0	171,362
183	295	176	0	1	472	253	725	0	0	9,100	0	0	0	0	0	132,329	16,026	53,884	16,100	218,338
184	30	0	0	0	30	0	30	14	0	52,398	0	0	0	0	0	256,717	155,411	37,501	109,931	559,560
185	271	103	0	1	375	139	514	4	0	0	0	0	0	0	0	0	151,273	3,752	0	155,025
186	93	203	0	0	296	0	296	10	0	59,931	0	0	0	0	0	61,885	96,354	51,214	67,672	277,125
187	361	125	0	0	487	1	488	0	0	1,820	0	0	0	0	0	1,540	92,674	51,450	280	145,944
188	71	40	0	0	111	0	111	10	0	30,940	0	0	0	0	0	26,180	580,536	37,039	15,074	658,829
189	253	23	12	0	288	104	391	0	0	0	292	0	0	0	292	0	41,877	0	0	41,877
190	436	12	4	0	451	241	692	2	0	3,640	0	0	0	0	0	0	443,780	0	10,360	454,140
191	284	70	8	719	1,081	36	1,118	0	0	0	0	0	0	0	0	2,582	7,819	3,651	0	14,052
192	257	242	0	80	580	125	704	0	0	134,680	346	0	0	0	346	141,548	149,923	114,880	20,720	427,071
193	443	239	1	77	761	309	1,070	0	0	20,020	0	0	0	0	0	286,528	62,790	16,170	3,080	368,568
194	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

2050 Land Use by TAZ

	Single Family Residential				Single Family Residential	Multi-family Residential	Total Residential		Industrial		Students					Commercial				
TAZ	SUM_ESFD	SUM_ESFA	SUM_EDup	SUM_EMob	SingleFamily	Multi Family	Total Residential	SUM_ParkAcres	SUM_IndAcres	Light Industrial	Elementary	Secondary	CommCollege	University	TotalStudents	Retail	Office	Service	Other Comm	TotalCommercial
195	3	0	0	0	3	0	3	0	2	0	0	0	0	0	0	0	0	0	0	0
196	6	0	0	0	6	0	6	0	49	289,617	0	0	0	0	0	5,104	0	0	0	5,104
197	2	0	0	0	2	0	2	32	2	0	0	0	0	0	0	0	0	0	0	0
198	2	0	0	0	2	0	2	153	1	0	0	0	0	0	0	0	0	0	0	0
199	8	0	0	0	8	0	8	0	22	0	0	0	0	0	0	0	0	0	0	0
200	163	37	18	0	218	166	384	10	0	0	0	0	0	0	0	0	0	0	0	0
201	244	59	29	0	331	263	595	10	0	0	578	0	0	0	578	0	0	0	6,965	6,965
202	117	27	14	0	158	122	280	10	0	0	0	0	0	0	0	0	0	0	0	0
203	44	0	0	0	44	0	44	0	0	0	0	0	0	0	0	0	0	0	0	0
204	0	114	0	52	166	525	691	0	0	207,515	0	0	0	0	0	686,040	211,873	211,953	110,419	1,220,285
205	58	0	0	0	58	0	58	0	0	27,408	0	0	0	0	0	145,280	20,790	40,703	24,107	230,880
206	497	0	0	0	497	234	731	0	0	0	746	0	0	0	746	0	199	152,069	0	152,268
207	297	104	2	2	405	98	503	0	0	0	0	0	0	0	0	0	181,082	150,432	0	331,514
208	221	32	19	0	272	170	442	0	0	3,640	0	0	0	0	0	26,614	121,705	105,507	560	254,387
209	5	0	0	0	5	0	5	28	0	0	0	0	0	0	0	0	0	0	0	0
210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,880	0	5,772	7,652
211	6	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
212	3	0	0	0	3	0	3	0	44	0	0	0	0	0	0	0	0	0	0	0
213	2	0	0	0	2	0	2	10	0	0	0	0	0	0	0	0	0	0	0	0
214	8	0	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	353,588	353,588
215	35	0	0	0	35	0	35	0	0	0	0	0	0	0	0	5,250	0	1,750	0	7,000
216	256	52	26	0	334	235	570	10	2	0	0	0	0	0	0	0	2,096	9,420	0	11,516
217	681	230	30	0	941	49	990	1	15	148,659	0	0	0	0	0	43,120	52,920	41,160	25,209	162,409
218	0	0	0	557	557	0	557	0	0	135,023	0	0	0	0	0	206,319	377,003	75,566	212,796	871,685
219	3	0	0	0	3	0	3	0	2	0	0	0	0	0	0	0	0	0	0	0
220	244	61	30	0	336	274	610	10	0	0	0	0	0	0	0	0	0	0	0	0
221	639	15	7	0	661	66	726	0	0	0	0	0	0	0	0	0	0	0	0	0
222	9	0	0	1	9	0	9	0	37	73,784	0	0	0	0	0	62,433	76,622	126,235	11,351	276,642
223	51	10	5	0	66	45	111	10	0	75,910	550	0	0	0	550	0	0	0	2,590	2,590
224	66	0	0	0	66	0	66	0	0	0	0	0	0	0	0	0	0	0	0	0
225	358	6	0	16	380	127	507	0	0	15,796	0	0	0	0	0	28,757	27,436	35,351	40,057	131,600
226	469	0	0	0	469	0	469	0	0	0	670	0	0	0	670	65,712	20,606	0	0	86,318
227	286	0	115	0	401	333	734	1	0	0	0	0	0	0	0	113,428	25,863	16,055	0	155,346
228	254	0	25	0	279	40	319	6	0	1,820	0	0	0	0	0	19,243	27,645	492,261	280	539,430
229	250	17	172	0	439	157	596	0	0	0	12	8	0	1019	1,039	19,799	54,701	0	0	74,500
230	669	43	11	2	726	194	920	14	1	0	452	0	0	0	452	103,339	26,648	6,787	0	136,774
231	117	0	49	0	166	314	480	0	18	7,105	0	0	0	0	0	166,161	49,456	209,801	1,036	426,454
232	508	28	1	0	537	7	544	0	0	0	0	0	0	0	0	0	0	0	0	0
233	352	13	0	0	365	0	365	20	0	0	370	154	0	0	523	0	76,984	0	0	76,984
234	408	283	0	36	727	338	1,065	0	0	0	0	0	0	0	0	13,817	0	50,572	0	64,389
235	751	72	11	0	834	8	842	0	0	0	486	0	0	0	486	11,443	116,499	4,828	0	132,770
236	314	19	13	0	346	0	346	0	0	0	554	0	0	0	554	57,178	51,754	2,033	8,187	119,152
237	13	0	0	0	13	6	19	0	0	0	0	0	0	0	0	0	67,142	1,904	0	69,046
238	261	0	72	0	333	769	1,102	0	0	3,162	543	0	0	0	543	120,996	5,240	16,974	4,100	147,310
239	0	0	0	0	0	0	0	0	196	2,014,504	0	0	0	0	0	0	0	0	0	0
240	65	0	0	0	65	0	65	46	0	0	0	2,434	0	0	2,434	0	17,448	0	131,316	148,764
241	192	2	0	0	194	199	393	19	0	0	0	0	0	0	0	186,933	170,932	344,420	0	702,285
242	0	0	0	0	0	0	0	0	0	20,687	0	0	0	0	0	367,016	59,681	33,975	34,377	495,050
243	100	52	31	30	213	743	955	4	0	0	0	0	0	0	0	0	24,050	16,282	30,440	70,772
244	412	34	0	0	446	172	618	0	0	0	346	184	0	0	530	30,169	77,728	2,733	0	110,630
245	158	0	0	0	158	0	158	0	0	0	0	1,211	0	0	1,211	145,329	46,106	18,994	37,324	247,754
246	0	0	0	0	0	0	0	0	0	54,458	0	0	0	0	0	401,093	60,452	57,339	150,095	668,979
247	267	0	0	0	267	118	385	0	0	0	0	0	0	0	0	0	0	0	0	0
248	436	4	0	0	439	0	439	0	0	0	0	0	0	0	0	0	0	0	0	0
249	235	211	2	0	448	24	472	0	0	37,599	0	0	0	0	0	91,489	70,159	78,222	23,712	263,582
250	133	173	4	0	310	34	344	34	0	10,920	0	0	0	0	0	9,240	30,892	45,956	1,680	87,768
251	84	0	0	0	84	0	84	0	0	5,460	0	0	0	0	0	4,620	86,492	45,993	840	137,945
252	272	36	0	3	311	193	504	0	0	0	341	364	0	0	706	0	50,743	0	0	50,743
253	270	88	0	0	358	0	358	0	0	0	740	0	0	0	740	0	5,419	0	0	5,419
254	133	76	0	0	209	80	289	43	0	10,535	0	0	0	0	0	110,859	45,431	101,279	15,284	272,853
255	231	187	32	0	450	536	986	211	0	0	0	0	0	0	0	0	0	47,266	0	47,266
256	0	0	0	0	0	0	0	1	0	14,438	0	0	0	0	0	25,128	0	3,476	41,093	69,697
257	726	17	0	120	863	221	1,084	242	17	330,511	447	187	0	0	633	218,105	845,490	224,758	58,415	1,346,768
258	391	24	2	0	417	0	417	0	0	26,117	0	0	0	0	0	70,798	82,570	92,349	20,434	266,151
259	20	68	0	0	89	600	689	0	48	326,969	0	0	0	0	0	79,506	4,655	90,203	0	174,364
260	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
261	0	51	0	0	51	600	651	0	4	265,611	0	2,416	0	0	2,416	225,561	292,312	226,111	172,869	916,853
262	2	0	0	0	2	0	2	0	21	159,350	0	2,201	0	0	2,201	20,531	224,640	73,678	0	318,849
263	11	0	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
264	15	0	0	0	15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0
265	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
266	583	1	4	0	587	0	587	10	14	0	0	0	0	0	0	0	0	0	0	0
267	46	10	5	0	61	45	106	10	0	0	550	0	0	0	550	0	0	0	0	0
268	88	21	11	226	346	95	440	0	0	0	0	0	0	0	0	0	0	0	0	0
269	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
270	46	0	0	0	46	0	46	0	0	0	0	0	0	0	0	0	0	0	0	0
271	12	0	0	1	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
272	17	3	1	0	21	13	34	0	0	0	0	0	0	0	0	0	0	0	0	0
273	44	0	0	72	116	590	705	0	0	1,208	0	0	0	0	0	0	6,532	0	3,440	9,972
274	419	13	7	0	439	60	500	9	0	0	0	0	0	0	0	0	3,291	0	2,070	5,361
275	141	77	7	0	225	14	239	0	0	112,840	0	0	0	0	0	502,929	157,990	203,011	17,360	881,290
276	7	0	0	0	7	0	7	157	0	0	0	0	0	0	0	0	0	0	0	0
277	24	0	0	0	24	0	24	140	0	0	0	0	0	0	0	0	0	0	0	0
278	32	0	0	0	32	0	32	0	1	0	0	0	0	0	0	0	0	0	0	0
279	11	0	0	0	11	0	11	0	51	0	0	0	0	0	0	0	0	0	0	0
280	7	0	0	0	7	0	7	0	14	0	0	0	0	0	0	0	2,918	156,767	0	159,685
281	74	0	0	0	74	0	74	0	0	0	0	0	0	0	0	0	0	0	0	0
282	13	0	0	0	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
283	726	48	67	62	903	46	949	0	96	319,285	0	0	0	0	0	20,429	29,564	15,405	0	65,398
284	771	15	40	0	826	72	898	0	64	339,589	663	1,094	0	0	1,757	56,172	25,711	22,133	384,784	488,799
285	0	0	0	0	0	0	0	0	136	682,888	0	0	0	0	0	29,986	3,610	14,937	0	48,533
286	13	0	0	1	14	0	14	0	0	21,633	0	0	0	0	0	0	0	0	61,569	61,569
287	30	0	0	0	30	0	30	0	2	0	0	0	0	0	0	0	3,676	0	0	3,676
288	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,800	0	8,610	0	25,410
289	2	0	0	0	2	0	2	10	0	0	550	0	0	0	550	0	0	0	0	0
290	386	53	0	0	439	215	654	0	0	38,155	0	0	0	0	0	46,903	47,650	131,100	44,895	270,548
291	206	11	2	4	223	114	337	0	10	4,186	0	0	15,000	0	15,000	0	63,743	5,250	11,914	80,907

2050 Land Use by TAZ

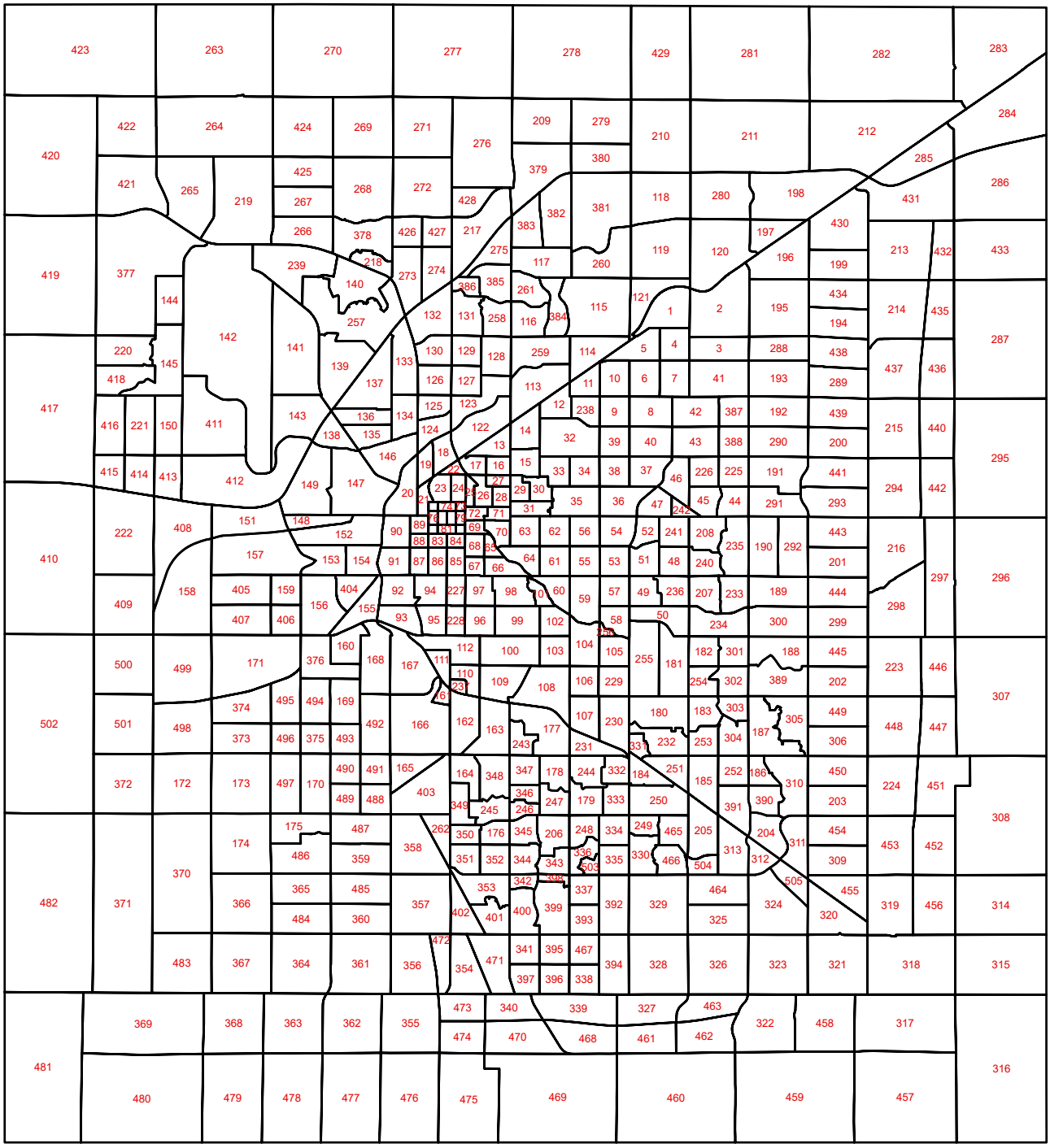
	Single Family Residential				Single Family Residential	Multi-family Residential	Total Residential		Industrial		Students					Commercial				
TAZ	SUM_ESFD	SUM_ESFA	SUM_EDup	SUM_EMob	SingleFamily	Multi Family	Total Residential	SUM_ParkAcres	SUM_IndAcres	Light Industrial	Elementary	Secondary	CommCollege	University	TotalStudents	Retail	Office	Service	Other Comm	TotalCommercial
292	282	110	0	0	392	82	474	0	0	0	0	0	0	0	0	0	0	33,540	0	33,540
293	625	172	13	1	811	117	927	0	0	3,640	0	0	0	0	0	3,080	3,780	2,940	560	10,360
294	34	6	3	0	42	25	68	0	0	0	0	0	0	0	0	0	0	0	0	0
295	46	0	0	0	46	0	46	0	23	107,345	0	0	0	0	0	0	0	24,600	0	24,600
296	42	0	0	0	42	0	42	0	0	264	0	0	0	0	0	245	0	0	751	996
297	61	40	0	0	101	0	101	0	0	0	0	0	0	0	0	0	0	12,079	24,301	36,380
298	108	13	7	0	128	60	187	10	0	0	0	800	0	0	800	0	0	0	0	0
299	227	55	27	0	309	246	555	10	0	0	0	0	0	0	0	0	0	0	0	0
300	405	23	11	595	1,034	101	1,135	10	0	46,081	0	0	0	0	0	38,991	51,353	62,598	7,089	160,032
301	219	89	4	2	313	197	510	0	0	0	0	923	0	0	923	31,969	10,877	0	0	42,846
302	416	31	0	0	447	0	447	0	0	0	0	0	0	0	0	0	17,811	0	0	17,811
303	125	41	10	16	192	0	192	0	0	18,248	0	0	0	0	0	54,651	45,681	41,371	12,737	154,440
304	433	192	0	0	625	0	625	6	0	23,655	0	0	0	0	0	14,698	33,631	33,781	67,327	149,437
305	132	7	4	0	143	33	176	0	0	0	0	0	0	0	0	1,050	0	2,520	0	3,570
306	11	0	0	0	11	0	11	10	0	0	0	0	0	0	0	0	0	0	0	0
307	27	0	0	0	27	0	27	0	0	0	0	0	0	0	0	0	3,430	0	6,986	10,416
308	46	0	0	0	46	0	46	0	0	0	0	0	0	0	0	0	0	0	0	0
309	15	0	0	0	15	0	15	0	0	0	0	0	0	0	0	0	11,463	0	0	11,463
310	914	73	2	0	988	0	988	0	0	0	533	0	0	0	533	0	0	0	0	0
311	293	45	1	0	339	179	518	0	0	147,547	0	0	0	0	0	113,960	159,908	228,367	57,342	559,577
312	3	191	0	0	194	0	194	0	0	46,639	0	0	0	0	0	93,067	47,733	165,203	20,041	326,044
313	247	34	9	0	290	232	522	1	0	0	0	0	0	0	0	0	0	3,687	0	3,687
314	26	0	0	0	26	0	26	0	27	0	0	0	0	0	0	0	0	0	0	0
315	20	0	0	0	20	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
316	56	0	0	0	56	0	56	0	0	0	0	0	0	0	0	0	0	0	0	0
317	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
318	37	0	0	0	37	0	37	0	0	0	0	0	0	0	0	0	0	0	0	0
319	14	0	0	0	14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0
320	5	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
321	10	0	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
322	11	0	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
323	101	21	11	0	133	96	229	0	0	13,871	0	0	0	0	0	11,737	14,405	11,204	17,534	54,879
324	180	44	22	0	246	199	445	165	0	28,255	578	527	0	0	1,104	23,908	29,342	22,821	4,347	80,418
325	937	32	11	0	980	96	1,076	0	0	11,927	0	0	0	0	0	10,092	12,385	9,633	23,077	55,187
326	616	14	7	711	1,348	64	1,413	0	0	0		2,310	0	0	2,310	0	0	0	20,811	20,811
327	55	6	3	0	64	27	91	10	0	19,500	0	0	0	0	0	16,500	20,250	15,750	3,000	55,500
328	265	41	20	0	326	184	510	10	0	0	0	0	0	0	0	0	0	0	0	0
329	183	5	3	0	191	24	215	10	0	0	0	0	0	0	0	0	0	0	16,192	16,192
330	453	74	6	0	532	0	532	2	0	1,820	542	0	0	0	542	1,540	17,771	1,470	280	21,061
331	0	0	0	0	0	700	700	0	0	22,638	0	0	0	0	0	426,079	24,490	54,364	64,432	569,365
332	272	28	4	0	305	181	486	0	0	2,894	0	0	0	0	0	13,110	60,484	16,941	8,236	98,772
333	318	0	0	0	318	0	318	0	0	0	0	0	0	0	0	0	928	31,848	0	32,776
334	195	144	56	0	394	91	485	8	0	16,380	0	0	0	0	0	35,494	96,180	180,663	2,520	314,857
335	40	0	0	0	40	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0
336	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	34,663	0	34,663
337	167	0	0	173	340	120	460	0	0	60,879	0	0	0	0	0	12,320	19,403	34,067	134,071	199,861
338	129	31	16	0	176	142	318	10	0	19,839	578	0	0	0	578	16,787	20,602	16,024	3,052	56,466
339	156	37	18	0	212	165	377	10	8	67,068	0	840	0	0	840	56,750	69,648	54,171	10,318	190,887
340	2	0	0	0	2	0	2	0	0	45,500	0	0	0	0	0	38,500	47,250	36,750	8,500	131,000
341	334	0	0	0	334	0	334	10	0	4,550	0	0	0	0	0	0	0	0	12,950	12,950
342	0	0	2	92	94	355	449	0	0	55,398	0	0	0	0	0	290,110	48,265	57,545	79,272	475,192
343	180	249	0	0	429	72	501	0	0	29,870	0	0	0	0	0	215,670	13,230	15,121	50,714	294,735
344	218	61	0	0	279	0	279	0	0	27,658	0	0	0	0	0	107,643	35,887	34,560	49,319	227,409
345	261	78	6	0	345	0	345	11	0	1,820	0	0	0	0	0	108,246	65,942	18,847	280	193,315
346	260	2	2	0	264	0	264	0	0	1,820	0	0	0	0	0	1,540	1,890	1,470	36,765	41,665
347	411	105	8	0	524	0	524	0	0	0	0	0	0	0	0	0	0	0	0	0
348	253	40	0	0	293	53	346	0	0	0	0	0	0	0	0	11,726	0	0	4,363	16,089
349	0	0	0	0	0	0	0	0	0	637	0	0	0	0	0	158,808	0	36,280	1,813	196,901
350	206	36	2	0	244	266	511	0	0	19,662	0	0	0	0	0	132,838	56,286	21,156	26,561	236,841
351	307	21	2	100	430	108	537	0	0	32,522	0	0	0	0	0	23,852	251,674	10,290	58,262	344,078
352	323	9	0	0	333	113	446	0	0	30,953	0	0	0	0	0	159,337	34,930	37,203	4,796	236,267
353	100	66	0	120	286	167	454	0	0	6,734	0	0	0	0	0	1,540	112,427	10,323	14,266	138,556
354	3	0	0	0	3	0	3	18	33	0	0	0	0	0	0	6,072	0	6,755	0	12,827
355	29	0	0	0	29	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0
356	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	1,702	93,608	0	95,310
357	6	0	0	0	6	0	6	266	0	0	0	0	0	0	0	0	0	0	0	0
358	4	0	0	0	4	0	4	211	0	0	0	0	0	0	0	0	0	0	0	0
359	13	0	0	0	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0
360	11	0	0	0	11	0	11	0	10	23,968	0	0	0	0	0	0	2,740	0	0	2,740
361	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
362	29	0	0	0	29	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0
363	10	0	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
364	23	0	0	0	23	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0
365	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
366	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
367	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
368	7	0	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
369	14	0	0	0	14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0
370	35	0	0	0	35	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0
371	55	0	0	0	55	0	55	0	0	0	0	0	0	0	0	0	0	0	0	0
372	43	0	0	0	43	0	43	0	0	0	0	0	0	0	0	0	0	0	0	0
373	7	0	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
374	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
375	48	10	5	0	63	45	108	10	0	0	0	0	0	0	0	0	0	0	0	0
376	65	0	0	17	82	21	103	61	0	0	0	0	0	0	0	5,565	2,520	2,662	0	10,747
377	7	0	0	1	8	0	8	0	0	1,365	0	0	0	0	0	0	0	0	3,885	3,885
378	455	286	9	0	750	250	1,000	4	0	34,580	0	946	0	0	946	82,450	59,570	40,432	34,720	217,172
379	2	0	0	0	2	0	2	105	0	0	0	0	0	0	0	0	0	0	0	0
380	0	0	0	0	0	0	0	0	41	0	0	0	0	0	0	0	0	0	0	0
381	556	69	22	0	647	199	846	0	0	55,825	0	0	0	0	0	18,536	20,790	81,620	35,455	156,401
382	114	28	14	0	156	126	283	5	0	0	0	0	0	0	0	0	0	0	0	0
383	0	0	0	0	0	0	0	63	0	125,580	0	0	0	0	0	157,818	130,410	218,515	19,320	526,063
384	59	49	0	0	108	0	108	0	11	20,930	0	0	0	0	0	68,417	67,039	25,047	15,470	175,973
385	234	274	15	0	523	341	864	0	0	0	0	0	0	0	0	3,580	9,360	6,940	0	19,880
386	158	0	0	1	159	287	447	0	0	21,840	0	0	0	0	0	18,480	22,680	20,422	3,360	64,942
387	367	8	2	0	377	0	377	6	0	39,616	0	0	0	0	0	42,486	28,350	32,812	39,254	142,901
388	213	147	0	0	360	0	360	12	0	73,360	0	0	0	0	0	164,950	114,300	52,693	86,293	418,235

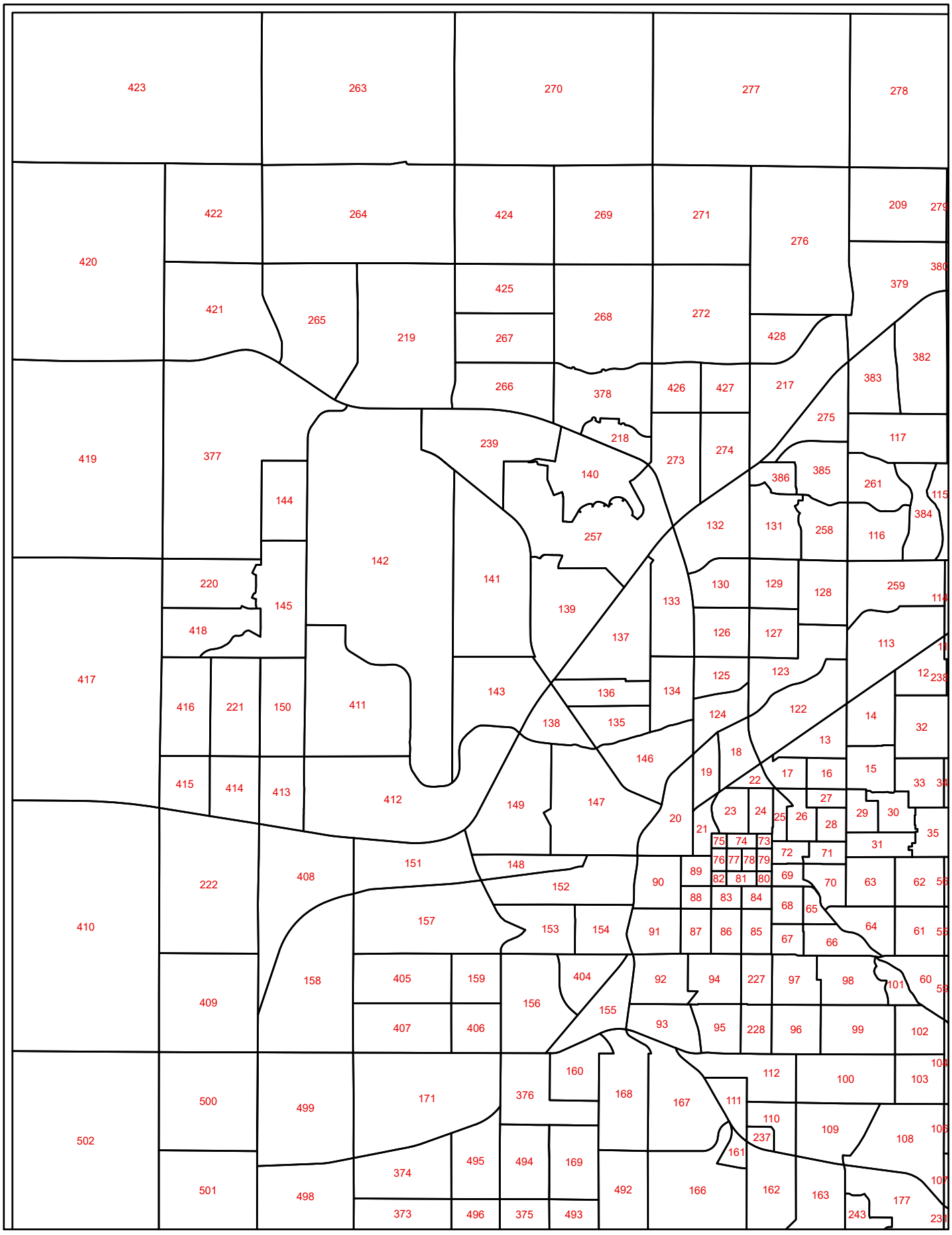
2050 Land Use by TAZ

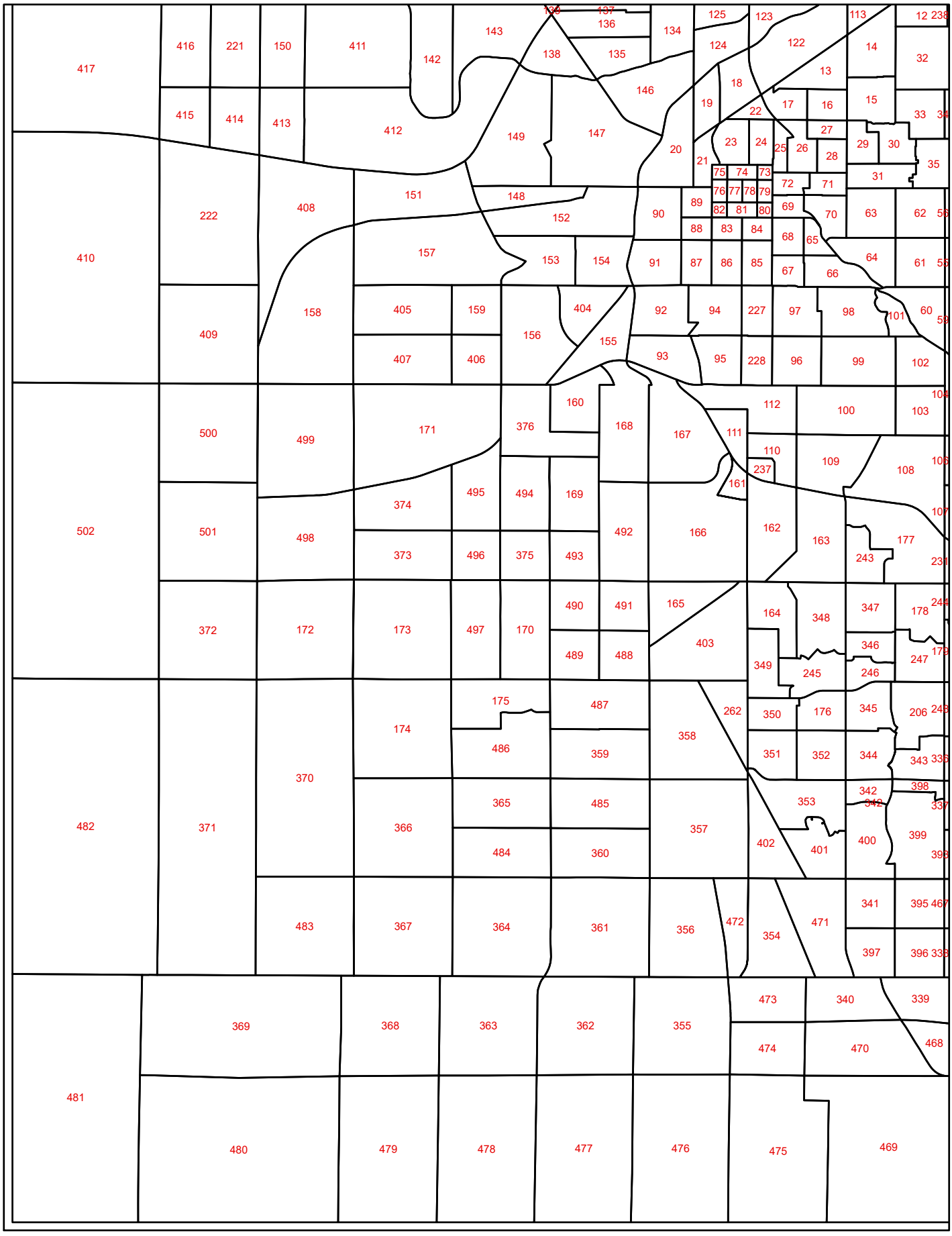
	Single Family Residential				Single Family Residential	Multi-family Residential	Total Residential		Industrial		Students					Commercial				
TAZ	SUM_ESFD	SUM_ESFA	SUM_EDup	SUM_EMob	SingleFamily	Multi Family	Total Residential	SUM_ParkAcres	SUM_IndAcres	Light Industrial	Elementary	Secondary	CommCollege	University	TotalStudents	Retail	Office	Service	Other Comm	TotalCommercial
389	159	69	0	0	228	3	231	0	0	18,782	0	0	0	0	0	13,860	107,950	33,381	9,358	164,548
390	295	200	0	224	719	26	746	0	0	0	0	0	0	0	0	0	0	0	0	0
391	135	8	0	0	142	0	142	0	0	43,680	0	0	0	0	0	37,121	159,967	55,395	6,720	259,203
392	122	76	8	0	206	75	282	10	0	3,276	0	0	0	0	0	0	10,500	0	9,324	19,824
393	263	0	0	0	263	0	263	0	0	0	0	0	0	0	0	0	30,479	0	0	30,479
394	85	0	0	0	85	0	85	10	0	0	0	0	0	0	0	0	0	0	0	0
395	77	19	9	0	105	84	189	10	0	27,024	0	0	0	0	0	22,867	28,063	21,827	4,158	76,915
396	95	24	12	0	130	107	237	10	0	60,967	0	0	0	0	0	51,587	63,312	49,243	9,380	173,521
397	77	18	9	0	104	83	187	0	6	0	0	0	0	0	0	0	0	0	0	0
398	40	0	0	120	160	0	160	0	0	21,361	0	0	0	0	0	119,095	0	12,261	60,797	192,153
399	652	125	0	1,095	1,872	85	1,957	0	0	7,326	0	0	0	0	0	0	0	0	20,850	20,850
400	500	292	0	0	792	0	792	0	0	0	0	0	0	0	0	0	0	0	29,742	29,742
401	184	25	0	0	209	1	210	0	0	0	0	0	0	0	0	0	0	0	0	0
402	1	0	0	0	1	0	1	148	0	0	0	0	0	0	0	0	0	0	0	0
403	246	165	0	0	411	255	666	143	0	0	0	0	0	0	0	0	139,449	63,298	0	202,747
404	329	70	30	0	429	213	642	0	19	181,890	0	0	0	0	0	12,940	2,528	5,616	280	21,364
405	890	10	19	0	919	36	954	3	0	0	0	0	0	0	0	0	0	0	0	0
406	22	11	0	0	33	0	33	0	0	0	964	0	0	0	964	0	0	6,418	0	6,418
407	35	0	0	0	35	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0
408	13	0	0	0	13	0	13	0	24	7,240	0	0	0	0	0	28,263	3,780	65,511	560	98,114
409	28	0	0	0	28	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0
410	58	0	0	3	61	0	61	0	9	9,100	0	0	0	0	0	15,043	9,450	26,350	1,400	52,243
411	652	95	7	275	1,028	43	1,072	2	25	70,204	0	0	0	0	0	117,469	53,581	42,232	7,108	220,391
412	66	15	8	0	89	69	157	0	95	112,917	0	0	0	0	0	95,545	117,260	135,202	17,372	365,378
413	2	0	0	0	2	0	2	0	0	23,808	0	2,310	0	0	2,310	366,645	234,723	20,979	3,663	626,010
414	50	12	6	0	68	55	122	10	14	49,485	0	0	0	0	0	41,872	51,388	39,969	7,613	140,842
415	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
416	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	3,068	0	3,068
417	19	0	0	1	20	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
418	162	39	19	0	220	175	395	10	0	0	0	0	0	0	0	0	0	0	0	0
419	19	0	0	0	19	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0
420	18	0	0	0	18	0	18	0	0	0	0	0	0	0	0	0	0	2,100	0	2,100
421	7	0	0	1	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
422	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
423	51	0	0	1	52	0	52	0	0	0	0	0	0	0	0	0	0	0	0	0
424	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
425	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
426	22	4	2	0	28	17	45	0	0	0	0	0	0	0	0	0	0	0	0	0
427	491	29	0	0	520	0	520	0	0	0	912	0	0	0	912	0	0	0	0	0
428	79	19	10	0	108	88	196	0	0	0	0	0	0	0	0	0	0	0	0	0
429	26	0	0	0	26	0	26	0	3	0	0	0	0	0	0	0	0	0	0	0
430	0	0	0	0	0	0	0	0	154	1,541	8	4	0	0	12	0	399,950	0	9,893	409,843
431	1	0	0	0	1	0	1	0	45	0	0	0	0	0	0	0	0	0	0	0
432	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
433	23	0	0	0	23	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0
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437	49	10	5	0	64	45	109	10	0	0	0	0	0	0	0	0	0	0	0	0
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439	42	10	5	0	57	45	102	77	0	0	0	0	0	0	0	0	0	0	0	0
440	15	0	0	0	15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0
441	856	0	0	0	856	0	856	0	0	0	578	0	0	0	578	0	0	0	0	0
442	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
443	258	62	31	0	351	277	627	10	0	0	578	840	0	0	1,418	0	0	0	0	0
444	176	39	19	0	234	174	408	10	0	0	0	0	0	0	0	0	0	0	0	0
445	183	44	22	0	250	200	450	10	0	0	0	0	0	0	0	0	0	0	0	0
446	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
447	4	0	0	9	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
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449	60	12	6	0	78	52	130	10	0	0	0	0	0	0	0	0	0	0	0	0
450	50	10	5	0	65	45	110	10	0	0	0	0	0	0	0	0	0	0	0	0
451	5	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
452	10	0	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
453	46	0	0	0	46	0	46	0	0	0	0	0	0	0	0	0	0	0	0	0
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455	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
456	21	0	0	0	21	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0
457	19	0	0	0	19	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0
458	10	0	0	0	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
459	21	0	0	0	21	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0
460	111	10	5	0	126	45	171	10	0	0	0	0	0	0	0	0	296	0	0	296
461	40	10	5	0	55	46	101	10	0	75,000	0	800	0	0	800	0	0	0	0	0
462	41	10	5	0	56	45	101	10	0	75,000	550	0	0	0	550	0	0	0	0	0
463	40	10	5	0	55	45	100	0	0	0	0	0	0	0	0	0	0	0	0	0
464	689	104	9	400	1,202	43	1,246	0	0	58,232	237	60	0	0	297	0	17,195	7,415	198,976	223,586
465	112	24	2	0	138	16	154	10	0	7,132	0	0	0	0	0	0	21,000	0	20,299	41,299
466	367	57	0	0	424	0	424	4	0	20,576	0	0	0	0	0	17,410	42,547	16,619	3,166	79,741
467	117	29	14	0	160	130	290	10	0	33,323	0	0	0	0	0	28,196	34,605	26,915	5,127	94,842
468	45	10	5	0	60	45	105	10	200	0	550	0	0	0	550	0	0	0	0	0
469	82	10	5	0	97	45	142	0	0	0	0	2,200	0	0	2,200	0	0	0	0	0
470	44	10	5	0	59	45	104	0	0	0	0	0	0	0	0	0	0	0	0	0
471	138	34	1	0	173	6	179	214	0	0	0	0	0	0	0	0	0	0	0	0
472	5	0	0	0	5	0	5	0	0	25,480	0	0	0	0	0	31,720	26,460	59,032	3,920	121,132
473	1	0	0	1	2	0	2	0	18	1,820	0	0	0	0	0	1,540	11,741	1,470	280	15,031
474	9	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
475	12	0	0	0	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
476	20	0	0	0	20	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0
477	5	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
478	36	0	0	0	36	0	36	0	0	0	0	0	0	0	0	0	0	7,000	0	7,000
479	11	0	0	1	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
480	8	0	0	1	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0
481	24	0	0	0	24	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0
482	77	0	0	1	78	0	78	296	0	0	0	0	0	0	0	0	0	572	0	572
483	12	0	0	0	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0
484	4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
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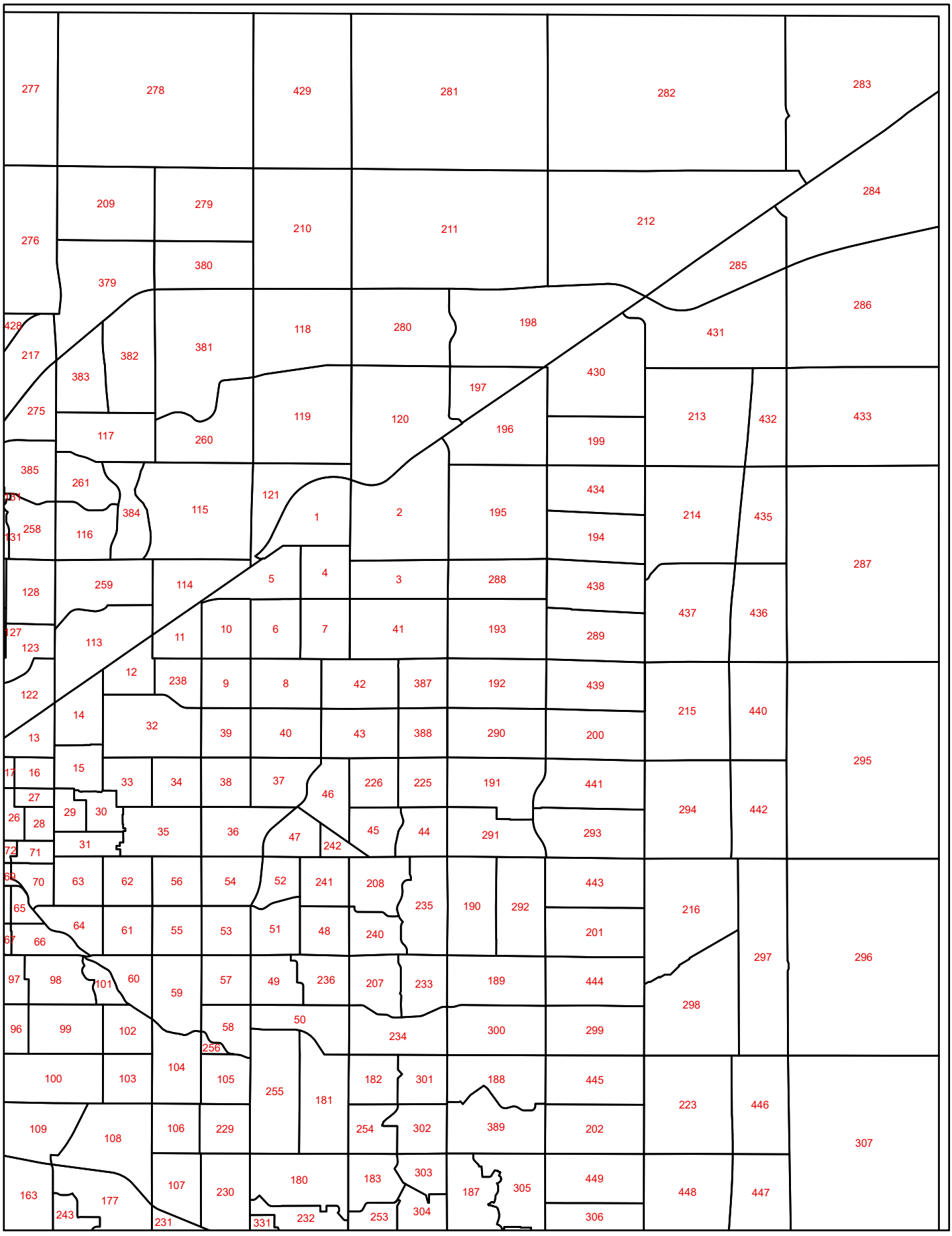
2050 Land Use by TAZ

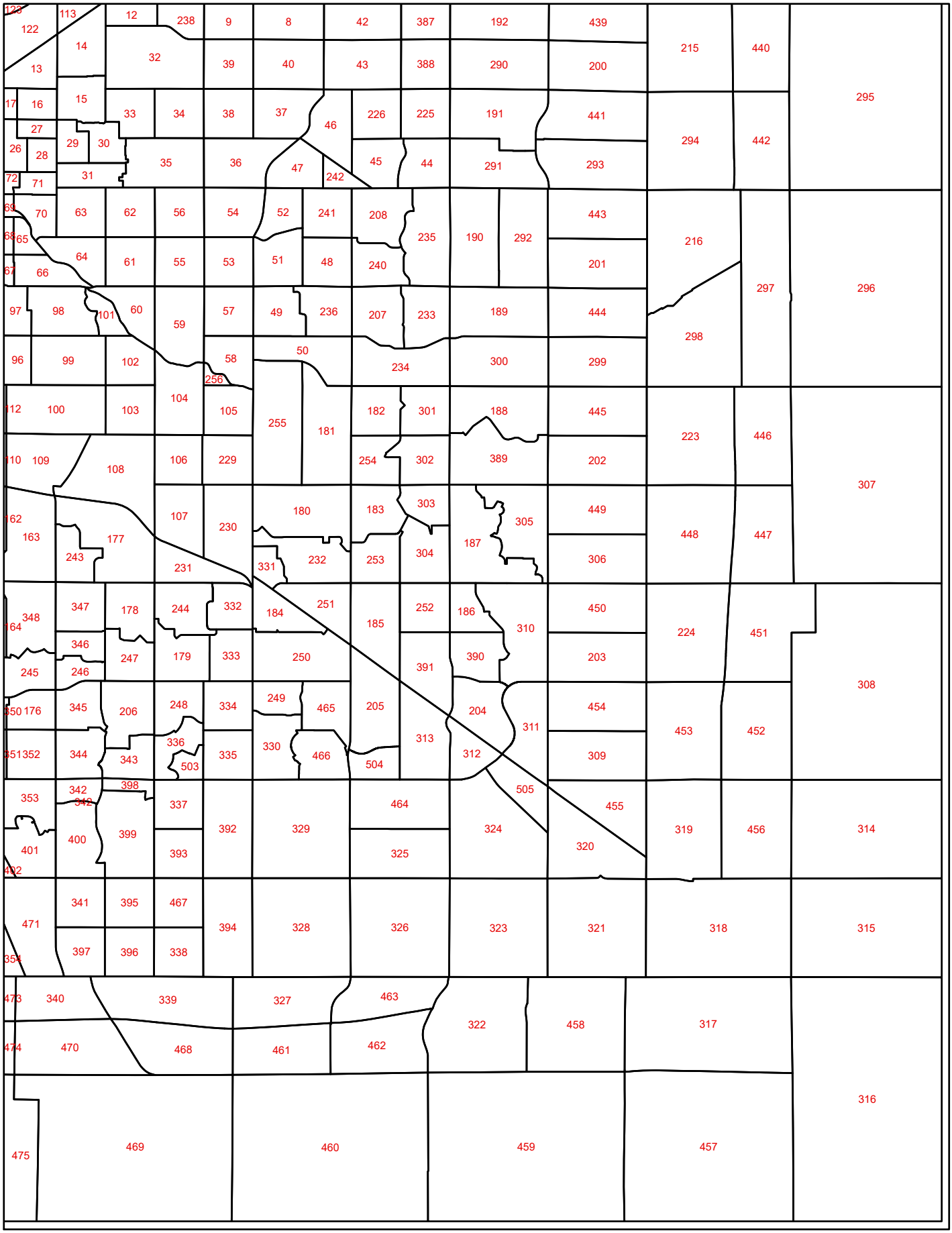
	Single Family Residential				Single Family Residential	Multi-family Residential	Total Residential		Industrial		Students					Commercial				
TAZ	SUM_ESFD	SUM_ESFA	SUM_EDup	SUM_EMob	SingleFamily	Multi Family	Total Residential	SUM_ParkAcres	SUM_IndAcres	Light Industrial	Elementary	Secondary	CommCollege	University	TotalStudents	Retail	Office	Service	Other Comm	TotalCommercial
486	116	0	0	0	116	0	116	0	0	0	0	0	0	0	0	0	0	0	0	0
487	75	19	9	0	103	84	187	0	0	0	0	0	0	0	0	0	0	0	0	0
488	0	0	0	0	0	0	0	0	3	311,220	0	0	0	0	0	182,585	200,340	155,820	366,380	905,125
489	283	13	6	0	302	53	354	0	0	0	0	0	0	0	0	0	0	0	0	0
490	141	34	17	0	193	155	348	0	0	0	0	0	0	0	0	0	0	0	0	0
491	118	29	15	0	162	132	294	0	0	0	0	0	0	0	0	0	0	0	0	0
492	34	8	4	0	45	34	79	0	0	8,334	0	0	0	0	0	7,051	24,262	8,513	1,282	41,108
493	131	32	16	0	179	145	324	0	0	8,408	578	0	0	0	578	7,115	8,732	6,791	1,294	23,932
494	47	0	0	0	47	0	47	0	0	455	0	0	0	0	0	735	4,524	748	1,295	7,302
495	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
496	11	0	0	0	11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
497	78	0	0	0	78	0	78	0	0	0	0	0	0	0	0	0	0	0	0	0
498	8	0	0	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0
499	1	0	0	0	1	0	1	514	0	0	0	0	0	0	0	0	0	0	0	0
500	7	0	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
501	6	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
502	251	0	0	1	251	0	251	117	0	0	0	0	0	0	0	0	0	0	0	0
503	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
504	59	14	7	0	79	62	141	0	0	0	0	0	0	0	0	0	0	0	0	0
505	74	0	2	0	76	0	76	0	1	0	0	0	0	0	0	0	5,138	6,478	2,892	14,507


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APPENDIX D

Travel Demand Model Documentation and User's Guide

CAMBRIDGE SYSTEMATICS

Lincoln MPO Travel Model

Technical Documentation

final

report

prepared for

Lincoln MPO

prepared by

Cambridge Systematics, Inc.

with

Felsburg Hold & Ullevig

August 18, 2021

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final report

Lincoln MPO Travel Model

Technical Documentation

prepared for

Lincoln MPO

prepared by

Cambridge Systematics, Inc.
1801 Broadway, Suite 1100
Denver, CO 80202

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date

August 18, 2021

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1.0 Introduction

The Lincoln Metropolitan Planning Organization (MPO) and member jurisdictions use the Lincoln MPO Travel Demand Model as a tool to forecast traffic and travel in Lancaster County and the Lincoln area. The primary purpose of the travel model is to support the Long Range Transportation Plan (LRTP). In addition, the model can support evaluation of proposed roadway projects, help evaluate potential impacts of proposed development projects, and support various other studies of the region, subareas, corridors, and other planning activities. The updated model was prepared and customized using TransCAD version 8.0 (build 22435). in order to provide an up-to-date and user-friendly model. Newer builds of TransCAD 8.0 may also work. The model has been calibrated to reflect a base year of 2019 and contains future year data reflecting forecast 2035 and 2050 conditions. This model update builds on the previous model update which had a base year of 2015. Parameters remain consistent with the previous model update unless adjustment to match the new 2019 base year traffic counts was required. The Lincoln MPO Model is an adaptation of the standard 4-step modeling process that is common in many small and medium-sized communities in the United States. A flow chart of the model is shown in Figure 1.1.

1.1 Uses and Outputs

The traditional use of a travel demand model is to evaluate systematic congestion on the regional roadway system and provide a tool for considering improvements. This provides a useful planning tool for analysis of the Lincoln MPO's long range plan scenarios as both the impacts of roadway network changes and demographic growth or reallocation are demonstrated by the resulting shifts in travel.

The Lincoln MPO Model can provide a variety of outputs to demonstrate these travel results. Information that can be obtained from the model include forecast traffic volumes, information about changes in traffic patterns due to changes in the roadway network, forecast changes to transit ridership based on system changes, and changes in travel demand due to changes in land use. An example map showing base year roadway congestion is included in Figure 1.2. As different scenarios are considered, similar maps can be created and compared to identify key outcomes.

Figure 1.1 Model Flow Chart

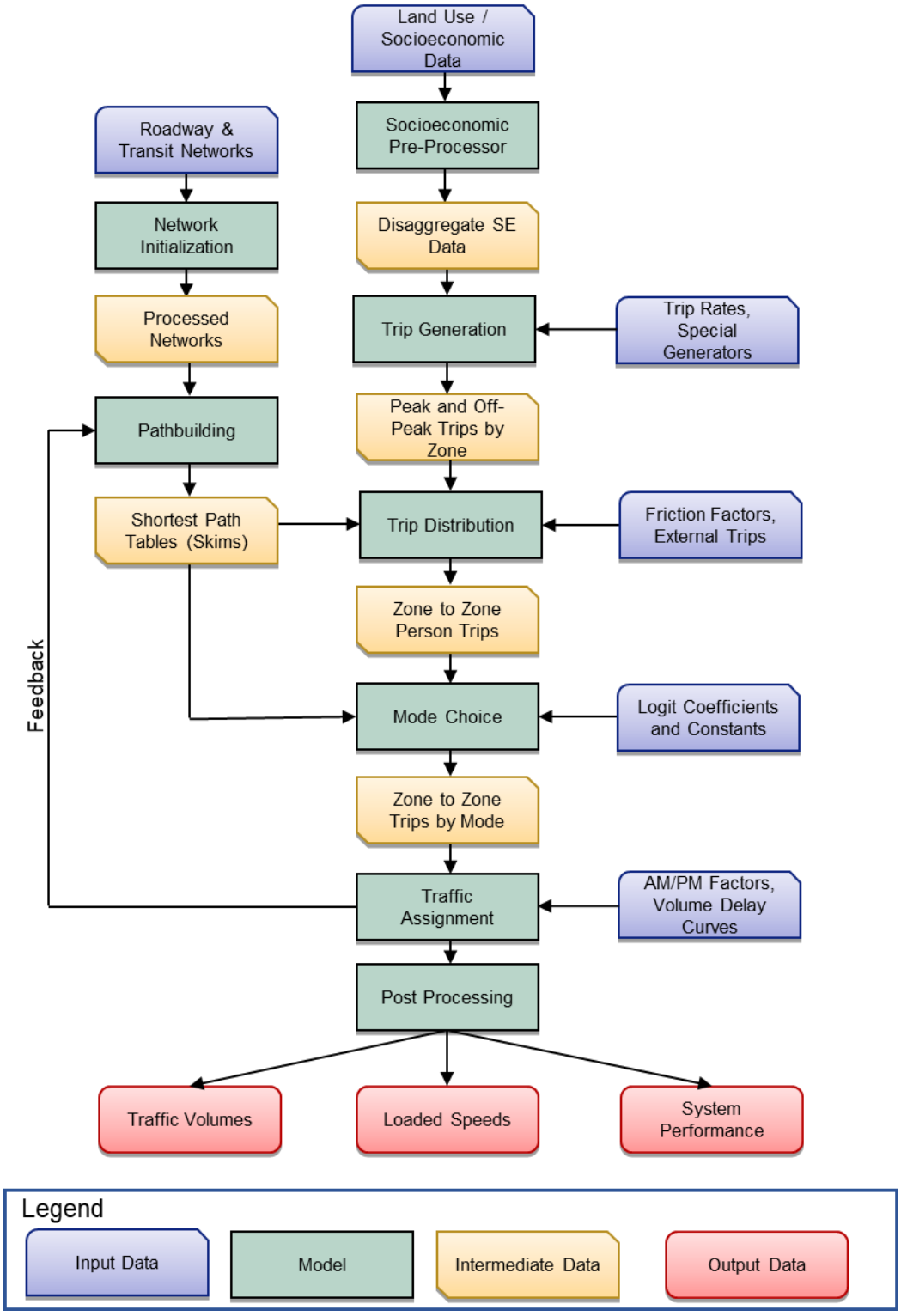
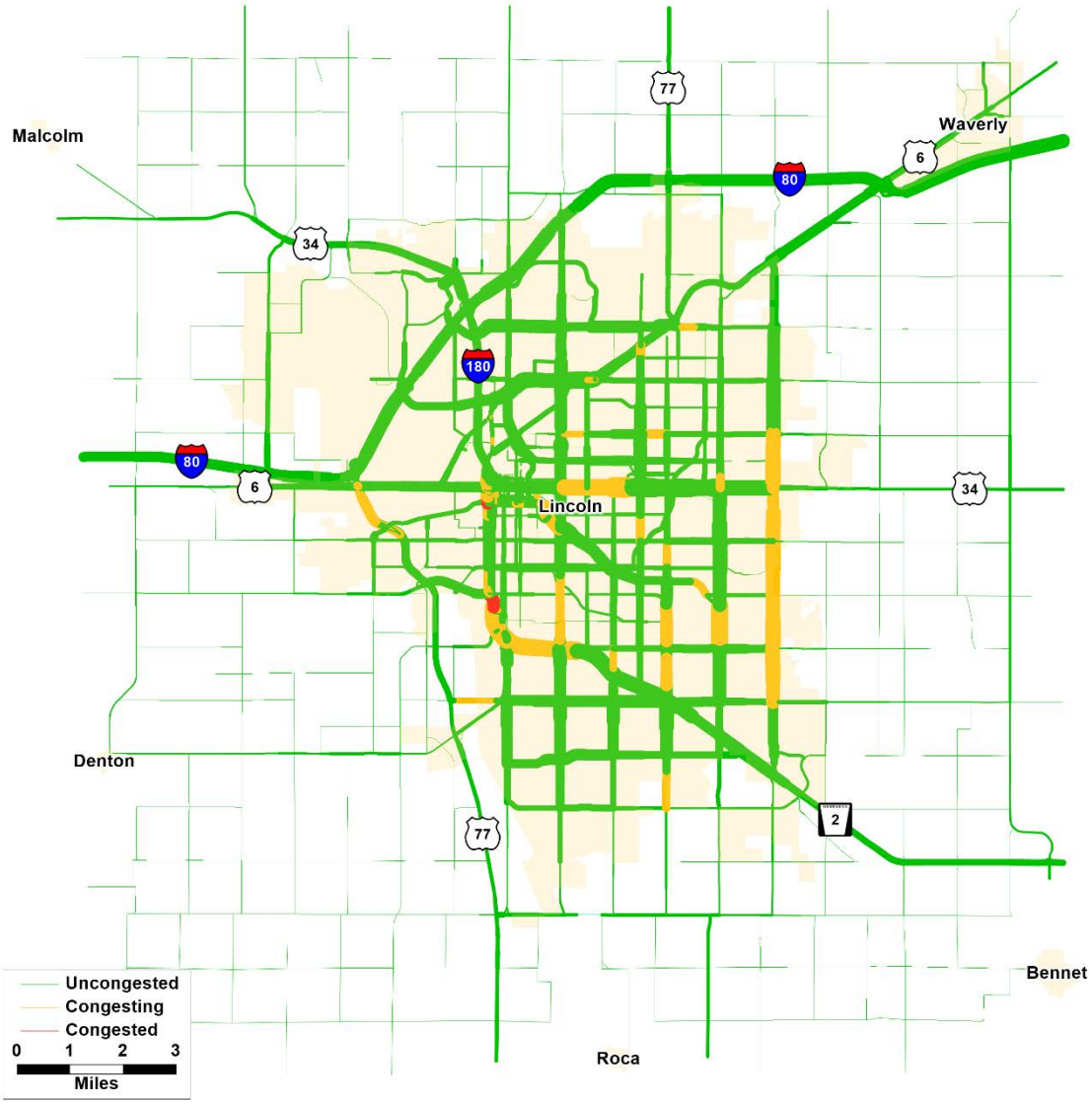


Figure 1.2 2019 Roadway Congestion



1.2 Location Based Services (LBS) Data

Location-based services (LBS) data collected passively from mobile devices are becoming an increasingly valuable source of information about travel patterns. LBS data are collected by GPS applications running either in the background or foreground on cellular devices, where the device user has opted to allow the app to access the device's geographic location. LBS data are spatially more accurate than other forms of cellular data because they collect locations using GPS technology.

These data can provide detailed information about how people are moving, where they are going, and when their travel is occurring. Compared to household surveys, LBS data can be collected for longer periods of time, at more regular intervals, and from a larger sample size. As a result, these datasets are massive in size, often containing millions of records collected over a period of months, rather than the typical 1- to 2-day

travel diary often collected by travel surveys. Not only does this generate a larger overall sample, but travel patterns of individual devices can be measured over a period, while maintaining sufficient degrees of privacy since the device ID cannot be tied to any demographic or personally identifiable information.

Expanded person trip tables based on LBS data were developed for the Lincoln MPO region and were used for calibration and validation of the travel model. LBS data was provided by the Nebraska Department of Transportation (NDOT) at the TAZ level.

2.0 Input Data

One of the critical components of any travel model is the input data. For the Lincoln MPO Model, this includes roadway and transit networks, land use/socioeconomic data at the traffic analysis zone (TAZ) level, and other factors (i.e. coefficients, peak hour factors and external trip data). This input data describes the travel condition for the Lincoln MPO region and provides the foundation for evaluating system performance and future travel alternatives.

2.1 Roadway Network

The roadway network contains basic input information for use in the travel model and is used to distribute person trips and route vehicle trips throughout the region. Input network attributes used by the travel model include facility type, area type, number of lanes, speed limit, and direction of flow. The facility type assigned to the various roadways in the network follow the definitions shown in Table 2.1. Area types used in the model, listed in Table 2.2, are first calculated at the TAZ level based on zone density, and then applied to network links.

The model includes roadway network data for the 2019 base year, for existing plus committed conditions, and for fiscally constrained projects in 2035 and 2050. The list of projects included in each network scenario were defined as part of the long range transportation plan development process.

Table 2.1 Facility Types

ID	Facility Type
1	Interstate/Freeway
2	Expressway
3	Principal Arterial
4	Minor Arterial
5	Collector
6	Major Rural Collector (State)
7	Major Rural Collector (County)
8	Minor Rural Collector
9	Local Street
10	Ramp
11	Freeway to Freeway Ramp
99	Centroid Connector

Table 2.2 Area Types

ID	Area Type
1	CBD
2	Urban
3	Suburban
4	Rural

Hourly capacities are assigned to each link based on facility type and area type using the lookup table shown in Table 2.3. Freeflow speeds are assigned based on facility type, area type and posted speed. For links without a posted speed, the model uses default speeds shown in Table 2.4. Freeflow speeds are then calculated by multiplying posted speed by the freeflow speed conversion factors shown in Table 2.5.

Table 2.3 Capacity Lookup Table

Facility Type	CBD	Urban	Suburban	Rural
Interstate/Freeway	2000	2000	2000	1900
Expressway	1100	1200	1200	1200
Principal Arterial	930	1080	1120	1120
Minor Arterial	740	860	900	900
Collector	560	710	740	740
Major Rural Collector (State)	560	710	740	740
Major Rural Collector (County)	560	710	740	740
Minor Rural Collector	560	710	740	740
Local Street	520	660	690	690
Ramp	740	860	900	900
Freeway to Freeway Ramp	930	1080	1120	1120
Centroid Connector	10000	10000	10000	10000

Table 2.4 Default Posted Speed Lookup Table

Facility Type
Interstate/Freeway
Expressway
Principal Arterial
Minor Arterial
Collector
Major Rural Collector (State)
Major Rural Collector (County)
Minor Rural Collector
Local Street
Ramp
Freeway to Freeway Ramp
Centroid Connector

Table 2.5 Posted Speed to Freeflow Speed Conversion Factors

Facility Type	CBD	Urban	Suburban	Rural
Interstate/Freeway	1.0	1.0	1.0	1.0
Expressway	0.9	0.95	1.0	1.0
Principal Arterial	0.75	0.85	0.9	1.0
Minor Arterial	0.8	0.9	0.9	1.0
Collector	0.75	0.9	0.95	1.0
Major Rural Collector (State)	0.75	0.85	0.9	0.9
Major Rural Collector (County)	0.75	0.85	0.9	0.9
Minor Rural Collector	0.75	0.85	0.9	0.85
Local Street	0.6	0.8	0.9	0.8
Ramp	0.8	0.8	0.8	0.8
Freeway to Freeway Ramp	1.0	1.0	1.0	1.0
Centroid Connector	1.0	1.0	1.0	1.0

2.2 Transit Networks

The travel model uses transit networks to build shortest transit paths between each zone pair, as well as to assign transit trips to individual transit routes. The Lincoln MPO Model uses information stored on the roadway network and a route system containing StarTran bus routes to represent the transit system. Routes

and the associated service characteristics are converted into a series of links and nodes or stops. Transit route systems directly connected to the roadway network so it is important to maintain this consistency when using the Lincoln MPO Model. A listing of the routes included in the base year Lincoln MPO Model network and the corresponding headway assumptions are listed in Table 2.6.

Table 2.6 Route Headway Assumptions

Route	Peak Headway (minutes)	Off-peak Headway (minutes)
13 - South 13th	30	30
27 - North 27th	30	30
40 - Heart Hospital	30	60
41 - Havelock	30	30
42 - Bethany	30	60
44 - O Street	30	30
46 - Arnold Heights	30	30
48/54 - North 48th/Veteran's Hospital	60	60
49 - University Place	60	60
51 - West A	60	60
52 - Gaslight	60	60
53 - South Pointe	30	60
56 - Sheridan	60	60

2.3 Traffic Analysis Zone Structure

TAZs are ideally but not always sized and shaped to provide a relatively homogeneous amount and type of activity within each zone. TAZ delineations traditionally follow the natural and manmade boundaries that tend to segregate different land uses. These boundaries include water features, roads, railroads, and other lines that form logical boundaries. Jurisdictional and census boundaries often do not make for good TAZ definitions because they can be arbitrary in relation to the needs of the model, but they are usually desirable for data development and reporting functions.

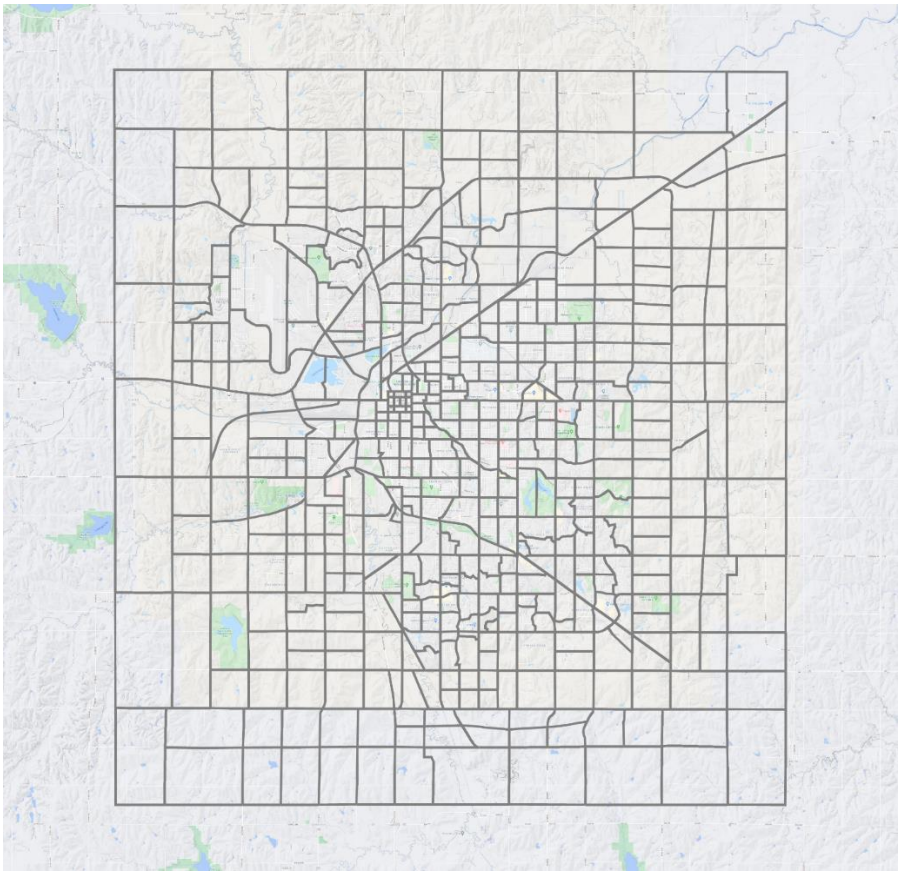
The definition of TAZs has implications throughout the travel model. For roadway model components, TAZ resolution affects the amount of precision that can be achieved when loading vehicles onto the collector and arterial roadway network. This precision is obtained by increasing detail in the roadway network, TAZ structure, and socioeconomic data. The desire for increased detail must however be balanced with the ability to develop and maintain the data at the increased level of detail.

The TAZ layer is a polygon layer that divides the modeling area into internal zones and external stations. This layer is useful in developing socioeconomic data and as a guide when placing centroids and centroid connectors. It is only tangentially used by the travel model algorithms. Within the travel model, TAZs are represented by centroids in the roadway network file. The TAZ-based data are stored in an Access database rather than directly in the TAZ polygon layer.

Intermediate and output data at the TAZ level is stored in TransCAD binary table files or matrix files in the output directory for each scenario. Each of these output files can be joined to the TAZ polygon layer or to centroids in the roadway network. TAZ-based intermediate and output data includes terminal times, trip productions and attractions, trip matrices, and skim (shortest path) matrices. TAZ-based output data are discussed in detail in subsequent chapters describing the respective model components.

The TAZ structure has been extensively reviewed and refined in past model update efforts. For this update, the TAZ structure was reviewed and several changes were made to better align the TAZ layer with existing and forecast land uses. The Lincoln MPO TAZs are shown in Figure 2.1.

Figure 2.1 Traffic Analysis Zone Structure



3.0 Trip Generation

Trip generation is the first phase of the traditional 4-step travel demand modeling process. It identifies the trip ends (productions and attractions) that correspond to the places where activities occur as represented by socioeconomic data (e.g., households, employment). Productions and attractions are estimated for each Traffic Analysis Zone (TAZ) by trip purpose, and then balanced at the regional level so that total productions and attractions are equal. In some cases, production and attraction allocation sub-models are applied to better represent the geographic distribution of trip-ends. The resulting productions and attractions by trip purpose and TAZ are subsequently used by the Trip Distribution model to estimate zone-to-zone travel patterns.

Trip generation rates are typically developed through analysis of household survey data. Since household survey data were not available for this effort, trip rates have been retained from the previous model.

3.1 Trip Production Rates

Trips productions are generated by trip purpose and household income group using the trip rates shown in Table 3.1 through Table 3.5. There are three income groups (low, medium, and high) and six trip purposes used in the Lincoln MPO Model as listed below:

- Home-Based Work (HBW): Trips between a traveler's residence and workplace.
- Home-Based Shop (HBS): Shopping trips starting or ending at the traveler's residence.
- Home-Based Other (HBO): All remaining trips starting or ending at the traveler's residence.
- Work-Based Other (WBO): Trips starting or ending at the workplace, but with neither end at the traveler's residence.
- Other-Based Other (OBO): Trips that do not start or end at the traveler's residence or workplace.
- Home-Based University (HBU): Trips between a traveler's residence and a University.

The previous version of the Lincoln MPO Travel Model had included an additional Home-Based Retail (HBR) trip purpose. The retail and shop trip purposes were combined in this model update. Trip production and attraction rates for the separate shop and retail trip rates were not found to be meaningfully different, and the separate land use data categories used for retail and shop trip purposes were not compatible with land use data available to the project.

Table 3.1 HBW Trip Production Rates

Income Group	1-Person	2-Person	3-Person	4-person	5+ Person
Low ($0 – $19,999)	0.67	1.86	1.86	1.86	1.86
Medium ($20,000 - $74,999)	1.19	2.46	4.36	4.36	4.36
High ($75,000 and higher)	1.42	2.84	3.92	3.92	3.92

Table 3.2 HBS Trip Production Rates

Income Group	1-Person	2-Person	3-Person	4-person	5+ Person
Low ($0 – $19,999)	0.95	1.96	1.74	3.70	4.61
Medium ($20,000 - $74,999)	0.78	1.96	1.74	3.70	4.61
High ($75,000 and higher)	0.69	1.57	2.85	2.72	4.61

Table 3.3 HBO Trip Production Rates

Income Group	1-Person	2-Person	3-Person	4-person	5+ Person
Low ($0 – $19,999)	1.65	4.31	10.18	14.39	24.79
Medium ($20,000 - $74,999)	1.59	4.31	10.18	14.39	24.79
High ($75,000 and higher)	1.56	2.95	9.08	14.71	24.79

Table 3.4 WBO Trip Production Rates

Income Group	1-Person	2-Person	3-Person	4-person	5+ Person
Low ($0 – $19,999)	0.32	0.87	0.98	0.98	0.98
Medium ($20,000 - $74,999)	0.77	0.98	2.05	2.05	2.05
High ($75,000 and higher)	1.14	1.81	2.66	2.66	2.66

Table 3.5 OBO Trip Production Rates

Income Group	1-Person	2-Person	3-Person	4-person	5+ Person
Low ($0 – $19,999)	1.36	1.72	4.01	6.58	11.77
Medium ($20,000 - $74,999)	1.52	2.71	4.01	6.58	11.77
High ($75,000 and higher)	1.70	2.37	4.88	5.87	11.77

3.2 Trip Attraction Rates

Attraction rates define the ends of trips that occur at locations other than the trip-maker's home. For home-based trips, the attraction end of a trip occurs at a non-residential location, or occasionally at another person's home. For WBO trips, trip productions occur at the trip maker's workplace and the trip attraction occurs at the non-work end of the trip. For OBO trips, the trip production and attraction are synonymous with trip origin and destination. For non-home-based trip purposes, allocation models and special procedures are used to properly locate the production and attraction end of each trip.

Trip attraction rates used in the Lincoln model are based on land use categories and use the rates shown in Table 3.6 through Table 3.10.

Table 3.6 HBW Trip Attraction Rates

	CBD	Urban	Suburban	Rural
Single Family	0.97	0.81	0.78	0.98
Multi Family	0.24	0.20	0.20	0.24
General Retail	2.25	1.49	1.10	1.12
Light Industrial	0.45	0.40	0.17	0.21
Office	3.00	1.67	0.98	1.24
Service	3.30	1.73	1.59	1.62
Industrial	30.16	15.08	9.94	7.88
Park	0.32	0.27	0.27	0.34
Elementary School	0.10	0.08	0.08	0.11
Secondary School	0.13	0.11	0.11	0.14
Community College	0.14	0.10	0.10	0.12
University	0.16	0.17	0.14	0.13

Table 3.7 HBS Trip Attraction Rates

	CBD	Urban	Suburban	Rural
General Retail	22.23	10.87	6.35	6.11

Table 3.8 HBO Trip Attraction Rates

	CBD	Urban	Suburban	Rural
Single Family	0.16	0.14	0.13	0.16
Multi Family	0.00	0.00	0.00	0.00
General Retail	4.26	2.48	2.00	2.59
Light Industrial	0.22	0.29	0.21	0.22
Office	2.99	2.40	2.42	2.52
Service	9.29	4.66	4.20	4.75
Industrial	0.00	0.00	0.00	0.00
Park	0.00	0.00	0.00	0.00
Elementary School	0.41	0.34	0.34	0.42
Secondary School	0.52	0.43	0.43	0.54
Community College	0.18	0.12	0.12	0.15
University	0.63	0.65	0.53	0.51

Table 3.9 OBO Trip Attraction Rates

	CBD	Urban	Suburban	Rural
Single Family	0.37	0.31	0.30	0.37
Multi Family	0.19	0.16	0.16	0.20
General Retail	7.89	3.59	2.45	3.06
Light Industrial	0.58	0.57	0.29	0.29
Office	7.72	4.78	3.38	3.33
Service	7.18	3.49	2.83	3.41
Industrial	5.60	2.80	1.85	1.47
Park	0.32	0.27	0.27	0.34
Elementary School	0.35	0.29	0.29	0.36
Secondary School	0.44	0.37	0.37	0.46
Community College	0.14	0.09	0.09	0.11
University	0.51	0.52	0.43	0.42

Table 3.10 WBO Trip Attraction Rates

	CBD	Urban	Suburban	Rural
Single Family	0.11	0.09	0.09	0.11
Multi Family	0.05	0.04	0.04	0.05
General Retail	3.03	1.38	0.95	1.18
Light Industrial	0.10	0.10	0.05	0.05
Office	1.30	0.81	0.57	0.56
Service	1.22	0.60	0.48	0.58
Industrial	4.45	2.23	1.47	1.16
Park	0.00	0.00	0.00	0.00
Elementary School	0.16	0.14	0.14	0.17
Secondary School	0.21	0.17	0.17	0.22
Community College	0.09	0.06	0.06	0.07
University	0.31	0.32	0.26	0.26

3.3 University Trip Generation and Production Allocation

Lincoln is home to the University of Nebraska Lincoln (UNL), which had a 2019 enrollment of 25,390 students. UNL includes a mix of students living on and off campus, with many off-campus students

concentrated in housing near the university. This suggests that a separate university trip purpose and allocation model can improve representation of UNL in the travel model.

3.3.1 University Trip Purpose Definitions

Because universities do no fall into the normal trip patterns used by the model in the remainder of the region, some special considerations are given to trip types at UNL. In particular, the Home-Based University (HBU) trip purpose is defined as a trip by a university student or visitor between home and any location on the university campus. Trip ends at the university are associated with university faculty and staff, students living on campus, and students and visitors living off campus and described as follows:

- ***HBW, HBS, and HBO Productions:*** These production trip ends can occur only for students living on campus.
- ***HBW Attractions and WBO Productions:*** These trip ends can occur only for University faculty and staff.
- ***WBO Attractions and all OBO Trips:*** These trip ends can only occur for students and visitors living off campus.
- ***HBS and HBO Attractions:*** These trip ends cannot occur at the university. All home-based trips to the university by students and visitors are considered HBU trips and all home-based trips to the university by faculty and staff are considered HBW trips.
- ***HBU Productions:*** Trips within the university campuses are not modeled, so HBU productions cannot occur on campus.
- ***HBU Attractions:*** HBU attractions can occur only for students and visitors living off campus.

3.3.2 Special Generator Values

Trip rates are in units of trips per on-campus student, trips per off-campus student, or trips per employee. Total university enrollment was readily available for UNL. Employment and on-campus vs. off-campus students were estimated based on values obtained from UNL. Enrollment and employment data are shown in Table 3.11, with trip rates and special generator values shown in Table 3.12.

Table 3.11 Employment and Enrollment Data at UNL

Trip Generation Variable	Value
Total Students	25,390
On-Campus Students	8,306 (estimated)
Off-Campus Students	17,084 (estimated)
Employment (FTE)	8,379 (estimated)

Table 3.12 University Special Generator Values

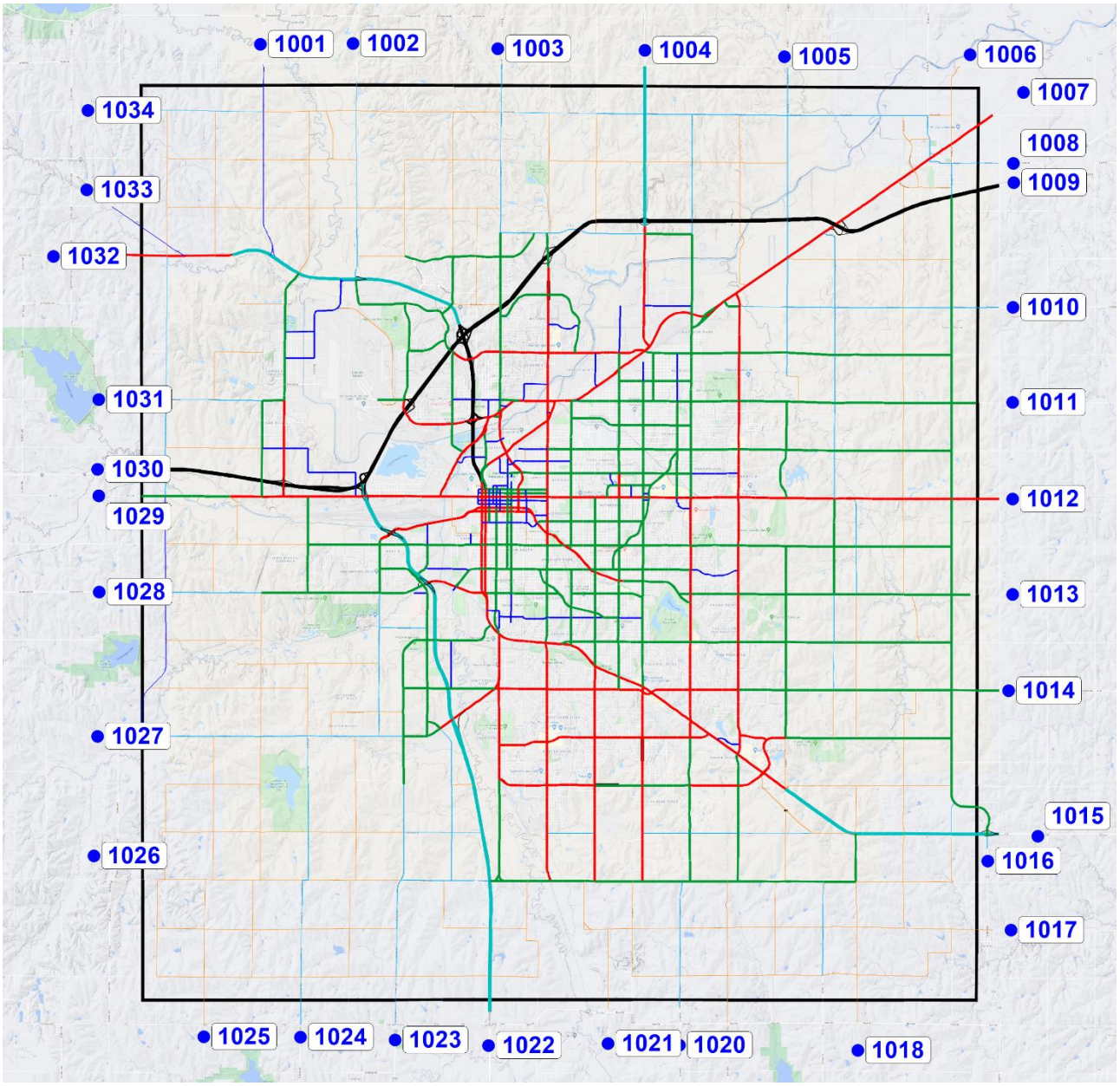
Trip Purpose	Production / Attraction	Trip Rate	Unit	UNL Special Generator Value
HBW	Productions	0.22	On Campus Students	1,827
	Attractions	1.25	Total Employment	10,474
HBS	Productions	0.30	On Campus Students	2,492
	Attractions	n/a	n/a	0
HBU	Productions	n/a	n/a	0
	Attractions	3.00	Off Campus Students	51,252
HBO	Productions	0.30	On Campus Students	2,492
	Attractions	n/a	n/a	0
WBO	Productions	0.30	Total Employment	2,514
	Attractions	0.15	Off Campus Students	2,563
OBO	Productions	0.40	Off Campus Students	3,322
	Attractions	0.20	Off Campus Students	3,417

3.4 External Trips

In addition to the internal-internal trips that occur entirely within the modeling area, the model must include external travel from outside of the region. Trips with one end inside the modeling area and the other outside of the area are called Internal-External (IE) and External-Internal (EI) trips. Through trips, or External-External (EE) trips, are those that pass through the modeling area without stopping (or with only short convenience stops).

External travel is modeled explicitly at the external stations where roadways cross the model boundary. This external trip component of the Lincoln MPO Model is based on traffic counts available from NDOT and Lancaster County. The external stations in the Lincoln MPO model are shown in Figure 3.1.

Figure 3.1 External Station Locations



3.4.1 External Station Volumes

The first step in estimating external travel for the model is to determine the average weekday traffic at each location in the base year. Next, it is necessary to determine the split between the EE and IE/EI trips at each external station. This was accomplished using LBS data provided by NDOT. The resulting base year traffic volumes and splits between EE and IE/EI trips for each external station are shown in Table 3.13. Only a few external stations are assumed to carry a significant number of EE trips.

Table 3.13 External Travel Assumptions

Station	Location	Volume	%EE	%IE	EE Trips	IE/EI Trips
1001	56th North - SS79	3365	0%	100%	0	3365
1002	27th North	216	0%	100%	0	216
1003	14th North	3703	0%	100%	0	3703
1004	US 77- 56th North	8720	12%	88%	1017	7703
1005	98th North	184	0%	100%	0	184
1006	148th North	230	0%	100%	0	230
1007	HWY 6 East	5845	0%	100%	0	5845
1008	Heywood/Bluff Rd	257	0%	100%	0	257
1009	I-80 East	50300	54%	46%	27214	23086
1010	Fletcher	255	0%	100%	0	255
1011	Adams East	313	0%	100%	0	313
1012	US 34 - O Street East	6540	11%	89%	715	5825
1013	Van Dorn East	129	0%	100%	0	129
1014	Old Cheney East	779	0%	100%	0	779
1015	N2 - Rokeby East	11137	30%	70%	3289	7848
1016	State Spur 43 South	6495	0%	100%	0	6495
1017	Bennet Rd	142	0%	100%	0	142
1018	120th South	184	0%	100%	0	184
1019	82th South	139	0%	100%	0	139
1020	68th South	7010	0%	100%	0	7010
1021	46th South	119	0%	100%	0	119
1022	Homestead Expy - US 77 South	13720	36%	64%	4909	8811
1023	14th South	440	0%	100%	0	440
1024	42th South	95	0%	100%	0	95
1025	72th South	117	0%	100%	0	117
1026	Kolbrook	51	0%	100%	0	51
1027	Denton West	4989	0%	100%	0	4989
1028	Van Dorn West	445	0%	100%	0	445
1029	O Street West- HWY 6	2075	0%	100%	0	2075
1030	I-80 West	35930	75%	25%	26804	9126
1031	Adams West	445	0%	100%	0	445
1032	Hwy 34 West	4920	0%	100%	0	4920
1033	State Spur 55-M	1645	0%	100%	0	1645
1034	Waverly Rd	95	0%	100%	0	95

4.0 Trip Distribution

Trip distribution is the second phase of the traditional 4-step demand model. Trip distribution is the process through which balanced person trip productions and attractions from the trip generation model are apportioned among all zone pairs in the modeling domain. The resulting trip matrix contains both intrazonal trips (e.g., trips that don't leave the zone) and interzonal trips to all other zone interchanges for each trip purpose.

The Lincoln MPO Model uses a gravity model equation and applies friction factors to represent the effects of impedance between zones. As the impedance (i.e., travel time) between a pair of zones increases, the number of trips between the zone pair decreases as represented by a decreasing friction factor. The trip distribution model also makes an assumption in that the number of trips between two zones is directly proportional to the number of productions and attractions contained in those zones. The gravity model used by trip distribution to estimate the number of trips between each zone pair is defined in the equation below.

$$T_{ij} = P_i \cdot \frac{A_j \cdot F_{ij} \cdot K_{ij}}{\sum_j A_j \cdot F_{ij} \cdot K_{ij}}$$

Where:

T_{ij} = trips from zone i to zone j
P_i = productions in zone i
A_i = attractions in zone j
K_{ij} = K-factor adjustment from i to zone j
i = production zone
j = attraction zone
F_{ij} = friction factor (a function of impedance between zones i and j)

Friction factors represent the impedance to travel between each zone pair. Friction factors have been calibrated for each trip purpose based on a trip length frequency distribution (TLFD) generated from LBS travel data and roadway network shortest path matrices.

4.1 Peak and Off-Peak Period Definitions

Trips occurring during the AM and PM peak hours are distributed based on peak congested speeds and trips occurring during off-peak times are distributed based on off-peak congested speeds. Trip distribution is performed in Production-Attraction (PA) format rather than Origin-Destination (OD) format. This is because the majority of trips in the AM peak hour travel from production to attractions (e.g., to work) and the majority of trips in the PM peak hour travel from attraction to productions (e.g., from work).

The Lincoln MPO Model has the capability of generating trips by time of day, using factors representing the portion of trips occurring in the peak (combined AM and PM peak hours) and off-peak (all other times) period. Peak hour trips are further separated in the time of day step prior to traffic assignment. Time of day factors were carried over from the previous version of the model. The resulting share of trips in the peak by trip purpose are shown in Table 4.1.

Table 4.1 Peak and Off-Peak Trip Percentages by Purpose

Time Period	HBW	HBS	HBO	WBO	OBO	HBU
Peak 7:00 – 8:00 AM and 5:00 – 6:00 PM	25.2%	14.0%	20.2%	22.0%	19.5%	10.7%
Off-Peak All other times	74.8%	86.1%	79.8%	78.0%	80.5%	89.3%

4.2 Roadway Network Shortest Path

The impedance portion of the gravity model equation is based on shortest paths between each zone pair. The Lincoln MPO Model finds the shortest path between each zone pair based on peak or off-peak congested travel time. Peak travel time is defined as the AM peak hour directional travel time, while off-peak travel time is defined as the off-peak period congested travel time. In the first speed feedback iteration, peak travel times are calculated based on congested speed lookup tables developed from INRIX and travel survey data. Initial off-peak speeds are identical to free flow speeds. In subsequent speed feedback iterations, travel times are calculated based on traffic assignment using a method of successive averages as described further in Section **6.2**. Pathbuilding and travel time parameters used in this model update remain consistent with those derived for the previous model.

4.3 Friction Factors

Friction factors represent the impedance to travel between each zone pair. The Lincoln MPO Model applies the friction factors in the form of gamma functions for each trip purpose. The gamma function is defined by the equation below, with calibrated parameters shown in Table 4.2.

$$F_{ij} = \alpha t^{-\beta} e^{-\gamma t}$$

Where:

F_{ij} = Friction factor between zones i and j

t = travel time

α, β, γ = calibration parameters

Friction factors for each trip purpose were calibrated by comparing a Trip Length Frequency Distribution (TLFD) generated by the travel model to a TLFD generated from a combination of observed trip OD pairs obtained from LBS data and the travel model shortest path matrix. The travel model was run iteratively with minor adjustments to calibration parameters alpha, beta, and gamma until the modeled and observed TLFD converged to a similar shape.

A comparison of observed TLFDs for peak and off peak periods shows minimal differences between time periods for all trip purposes. Therefore, separate calibration exercises were not performed for the peak and off-peak time periods.

Table 4.2 Calibrated Friction Factor Parameters

Trip Purpose	Alpha	Beta	Gamma
HBW	1000	0.0104	0.011
HBS	1000	1.1147	0.2713
HBU	100	1.1147	0.2713
HBO	100	1.6087	0.2583
WBO	100	1.0236	0.2026
OBO	100	2.512	0.0263

5.0 Mode Choice

5.1 Mode Choice Model Structure

Because neither a household survey nor a detailed on-board survey were available, it was necessary to borrow many elements of the Lincoln MPO mode choice model from another region. While preference was given to local data sources, the mode choice model also draws from Federal Transit Administration (FTA) guidelines, consultant experience, and the mode choice model included in Colorado North Front Range (NFR) Regional Travel Model. The NFR mode choice model was selected as a source of information for this model update due to geographic proximity, similarity in community size, and the presence of a large university in both areas.

The Lincoln MPO Model applies a logit-based mode choice model for all internal trip purposes. The general equation describing a multinomial mode choice is shown in the equation below.

$$P_i = \frac{e^{U_i}}{\sum_m e^{U_m}}$$

Where:

P_i = the probability of using mode i
u_i = the utility of mode i
u_m = the utility of mode m

The logit model is based on the concept of utilities (or disutilities) that describe the characteristics of travel by each mode. The utility function can be made up of impedance variables such as travel time, wait time, and cost as well as locational and socioeconomic variables. Each variable is multiplied by an estimated coefficient that describes the relative weight (positive or negative) of each variable. A mode constant that captures mode preferences not measured by the other utility variables is also added to the utility. Due to the relative nature of the mode constants, the mode constant for one mode must be set to zero. The utility equation applied to each mode is shown below.

$$u_i = c_1 X_{1i} + c_2 x_{2i} + \ c_3 x_{3i} + \ \ldots + c_n x_{ni}$$

Where:

u_i = Utility for mode i
$c_1, c_2, c_3, \ldots, c_n$ = Estimated coefficients for variables 1 through n
$x_{1i}, x_{2i}, x_{3i}, \ldots, x_{ni}$ = Values for variables 1 through n

The Lincoln MPO Model uses a mode choice structure that nests multiple multinomial choices. At the bottom level of the nested logit structure, utility values are computed using the method described for multinomial application. Utilities at the upper level are computed as a combination of utilities for the nested modes (i.e., modes below the upper level choice). An example of a lower level mode is walk, while the corresponding upper level mode is non-motorized. Utilities for intermediate modes are based on the natural log of the sum of exponentiated sub-mode utilities. This term, referred to as the “logsum” variable, is computed as shown below.

$$LS_i = \ln\left(\sum_{j=1}^{n} e^{u_j}\right)$$

Where:

LS_i = The logsum of intermediate mode i
u_j = Utility terms for nested mode j
n = The number of sub-modes under mode i

Once the logsum variables have been computed for all intermediate modes, mode probabilities are calculated in a manner similar to that described for multinomial logit models. However, for nested modes, utilities are replaced by the product of the logsum and a nesting coefficient as shown in the equation below. The nesting coefficient has a value between zero and one, where a nesting value of zero indicates sub-modes are identical and do not need to be included as separate modes and a nesting value of one indicates sub-modes are distinctly different and could be represented as separate non-nested modes.

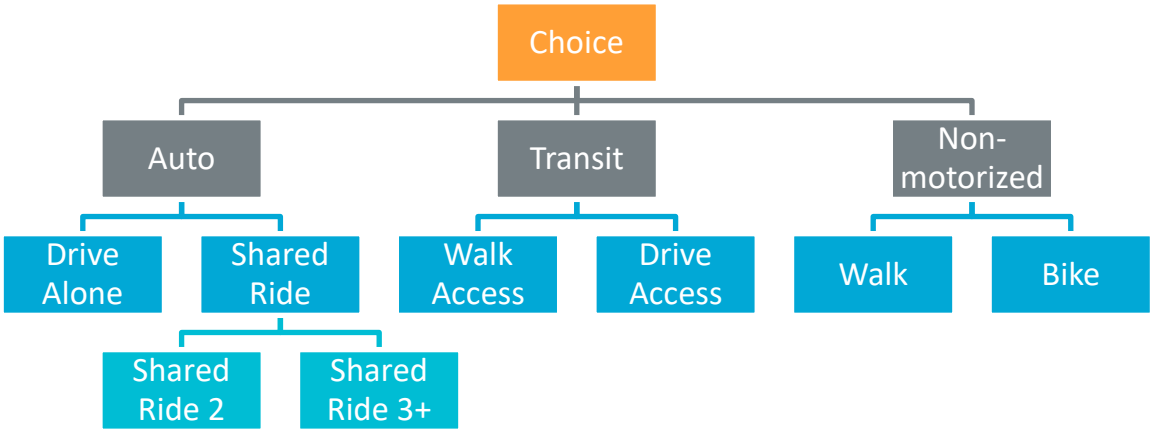
$$P_i = \frac{e^{\theta_i \cdot LS_i}}{\sum_{m=1}^{n} e^{\theta_m \cdot LS_m}}$$

Where:

P_i = The probability of selecting intermediate mode i
θ_i = The nesting coefficient for intermediate mode i
θ_m = The nesting coefficient for mode m
n = The number of modes at the same level as mode i

The structure for the Lincoln MPO mode choice models, shown in Figure 5.1, assumes modes, sub-modes, and access modes are distinctly different types of alternatives that present distinct choices to travelers. Within each nest, the model operates on the modes included in the nest as a multinomial logit model. Likewise, the model operates on nests included at a specific nesting level as a multinomial logit model. However, the competition between modes included in different nests or nesting levels is not in proportion to initial estimates of the mode shares. As a result, an important departure from multinomial logit models is "lower level" choices are more elastic than they would be in a multinomial logit model.

Figure 5.1 Nested Logit Mode Choice Structure



The nested logit model employs several multinomial logit models. The first is choice among primary modes: auto, transit, and non-motorized. The second model provides a choice between drive alone and shared ride followed by a choice between shared ride 2 and shared ride 3+. The next model provides a choice between walk and drive access to transit. Lastly, the model provides a choice between walk and bike.

In application, utilities are calculated at the bottom levels first and passed up through the nesting structure. When this is complete, the probabilities are estimated from the top of the structure down. Composite utilities are passed upward using "logsum" variables. For example, for the composite transit mode, the "logsum" would be based on walk and drive access modes. The logsum for transit is calculated as shown in the equation below.

$$LS_{transit} = -\ln\left(e^{u_{WalkAccess}} + e^{u_{DriveAccess}}\right)$$

The logsum terms for the transit mode would then appear in the multinomial choice model for auto, transit, or non-motorized as follows:

$$P_{transit} = \frac{e^{\theta_1 \cdot LS_{transit}}}{e^{\theta_1 \cdot LS_{auto}} + e^{\theta_1 \cdot LS_{transit}} + e^{\theta_1 \cdot LS_{nonmotor}}}$$

Where:
$P_{transit}$ = the probability that a traveler will use transit
θ_1 = the nesting coefficient for the upper level nest

While it is possible to estimate mode choice model coefficients and constants using a combination of household and on-board survey data, sufficient data are not available to estimate mode choice model coefficients in the region. Therefore, mode choice coefficients are consistent with guidance provided by the Federal Transit Administration (FTA). This guidance, summarized in Table 5.1, specifies allowable ranges for certain model coefficients. The Lincoln MPO Model uses coefficient values that fall mid-way between the minimum and maximum recommended coefficients.

Table 5.1 New Starts Coefficient Guidelines

Coefficient	Minimum Value	Maximum Value
In-Vehicle Travel Time (IVTT)	-0.030	-0.020
Out of Vehicle Travel Time (OVTT)	-0.090	-0.040

Note: Guidance states that the coefficient for out of vehicle travel time should be between 2 and 3 times the in-vehicle travel time coefficient.

5.2 Mode Choice Model Specification

The utility equations for the Lincoln MPO mode choice model follow. The coefficient designations (e.g., C_{ivtt} for Coefficient of in-vehicle travel time) rather than the actual model coefficients are shown to aid in the understanding of the model specification. The actual model coefficients are shown in Table 5.2. Model constants will be calibrated to the mode choice targets documented in the subsequent section.

Drive Alone Utility:

$$\begin{aligned} U_{DA} &= C_{IVTT} \cdot IVTT_{drive} \\ &+ C_{OVTT} \cdot TTIME \\ &+ C_{Cost(income)} \cdot (CPM \cdot Dist) \end{aligned}$$

Shared Ride 2 Utility:

$$\begin{aligned} U_{SR2} &= C_{IVTT} \cdot IVTT_{drive} \\ &+ C_{OVTT} \cdot TTIME \\ &+ C_{Cost(income)} \cdot (CPM \cdot Dist) \\ &+ K_{SR2} \end{aligned}$$

Shared Ride 3+ Utility:

$$\begin{aligned} U_{SR3p} &= C_{IVTT} \cdot IVTT_{drive} \\ &+ C_{OVTT} \cdot TTIME \\ &+ C_{Cost(income)} \cdot (CPM \cdot Dist) \\ &+ K_{SR3p} \end{aligned}$$

Note: the cost terms for HBW trips are divided by 2 for SR2 and by 3.3 for SR3+. Cost terms for HBU trips are divided by 2 for SR2 and 3.5 for SR3+.

Walk to Transit Utilities:

$$\begin{aligned} U_{WalkTransit} = \ & C_{IVTT} \cdot IVTT_{transit} \\ &+ C_{OVTT} \cdot WalkAccessTime \\ &+ C_{OVTT} \cdot WalkEgressTime \\ &+ C_{OVTT} \cdot \min(WaitTime, 7.5) \\ &+ C_{LWAIT} \cdot \max(WaitTime - 7.5, 0) \\ &+ C_{OVTT} \cdot XferTime \\ &+ C_{Cost(income)} \cdot Fare \\ &+ K_{WalkTransit} \end{aligned}$$

Drive to Transit Utilities:

$$\begin{aligned} U_{DriveTransit} &= C_{IVTT} \cdot (IVTT_{transit}) \\ &+ C_{IVTT} \cdot DriveAccessTime \\ &+ C_{OVTT} \cdot WalkEgressTime \\ &+ C_{OVTT} \cdot \min(WaitTime, 7.5) \\ &+ C_{LWAIT} \cdot \max(WaitTime - 7.5, 0) \\ &+ C_{OVTT} \cdot XferTime \\ &+ C_{Cost(income)} \cdot (Fare + CPM \cdot Dist) \\ &+ K_{DriveTransit} \end{aligned}$$

Walk Utility:

$$U_{Walk} = C_{OVTT} \cdot WalkTime + K_{Walk}$$

Bike Utility:

$$U_{Bike} = C_{OVTT} \cdot BikeTime + K_{Bike}$$

Where:

$IVTT_{transit}$	= Transit in-vehicle travel time
$IVTT_{drive}$	= Drive in-vehicle travel time
TTIME	= Terminal time in minutes
CPM	= Auto operating cost per mile in cents
Dist	= Distance traveled in miles
WalkAccessTime	= Walk access time
DriveAccessTime	= Drive access time
WalkEgressTime	= Walk egress time
WaitTime	= Initial wait tie for transit in minutes
XferTime	= Transfer time in minutes (1/2 of the headway of the route being boarded, plus walk time if applicable)
WalkTime	= Direct walk time, assuming a 3 mph walk speed
BikeTime	= Direct bike time, assuming a 12 mph bike speed
Fare	= Transit fare in dollars (average rate paid by all riders)
C_x	= Coefficient for variable x, defined in Table 5.2
K_{TRN}	= Transit Constant
K_{DACC}	= Drive Access Constant
K_{mode}	= Constant for specified mode (i.e., express or premium)

Table 5.2 Mode Choice Model Coefficients

Coefficient	Value
In-Vehicle Travel Time (IVTT)	-0.025
Out of Vehicle Travel Time (OVTT)	-0.050
Long wait time (LWAIT)	-0.125
Cost (low income)	-0.621
Cost (med income)	-0.214
Cost (high income)	-0.121
Cost (not segmented)	-0.212
Walk Time	-0.050
Bike Time	-0.050
Nesting Coefficient (same for both levels)	0.5

Source: NFR Regional Travel Model, adjusted and transferred to the Lincoln MPO Model.

5.3 Mode Choice Targets

The Lincoln mode choice targets were prepared using a combination of the following data sources:

1. 2019 StarTran Farebox Ridership Data
2. 2019 StarTran On-Board Transit Survey
3. 2015 NFR Mode Choice Targets

Transit Ridership

Table 5.3 shows the 2019 route boardings. The boardings reflect average daily boardings using farebox data for Tuesdays – Thursdays for all months in 2019. For route 54, there were no farebox data for the months of January through April, so the daily boardings for route 54 represent average daily boardings for Tuesdays – Thursdays for the months of May through December.

Table 5.3 Route Ridership

Route	Daily Boardings
10	46
11	89
12	105
13	565
14	31
15	70
16	40
17	13
18	80
19	17
22	183
23	57
24	1,352
25	1,116
27	619
40	396
41	437
42	362
44	442
46	583
48	191
49	303
51	216
52	330
53	452
54	137
55	121
56	172
Total	**8,523**

Source: 2019 Farebox Data.

On-Board Transit Survey

StarTran conducted an on-board transit survey on all fixed routes in mid-October 2019. The survey was meant to analyze travel patterns and transit use. There were 405 completed surveys. The survey provides information regarding on transfer rates and access and egress modes to/from transit.

Table 5.4 presents the transit access and egress mode splits as per the on-board transit survey report. To determine the 2019 linked transit trip target, the 2019 unlinked transit trips (boardings) are divided by the transfer rate. To that end, and in absence of more reliable information, we assumed that the average transfer rate in the region is the average of transfer access and egress rates, or 21.24%. Consequently, the linked transit trip target in the Lincoln MPO is **7,030 transit trips**.

Table 5.4 Transit Access and Egress Mode Splits

Access Modes	Percent of Respondents	Egress Modes	Percent of Respondents
Transfer	15.6%	Transfer	26.9%
Walk	72.6%	Walk	54.3%
Auto	5.4%	Auto	2.0%
Bike	2.0%	Bike	1.5%
Other	1.7%	Other	9.6%
N/A	2.7%	N/A	5.7%

Source: StarTran 2019 On-Board Transit Survey.

Also, Table 5.4 identifies the splits between walking to/from transit and driving to/from transit. We assumed that all access and egress modes aside from transfer and auto belong to the walk mode, whereas the auto mode belongs to the drive mode. Consequently, after adjusting the non-transfer modes to sum up to 100%, and averaging access and egress percentages, we find that 95.4% of transit trips are accessed/egressed via walking, whereas 4.6% of transit trips are access/egressed via driving.

Mode Choice Targets

Because trip purpose information and detailed auto occupancy information were not available from household and on-board surveys, the Lincoln MPO mode choice targets are partially based on mode choice targets from the NFR Regional Travel Model. Non-transit mode targets are in percent, and sum up to 100%. Transit is split into Walk to Transit and Drive to Transit.

Table 5.5 shows the mode choice targets for the NFR model. The Lincoln MPO Model borrows the non-transit mode targets by purpose directly. Transit targets have been scaled to match overall transit targets by access mode specific to Lincoln and have been aggregated to combine local, express, and premium transit modes. Table 5.6 presents the resulting Lincoln MPO mode choice targets.

Table 5.5 NFR Mode Choice Targets

					Walk to Transit			Drive to Transit			
Purpose	Income	DA	SR2	SR3	Local	Express	Premium	Local	Express	Walk	Bike
HBW	Income 1	86.4%	5.68%	2.32%	606	224	306	91	127	5.1%	0.5%
HBW	Income 2	83.3%	6.67%	2.73%	450	166	227	67	95	2.4%	4.9%
HBW	Income 3	80.2%	6.17%	2.53%	69	25	34	10	14	1.7%	9.5%
HBS	All	43.3%	32.6%	17.7%	570	0	200	0	29	4.7%	1.8%
HBU	All	54.2%	14.4%	7.63%	3,894	0	306	0	338	11.7%	12.1%
HBO	All	33.7%	27.7%	24.8%	1,908	36	503	9	303	10.8%	3.0%
HBSc	All	15.6%	31.9%	33.8%	268	0	0	0	0	13.1%	5.5%
WBO	All	77.6%	7.81%	4.09%	576	73	297	17	83	8.3%	2.1%
OBO	All	36.8%	27.8%	24.9%	1,496	36	689	9	209	9.5%	1.0%

Source: NFR Model, borrowed for use in the Lincoln MPO Model.

The Home-Based School purpose is not a separate purpose in the Lincoln MPO model, so transit trip targets were added to the Home-Based Other purpose. Moreover, the Home-Based Recreational trip purpose is not a separate purpose in the NFR Model, so we divided the transit trip targets of Home-Based Shopping NFR trip purpose to Home-Based Shopping and Home-Based Recreational in the Lincoln model proportionally using trip generation model results. We also assumed that the Home-Based Recreational non-transit mode targets are the same as those of the Home-Based Shopping trip purpose.

The Lincoln MPO walk to transit trip target total is 95.4% x 7,030 = 6,709. The drive to transit trip target total is 4.6% x 7,030 = 321.

Table 5.6 Lincoln MPO Mode Choice Targets

Purpose	Income	DA	SR2	SR3	Walk to Transit	Drive to Transit	Walk	Bike
HBW	Income 1	86.4%	5.68%	2.32%	588	50	5.1%	0.5%
HBW	Income 2	83.3%	6.67%	2.73%	436	37	2.4%	4.9%
HBW	Income 3	80.2%	6.17%	2.53%	66	5	1.7%	9.5%
HBS	All	43.3%	32.6%	17.7%	221	4	4.7%	1.8%
HBR	All	43.3%	32.6%	17.7%	177	3	4.7%	1.8%
HBU	All	54.2%	14.4%	7.63%	2,174	77	11.7%	12.1%
HBO	All	33.7%	27.7%	24.8%	1,406	71	10.8%	3.0%
WBO	All	77.6%	7.81%	4.09%	490	23	8.3%	2.1%
OBO	All	36.8%	27.8%	24.9%	1,150	50	9.5%	1.0%

6.0 Trip Assignment

The trip assignment model includes a time of day step followed by assignment of transit and vehicle trips to the transportation networks. In the time of day model component, the vehicle trip tables from the mode choice model are converted to Origin/Destination format and factored into time periods for assignment on the roadway network.

In the traffic assignment step, vehicle trip tables by time of day are assigned to the roadway network using an equilibrium procedure for the AM and PM peak hours and for the off-peak period. After traffic assignment is completed, resulting travel times are fed back to trip distribution and the model is run iteratively until speeds input to trip distribution are reasonably consistent with speeds resulting from traffic assignment.

After speed feedback has been completed, transit person trips are assigned to the transit route system. Transit trips are assigned separately for peak and off-peak periods and by drive and walk access. These individual assignment results are combined to form daily transit assignment results.

6.1 Time of Day

Based on the analysis of household survey data and discussions with Lincoln MPO staff, the AM and PM peak hours were defined as shown in Table 6.1.1. The peak hour definitions are consistent with the traditional morning and evening peaks observed in many similarly sized areas. One-hour peaks are often modeled in regions that don't experience significant congestion outside of rather short peak periods during typical weekdays. One-hour peaks also facilitate reporting of the common performance measure of peak hour level of service.

Table 6.1 Peak Period Definitions

Period Name	Period Definition
AM Peak Hour	7:00 AM – 8:00 AM
PM Peak Hour	5:00 PM – 6:00 PM
Off-Peak Period	All Remaining Time (22 hours)

Time of day processing is done in two steps in the Lincoln MPO Model. Factors are first applied in a pre-distribution time of day module that separates trips into peak and off-peak time periods but does not distinguish between different directions. After mode choice is complete, a second time of day process separates peak period trips into AM and PM trips and processes trip directionality. These time of day factors, along with the directional trip factors by time period were retained from the previous model and are shown in Table 6.2.

Table 6.2 Overall Time of Day Factors

Time Period	Direction	HBW	HBS	HBO	WBO	OBO	HBU
AM Peak Hour	Depart	12.0%	1.9%	11.5%	2.2%	1.7%	15.0%
	Return	0.7%	0.2%	1.6%	5.3%	1.7%	0.0%
PM Peak Hour	Depart	1.2%	5.7%	2.5%	10.3%	3.7%	1.5%
	Return	11.3%	6.2%	6.4%	1.8%	3.7%	3.7%
Off-Peak	Depart	40.0%	35.4%	36.7%	54.0%	44.6%	38.8%
	Return	34.7%	50.7%	41.3%	26.5%	44.6%	41.0%

6.2 Traffic Assignment

The Traffic Assignment step loads the travel demand represented by the vehicle trip tables onto the roadway network. The Lincoln MPO Model features a user equilibrium assignment method that accounts for traffic congestion and the associated rerouting of trips to avoid congestion. The equilibrium assignment process minimizes the total travel time on the roadway network, representing a condition in which each highway user has perfect knowledge of traffic conditions in the region.

The impedance used for determining the shortest path in the Traffic Assignment step of the Lincoln MPO Travel Model includes travel time and auto operating cost. When including variables in addition to travel time, a generalized cost function converts all variables to a consistent cost using a value of time, as demonstrated in the equation below.

$$Generalized\ Cost = Time \cdot ValueOfTime + OperatingCost$$

A volume-delay function represents the effect of increasing traffic volume on link travel time in the assignment process. The Lincoln MPO Model uses the most common volume-delay function called the modified Bureau of Public Roads (BPR) function. The modified BPR function is shown below.

$$T_C = T_F\left(1 + \alpha\left(\frac{V}{C}\right)^{\beta}\right)$$

Where:

- T_C = Congested travel time
- T_F = Freeflow travel time
- V = Traffic volume
- C = Highway design capacity (i.e., upper limit level of service C capacity)
- α = Coefficient alpha
- β = Exponent beta

The coefficient alpha and the exponent beta are calibrated values that vary by facility type, shown in Table 6.3. They were developed by monitoring link speed and VMT balance by facility type during the model validation process.

Table 6.3 Calibrated Friction Factor Parameters

	Alpha	Beta	Gamma
Freeway	0.83	5.5	1000
Expressway	0.71	2.1	1000
Principal Arterial	0.15	10	1000
Minor Arterial	0.15	7	1000
Urban Collector	0.15	7	1000
Major Rural Collector (State)	0.15	7	1000
Major Rural Collector (County)	0.15	7	1000
Minor Rural Collector	0.15	7	1000
Others (Local)	0.15	7	1000
Ramp	0.83	5.5	1000
Freeway/Freeway Ramp	0.83	1.40	1000

Speed Feedback

The trip distribution and mode choice model steps rely on congested zone to zone travel time information to distribute trips and identify mode shares. The traffic assignment step produces estimated congested travel speeds based on traffic flows and application of the volume-delay function. The speeds input to trip distribution and mode choice are generally not consistent with the speeds output from traffic assignment. To rectify this inconsistency, results from traffic assignment are used to re-compute zone to zone travel times for input to trip distribution and mode choice. The model is re-run, and a comparison is then made between the initial and updated zone to zone travel times. If the travel times are not reasonably similar, the updated travel times are then fed back to trip distribution and mode choice. This process can be repeated iteratively until a convergence criterion or iteration limit is met.

Without speed feedback, overall regional travel demand remains constant regardless of the roadway network assumptions because trip distribution and mode choice patterns are not affected by changing congestion levels. When speed feedback is added to the model, heavy congestion results in slower speeds, thereby leading to shorter trip patterns in areas with heavy congestion. As roadway improvements are added to the model, the associated capacity increase results in faster travel speeds as localized congestion decreases. The higher speeds result in longer trip lengths, which has the effect of incrementally increasing overall travel demand. In the mode choice model, slower roadway speeds typically result in slower transit speeds as well, minimizing the effect of speed feedback on transit results. Speed feedback has a more notable effect on transit results when modeling transit options that do not experience speed degradation as traffic congestion increases. Inclusion of speed feedback is most important from a mode choice perspective when using the model to test options such as BRT, rail, or even improvements such as transit signal prioritization or queue jumps.

Application of Speed Feedback for Alternatives Analysis

Speed feedback ensures travel time consistency within the entire modeling structure. It was conceived as a model enhancement in the early 1990's largely in response to environmental lawsuits, although it is good practice and now considered a necessity. Generally, speed feedback is most noticeable when modeling network changes that provide a significant travel time improvement, such as a new freeway in a developing area. These types of alternatives warrant running the feedback process because they can affect regional travel patterns. Less significant improvements may not result in a significant change in trip distribution patterns.

For any and all interim milestone and horizon years, speed feedback should be executed to closure for the base network in each of these years. This base network could be defined as a no-build, existing plus committed, or build network for each of these future years. In any given year, speed feedback should generally be run when a scenario includes major changes to socioeconomic data assumptions or significant changes to the roadway network.

When comparing minor improvements, it is often best to run the model with speed feedback disabled. This will increase consistency between scenarios being compared.

6.3 Transit Assignment

Transit person trips resulting from the mode choice model are assigned to the transit route system. Each trip is assigned from zone centroid to zone centroid using walk or drive access links, transit routes, and walk egress links. The transit assignment step does not include capacity constraint, so increasing transit volumes do not result in diversion of transit trips to other transit service.

Transit assignment results include the total number of boardings at each transit stop, as well as transit volumes on all stop to stop transit route segments. However, transit results are generally best evaluated at the systemwide or route group level. Individual route, stop, and segment values have not been validated to observed conditions. Prior to using the model to support detailed transit corridor studies, a focused transit model calibration and validation effort is recommended.

6.4 Assignment Validation

Roadway volumes resulting from traffic assignment were compared against traffic count data. This process, called traffic assignment validation, ensures that the model is reasonably representing observed traffic patterns. Traffic counts obtained from Lincoln Transportation & Utilities, Lancaster County Engineering Office, and NDOT were placed on the roadway network. Travel model results were then compared to traffic count data using a variety of techniques, including regional comparisons, screenline comparisons, and visual inspection of individual link data.

Overall vehicle trip activity was validated by comparing count data to model results on all links where count data is available using two statistics: Model Volume as compared to Count Volume and Model VMT as compared to Count VMT. These statistics were reviewed at the facility type, area type, and regional level and are shown in Table 6.4.

While the model should accurately represent the overall level of activity, it is also important to verify the model has an acceptably low level of error. It is expected that the model will not perfectly reproduce count

volumes on every link, but the level of error should be monitored. The plot shown in Figure 6.1 demonstrates the ability of the model to match individual traffic count data points. General guidelines suggest that % RMSE should be below about 40 percent region-wide, with values below 30 percent for high volume facility types such as freeways. The % RMSE measure tends to over-represent errors on low volume facilities, so values on collectors are not particularly meaningful. Table 6.5 shows % RMSE values by facility type and area type.

The Lincoln MPO Model includes 7 screenlines, shown in Figure 6.2. Screenlines capture distinct regional travel patterns, and can be useful in understanding the mode's trip generation and trip distribution characteristics. Screenlines have been drawn to cover links that either have observed traffic volumes or are known to carry very low traffic volumes. A comparison of model and count volumes across each screeline is provided in Table 6.6.

The validation summaries described above are limited to information on links where traffic count data are available. Total VMT and VHT on all links are presented in Table 6.7.

Table 6.4 Regional Volume and VMT Summary

Category	Model Volume / Count Volume	Model VMT / Count VMT	Target
Freeway	108.8%	103.8%	100% +/- 10%
Expressway	103.0%	104.7%	100% +/- 10%
Principal Arterial	101.1%	100.5%	100% +/- 10%
Minor Arterial	105.2%	102.6%	100% +/- 15%
Urban Collector	97.3%	84.0%	100% +/- 25%
Major Rural Collector(State)	100.6%	103.1%	100% +/- 25%
Major Rural Collector(County)	110.1%	103.1%	100% +/- 25%
Minor Rural Collector	132.5%	127.2%	100% +/- 25%
CBD	94.7%	94.1%	n/a
Urban	106.2%	104.6%	n/a
Suburban	102.3%	102.8%	n/a
Rural	98.5%	96.0%	n/a
Overall	**103.4%**	**102.1%**	**100% +/- 5%**

Note: Targets are a set of general guidelines shown for reference and are not a rule or regulation.

Table 6.5 Root Mean Square Error Summary

Category	RMSE	% RMSE
Freeway	4,789	25.2%
Expressway	2,821	25.8%
Principal Arterial	5,658	28.8%
Minor Arterial	3,843	40.3%
Urban Collector	3,314	75.3%
Major Rural Collector(State)	971	37.2%
Major Rural Collector(County)	1,329	98.0%
Minor Rural Collector	372	165.9%
CBD	4,563	41.4%
Urban	4,894	33.5%
Suburban	4,440	35.6%
Rural	1,527	58.8%
Overall	**4,032**	**39.2%**

Figure 6.1 Model Volume vs Count Volume

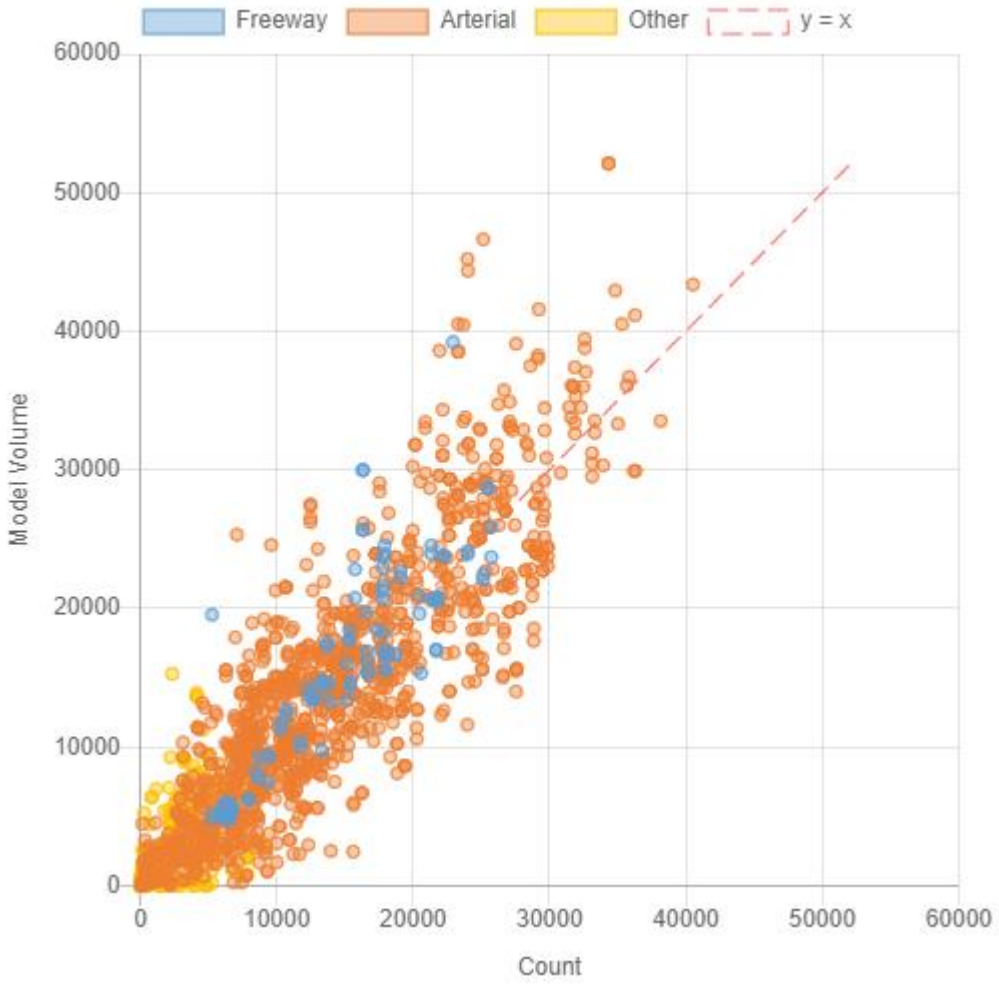


Table 6.6 Screenline Summary

Screenline ID	Model Volume	Model Count	Vol/Count	Error	Number of Links
1	170,854	141,706	120.60%	20.60%	20
2	393,626	351,209	112.10%	12.10%	30
3	340,489	299,156	113.80%	13.80%	29
4	133,869	133,301	100.40%	0.40%	22
5	180,553	185,077	97.60%	-2.40%	21
6	349,153	313,024	111.50%	11.50%	24
7	203,389	212,327	95.80%	-4.20%	52

Figure 6.2 Screenline Locations

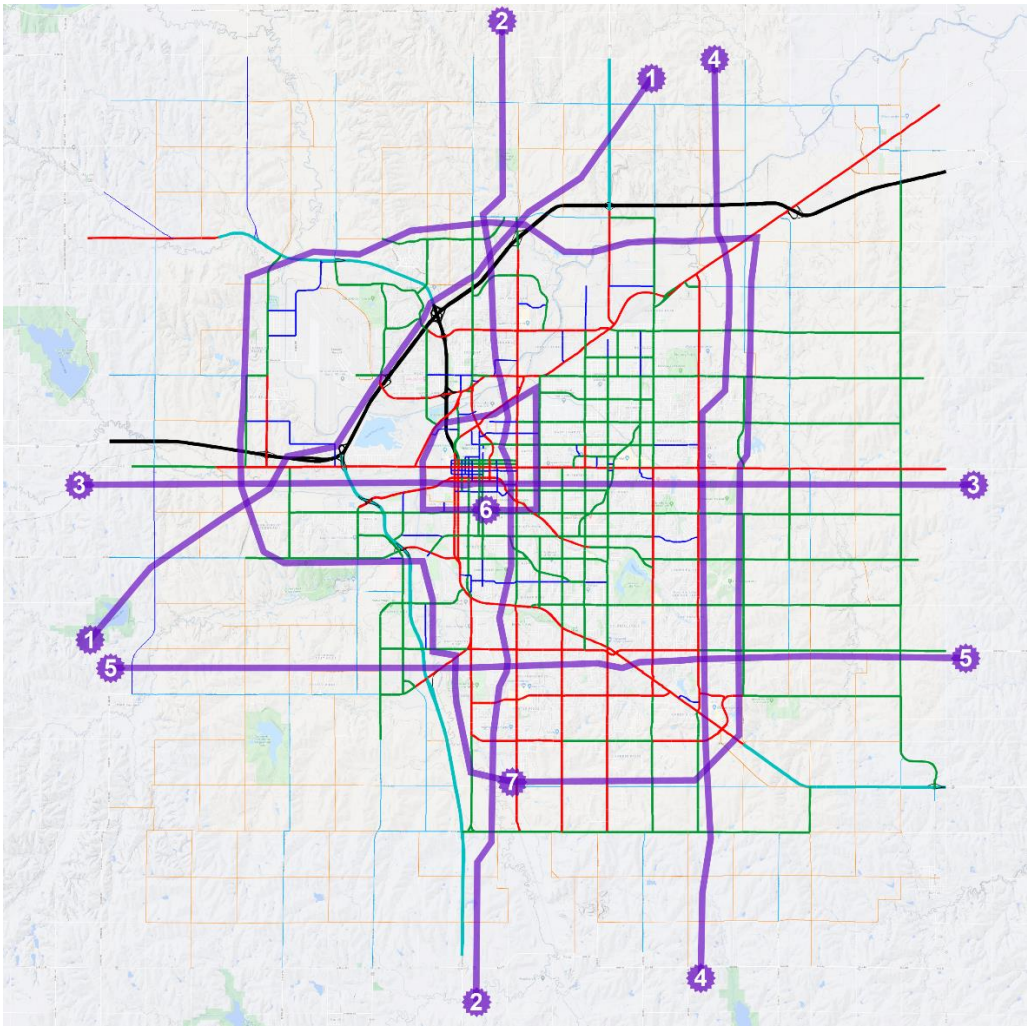


Table 6.7 Base Year VMT and VHT – Model Results for All Links

Category	Modeled VMT	Modeled VHT
Freeway	1,049,913	16,144
Expressway	396,034	7,227
Principal Arterial	2,254,674	60,021
Minor Arterial	1,543,505	45,994
Urban Collector	110,530	4,333
Major Rural Collector(State)	29,336	548
Major Rural Collector(County)	102,706	2,296
Minor Rural Collector	4,056	95
Local	44,756	1,292
Ramps	57,259	1,739
Freeway/Freeway Ramps	54,328	1,236
Centroid Connectors	746,621	34,151
CBD	136,928	6,705
Urban	2,139,136	70,521
Suburban	2,819,389	73,090
Rural	1,298,266	24,760
Total	**6,393,720**	**175,076**

6.5 Traffic Assignment Post Processing

The Lincoln MPO Model includes a post processing step that calculates adjusted volumes based on error in the validation year and assigns a level of service (LOS) to each link.

6.6 Link Volume Adjustment

The Lincoln Model produces adjusted link volumes based on guidance provided in National Cooperative Highway Research Program (NCHRP) Report 255 and re-iterated in NCHRP Report 765. These documents define the Ratio Method, Difference Method, and Average method, defined in the equations below.

$$AdjustedVolume_{Ratio} = ForecastVolume \cdot \frac{ValidationCount}{ValidationVolume}$$

$$AdjustedVolume_{Difference} = ForecastVolume + (ValidationCount - ValidationVolume)$$

$$AdjustedVolume_{Average} = \frac{\left(AdjustedVolume_{Ratio} + AdjustedVolume_{Difference}\right)}{2}$$

The Lincoln Model applies the average method in most cases, but will instead use the difference method for links where any of the following conditions identified below are true. In these conditions, growth factor (GF) is

defined as $ForecastVolume/ValidationVolume$ and error factor (EF) is defined as $ValidationCount/ValidationVolume$.

- $GF > 3$
- $GF > 4 \; and \; ForecastVolume \leq 1000$
- $EF > 2 \; or \; EF \leq 0.5$
- $(EF > 3 \; or \; EF \leq 0.33) \; and \; ForecastVolume \leq 3{,}000$
- $(EF > 4 \; or \; EF \leq 0.25) \; and \; ForecastVolume \leq 1000$

Link adjustments are only applied to links having either an actual traffic count or an estimated traffic count based on nearby traffic counts. Estimated traffic counts have been placed on all arterial, expressway, and freeway links where actual counts are not available. Furthermore, link adjustments have only been applied to arterials, expressways, and freeways. The adjustment routine has not been applied to collectors, local streets, local streets, ramps, or centroid connectors.

7.0 Sensitivity Tests

The base year calibration and validation measures described above and in the previous sections are critical in ensuring the validity of the model. These measures show that the model adequately reproduces observed trip generation, distribution, mode choice, and assignment patterns. However, the base year validation measures are *static* – they do not demonstrate the sensitivity of the model. The Lincoln MPO Model was run through a series of simple sensitivity tests to demonstrate that it provides appropriate sensitivity to variables that are important in the forecasting and planning process. These tests included:

- Socioeconomic Data Adjustments – both small scale and large scale changes were examined for reasonableness; and,
- Network Adjustments – critical links in both rural and urban areas were removed from the roadway network to ensure the Lincoln MPO Model reflected the expected diversion of traffic and congestion.

CAMBRIDGE SYSTEMATICS

Lincoln MPO Travel Model

User's Guide

final

report

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1.0 Introduction

This User's Guide provides instructions on operation of the Lincoln Metropolitan Planning Organization (MPO) Travel Model. Information is provided regarding installing the model, managing model scenario data, and running the model. Detailed information on the development and features of the model is available in the Lincoln MPO Travel Model Technical Documentation (August 18, 2021).

The model is run from the TransCAD software platform through a customized user interface. This interface provides access to custom calculations developed specifically for the Lincoln MPO. Scenario and file management is achieved through a scenario management system integrated into the custom user interface. A basic understanding of the TransCAD software program is required to maximize model performance. However, users unfamiliar with the software should be able to perform some modeling tasks with the assistance of this guide.

1.1 System Requirements

The model must be run on a computer running Windows 10 or later, the TransCAD software program, and Microsoft Office. Specific system requirements are shown in Table 1.1.

The listed requirements are suggested minimums; a computer that does not meet these requirements may still succeed in running the model. Increased processor speeds and multiple processor cores will reduce the amount of time required to run the model. The disk space requirements can be located on a local or network drive and must be available before attempting to run the model. However, model run times will be much longer if the model is run from a network drive rather than a local drive.

Table 1.1 System Requirements

Operating System	Windows 7 or later
Processor	Intel Core i5 processor or better Note: Multiple cores will significantly improve model run times.
Memory	4GB – 12 GB
TransCAD Software	Version 8.0 Build 22365 is recommended.
Disk Space (Installation and Input)	About 25 MB
Disk Space (Each scenario)	1 GB for each scenario
Software Type	MS Office and TransCAD must either both be 32-bit or both be 64-bit.

2.0 Installing the Model

2.1 Installing the Model Add-In

Installation of the Lincoln MPO Model has been streamlined so that the model can be installed in a simple three-step process. The entire Lincoln MPO Model is typically provided in a 7-zip file named *Lincoln MPO Moodel_vxxx_yyyy-mm-dd.7z*, where xxx is a version reference and yyyy-*mm-dd* represents the date that the installation package was created or delivered. Installation of the model can be completed by following the three steps described below.

1. Extract the provided 7-zip file and place the resulting folder in a user specified location (e.g., C:\Lincoln Model). The 7-zip file can be extracted using the 7-zip software available from www.7-zip.org.

2. Open the TransCAD software and select *Tools → GIS Developer's Kit → Setup Add-Ins…* from the main menu. In the dialog box that appears:

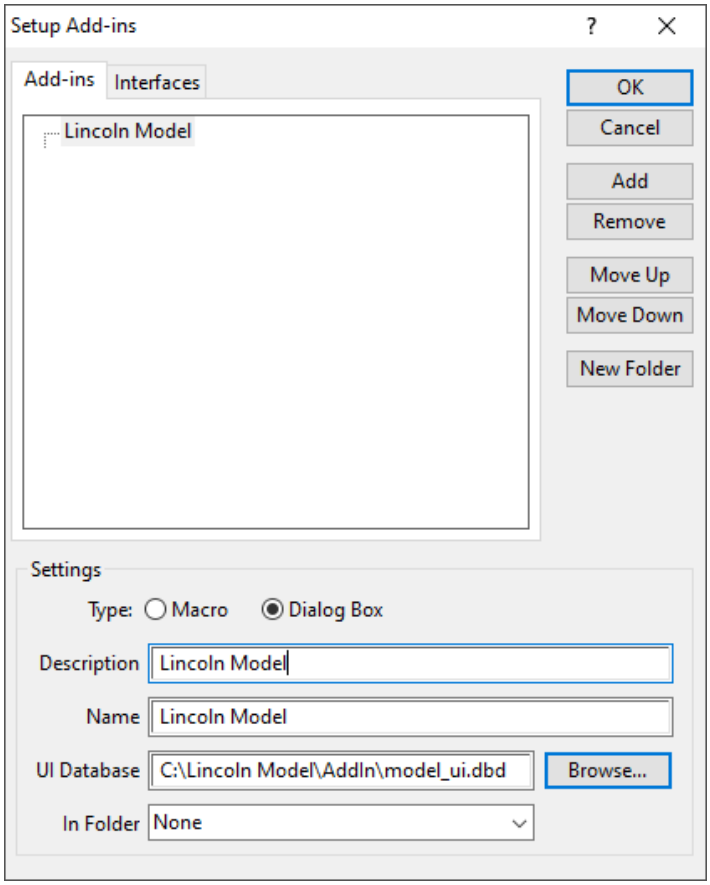
   a. Click *Add* to create a new entry

   b. Modify the new entry as shown in Figure 2.1.

3. Verify the Lincoln MPO Model dialog box can be started by selecting Tools → *GIS Developer's Kit → Add-Ins → Lincoln MPO Model* from the TransCAD menu.

If the model dialog box appears, the model installation has been successful. If necessary, pre-populated scenarios can be modified to reference the installed data.

Figure 2.1 Lincoln MPO Model Add-Ins Settings



Note: This example assumes the model has been extracted into *C:\Lincoln Model*. The actual location of the *UI Database* entry must be modified if the model is extracted to another location.

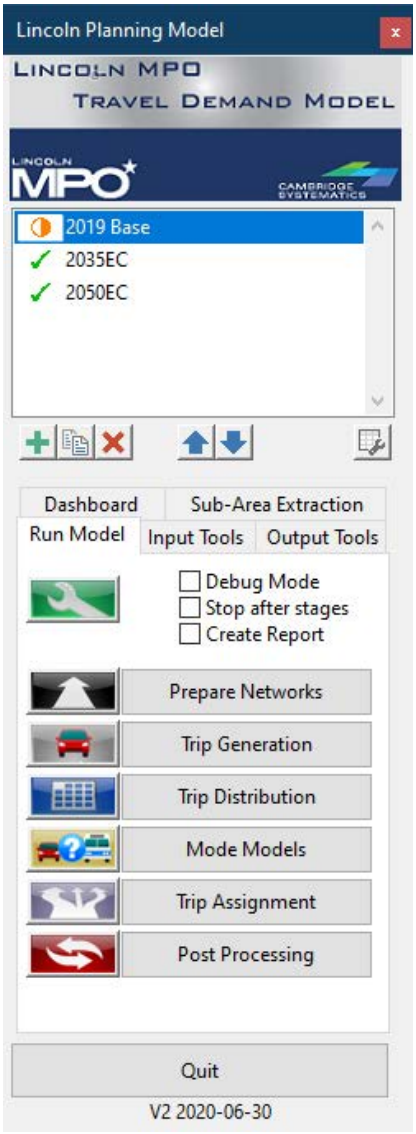
2.2 Launching the Add-In

Once the Add-in has been installed using the steps described above, the Lincoln MPO Model dialog box is launched by selecting **Tools → GIS Developer's Kit → Add-Ins → Lincoln Model** from the TransCAD menu. After first running the Add-In, the Lincoln MPO Model will be available in the list of recently used Add-Ins and can be accessed directly under the **Tools** menu.

In some cases when first running the Lincoln MPO Model, the user may be prompted to with the message *No Scenarios Found. Creating Default Scenario*. This occurs when there are not any scenarios set up in the model Add-In folder. The scenario editor dialog box can be dismissed, and the created scenario can be edited at a later time.

After successfully launching Lincoln MPO Model Add-In, dialog boxes similar to the example shown in Figure 2.2 will appear. All model functions can be accessed from these boxes and are described in more detail in the next chapter.

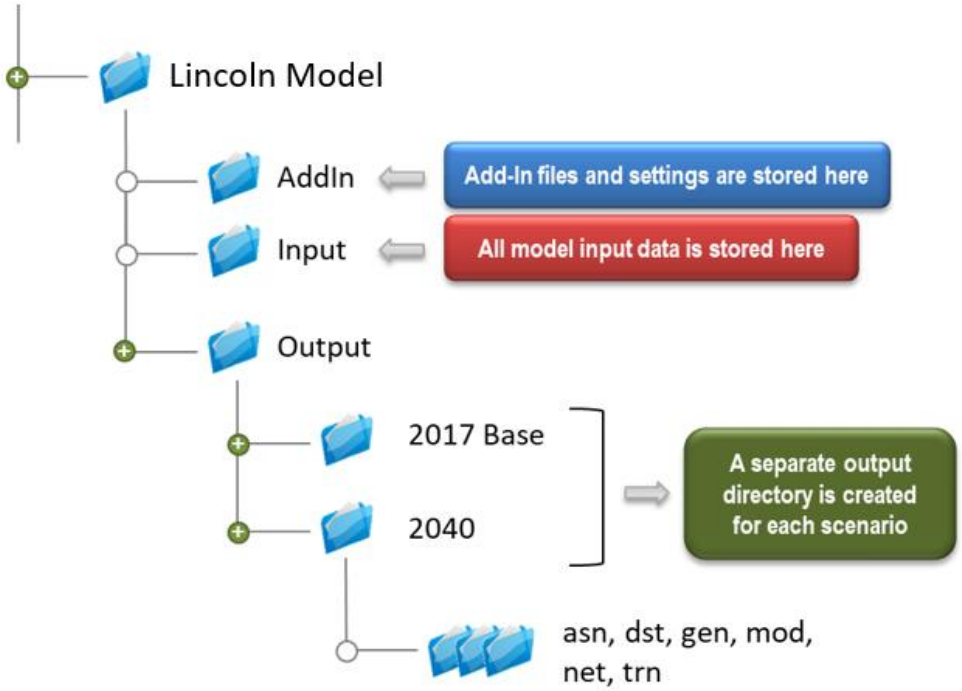
Figure 2.2 Lincoln MPO Model Add-In



2.3 Folder Structure

The Lincoln MPO Model has been set up to use a streamlined file and folder structure that maintains all model data and macro files within a common folder. This folder can be placed at a user-specified location anywhere on the computer that will be used to run the model. It is recommended that the model be installed on a local hard drive rather than a network drive, as use of a network drive to run the model will significantly impact performance. In addition, it is not advisable to install the model in a location that is actively synced using tools such as DropBox or OneDrive, as these tools may interfere with TransCAD's ability to repeatedly read and modify files. If model files are stored in a location that is actively synced, the synchronization should be paused for the duration of any model run. The general Lincoln MPO Model folder structure is shown in Figure 2.3.

Figure 2.3 Lincoln MPO Model Folder Structure



3.0 Running the Model

The model is controlled through a series of dialog boxes that allow the user to specify custom model run settings or to copy settings from a previously defined scenario. Users may also run the travel model, create reports and maps, and specify model run options. Steps required to complete a successful model run are described in the following sections.

3.1 Collecting the Required Data

To successfully run the model, various data files are required. Some input files are optional and will provide additional functionality. Each file is identified by a short keyword as shown in Table 3.1. All input files should be collected and placed in a model input directory. Input files will not be modified when the model is run. Input files are placed in *C:\Lincoln Model\Input* when the model is installed using the example directory location.

The land use (LU) and socioeconomic data (SED) must be set to represent a specific forecast year in the parameters section of the scenario editor. The roadway network and transit route system utilize a master network system that can also be set from the parameters section of the scenario editor.

Table 3.1 Lincoln MPO Model Input Files

ID	Description and Notes	Required / Optional
Network*	The Roadway Geographic File.	Required
Routes*	A TransCAD Route System based on the roadway network geographic file.	Required
TurnPen	A turn penalty file defining specific link to link turn penalties.	Optional
Database	An Access database containing SED, roadway capacity factors, trip generation rates, and a number of other parameters	Required
TAZ	The TAZ geographic file.	Required
KFAC	K-Factor Matrix (not used in validated model)	Optional
SelQry	Select Link/Node Query File	Optional
MODE	The TransCAD Mode table compatible with the route system.	Required
MODEXFER	The TransCAD Mode Transfer table compatible with the route system.	Required
ModeCoefficients	Mode choice coefficients	Required
ModeConstants	Mode choice constants	Required
Mode Targets	Mode choice model targets (used only when recalibrating mode choice).	Required

* The roadway network and transit route system utilize a master network system.

3.2 Creating and Running a Scenario

After the input data have been collected, a scenario must be defined from the model dialog box. Model scenarios are accessible from the scenario toolbox and contain information about the following:

- Input and output directories;
- Filenames;
- Network year/alternative;
- A scenario description; and
- Advanced settings and parameters.

The model dialog box, shown in **Figure 3.1**, provides flexibility in how the model is run. In most cases a simple approach can be taken.

- To run a standard, complete model run, start the model dialog box, create a scenario, review file settings, uncheck “Stop after stages”, and click on step 1 – Prepare Networks. The model will be run with the standard default settings.
- To automatically create a performance report when the model run is complete, select the Create Report checkbox.
- If buttons are grayed out and cannot be used, input files may be missing or settings may be invalid.

Scenarios can be copied based on existing scenarios or can be created using default settings. **Figure 3.2** through **Figure 3.5** show the scenario toolbox and editor used to manage scenarios along with annotations describing the available functions.

A scenario can be created or edited using the steps listed below. It is recommended these steps are performed in order.

1. Specify a scenario name
2. Identify the scenario input and output directories.
3. As necessary, identify input files by name. Most files will be found automatically, but some files may need to be located manually.
4. Once the status for all required files is shown as “Exists,” edit the scenario settings on the General tab.
5. *Optional:* Review the output filenames and modify if desired (changes are not recommended).

6. *Optional:* Review the parameters settings and modify if desired (changes are not recommended in most cases).

WARNING: *The Parameters tab in the Scenario Editor allows the user to edit values that are not often changed. The interface does not prevent the user from entering invalid or inconsistent data, which may cause the model to crash or produce invalid results.*

Figure 3.1 The Model Dialog Box (Scenario Management)

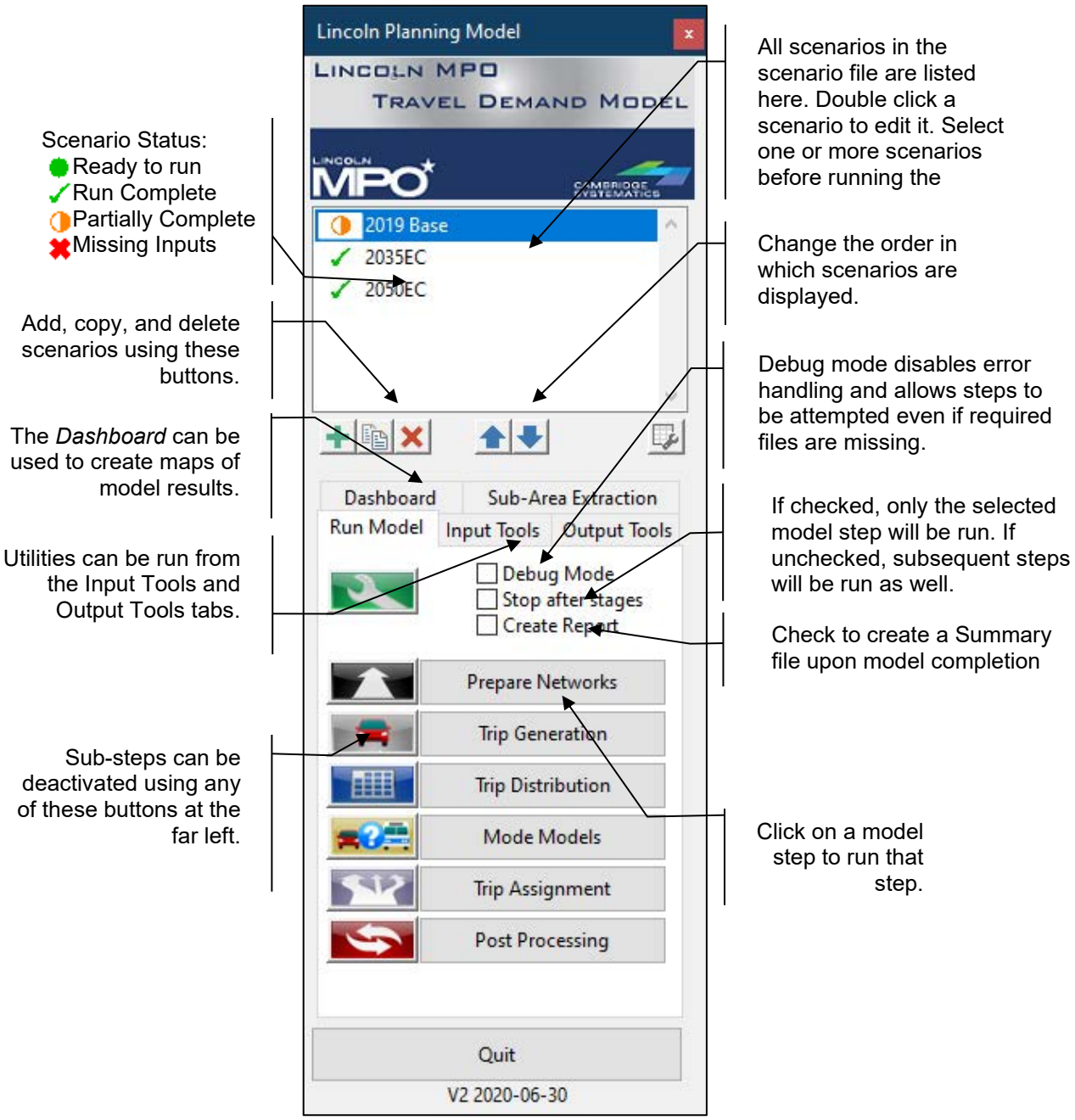


Figure 3.2 The Scenario Editor (Input Tab)

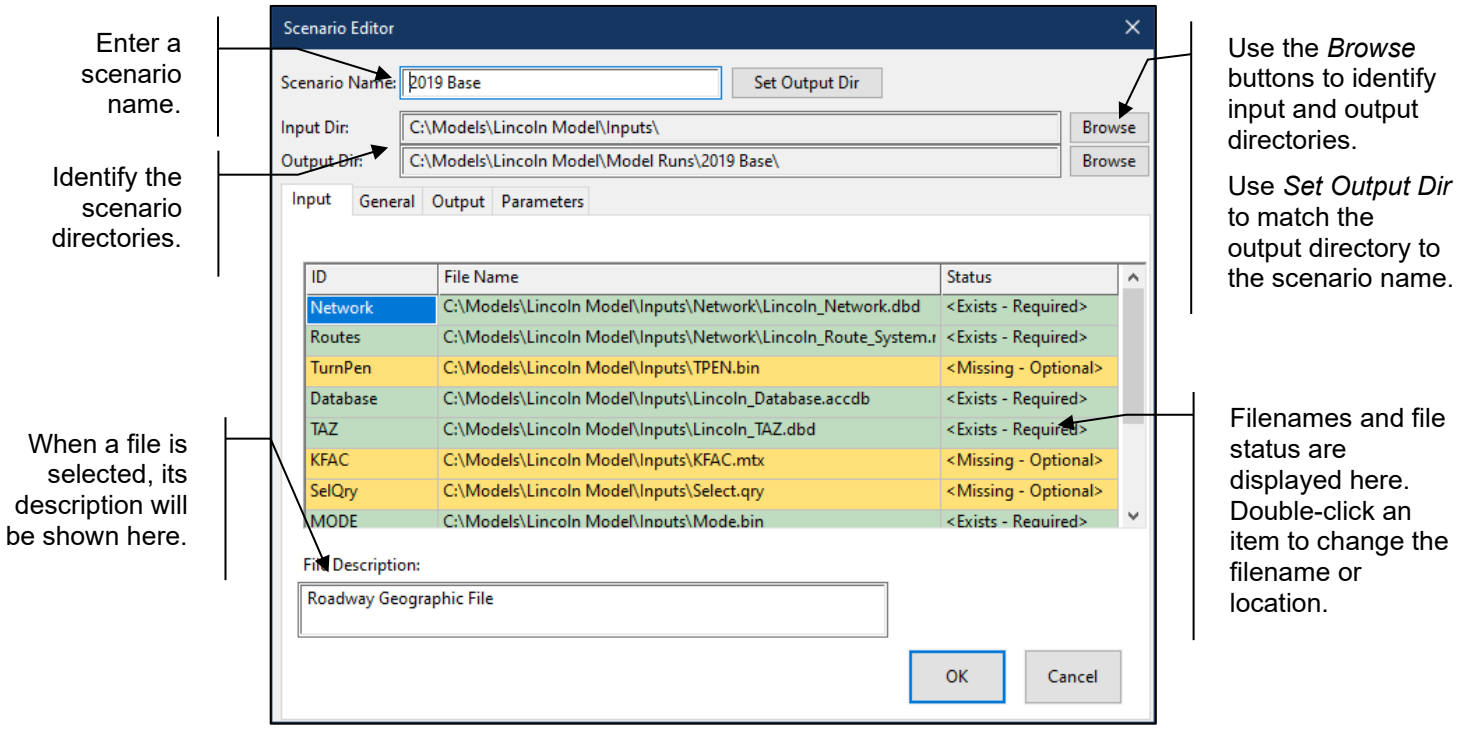


Figure 3.3 The Scenario Editor (General Tab)

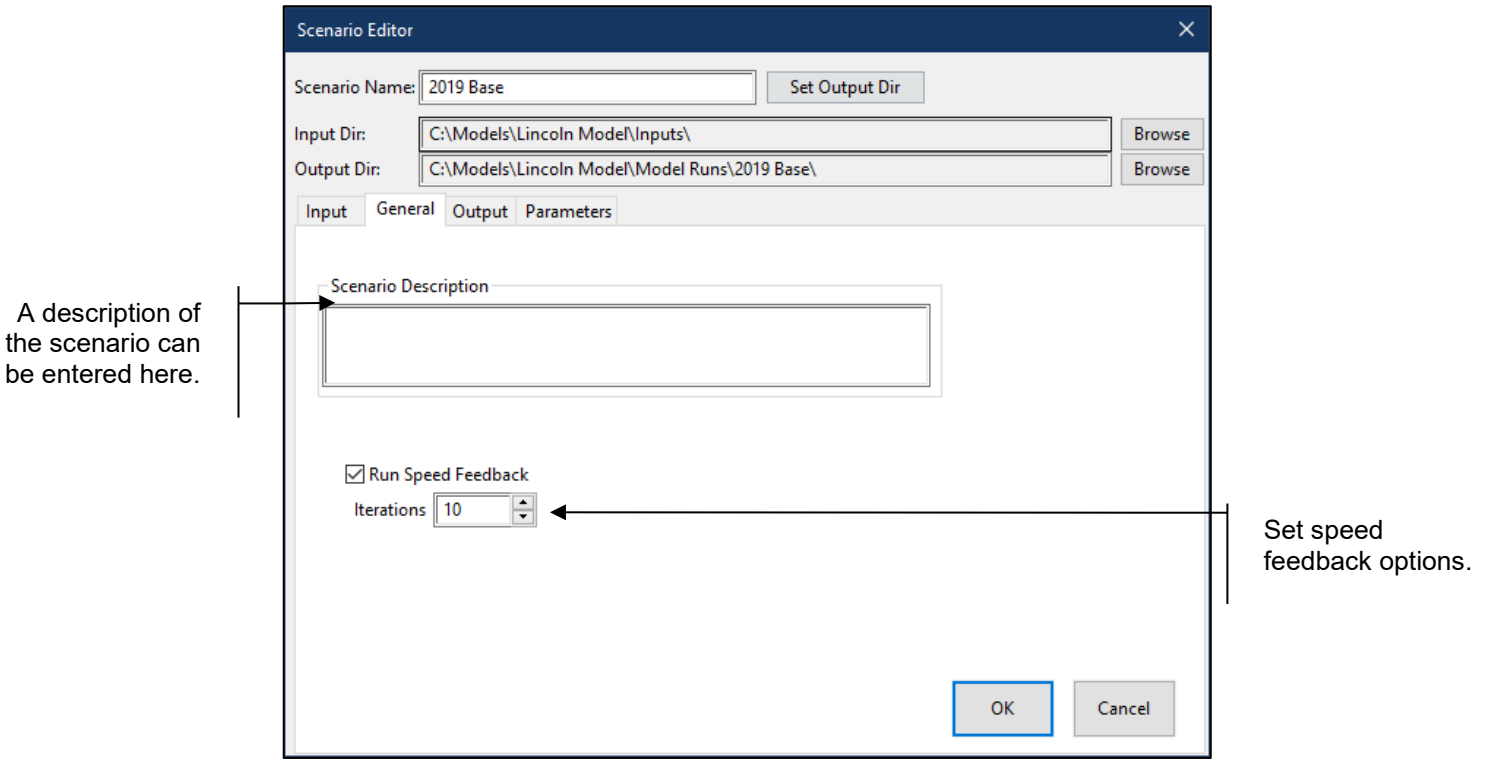


Figure 3.4 The Scenario Editor (Output Tab)

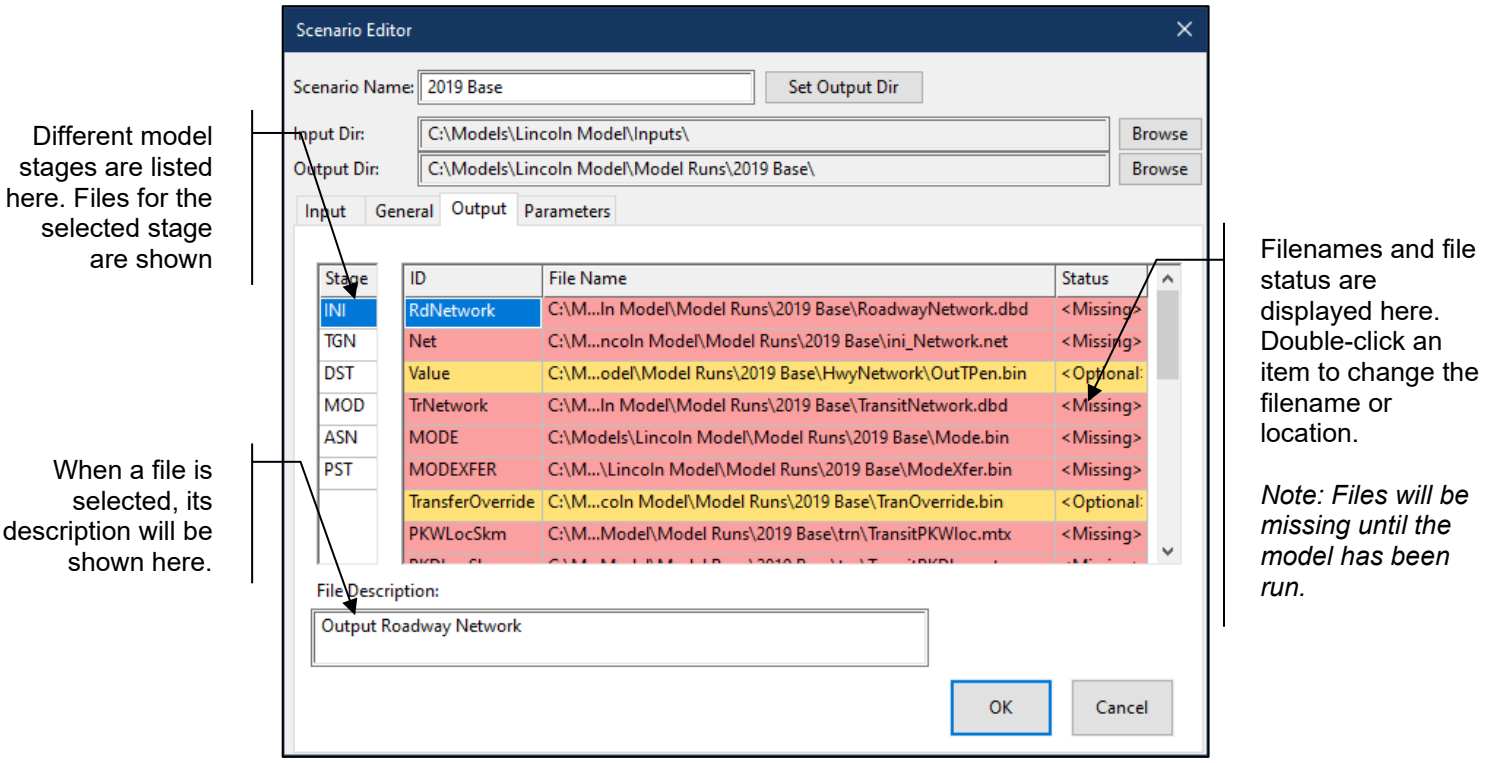
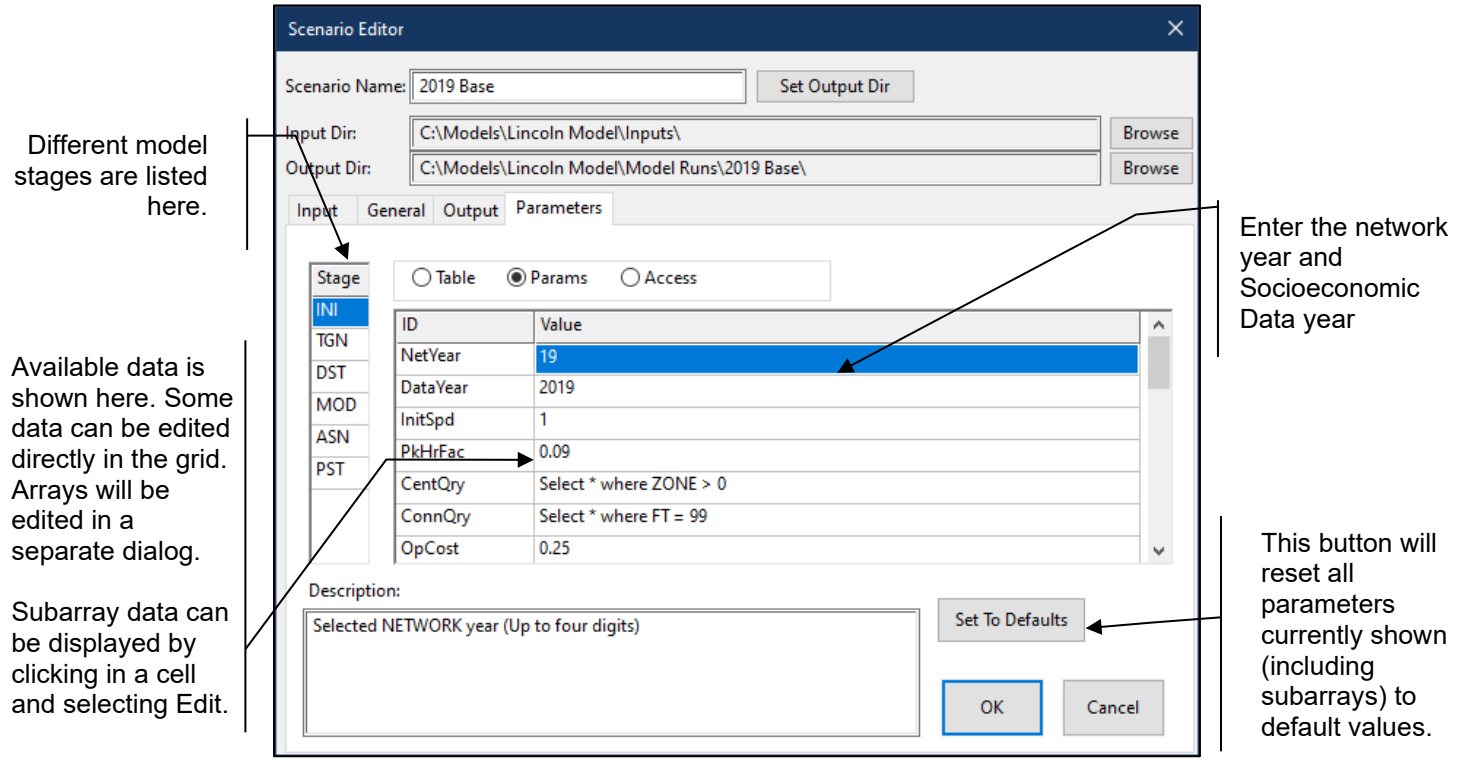


Figure 3.5 The Scenario Editor (Parameters Tab)



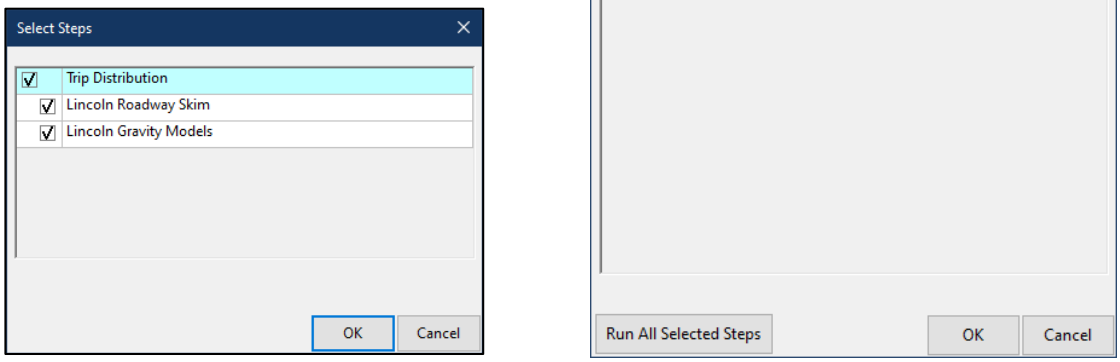
Note: Most model parameters should not typically be changed.

Running Selected Model Steps

The user interface can be set to run only selected model steps or sub-steps. To run only a single step, click the *Stop after stages* checkbox in the main model dialog box. When this box is checked, the selected step will be run, but subsequent steps will not. When this checkbox is cleared, subsequent steps will run automatically.

To exclude certain sub-steps or to run only selected sub-steps, the dialog boxes shown in **Figure 3.6** can be used. By clicking on the button to the left of each model step or the green wrench button at the top of the model steps, the user can enable or disable specific steps. The behavior of the "Stop after stages" checkbox is not changed when sub-steps are enabled or disabled.

Figure 3.6 Sub-Steps Dialog Boxes



Running Speed Feedback

Speed feedback is a process in which portions of the model are run interactively until speeds that are input to the destination and mode choice models are consistent with speeds output by the

traffic assignment model. Speed feedback can be enabled from within the scenario editor. When enabled, speed feedback will only be run if:

1. The model is *not* set to stop after each step and
2. The model is started from Step 1, 2, or 3.

Otherwise, the model will be run as if the selected scenario does not have speed feedback enabled.

When performing alternatives analyses, it is often preferable to run the model without enabling speed feedback. However, trip distribution patterns must still be consistent with a baseline scenario (e.g., an existing plus committed model run). Running the travel model with speed feedback enabled also requires considerably more time than running the model with speed feedback disabled. The model can be run without speed feedback using speed feedback results from a previous model run to produce consistent trip distribution results. To do this, follow the steps listed below:

1. Perform a complete model run with speed feedback enabled.
2. Use the *Copy Feedback Results* utility to save resulting speeds to the input network file.
3. Create a new scenario that uses similar roadway and land use assumptions.
4. The new scenario should reference the same network year as the original run.
5. The new scenario may include network alternatives or changes to land use data.
6. Set the new scenario to run without speed feedback and without initializing speeds.
7. Run the new scenario.

The user may select to *Initialize Speeds* in the scenario manager. When the model is set to initialize speeds, any saved speeds are ignored and the first speed feedback iteration is run using freeflow speeds. It is unadvisable to initialize speeds when running the model without speed feedback, as travel speeds input to destination and mode choice will be inconsistent with traffic assignment. This option is primarily useful in model development and testing, as it allows the model to be run with a standard set of speeds that are not influenced by a previous model run.

3.3 Roadway Network and Assignment Fields

The roadway network contains a description of the roadway system and is used by the model to find shortest paths and to assign traffic to the highway network. A listing of fields on the roadway network is included in Table 3.2.

After running the model, a series of assignment results are created. Daily assignment volumes are included in the file named Flow_Day.bin. A listing of fields in the traffic assignment result file is contained in Table 3.3.

Table 3.2 Roadway Network Field Listing

Field Name	Notes / Description
ID	Unique link ID. Maintained by TransCAD
Dir	Direction of link (1 = A to B, -1 = B to A, 0 = Two-way)
Length	Link length in miles. Maintained by TransCAD
STPre	Street prefix. Used only for reference.
StName	Street name. Used only for reference.
STType	Street type. Used only for reference.
HWY_NUM	Highway number. Used only for reference.
SUB_REGION	Subregion used for reporting. (1=Built Environment, 2= Other)
CUSTOM1	Optional field for use in manual summarization of results.
CUSTOM2	Optional field for use in manual summarization of results.
MODE	Field used by the transit networks. Filled automatically and should be blank on the input network.
Dir_yy	Scenario-specific link direction.
FT_yy	Scenario-specific facility type.
AT_yy	Scenario-specific area type.
AB_LN_yy	Scenario-specific number of lanes in the AB direction.
BA_LN_yy	Scenario-specific number of lanes in the BA direction.
CTLMED_yy	A value of 1 indicates presence of a median or center turn lane.
UNPAVED_yy	A value of 1 indicates the link is unpaved.
AB_PARK_yy	A value of 1 indicates presence of parking in the AB direction.
BA_PARK_yy	A value of 1 indicates presence of parking in the BA direction.
SPLM_yy	Posted speed limit if known.
SIGPR_yy	Indicates a corridor has prioritized signals and should be treated as a principal arterial for speed and capacity calculations.
TIMPEN_yy	Additional link time penalty in minutes.
AB_FBAM_yy	Copied speed feedback results for use in running the model with consistent feedback results
BA_FBAM_yy	
AB_FBOP_yy	
BA_FBOP_yy	
FT_Comments	User comments retained from model development. Not used by the model.
ALT	Master network alternative ID.
ALT2	Secondary master network alternative ID.
ADT_ID	ADT count ID from traffic count review (retained from 2015 base year model).
Use	Indicates if the ADT count is reasonable and should be used in validation (retained from 2015 base year model).

Field Name	Notes / Description
ADT_ID_Use	Identifies the ADT ID to use in cases where the count has been selected for use in validation (retained from 2015 base year model).
SCRLN	2015 Numeric screenline ID (retained from 2015 base year model).
2015_VOL	2015 count volume (retained from 2015 base year model).
Source	2015 count volume source (retained from 2015 base year model).
DO_NCHRP	A value of 1 indicates that NCHRP post processing should be performed on the link.
IMET_NCHRP	Flag to override the default post processing method (a = average, d=difference, r=ratio, n=no adjustment)
SCRLN_2019	Numeric screenline ID
2019_VOL	(not used)
BASEVOL	Calibrated 219 model results for use in link post processing.
Lancaster Count	Count data received from Lancaster County.
NDOT 2018 Count	NDOT count conducted in 2018
NDOT 2019 Count	NDOT count conducted in 2018
Lincoln Count	Count data received from the City of Lincoln.
Val_Count	Traffic count selected for use in model validation.
Val_Count_Source	Source of traffic count selected for use in model validation.
Val_Count_Year	Year of traffic count selected for use in model validation.
Est_Count	Estimated count for use in link post processing.
Checked	User field populated during network and count QA/QC. Can be deleted if desired.
LOS_Override_19	Override LOS value when running the model for 2019.
LOS_Override_35	Override LOS value when running the model for 2035.
LOS_Override_50	Override LOS value when running the model for 2050.

Note: Fields containing yy indicated year-specific fields. Multiple sets of these fields are included, with yy replaced by two to four-digit network identifiers.

Table 3.3 Assignment Result Field Listing

Field Name	Notes/Description
ID1	TransCAD network link ID (for use in joining the table to the network geographic file)
[AB/BA/Tot]_Flow_PCE	Passenger car equivalent (PCE) link volume. Matches link volume because this model does not include commercial vehicle PCE values.
[AB/BA/Max]_Time	Travel time in minutes. For daily, this field contains a weighted average of time period values.
[AB/BA/Max]_VOC	Volume to capacity ratio. For daily, this field contains a weighted average of time period values.
[AB/BA/Max]_VMT	Link VMT
[AB/BA/Max]_VMT	Link VHT
[AB/BA]_Speed	Link speed in miles per hour. For daily, this field contains a weighted average of time period values.
[AB/BA/Max]_VDF	Volume delay function value resulting from traffic assignment.
[AB/BA/Tot]_Flow_[class]	Link flow by vehicle class for drive alone (DA), shared-ride 2 (SR2), shared-ride 3+ (SR3p), and external-external (EE)
[AB/BA/Tot]_Flow	Total link flow.
[AB/BA/Tot]_Flow_NCHRP	Post-processed total link flow.
[AB/BA/Tot]_Speed_NCHRP	Post-processed link speed.
[AB/BA/Tot]_VMT_NCHRP	Post-processed link VMT.
[AB/BA/Tot]_VHT_NCHRP	Post-processed link VHT.
METHOD_NCHRP	Post processing adjustment method (1=average, 2=difference, 3=ratio, 0=no adjustment, 99=missing data).
LOS_CAP	Daily capacity for level of service calculations.
LOS_VC	Volume to capacity ratio for level of service calculations.
LOS_NUM	Numeric LOS indicator, 1 (A) through 6 (F), or 0 when not calculated.
LOS	Level of service value (A through F, or n/a when not calculated).
LOS_MAP	Same as LOS, intended for user adjustment in manual level of service smoothing.
LOS_CAP_NCHRP	Daily capacity for level of service calculations (post processed).
LOS_VC_NCHRP	Volume to capacity ratio for level of service calculations (post processed).
LOS_NUM_NCHRP	Numeric LOS indicator, 1 (A) through 6 (F), or 0 when not calculated (post processed).
LOS_NCHRP	Level of service value (A through F, or n/a when not calculated; post processed).
LOS_MAP_NCHRP	Same as LOS, intended for user adjustment in manual level of service smoothing (post processed).

4.0 Model Utilities

The model dialog box includes several utilities that can be used to prepare model inputs. Some of these utilities will only be available if all required input files for a scenario have been identified and are present.

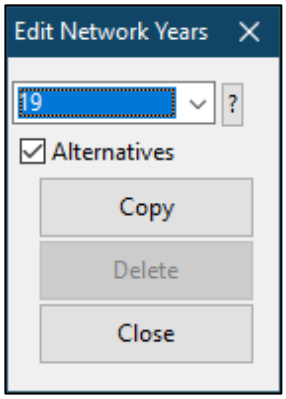
4.1 Input Tools

4.1.1 Add/Delete Network Year

The model roadway network is designed to contain data for various distinct scenarios. This tool will allow network years to be added or deleted and can be operated as described below.

1. Select a model scenario that references an input network. The referenced input roadway network will be modified.
2. Click the *Add/Delete Network Year* button in the main model dialog box (Input tab); the dialog box shown in Figure 4.1 will appear.
3. To add a network year:
   a. Select a year from the drop-down list.
   b. Click the *Copy* button. The tool will make an exact copy of the selected year. If the *Alternatives* option is enabled, you will be prompted to select alternatives to be included in the new network year.
   c. Attributes for the new network year can be modified by opening the network file and using the tools available in the TransCAD software.
4. To delete a network year:
   a. Select a year from the drop-down list. Note the base year network cannot be deleted.
   b. Click the *Delete* button. The tool will delete all data fields associated with the selected year.

Figure 4.1 Edit Network Year Dialog Box



Network years can contain up to four digits and can contain both letters and numbers.

4.2 Create Select Query

A select link or node query file (*.qry) can be created for a scenario using the Select Link/Zone Query Builder provided with the TransCAD software. This toolbox, accessed from *Planning → Assignment Utilities → Select Link/Zone Query Builder*, is explained in the TransCAD software documentation. This tool interactively guides creation of a query file. It cannot be used to create a select zone query based on a node selection set. To create a select zone query based on a node selection set, use the *Create Select Query* tool using the following steps.

1. Add the attributes as needed to the input network node layer (e.g., use a subarea ID).
2. Create a scenario that references the modified input network and select this scenario. Make sure that the select link/zone query file is set to the desired file name for the new query.
3. Click the *Create Select Query* button in the main model Utilities dialog box (Input tab). The system will warn the user if an existing select link/query file is specified for the selected scenario.
4. Enter a name for the new select zone query.
5. Select the query method:
   a. To or from: Track trips departing or arriving,
   b. From: Only track departing trips, or
   c. To: Only track arriving trips.
6. Enter a selection condition when prompted.
7. When prompted, choose whether or not to add an additional query to the query file.

Once the query file has been created, it can be viewed and edited using TransCAD's *Select Link/Zone Query Builder* and can be used as input to a travel model scenario.

4.3 Update Input Network

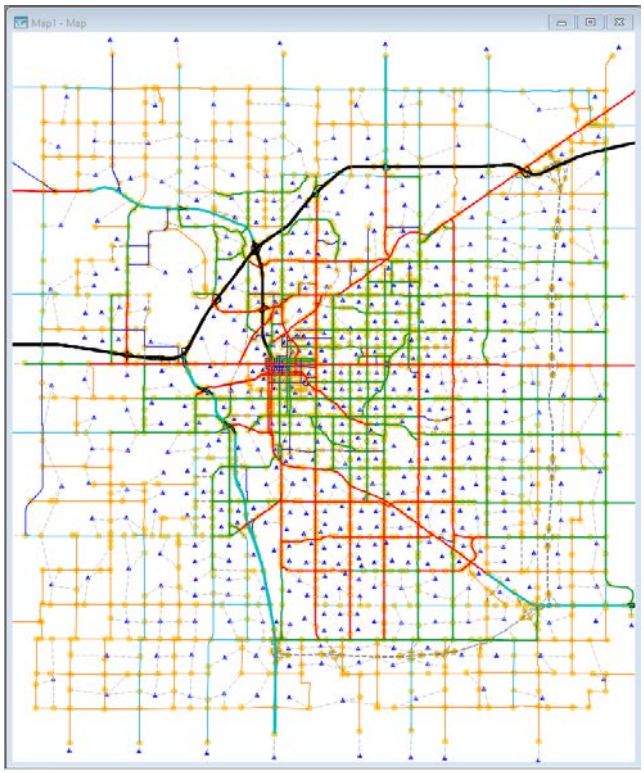
This tool will update the link facility type themes displayed when the roadway network is first opened. Link theme settings will be set to be consistent with the settings provided in the original model network.

In addition, this utility will update the ID field on the roadway network node layer with the correct TAZ number. This action is necessary when splitting TAZs.

4.4 Edit Network

This utility opens a map containing the roadway network and route system, shown in Figure 4.2.

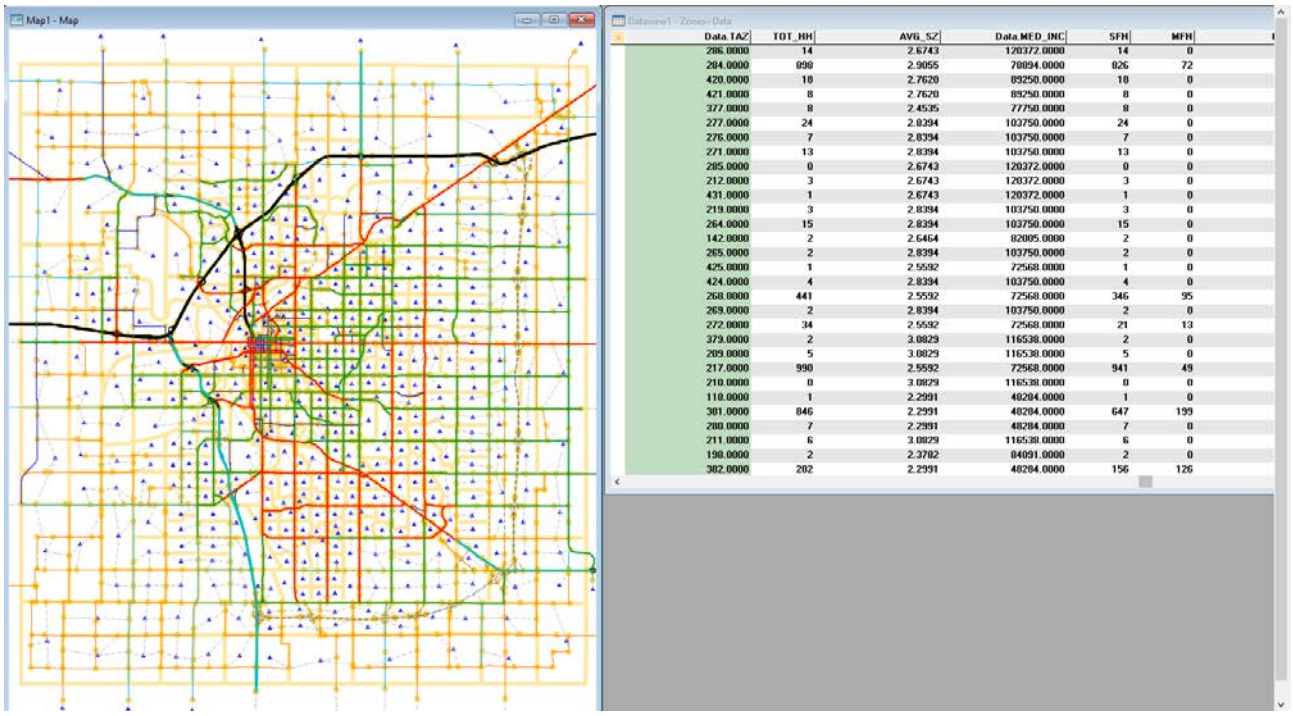
Figure 4.2 Network Editing Map



4.5 TAZ Data

This tool creates a map of the Lincoln MPO TAZs along with socioeconomic and land use data joined to the TAZ layers. Opening the TAZ Dataview will allow the user to display the joined data as shown in Figure 4.3 This tool allows the model user to interactively review TAZ data, or to create custom maps that show socioeconomic data in spatial data

Figure 4.3 TAZ Data Workspace



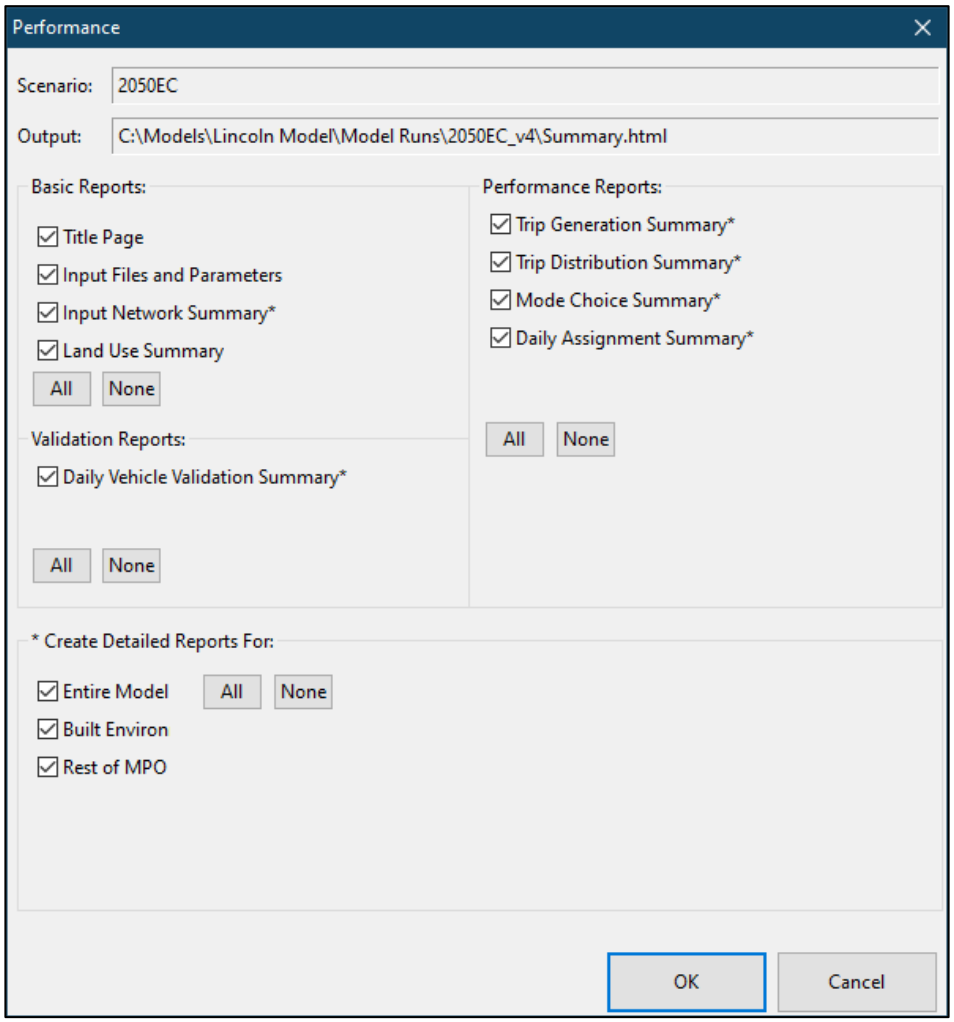
Output Tools

4.6 Summary Report

A summary report can be created after completing a model run. If the **Create Report** option is checked when running the model, a summary report will be created automatically on completion of the model run. Alternately, a summary report can be created using the Summary Report button on the **Output Tools** tab in the model dialog box. When enabling a summary report on model completion or when creating a report from the Utilities tab, the user is presented with report options, shown in **Figure 4.4**.

The summary report is created in the model output folder and is named **Summary.html**. The user will be prompted to select performance report options prior to report creation. Some of the reports are be created for various geographies identified in the “Create Reports For” section. The validation reports should only be selected for base year scenarios.

Figure 4.4 Summary Report Options Dialog



4.7 Copy Feedback Results

This tool will copy speed feedback results from a completed model run to the input roadway network file. Copying speed feedback results will allow a subsequent model run to produce trip distribution results consistent with the completed model run, as described in the *Running Speed Feedback* section.

4.8 Delete Extra Files

This utility will delete some large intermediate files that are only occasionally used in order to save memory space. The model will then need to be re-run to recover these files. The user will be prompted to select from a list of file types to be deleted.

5.0 Troubleshooting

This section provides general guidance on troubleshooting model errors. In addition, the TransCAD software documentation can be accessed from the in-program Help menu.

5.1 Log and Report Files

When the model crashes with an error such as “Batch Routine Failed,” additional information may be present in the TransCAD log and report files. There are four files in total that can be inspected.

1. ***Scenario Report File:*** Report.xml, located in the model scenario output directory.
2. ***Scenario Log File:*** Log.xml, located in the model scenario output directory.
3. ***Program Report File:*** Accessible from Tools → Logging → View Report.
4. ***Program Log File:*** Accessible from Tools → Logging → View Log.

The program log and report files are stored in a user-specific folder, so error messages encountered by a particular user may not be visible to another user logged in under a different username. Locations of the program log and report files can be identified by from Edit → Preferences, on the Logging tab.

In some cases, the log and report XML files may not correctly load into a web browser. In such cases, it is possible to open and view these files using a text editor.

The program log and report files are continually appended and can become quite large. When troubleshooting problems, it may be helpful to clear the log and report files from Tools → Logging.



APPENDIX E

Congestion Management Process

Congestion Management Process

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LIST OF ACRONYMS

ACS	American Community Survey
CFR	Code of Federal Regulations
CMP	Congestion Management Process
FAST Act	Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
ISTEA	Intermodal Surface Transportation Efficiency Act
LOTTR	Level of Travel Time Reliability
LRTP	Long Range Transportation Plan
MPO	Metropolitan Planning Organization
NDOT	Nebraska Department of Transportation
NHS	National Highway System
NPMRDS	National Performance Management Research Data Set
PHED	Peak Hour Excessive Delay
SOV	Single Occupancy Vehicle
TIP	Transportation Improvement Program
TMA	Transportation Management Area
TTTR	Truck Travel Time Reliability
v/c	Volume per Capacity
VMT	Vehicle Miles Traveled

I. CMP INTRODUCTION

A. Overview

Federal Requirements

Federal requirements state that metropolitan areas with more than 200,000 people, known as Transportation Management Areas (TMAs), must maintain a Congestion Management Process (CMP) and use it to make informed transportation planning decisions. These requirements were introduced by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 as a "*Congestion Management System*" and are continued under the successive transportation authorization laws, including the current law, Fixing America's Surface Transportation (FAST) Act. FAST Act refers to a "*Congestion Management Process,*" reflecting the goal of the law to utilize a process that is an integral component of metropolitan transportation planning.

The Federal Highway Administration (FHWA) guidance[1] refers to a CMP as a "systematic and regionally-accepted approach for managing congestion that provides accurate, up-to-date information on transportation system performance and assesses alternative strategies for congestion management that meet state and local needs." The purpose of the CMP is to define congested corridors in the region, develop strategies to mitigate the congestion, and provide a way to monitor the effectiveness of the strategies. The CMP is also intended to use performance measures to direct funding toward projects and strategies that are most effective for addressing congestion. The CMP is intended to augment and be folded into the overall metropolitan transportation planning process in Lincoln and Lancaster County.

FHWA suggests that consideration should be given to strategies that manage demand, reduce Single Occupant Vehicle (SOV) travel, improve transportation system management and operations, and improve efficient service integration within and across modes, including highway, transit, passenger and freight rail operations, and non-motorized travel.

The FHWA regulations in 23 CFR Part 450 Sec. 322 specify that an effective CMP should include:

- Methods to monitor and evaluate the performance of the multimodal transportation system, identify the causes of reoccurring and non-recurring congestion, identify and evaluate alternative strategies, provide information supporting the implementation of actions, and evaluate the efficiency and effectiveness of implemented actions;
- Definition of objectives and performance measures to assess the extent of congestion and support the evaluation of the effectiveness of congestion reduction and mobility enhancement strategies for the movement of people and goods;
- Establishment of a program for data collection and system performance monitoring to define the extent and causes of congestion, to contribute in determining the causes of congestion, and to evaluate the efficiency and effectiveness of implemented actions;
- Identification and evaluation of the anticipated performance and benefits of both traditional and non-traditional congestion management strategies;
- Identification of an implementation schedule, implementation responsibilities, and possible funding sources for each strategy (or combination of strategies); and

[1] FHWA Congestion Management Process: A Guidebook, April 2011

- Implementation of a process for periodic assessment of the efficiency and effectiveness of implemented strategies, in terms of the area's established performance measures.

History of Lincoln MPO's CMP

The City of Lincoln is the federally recognized Metropolitan Planning Organization (MPO) for the Lincoln Metropolitan Area, supporting Lincoln and Lancaster County to carry out transportation planning and decision-making within the TMA. The MPO provides a forum for cooperative decision-making among responsible state and local officials, public and private transit operators, and the general public. The MPO coordinates the planning activities of all transportation-related agencies and adopts long range plans to guide transportation investment decisions. Plans and programs consider all transportation modes and support community development and social goals.

The 2000 Census identified the Lincoln Urban Area as having a population of 226,582 and accordingly, the Secretary of Transportation designated the Lincoln MPO as a TMA. This classification qualifies the Lincoln MPO for specific shares of federal transportation funds, but also establishes additional administrative and planning requirements in the transportation planning process. These additional planning activities relate primarily to the development of a Congestion Management Process (CMP), project selection, public involvement and the MPO certification process.

The inaugural CMP for the Lincoln MPO was approved in 2009, and it was created to satisfy the essential requirements of the ISTEA regulations. The 2040 LRTP update included development of goals and objectives for the multimodal transportation network as well as performance measures appropriate for evaluating progress. Data required to assess the performance measures were used to produce the Lincoln MPO 2019 Annual Performance Report. Multiple performance measures address measures of congestion. Future updates of the LRTP provide the Lincoln MPO with the opportunity to update objectives and performance measures that address congestion management.

B. Congestion Management Process: The 8-Steps

The Lincoln MPO views congestion management in the context of the overall transportation planning process and as a tool to ensure that existing and new transportation infrastructure is effectively managed and maintained. The CMP is implemented as a feedback process to inform and understand congestion within the TMA and the appropriate strategies to address it. The 8-Steps of the CMP include:

- Step 1: Develop Regional Objectives for Congestion Management
- Step 2: Define CMP Network
- Step 3: Develop Multimodal Performance Measures
- Step 4: Collect Data / Monitor System Performance
- Step 5: Analyze Congestion Problems and Needs
- Step 6: Identify and Assess CMP Strategies
- Step 7: Program and Implement CMP Strategies
- Step 8: Evaluate Strategy Effectiveness

Effective implementation of the CMP may improve the operational efficiency and reliability of Lincoln's transportation system. It provides guidance for effectively allocating finite resources toward improvements that minimize travel-time delays, improve air quality and conserve energy. These improvements are important to the region's environment, economy, and quality of life. They directly benefit automobile and transit vehicle users as well as truck and freight operators, pedestrians and bicyclists. The continued development and coordination of this process is an important element of the Lincoln transportation planning process. It is used as a guide to develop project recommendations for the Transportation Improvement Program (TIP) and to provide policies for the congestion management element of the Long Range Transportation Plan.

C. CMP Structure

The Lincoln MPO's CMP is intended to be a systematic and regionally accepted approach for managing congestion that provides accurate and relevant information on transportation system performance and assesses alternative strategies for congestion management that meet state, regional, and local needs. These strategies can then be developed into policies and/or programmed as projects into the LRTP and TIP. A description of congestion trends and the impacts of congestion is presented to give context for the problems the CMP will address. With this perspective, the CMP is organized into two sections that capture the 8-Step process. The first section addresses how the CMP evaluates congestion. Steps 1-5 are independent steps that work to generate relatable measures of congestion. The second section addresses how the CMP will address congestion. Steps 6-8 identify strategies that may best address congestion and how those strategies will be evaluated going forward.

D. Trends

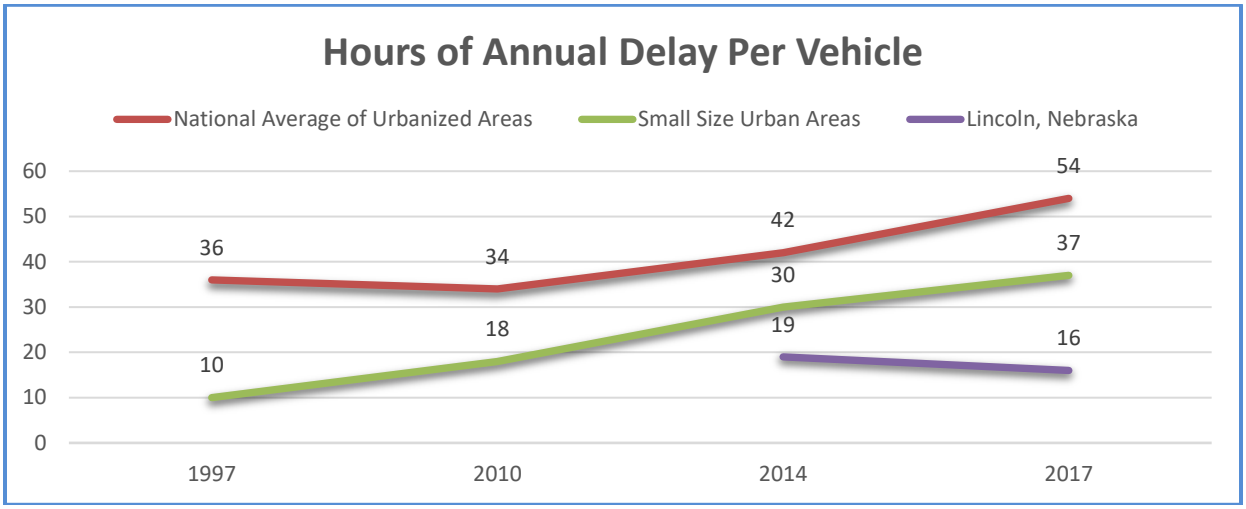
National Trends in Congestion

A primary reference for national statistics and analysis on the current state of roadway congestion comes from the Texas Transportation Institute (TTI). The 2019 Urban Mobility Report gives a detailed description of congestion conditions in all of America's 494 urban areas ranging from smaller cities with populations greater than 50,000 to large urbanized regions with populations of over three million people.

Based on national data compiled by the TTI, roadway congestion increased steadily from the 1980s through 2006 before receding with the December 2007 recession. TTI calculations showed that by 2017, nationwide National Highway System (NHS) congestion within urban areas had generally returned to historic growth pattern. The 10-years of economic growth brought traffic congestion to the highest measured levels in most U.S. cities.

Growing congestion results in lost time and wasted fuel which affects quality of life, the economy and the environment. According to the TTI, congestion in 2017 caused Americans to travel an additional 8.8 billion hours and purchase an extra 3.3 billion gallons of fuel. The number of annual hours expended per vehicle due to congestion is shown in **Figure 1**. The reported values are documented in the Urban Mobility Scorecards which includes the Lincoln Urban Area starting in 2016 reporting on 2014 data.

Figure 1 - Hours of Annual Delay Per Vehicle Comparison[2]



For the years reported, trends for the Lincoln area are much less than national averages and urban areas of similar size. The total number of extra hours spent in traffic due to congestion helps to compare relative congestion. The lower number of annual hours of delay per vehicle in Lincoln from 2014 to 2017 is noticeable because of the upward national trend. During 2014, the impact of construction projects along portions of Interstate 80 and maintenance along Nebraska Highway 6 in Lincoln likely elevated the number of hours of congestion. Without those non-recurring events, annual hours of delay per vehicle in 2014 would have been lower and the upward trend would likely have occurred for Lincoln as well.

Nebraska Trends in Congestion

Within Nebraska, the small and larger size urban areas demonstrate less traffic congestion relative to national levels. Even so, published public sentiment about congestion indicates Nebraska roadway users value reducing congestion further. The public survey conducted in 2011 as part of the Statewide Long Range Transportation Plan documented 62/52/42% (Omaha/Lincoln/Statewide) of roadway users prioritize projects and programs that would address congestion. The Statewide Long Range Transportation Plan is currently being updated and may demonstrate a shift in priority for addressing congestion, but available funding is expected to limit the scope of what can be accomplished. In 2017, the Nebraska Department of Transportation (NDOT)[3] estimated a $6 billion dollar shortfall in level of funding needed over 20 years to maintain and improve the statewide transportation system.

A key factor that influences travel demand is population. Nationally, Nebraska ranked 37th in population with 1,929,268 residents in 2018. As Nebraska's population grows, that growth is unevenly distributed throughout the state. According to the University of Nebraska – Omaha, Center for Public Affairs Research[4], statewide population growth averaged 4.4% from 2010-2016, with only seven of 93 counties experiencing growth greater than 5%. In urban counties of Douglas, Sarpy, Lancaster, Dakota and Hall where MPOs are located, land development continues to build out quicker from urban centers. The

[2] Texas A&M Transportation Institute Urban Mobility Scorecards; 1997, 2012, 2016 and 2019
[3] Omaha World Herald, December 14, 2017
[4] David Drozd, March 21, 2017

effect of this expansion influences transportation needs that have been historically met by the single-occupant automobile trip.

Based on American Community Survey data from 2018, 81.9% of all trips to work in Nebraska were made using SOVs. This measure indicates Lincoln has a lower percentage of SOV trips than some small urban areas such as Jackson, MS with 84.5% SOV, but a higher percentage than others like Madison, WI at 64.2% SOV. The percentage of individuals in the Lincoln urban area who drove to work alone (81.0%) is lower than the state average, but higher than the national average. Lincoln's mode-share is contrasted against Nebraska and National benchmarks in **Table 1**.

Table 1 - Estimated Mode-Split of Lincoln Relative to Nebraska and National Estimates

Commuting to Work 2018[5]	Lincoln, NE	Nebraska	National
Drove alone (SOV)	81.0%	81.9%	76.4%
Carpooled	9.1%	9.0%	9.1%
Public transportation (excluding taxicab)	1.4%	0.7%	5.0%
Walked	3.3%	2.7%	2.7%
Bicycled	1.3%	0.4%	0.6%
Other	0.6%	0.8%	1.2%
Worked at Home	3.3%	4.4%	4.9%
Mean Travel Time to Work	18.7 minutes	18.6 minutes	26.6 minutes

The dominance of individuals driving alone to work continues a long-standing pattern of increasing automobile use extending back to 1960 when the American Community Survey first began collecting data on commuting travel modes. Increasing numbers of SOVs adds to the number of Vehicle Miles Traveled (VMT) and can incrementally increase the time of travel to work as congestion worsens. According to the NDOT[6], the total Average Daily VMT on the all roadways in the state grew from 52.5 million and 57.5 million between 2009 and 2019. In 2018, the mean time for an individual to commute to work was 18.6 minutes in Nebraska, similar to Lincoln, while the national mean was 26.6 minutes. This information reflects all travel modes to work, not just SOVs.

E. Impacts

The effects of roadway congestion can measurably influence lost time, lost income, and reduced safety. In some cases, these effects can be quantified in terms of production costs, such as the costs associated with wasted fuel. Quality of life can also be affected by roadway congestion but is more difficult to quantify in monetary terms. A small sample of the adverse effects of roadway congestion is listed below:

- **Wasted fuel** – Each year, millions of gallons of fuel are wasted as a result of roadway congestion. This represents billions of dollars in losses to both commercial and private interests. The costs associated with wasted fuel are typically passed on to the consumer.
- **Diminished quality of life** – Every minute wasted in congestion reduces the available time for family, friends, errands, hobbies, exercise, and other life pursuits. In addition, evidence has

[5] American Community Survey – 2018 5-Year Average Table S0801
[6] Source reference – State of Nebraska Automatic Traffic Recorder Data (NDOT)

suggested that increases in commuter times can negatively affect involvement in community affairs.

- **Lost economic productivity** – As traffic congestion grows, material storage and delivery systems can be easily disrupted, raising transportation and manufacturing costs while reducing productivity. The costs associated with lost productivity are often passed on to the consumer.
- **Reduced safety** – Frustrated drivers can exhibit higher risk and aggressive driving behaviors, increasing the potential for crashes. Highway interchanges that require weaving maneuvers on congested roadways also pose significant safety hazards.
- **Slowed emergency response** – Delays caused by roadway congestion can severely impact response times in emergency situations and add additional safety risk to both roadway users and emergency responders.
- **Degraded air quality** – In general, vehicles emit far more pollutants that contribute to ground-level ozone and smog during stop-and-go traffic than under free flow conditions. Greenhouse gas emissions also increase as a result of roadway congestion.
- **Decreased system reliability** – Reliability of the transportation system begins to decrease as roadway congestion grows to absorb longer periods of time and more stretches of highway. Additional buffer time must be committed in order to arrive at a destination on-time, reducing market access and competitiveness.
- **Increased spending on infrastructure** – When local, state, and federal governments must allocate an increasing amount of resources to simply keep pace with growing roadway demand, fewer funds are available for transportation initiatives and other government services.

Many of these effects can be minimized using congestion mitigation strategies. Strategies discussed in Section III include both physical and operational improvements to the regional transportation network.

II. CMP EVALUATION (STEPS 1-5)

A. Step 1: Develop Regional Objectives for Congestion Management

Congestion management objectives are derived from the vision and goals articulated in the current Long Range Transportation Plan. The vision and goals in these documents enable the CMP to articulate efforts that minimize congestion and improve system reliability in the movement of people, goods, and services.

2040 LRTP Goals

Maintenance	A well-maintained transportation system.
Mobility and System Reliability	An efficient, reliable, and well-connected transportation system for moving people and freight.
Livability and Travel Choice	A multimodal system that provides travel options to support a more compact, livable urban environment.
Safety and Security	A safe and secure transportation system.
Economic Vitality	A transportation system that supports economic vitality for residents and businesses.
Environmental Sustainability	A transportation system that enhances the natural, cultural and built environment.
Funding and Cost Effectiveness	Collaboration in funding transportation projects that maximizes user benefits.

CMP Objectives

With these LRTP goals in mind, the Lincoln MPO has established two objectives that address the multifaceted challenges of measuring congestion, communicating how it is managed, and enabling data driven decisions. These two objectives broadly support the comprehensive nature of all goals in the LRTP.

The first objective of the CMP is to manage the efficient performance of the multimodal transportation network.

Efficiency is desirable because it represents management of resources that avoids wasting energy, money and time. The multimodal transportation network requires the wise investment of resources to achieve the objective of efficient movement of people, goods and services. Users view an efficient transportation network as one that enables them to move from place to place with minimal delay. Therefore, planners and engineers configure the transportation network to accommodate movement with reasonable levels of recurring delay during peak periods. An efficient system is neither under-designed nor over-designed. This objective for infrastructure prioritization, design, construction and operation helps stretch limited funding and keep up with the maintenance costs of aging infrastructure. Efficient performance minimizes lost time and the costs of travel as well as the negative environmental impacts to air quality caused by excessive idling.

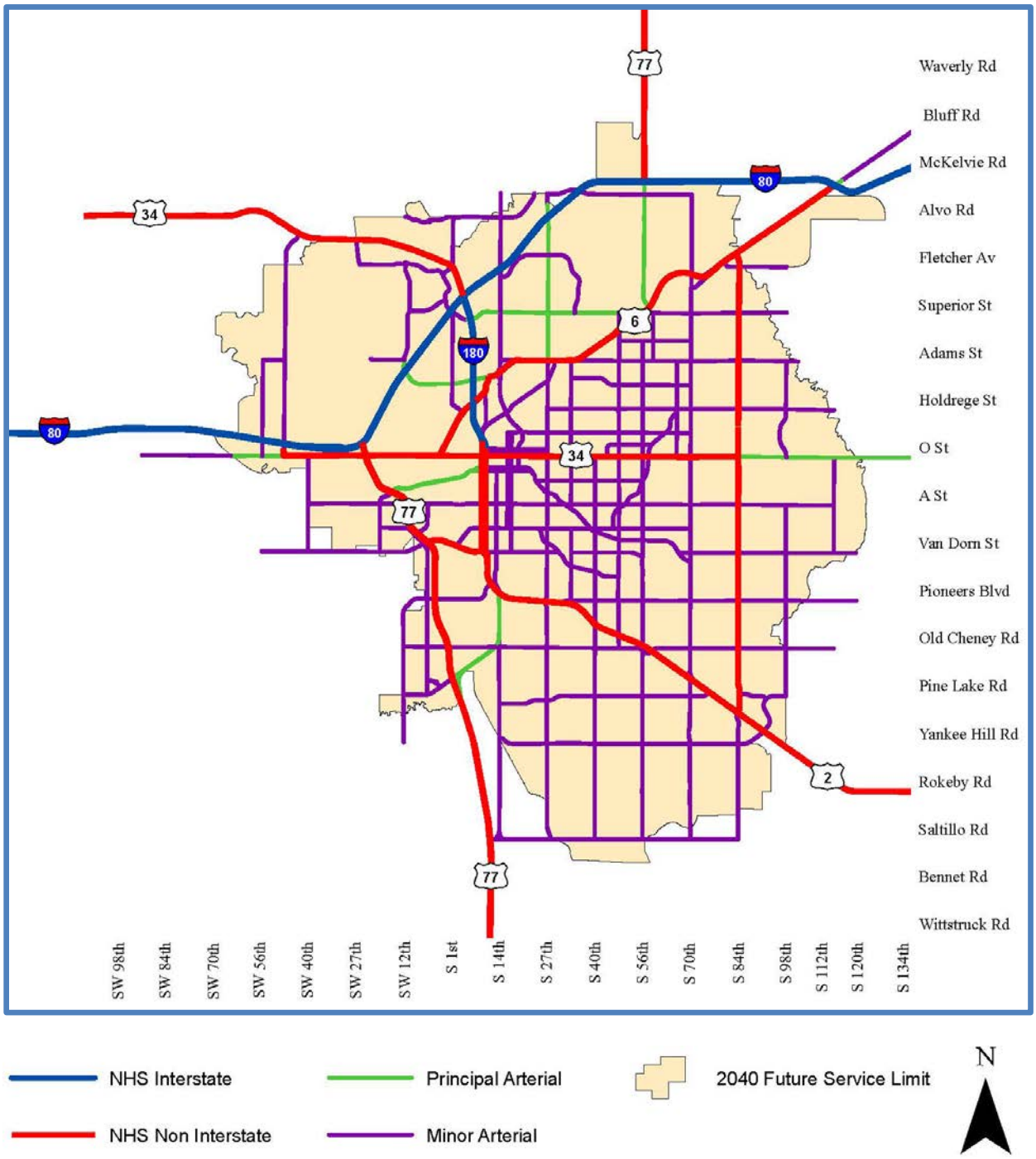
The second objective of the CMP is to manage the reliable performance of the multimodal transportation network.

Reliability is desirable because it represents dependability, offering reasonable expectation of travel time for people, goods and services. The multimodal transportation network must be managed on a day to day basis to limit instances and duration of non-recurring delay to achieve the objective of reliable movement of people, goods and services. Users consider a reliable transportation network to be predictable, even if that predictability includes recurring delay. Some conditions that create non-recurring delay (like events) may be anticipated and managed accordingly, but unpredictable conditions (like accidents) also occur and require strategies that resolve the delay as quickly as possible. Even though the network is managed to be efficient as possible, different strategies are needed to deliver reliable performance. This objective for infrastructure management helps connect people, goods and services to their destination with limited variation day-to-day. Reliable performance will minimize unplanned travel delay and infrastructure maintenance associated with traffic management along the travelled way.

B. Step 2: Define CMP Network

The CMP is applied within a specific geographic area for specific surface transportation facilities that comprise the CMP network. The MPO designates transportation facilities that represent the CMP network and that are evaluated against CMP objectives. The Lincoln MPO designates the CMP network within the City of Lincoln Future Service Limit, the area anticipated to urbanize over the next 20 years. The CMP network includes interstate and non-interstate portions of the NHS, major arterial streets and a small number of major collector streets that are perceived as arterial by roadway users. Transit routes are also considered part of the CMP network. Sidewalks and trails within the application area are to be strategically managed but are not analyzed for congestion management objectives. **Figure 2** illustrates the Lincoln MPO's CMP Network.

Figure 2 - CMP Network of the Lincoln MPO



C. Step 3: Develop Multimodal Performance Measures

The CMP utilizes performance measures that aid in characterizing CMP objectives and the congestion challenges facing the region. The Lincoln MPO measures progress toward CMP objectives using three groups of metrics summarized in this Step. The first group of performance measures are federally mandated and the Lincoln MPO coordinates performance targets for them with NDOT. The second group of performance measures are listed in the current LRTP and provide additional context to local congestion by providing performance targets that support CMP objectives. The final group of performance measures are established specifically for the CMP. The three groups are described below.

Mandated Performance Measures

The performance measures listed in **Table 2** are required by federal regulations for assessing the Interstate and Non-Interstate portions of the NHS within the MPO. The performance measures utilize national data sets that are established in federal regulations to be applied equally by all MPOs.

Table 2 – Mandated Performance Measures

Mandated Measures:	Description:
Interstate (*490.507(a)(1)*) and Non-Interstate (*490.507(a)(2)*) Level of Travel Time Reliability (LOTTR)	Level of Travel Time Reliability (LOTTR) is defined as the ratio of the longer travel times (80th percentile) to a "normal" travel time (50th percentile), using data from FHWA's National Performance Management Research Data Set (NPMRDS) or equivalent. Data are collected in 15-minute segments during all time periods between 6 a.m. and 8 p.m. local time. The measures are the percent of person-miles traveled on the relevant portion of the NHS that are reliable. Person-miles take into account the users of the NHS. Data to reflect the users can include bus, auto, and truck occupancy levels.
Truck Travel Time Reliability (TTTR) Index (*490.607*)	Freight movement is assessed by the TTTR Index. Reporting is divided into five periods: morning peak (6-10 a.m.), midday (10 a.m.-4 p.m.) and afternoon peak (4-8 p.m.) Mondays through Fridays; weekends (6 a.m.-8 p.m.); and overnights for all days (8 p.m.-6 a.m.). The TTTR ratio is generated by dividing the 95th percentile time by the normal time (50th percentile) for each segment. The TTTR Index is then generated by multiplying each segment's largest ratio of the five periods by its length, then dividing the sum of all length-weighted segments by the total length of Interstate.

Table 2 Continued on Next Page

Annual Hours of Peak Hour Excessive Delay per Capita (*490.707(a)*)	Traffic congestion is measured by the annual hours of peak hour excessive delay (PHED) per capita on the NHS. The threshold for excessive delay is based on the travel time at 20 miles per hour or 60% of the posted speed limit travel time, whichever is greater, and is measured in 15-minute intervals during peak travel hours. The total excessive delay metric is then weighted by vehicle volumes and occupancy. *The Lincoln MPO is required to begin reporting this measure for 2022.*
Percent Non-SOV Travel (*490.707(b)*)	Single Occupancy Vehicle (SOV) use and alternative mode share is measured using American Community Survey (ACS) Commuting (Journey to Work) data from the U.S. Census Bureau. NDOT and the Lincoln MPO may use localized survey or volume/usage counts for each mode to determine the percent non-SOV travel. *The Lincoln MPO is required to begin reporting this measure for 2022.*

LRTP Performance Measures Relevant to Congestion Management

The Lincoln MPO has also established a range of performance measures which are documented in the LRTP. These performance measures reflect the local nature of Lincoln MPO goals and objectives for the multimodal transportation network. A range of congestion conditions and management approaches are quantified through the periodic assessments of these performance measures. As the LRTP is updated, the Lincoln MPO may revise these performance measures. Therefore, the current LRTP may be referenced for the complete list of LRTP performance measures relevant to congestion management.

Additional Measures Related to Congestion Management

Two additional performance measures listed in **Table 1** have been selected to support evaluation of the CMP. These measures are not currently included within the LRTP but improve the ability to evaluate congestion and support project prioritization and selection related to the TIP. The ongoing use and frequency of evaluation for these measures will be considered during the next LRTP update.

Table 3 Presented on Next Page

Table 3 – Additional Measures Related to Congestion Management

Mobility and System Reliability Measure:	For the Purpose of:	Which Addresses Congestion by:	Limitations include:
Non-NHS Congestion Factor (Location Based Data)	Evaluating efficiency of CMP network.	Indicating the statistical severity of measured travel times experienced during peak periods along CMP network segments compared to free flow speeds.	• Segment lengths are defined by a corridor trip instead of individual intersections or bottleneck locations where congestion is typically experienced. • Segment lengths not standardized allowing longer segments to influence travel time more than shorter segments. • Segments are not representative of VMT • Location based service data is largely illustrative, not definitive, and requires validation by other measures before applying CMP strategies
Safety and Security Measure:	**For the Purpose of:**	**Which Addresses Congestion by:**	**Limitations include:**
Annual crashes per mile on CMP Network (Ratio) (NDOT/City)	Evaluating reliability of CMP network.	Using crash density as a surrogate to measure crashes per CMP segment mile. This measure is not evaluated to provide safety analysis. It indicates the relative likelihood of experiencing non-recurring delay on each CMP segment caused by a crash.	• Crashes are only one of many potential traffic incidents. • Data limited to reportable crashes only, excluding non-reportable and near miss incidents that may also influence non-recurring congestion. • Normalized crash statistics are not representative of traffic safety or efforts to reduce the risk of crashes. • Value does not reflect a duration that congestion is created as result of annual crashes per segment mile.

D. Step 4: Collect Data / Monitor System Performance

The Lincoln MPO has identified three groups of performance measures that require data collection to support system monitoring and decision making. The mandated performance measure data is presented as defined by NDOT and adopted by the Lincoln MPO. LRTP performance measure data types, frequency, sources and results are described in the annual performance report. The additional

performance measures recommended for the CMP are presented as analyzed by the Lincoln MPO in completing this CMP update.

Mandated Performance Measure Data

The performance measures listed in **Table 4** are directly influenced by NDOT based on National criteria. The measures were proposed in 2018 and adopted by the Lincoln MPO in 2019.

Table 4 – Mandated Performance Measure Data

	NDOT System Target	Lincoln Performance[7]
Interstate Level of Travel Time Reliability (LOTTR) Percent	98.9%	100%
Non-Interstate Level of Travel Time Reliability (LOTTR) Percent	92.6%	92.0%
Truck Travel Time Reliability (TTTR) Index	1.10	1.10
Annual Hours of NHS Peak Hour Excessive Delay per Capita	TBD for 2022	TBD for 2022
Percent NHS Non-SOV Travel	TBD for 2022	TBD for 2022

LRTP Performance Measure Data

Data collected for LRTP performance measures and summaries of recent trends are compiled annually by the Lincoln MPO. Information about the performance measures and annual metrics can be reviewed in the most recent LRTP annual report.

Additional Measure Data Recommended for Congestion Management

The CMP identified two additional performance measures used to assess the efficiency and reliability of the multimodal transportation network. Although various measures could be used, these measures provide an appropriate level of analysis for the Lincoln MPO to assess causes of congestion and evaluate strategies to address severe congestion experienced within the CMP network.

Congestion Factor of Other CMP Network Roadways

To help identify CMP network locations where travelers experience the most severe recurring congestion, the Lincoln MPO evaluated Location Based Data (LBD) to calculate a Congestion Factor for a select number of CMP segments. A Congestion Factor is a measure that reflects an increased travel time caused by the difference in average speed compared to free flow travel speed. To illustrate the impact of Congestion Factor on travel time, a hypothetical study segment with a 10-minute travel time under free flow conditions that exhibits an average travel time of 13.3 minutes during an analysis period would have a Congestion Factor value of 0.33. Other free flow travel times can be used to calculate a Congestion Factor.

[7] NDOT published 2017 NPMRDS Data in, Nebraska PM3 Performance Measures and Target Setting, Measuring Statewide Performance and Setting Targets

Segments were generated to represent travel corridors for the analysis rather than studying individual blocks where congestion is commonly experienced. This scale for segment analysis best represents a user's overall trip and leaves more traditional analysis to further study within segments where severe congestion is represented. The Lincoln MPO assessed the travel time LBD for morning commute (7:00 am to 9:00 am) and afternoon commute (4:00 pm to 6:00pm) periods. Other analysis periods can be used to study congestion.

LBD can provide some insight to the Lincoln MPO when evaluating recurring congestion. Because LBD are largely dependent upon the mobile location of a user's mobile devise, they can give a measured duration of time between entering and exiting a defined network segment. The Lincoln MPO studied LBD for this CMP to evaluate travel times during 2019 along defined CMP network segments.

As was described in **Table 3**, some important limitations exist when interpreting LBD. As a result, drawing conclusions from Congestion Factors should not be made independent from other LRTP performance measures. For example, volume to capacity (v/c) ratio compares the number of vehicles to the capacity of a designated intersection. This is another common method of measuring congestion and is already included as a LRTP performance measure. The v/c ratio also inherently measures the number of vehicles that are affected at intersections. A Congestion Factor does not measure the number of vehicles affected. The Lincoln MPO anticipates LBD service availability will continue to grow and improvements to analysis methods may eliminate some limitations to using results for CMP updates.

Crashes per CMP Network Segment Mile

To identify segments where travelers are most likely to experience non-recurring congestion, the Lincoln MPO used State of Nebraska crash data available from 2018 to calculate crash ratios for each CMP segment. This ratio represents the average number of annual crashes per CMP segment mile. Crash ratios are different from commonly reported crash rates which describe the number of crashes in a given period as compared to traffic volume. A crash ratio simply seeks to characterize the potential for a given segment to experience non-recurring delay. Crash rates are a safety analysis measure that is not part of this CMP.

A crash ratio value of 45.0 indicates the segment averaged 45 reportable crashes per mile of that segment over the measured year. A traveler could anticipate half the probability of experiencing non-recurring delay on that segment when compared to a segment with a crash ratio of 90. A Geographic Information System buffer was used to analyze each segment's measured length. Changes to the lengths of a segment could have an impact on calculated crash ratios. The 25 segments with the highest measured crash ratio are listed in **Table 5**.

Table 5 Presented on Next Page

Table 5 - Highest Density Crashes by CMP Segment in 2018

Rank	Segment Name	From	To	Length (mi)	Crash Ratio
1	9th Street	K Street	Q Street	0.48	136.38
2	10th Street	K Street	Q Street	0.48	122.30
3	O Street	9th Street	25th Street	1.22	104.03
4	L Street	9th Street	17th Street	0.63	90.18
5	O Street	25th Street	84th Street	4.13	81.84
6	17th Street	K Street	Q Street	0.49	81.65
7	11th Street	L Street	P Street	0.23	79.24
8	14th Street	L Street	P Street	0.23	78.59
9	13th Street	L Street	P Street	0.23	69.96
10	27th Street	O Street	Highway 6	1.96	66.83
11	K Street	9th Street	17th Street	0.63	66.68
12	27th Street	Highway 2	O Street	2.93	64.45
13	Antelope Valley Parkway	K Street	Military Road	1.63	61.43
14	A Street	17th Street	27th Street	0.73	61.32
15	Q Street	9th Street	17th Street	0.65	61.27
16	16th Street	K Street	Q Street	0.49	59.00
17	33rd Street	Normal Boulevard	O Street	1.05	51.51
18	48th Street	O Street	Superior Street	2.98	47.29
19	P Street	9th Street	17th Street	0.64	47.15
20	Cornhusker Highway	11th Street	56th Street	3.76	46.06
21	Vine Street	27th Street	70th Street	2.98	45.37
22	14th Street	Highway 6	Fletcher Avenue	1.91	45.37
23	Normal Boulevard	Antelope Valley Parkway	56th Street	3.16	40.76
24	12th Street	L Street	P Street	0.23	39.45
25	P Street	17th Street	27th Street	0.73	38.55
Average of all CMP Network Segments Analyzed					**26.10**

E. Step 5: Analyze Congestion Problems and Needs

The Lincoln MPO takes the information generated in Step 4 to make observations about locations where congestion is occurring. MPO staff along with agency members of the MPO analyze the data to identify congestion problems and needs that may need addressed. This process is completed in coordination with the CMP Subcommittee of the MPO Technical Committee. The CMP Subcommittee represents the transportation agencies that ensure congestion problems are characterized correctly. Once congestion problems and needs have been characterized, future planning efforts identify appropriate strategies for implementation. These agencies work together to address the causes of congestion through a variety of transportation funding strategies. A brief overview of the common causes of congestion experienced within Lincoln's CMP Network is provided below.

Causes of inefficient performance

- **Physical Bottlenecks** – Sections of roadway network including intersections that have reached their operational capacity which is determined by a number of factors including the number and width of lanes and shoulders, merge areas at interchanges, and roadway alignments (grades and curves).
- **Access Management** – Locations of driveway/street spacing, turn lane configurations, or median treatments that introduce traffic flow disruptions.
- **Signal Timing** – Disruption of traffic flow by traffic control devices and railroad grade crossings. Unoptimized signals, which Lincoln LTU continues to reduce on the CMP network, contribute to congestion and travel time variability.

Causes of unreliable performance

- **Traffic Incidents** – Events that disrupt the normal flow of traffic, usually by physical impedance in the travel lanes. Events such as vehicular crashes, breakdowns, and debris in travel lanes are the most common form of incidents. In addition to blocking travel lanes physically, events that occur on the shoulder or roadside can also influence traffic flow by distracting drivers, leading to changes in driver behavior and ultimately degrading the quality of traffic flow. Even incidents off of the roadway (e.g., a fire in a building next to a highway) can be considered traffic incidents if they affect travel in the travel lanes.
- **Weather Conditions** – Environmental conditions can lead to changes in driver behavior that affect traffic flow. Due to reduced visibility, drivers will usually lower their speeds and increase their headways when precipitation, bright sunlight on the horizon, fog, or smoke are present. Wet, snowy, or icy roadway surface conditions will also lead to the same effect even after precipitation has ended.
- **Work Zones** – Construction activities on the roadway that result in physical changes to the highway environment. These changes may include a reduction in the number or width of travel lanes, lane "shifts," lane diversions, reduction, or elimination of shoulders, and even temporary roadway closures. Delays caused by work zones have been cited by travelers as one of the most frustrating conditions they encounter on trips.
- **Special Events** – Demand fluctuations where traffic flow in the vicinity of an event is disproportionately different from "typical" patterns. Special events such as university sporting events, concerts, municipal festivals, organized recreational events and others occasionally cause "surges" in traffic demand or barriers to traffic patterns that overwhelm the system.

III. CMP IMPLEMENTATION (STEPS 6-8)

A variety of strategies may be considered and employed to address congestion in Lincoln. This section describes the strategy evaluation process that the Lincoln MPO intends to follow once adequate data are compiled and congestion problems appropriately characterized. The implementation steps continue a feedback process of planning, implementation and evaluation that leads to prioritizing transportation investments that minimize congestion.

A. Step 6: Identify and Assess Strategies

The CMP can be used for measuring progress toward objectives using a variety of metrics. The Lincoln MPO considers the applicability of each strategy to address congestion of the CMP network. Some strategies that are not applicable in other MPOs may be well suited for the Lincoln MPO. Similarly, the Lincoln MPO must strive to make wise decisions about the investment into strategies with the highest likelihood of reducing congestion. **Tables 6 - 9** present the subjective assessment by the MPO for four groups of strategies and how applicable each strategy is currently considered within the CMP. The CMP Subcommittee members provided valuable input about the applicability of strategies listed below. Strategies with high applicability to address recurring or non-recurring congestions may be prioritized higher as strategies in the LRTP and when updating the TIP.

Reducing Person Trips or Vehicle Miles Traveled

The transportation network within the City of Lincoln benefits from the long-standing land use development pattern that limits sprawl. Public utilities of water and wastewater are developed within stormwater drainage basins and may be extended upon annexation. This strategic initiative reduces Vehicle Miles Traveled (VMT) relative to other urban areas. Additional strategies may help to further reduce person trips or VMT.

Table 6 - Strategies that Reduce Person Trips or Vehicle Miles Traveled

Description	Current Applicability to Lincoln MPO
A.1 Congestion Pricing or Road User Charge	Lower Potential
A.2 Alternative Work Hours	Lower Potential
A.3 Telecommuting	Some Potential
A.4 Emergency Ride Home Program	Lower Potential
A.5 Alternative Mode Marketing and Education	Some Potential
A.6 Safe Routes to Schools	Some Potential
A.7 Preferential for Free Parking for HOVs	Some Potential
A.8 Negotiated Demand Management Agreements	Lower Potential
A.9 Trip Reduction Ordinance	Lower Potential
A.10 Infill Developments	Higher Potential
A.11 Design Guidelines for Pedestrian-Oriented Development	Some Potential
A.12 Mixed-Use Development	Higher Potential

Shifting Automobile Trips or Other Modes:

The City of Lincoln StarTran bus system operates six-days a week and offers a cost-effective alternative to SOV travel to work and other transportation needs. Bus system routes were reconfigured following the 2016 Transit Development Plan. Following significant drops in ridership after 2014, route changes have seen increasing ridership in 2016-2018. The N-Street Cycle Track constructed in 2014 was the City's first protected bike lane and is connected to a growing network of over 130 miles of award-winning[8] bicycle infrastructure throughout the Lincoln MPO. This infrastructure provides travelers with an alternative to SOV travel that can see greater seasonal demand in the late Spring through early Fall. In 2019, the City adopted an inaugural shared mobility ordinance which will bring a pilot project for electric scooters that can provide first and last mile options for some travelers. BikeLNK, Lincoln's docked bike share program, includes 21 stations and 105 bikes as of February 2020. BikeLNK was integrated into Lincoln Transportation and Utilities starting in 2020 and additional expansion is anticipated to continue shifting some automobile trips to bicycles.

Table 7 - Strategies that Shift Automobile Trips or Other Modes:

Description	Current Applicability to Lincoln MPO
B.1 Transit Capacity Expansion	Some Potential
B.2 Increasing Bus Route Coverage or Frequency	Some Potential
B.3 Implementing Regional Premium Transit	Lower Potential
B.4 Transit Route Real-Time Information	Some Potential
B.5 Reduced Transit Fares	Higher Potential
B.6 Exclusive Bus Right-of-Way	Some Potential
B.7 New Sidewalk Connections	Some Potential
B.8 Complete Streets	Higher Potential
B.9 Improved Bicycle Facilities at Transit Development Centers or Trip Destinations	Some Potential
B.10 Improved Safety of Existing Bicycle and Pedestrian Facilities	Higher Potential
B.11 Exclusive Non-Motorized ROW	Some Potential
B.12 Intermodal Enhancements Linked to Micro-Mobility Services	Some Potential

Improve Roadway Operations:

The 2015 Traffic Management Master Plan provided a range of recommendations for evaluation and enhancements to improve roadway operations. A few of the primary system needs included Advanced Traffic Management System (ATMS) hardware and software, Location and functionality of the Public Works Operations Center (PWOC), Vehicle detection, Signal phasing alternatives, Signal optimization program, ITS field devices - CCTV cams for system monitoring, Arterial dynamic message signs (DMS) and other important considerations for optimizing existing roadway infrastructure.

In 2016, the City began the process of optimizing signal timing through a program called, Green Light Lincoln. Phase 1 was estimated to save travelers 8.8 million dollars annually by drivers using 575,000 fewer gallons of gas. The successful program is entering into Phase 4 and continues to provide operation

[8] 2014 American Planning Association – Great Places in America Award for the Great Plains Trails Network

improvements that reduce the cost of vehicle travel and increase reliability of transit services. Additional strategies listed in the Traffic Management Master Plan are also generating a positive impact on congestion that can be influenced by roadway operations.

Table 8 - Strategies that Improve Roadway Operations:

Description	Current Applicability to Lincoln MPO
C.1 Dynamic Messaging	Some Potential
C.2 Advance Traveler Information Systems (ATIS)	Some Potential
C.3 Integrated Corridor Management (ICM)	Some Potential
C.4 Transit Signal Priority (TSIP)	Lower Potential
C.5 Variable Speed Limits	Lower Potential
C.6 Truck Signal Priority	Lower Potential
C.7 Traffic Signal Coordination	Higher Potential
C.8 Channelization	Some Potential
C.9 Bottleneck Removal	Some Potential
C.10 Vehicle Use Limitations and Restrictions	Lower Potential
C.11 Autonomous Vehicle Smart Routing	Some Potential
C.12 Improved Signage	Some Potential
C.13 Geometric Improvements for Transit	Lower Potential
C.14 Goods Movement Management	Some Potential
C.15 Freeway Incident Detection and Management Systems	Lower Potential
C.16 Access Management Policies	Higher Potential
C.17 Corridor Preservation	Some Potential
C.18 Corridor Management	Some Potential

Improve Infrastructure or add Capacity:

The LRTP process considers a range of priorities that are important to stakeholders. Congestion management is an important consideration. The range of priorities are used to help the Lincoln MPO make decisions between projects and strategies. Some strategies consider improving infrastructure or adding capacity to help alleviate congestion. The LRTP documents the need to continue allocating resources to address current and future congestion on the street network at existing intersections. Improvements to existing intersections may reduce bottlenecks and improve safety; both of which address the objectives of the CMP. Roadway projects may minimize future congestion that can be anticipated with additional future growth. The Transit Demand Model maintained by the MPO is used to anticipate the increased demand on the roadway network and helps with the prioritization of projects given funding constraints. Infrastructure and Capacity improvements strategies are part of a comprehensive approach to managing congestion.

Table 9 - Strategies that Improve Infrastructure or add Capacity:

Description	Current Applicability to Lincoln MPO
D.1 Intersection Improvements	Higher Potential
D.2 Interchange Improvements or Additions	Lower Potential
D.3 New Lanes of Travel	Some Potential
D.4 2+1 Center Turn Lane Projects	Higher Potential

B. Step 7: Program and Implement Strategies

Information developed through the CMP is applied to establish priorities in the Transportation Improvement Program (TIP) thereby facilitating the implementation of the CMP, either through formal or informal processes. During the development of the LRTP and TIP, congestion management objectives and performance measures from this document will be referenced in the project prioritization and evaluation processes. Therefore, the information documented in this CMP serves to inform other decision-making processes over the coming years and will be reevaluated when the CMP is updated. The Lincoln MPO staff, Technical Committee and Officials Committee lead and direct the effort to program the CMP strategies for implementation.

C. Step 8: Evaluate Strategy Effectiveness

The central focus of this CMP update is to build upon the MPO's previous CMP by integrating real world data collection and performance measures into the process. Not only must the CMP meet the federal requirements, but the Lincoln MPO has a desire to use the CMP as a regional benchmarking resource to inform transportation investment decisions and to paint a clear picture of the region's transportation needs. This CMP will be integrated into the 2050 LRTP.

The CMP highlights an on-going and iterative process to use strategies that span various timelines and resource demands. The Lincoln MPO works closely with operating agencies to evaluate the effectiveness of congestion reduction strategies implemented in the Lincoln region. There is not a one-size-fits-all approach to congestion management and strategies should remain flexible to address new opportunities and challenges. Future analysts should utilize the performance measures captured within this CMP to determine the effectiveness of the selected strategies. Doing so will lead to identification of areas with congestion or safety issues, development and assessment of potential mitigation strategies, and support of prioritization decisions that lead to investments in congestion and safety improvements.

Appendix E1 - Congestion Management Process

February 8, 2021

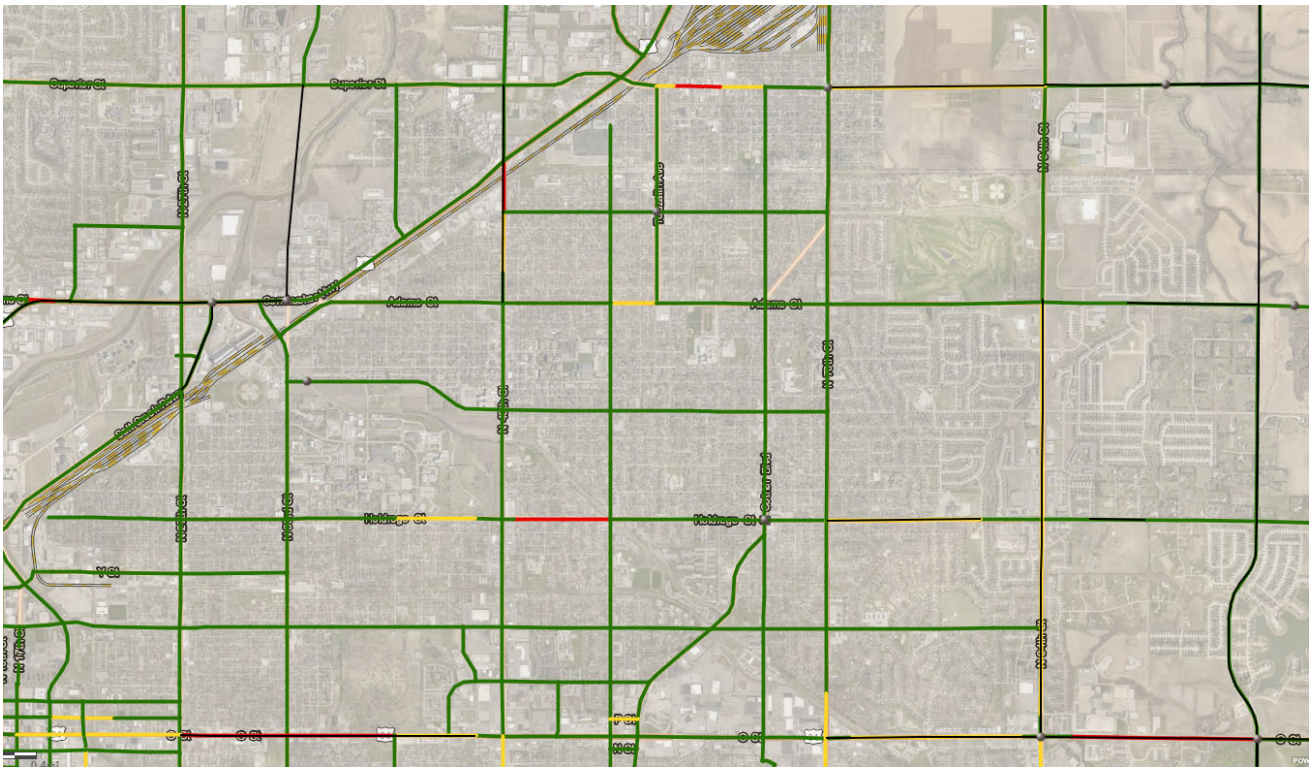
Existing Congestion

Only two segments of roadway with V/C > 1.0

- S. 9th Street from L Street to K Street (1.05)
    - **CMP Strategy A.10** Infill Development to reduce commuting demand
    - **CMP Strategy C.7** Traffic Signal Coordination – Green Light Lincoln Phase 3 Corridor
- Hwy 2 from Van Dorn Street to High Street (southbound) (1.34)
    - Covered by Hwy 2 corridor improvements (82) and 6 Lane Widening (18)

2035 Congestion

Northeast Lincoln

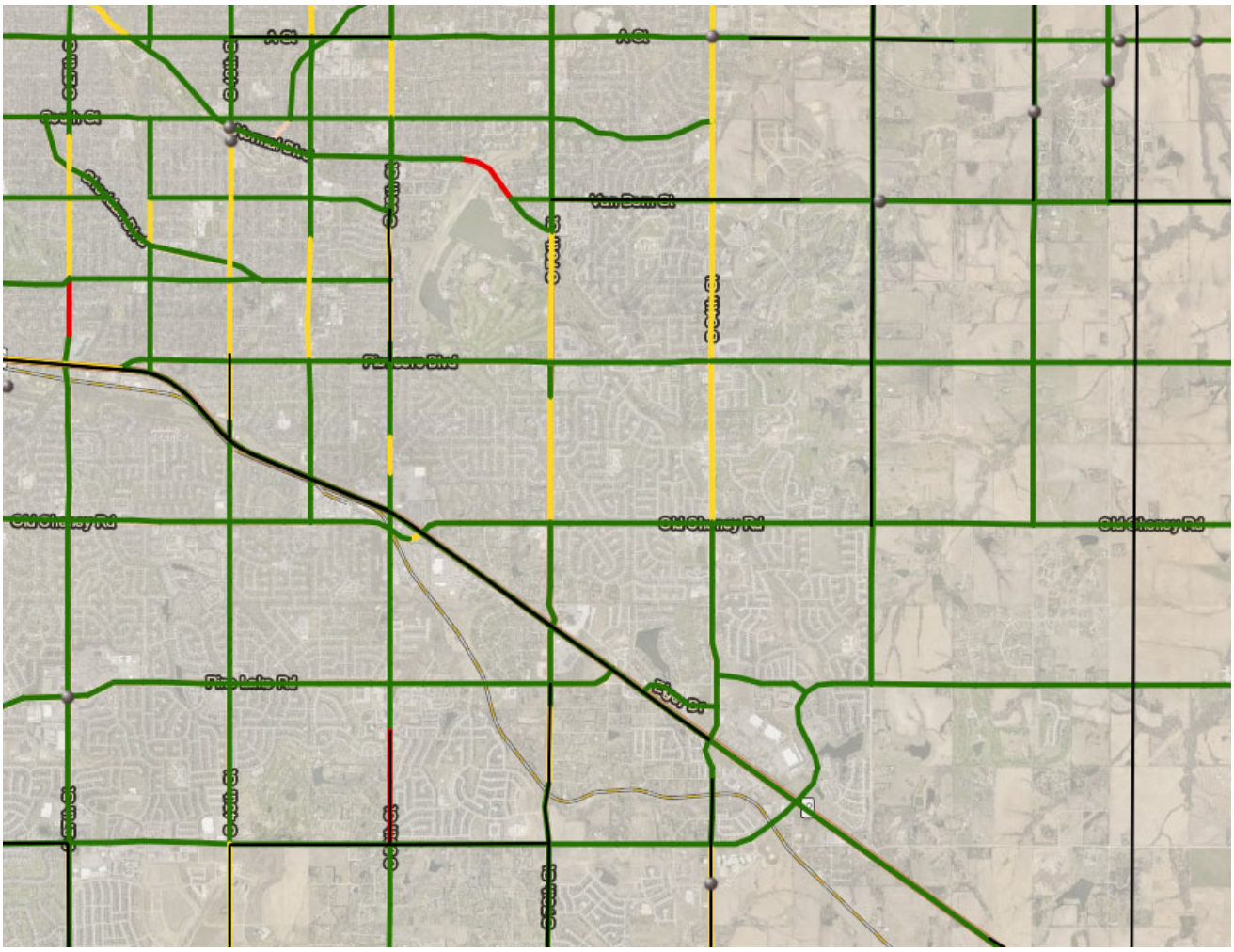


- Holdrege Street between North 48th Street and North 56th Street (1.11)
    - **CMP Strategy B.10** Improved Safety of Existing Bicycle and Pedestrian Facilities; Bike Plan recommends widening sidewalk on north side to function as sidepath
- Havelock Avenue between North 60th Street and N 63rd Street (1.37)

- **CMP Strategy B.8** Complete Streets; Bike Plan recommends separated bike lanes along Havelock
- **CMP Strategy C.7** Traffic Signal Coordination – Green Light Lincoln Phase 2 Corridor

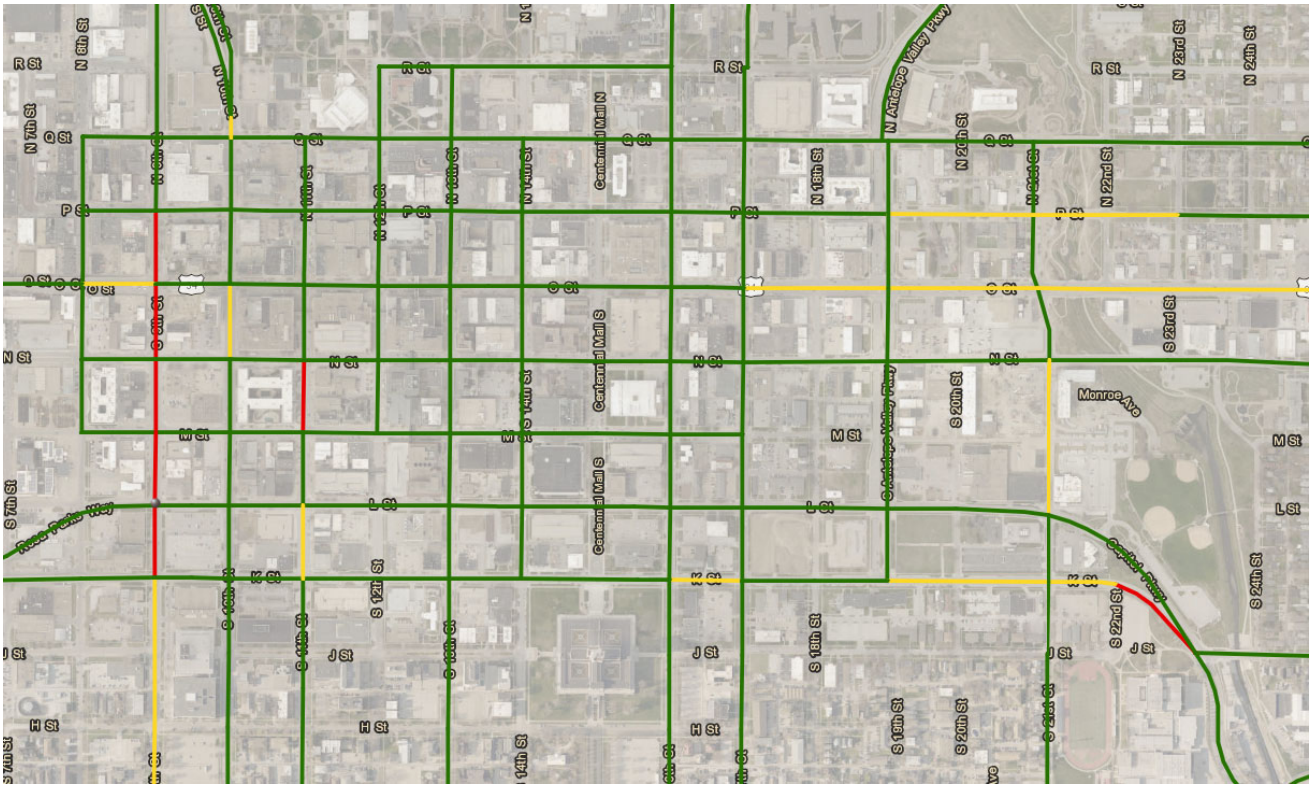
- Other congested corridors are covered by a roadway project

Southeast Lincoln



- South 27th Street between Hwy 2 to Calvert Street (1.11)
  - **CMP Strategy C.7** Traffic Signal Coordination – Green Light Lincoln Phase 2 Corridor
- Normal Boulevard between South 62nd Street to Van Dorn Street (1.13)
  - **CMP Strategy C.7** Traffic Signal Coordination – Green Light Lincoln Phase 1 Corridor; limited benefit to this segment – no signals
  - Consider southbound to eastbound left turn lane
- Other congested corridors are covered by a roadway project

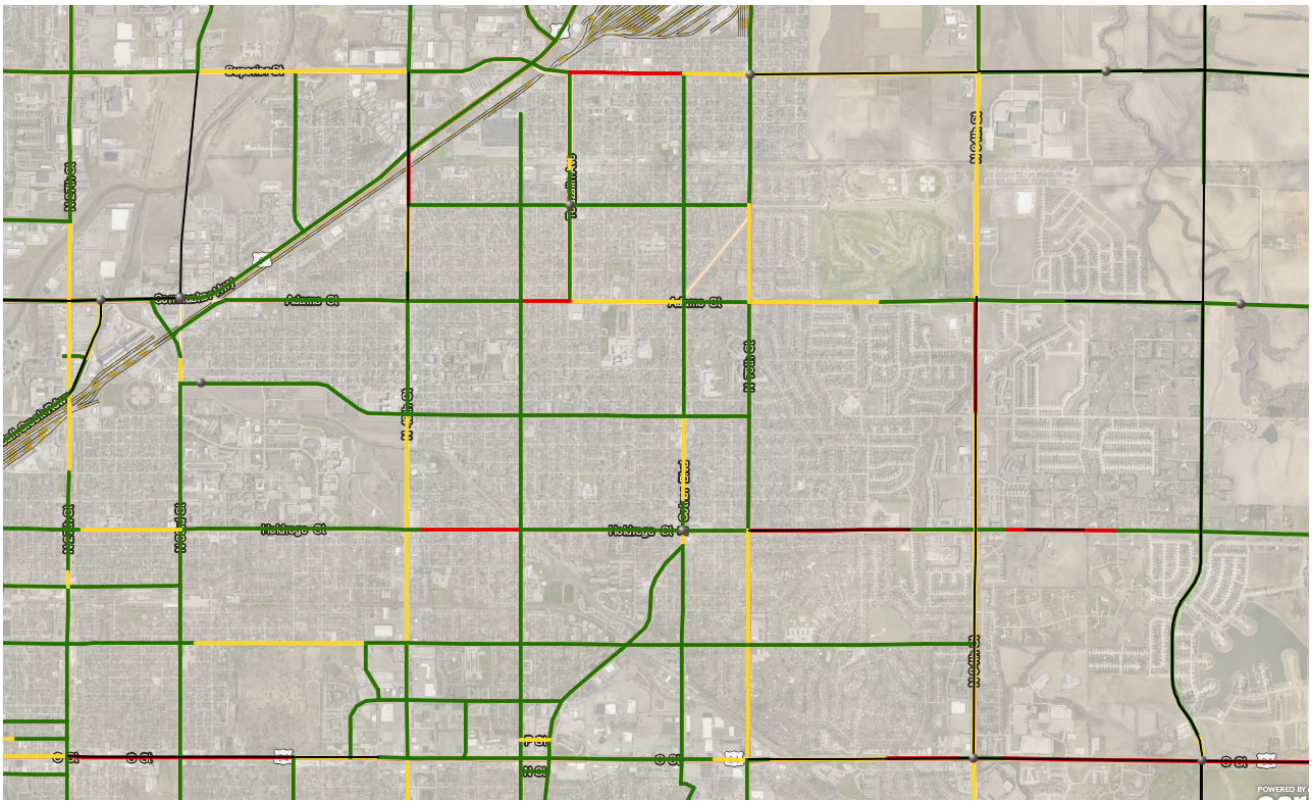
Downtown Lincoln



- South 9th Street between P Street and K Street (1.09 – 1.26)
    - **CMP Strategy C.7** Traffic Signal Coordination – Green Light Lincoln Phase 3 Corridor
    - **CMP Strategy B.8** Complete Streets; Bike Plan recommends buffered bike lanes on 13th Street, 16th/17th Streets – parallel facilities providing north-south bike routes for commuting into downtown
    - **CMP Strategy A.3** Telecommuting; encourage downtown employers to support continued telecommuting post-COVID
    - **CMP Strategy A.10** Infill Development to reduce commuting demand
- South 11th Street between M Street and N Street (1.08)
    - **CMP Strategy C.7** Traffic Signal Coordination – Green Light Lincoln Phase 3 Corridor
    - **CMP Strategy B.8** Complete Streets; Bike Plan recommends buffered bike lanes on 13th Street, 16th/17th Streets – parallel facilities providing north-south bike routes for commuting into downtown; future greenway on 11th Street
    - **CMP Strategy A.3** Telecommuting; encourage downtown employers to support continued telecommuting post-COVID
    - **CMP Strategy A.10** Infill Development to reduce commuting demand
- Capital Parkway between South 22nd Street and J Street, eastbound (1.19)
    - **CMP Strategy C.7** Traffic Signal Coordination – Green Light Lincoln Phase 1 Corridor
    - **CMP Strategy A.3** Telecommuting; encourage downtown employers to support continued telecommuting post-COVID
    - **CMP Strategy A.10** Infill Development to reduce commuting demand

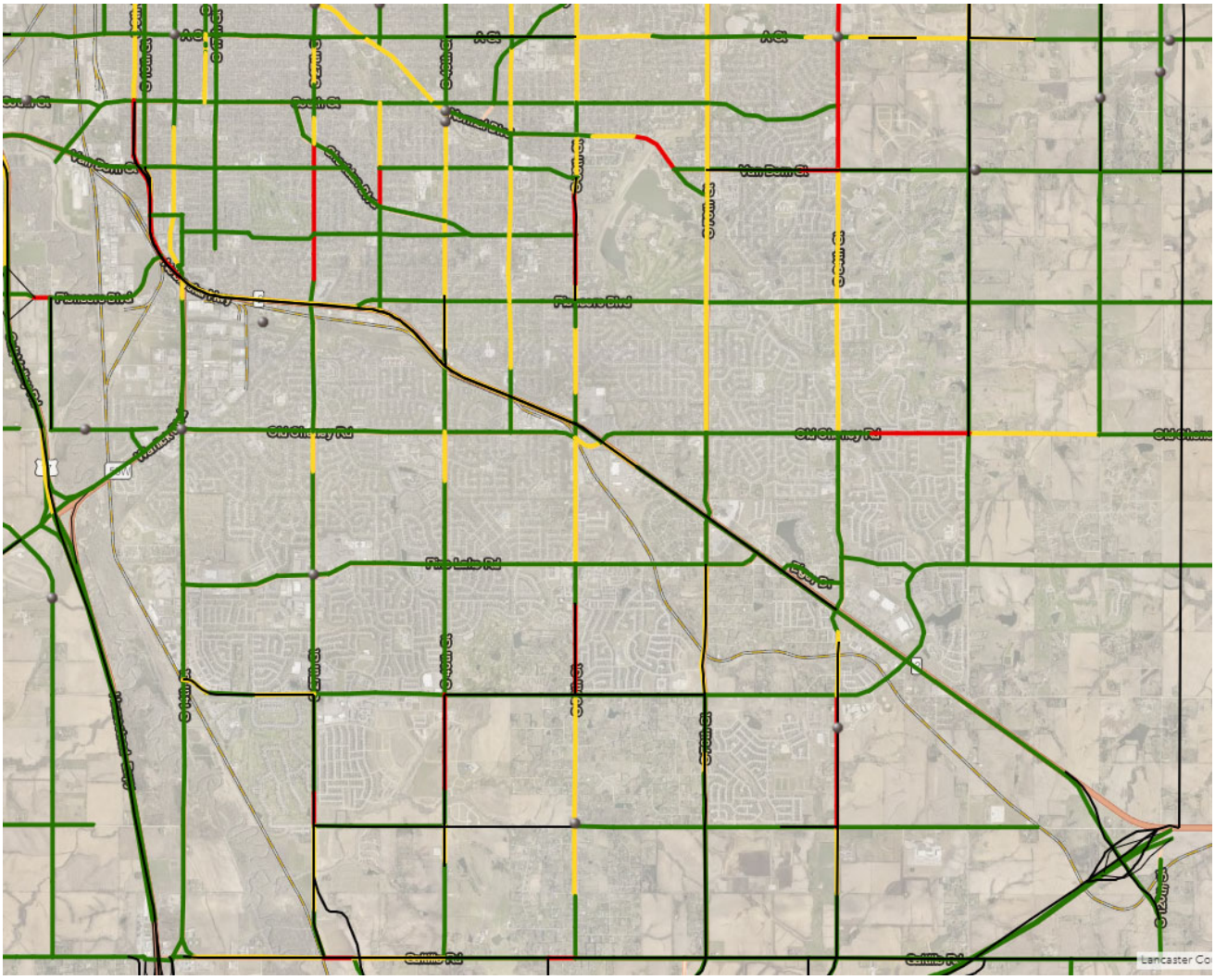
2050 Congestion

Northeast Lincoln



- Havelock Street (see 2035 Congestion)
- Holdrege Street (see 2035 Congestion)
- Adams Street between North 56th Street and North 59th Street (1.02)
    - **CMP Strategy A.6** Safe Routes to School – Focus on improving biking, walking, transit access to Lincoln Northeast High School and education campaign; support alternative modes access and education for Nebraska Wesleyan University students and staff
- Other congested corridors are covered by a roadway project

Southeast Lincoln



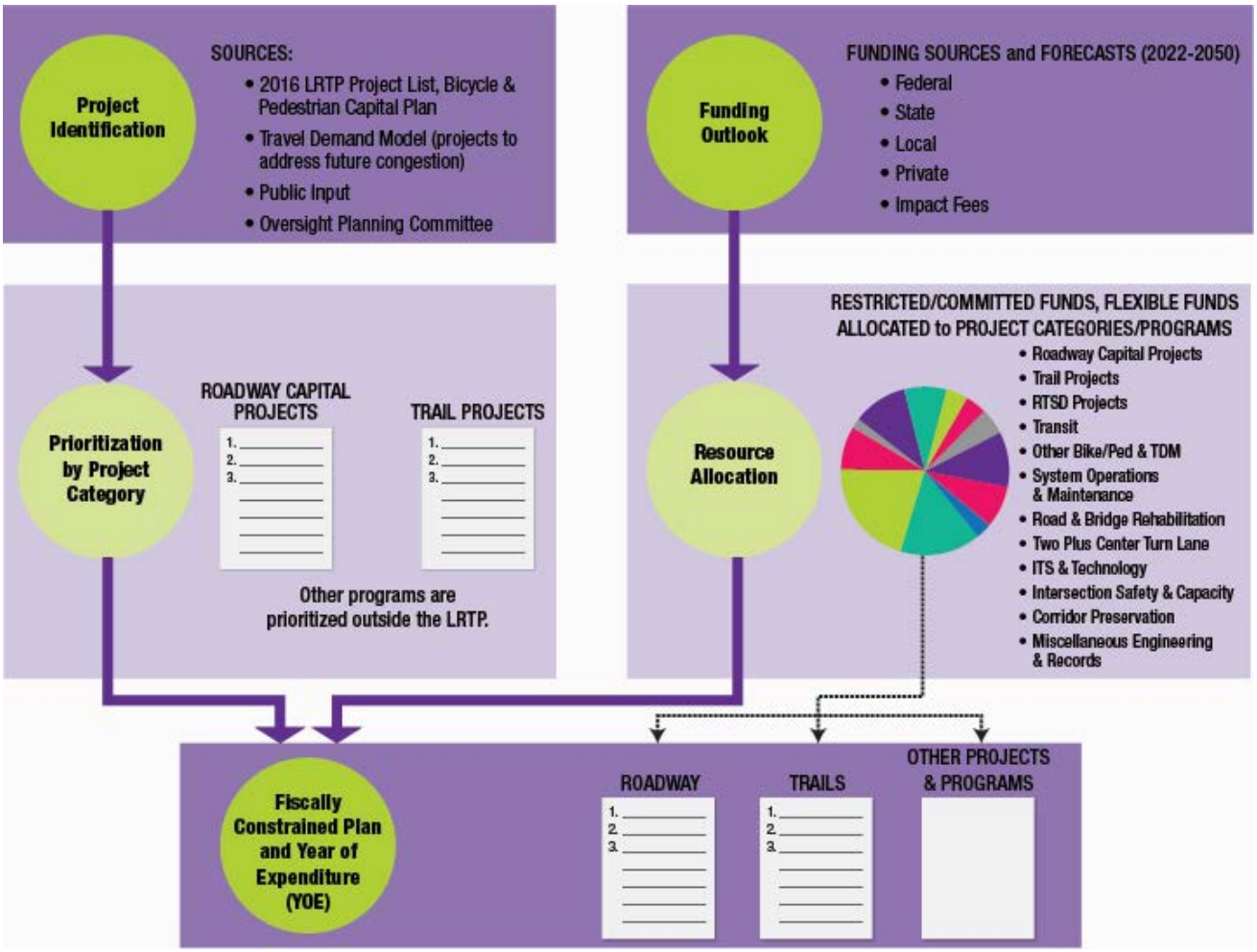
- Pioneer Boulevard between S 1st Street and SW 2nd Street (1.11)
    - If/when development occurs on south side of street; evaluate the need for intersection improvements or other traffic mitigation
- South 27th Street between Hwy 2 Sheridan Boulevard (1.01 – 1.22)
    - **CMP Strategy C.7** Traffic Signal Coordination – Green Light Lincoln Phase 2 Corridor
- South 33rd Street between Sheridan Boulevard and Van Dorn Street (1.02)
    - **CMP Strategy A.6** Safe Routes to School – Focus on improving biking, walking (pedestrian crossing improvements) to Sheridan Elementary School and Lincoln Southeast High School and education campaign
- Normal Boulevard (see 2035 Congestion)
- South 84th Street between Van Dorn Street and Sandalwood Drive (1.02-1.06)
    - **CMP Strategy C.7** Traffic Signal Coordination – Green Light Lincoln Phase 1 Corridor
- Old Cheney Road between South 84th Street and South 98th Street (1.00 – 1.18)
    - **CMP Strategy C.7** Traffic Signal Coordination – Green Light Lincoln Phase 2 Corridor



APPENDIX F
Project Prioritization Process

Appendix F – Project Prioritization Process

The purpose of this document is to describe the process used to prioritize projects and develop a fiscally constrained plan for the 2050 Long Range Transportation Plan (LRTP) Update. Although the LRTP addresses funding for a variety of project and program categories, only roadway and trail projects are prioritized within the LRTP. All other project categories (e.g., transit, on-street bicycle, rehabilitation, etc.) are prioritized outside of the LRTP. These other project categories are funded through a "pool" of funding as established in the Resource Allocation step. The Fiscally Constrained Plan includes the top ranked roadway and trail projects, and a pool of funding for the various other project categories.



LRTP Goals

In compliance with federal requirements, the 2050 LRTP Update is a performance-based plan. The Lincoln MPO tracks a series of system-level performance measures that align with the eight LRTP goals (listed below). The project prioritization process is structured to identify those projects that will provide the greatest contributions toward meeting these eight goals. The evaluation criteria used to compare projects are directly related to the eight goals.



A well-maintained transportation system.



A transportation system that supports economic vitality for residents and businesses.



An efficient, reliable, and well-connected transportation system that leverages innovation and technology for moving people and freight.



A transportation system that enhances the natural, cultural, and built environment.



A multi-modal system that provides travel options to support a more compact, livable urban environment.



Collaboration in funding transportation projects that maximizes user benefits.



A safe and secure transportation system.



Transportation investments developed through an inclusive process that promotes equitable outcomes.

Project Identification

The following process was used to identify projects to be evaluated and prioritized in the LRTP:

1. Started with 2040 LRTP Roadway Capital Projects, Rural Road Projects, and Trail Project lists.
2. Identified projects that have been completed; these projects were removed.
3. Identified projects included in the current Capital Improvement Program (CIP)/Transportation Improvement Program (TIP) and County 1 & 6 Year Plan. These committed projects are listed at the top of the Fiscally Constrained Plan.
4. Identified projects with funding obligations such as Lincoln on the Move (LOTM), highway allocation bonds or public-private partnerships. These projects are also listed at the top of the Fiscally Constrained Plan.
5. Used the 2019, 2035, and 2050 travel demand models to identify areas of congestion that would not be addressed by previously identified projects. The Congestion Management Process (CMP) was applied to these congested roads to identify potential congestion mitigation as summarized in Attachment 1 of Appendix A. The initial recommendations were discussed with the Roadway Subcommittee for consideration of additional projects.
6. Overlaid the On-Street Bike projects and the Trail sidepath projects with the Roadway Capital Projects to identify opportunities to combine bike improvements with roadway projects. Such opportunities were presented and discussed with the Trails Subcommittee (and the POPC) for consideration. Trail and On-Street Bike projects that are expected to be constructed with Fiscally Constrained roadway projects are included in the Fiscally Constrained Plan.
7. Based on the September/October 2020 public input (specifically, the Pinmap), identified locations with clusters of public comments that would not be addressed by previously

identified projects. These clusters of public comment were discussed with the Roadway Subcommittee (and the POPC) for consideration of additional projects and/or project refinements.

8. The Roadway and Trail Subcommittees (and the POPC) were be asked to review and refine the project lists.
    - Are there changes in the project scope that should be considered?
    - Are there additional projects to be included?

Project Scoring and Weights

The Lincoln and Lancaster County Roadway Capital Projects were evaluated and prioritized separately in recognition of the unique transportation needs and priorities in the urban versus rural context. The eight LRTP goals (plus community support) were used as the basis for the data-driven project evaluation for both urban and rural projects. Scores for each goal area/criterion are on a 0–1 scale, with 0 being the least favorable and 1 being the most favorable. The roadway projects were evaluated through a data-driven scoring process, and the Roadway Evaluation Subcommittee was responsible for guiding the process, providing relevant data and project information, and reviewing the evaluation results.

Each trail project was given a score ranging from 0 to 1 for each goal. A score of 0 is the least favorable and a score of 1 is the most favorable rating. Because the data for trail projects are not as robust as those for roadway projects, Trail Evaluation Subcommittee members scored the projects independently, and project scores were averaged. The committee met to discuss the scoring results and presented their recommended scores to the POPC.

The relative importance of the eight goals (plus community input) varies; therefore, weights are assigned to each goal category and corresponding evaluation criteria. Because the relative importance of the goals differs for Urban Roadway Projects, Rural Roadway Projects, and Trail Projects, separate weights are established for the three project categories.

The weights shown in Table 1. Weights by Goal Area and Project Category were developed using the combined input from the POPC and the Community Committee. The project score (0–1) for each goal was multiplied by the corresponding weight, resulting in a total project score ranging from 0 to 100.

Table 1. Weights by Goal Area and Project Category

Goal Area	Rural Area Roadway Projects (Lancaster County)	Urban Area Roadway Projects (Lincoln)	Trail Projects
Maintenance	22.1	17.8	13.0
Mobility and System Reliability	12.1	12.4	12.2
Livability and Travel Choice	5.8	11.0	13.7
Safety and Security	13.8	13.5	13.1
Economic Vitality	8.9	7.5	5.8
Environmental Sustainability	12.2	12.8	12.4
Transportation Equity	6.7	10.0	12.1
Funding and Cost Effectiveness	13.4	10.0	7.7
Community Support	5.0	5.0	10.0
Total	**100.0**	**100.0**	**100.0**

Roadway Project Evaluation

The eight LRTP goals were to be used as the basis for project evaluation for both urban and rural roadway projects. Decision Lens was used as the tool to evaluate projects; all evaluation metrics were converted to a 0-1 scale, with 0 being the least favorable and 1 being the most favorable. The following sections describe the evaluation criteria and supporting data.



Maintenance

Evaluation Question: Is the project located on a road that is in poor condition and would therefore serve dual functions of rehabilitating and improving the road?

Evaluation Metric: Current pavement condition index (PCI)

Decision Lens Scale:

The project with the worst PCI was given a score of 1; all other scores were scaled proportionately.

If the PCI varies over the length of the project, the score is a weighted average based on length.

Data Sources: LTU 2020 PCI data, Lancaster County 2020 PCI data, and NDOT National Service Index (NSI) data

Data Gaps/ Validation: None anticipated.



Mobility and System Reliability

Evaluation Question: Is the project located on a road that is currently congested or expected to experience congestion in the future?

Evaluation Metric: Volume to capacity ratio (V/C)

Decision Lens Scale:

Weighted Average V/C =

0.5 * (2019 V/C) +

0.3 * (2035 V/C) +

0.2 * (2050 V/C)

Value of 1 in Decision Lens was set based on the highest value in the dataset.

Data Sources: 2019, 2035, and 2050 V/C ratios from updated Lincoln MPO travel demand model

Data Gaps/ Validation: Areas of Lancaster County outside of the model area; traffic counts were used to estimate V/C over time with an average annual growth rate of one percent. A capacity of 400 vehicles per day (vpd) was used for gravel roads.

<table>
<tr><td rowspan="2"> 
Livability and Travel Choice</td><td colspan="2">Evaluation Question: Does the project include multimodal elements?</td></tr>
<tr><td colspan="2">Evaluation Metric: Presence of StarTran route; inclusion of bicycle or pedestrian enhancements</td></tr>
<tr><td>Decision Lens Scale:
No additional modes = 0
1 additional mode = 0.33
2 additional modes = 0.67
3 additional modes = 1.0</td><td>Data Sources: StarTran existing routes (assumes that StartTran will benefit from project along the route); bicycle and trail project overlay; project description (to identify bicycle and pedestrian improvements)</td><td>Data Gaps/ Validation: Project sponsors assisted in identifying bicycle and pedestrian improvements associated with each project.</td></tr>
</table>

<table>
<tr><td rowspan="2"> 
Transportation Equity</td><td colspan="2">Evaluation Question: Is the project located in an area with a high number of underserved and overburdened communities and does the project address the needs identified for that area?</td></tr>
<tr><td colspan="2">Evaluation Metric: Underserved and overburdened communities (NOTE: Felsburg Holt & Ullevig (FHU) calculated the Transportation Equity score using a GIS spatial overlay)</td></tr>
<tr><td>Decision Lens Scale:
Equity index category
Low = 0
Low to moderate = 0.33
Moderate to high = 0.67
High = 1.0
If the project passes through areas with different equity index categories, the score defaults to the higher score.
If the project could have adverse impacts, the score was reduced by one or more levels.</td><td>Data Sources: Equity index which includes: older adults, people with disabilities, people with limited English proficiency, single parent households, people with low income, minority populations, and people without access to a vehicle); Pinmap public comments</td><td>Data Gaps/ Validation: Projects with potential adverse impacts were flagged and discussed categorically with the Equity Subcommittee to determine if a reduction in score was appropriate.</td></tr>
</table>

<table>
<tr><td colspan="2"> 
Safety and Security</td><td colspan="2">Evaluation Question: Will the project alleviate a known safety problem?

Evaluation Metric: Crash rate, number of bicycle and pedestrian crashes, number if injury and fatal crashes</td></tr>
<tr><td colspan="2">Decision Lens Scale:

Each of three crash metrics within the project area were calculated and scaled. The Decision Lens score is a cumulative score with a maximum total score of 1.

▪ Crash Rate (50% of score)
▪ Number of Bicycle and Pedestrian Crashes (25% of score)
▪ Number of Injury and Fatal Crashes (25% of score)</td><td>Data Sources: NDOT crash data; model Vehicle Miles Traveled (VMT) to calculate crash rates</td><td>Data Gaps/ Validation: VMT estimates for County projects outside of model area were calculated based on existing traffic counts and project length.</td></tr>
</table>

<table>
<tr><td> 
Economic Vitality</td><td colspan="2">NOTE: This category has two evaluation criteria; the combined score was used with each criterion representing half of the score.</td></tr>
<tr><td>Evaluation Question 1: Will the project improve access to and/or add value to surrounding land uses?</td><td colspan="2">Evaluation Metric 1: Proximity of project to commercial, industrial, or light industrial land uses in Future Land Use (FLU) map</td></tr>
<tr><td>Decision Lens Scale:
Not proximate to commercial or industrial land uses = 0
Proximate to commercial or industrial land uses = 1</td><td>Data Sources: Future Land Use map</td><td>Data Gaps/ Validation: Confirmation from Urban Development on results</td></tr>
<tr><td>Evaluation Question 2: Will the project improve travel on a designated truck route and/or the National Highway System (NHS)?</td><td colspan="2">Evaluation Metric 2: Primary and secondary truck routes and NHS routes</td></tr>
<tr><td>Decision Lens Scale:
Not a truck route = 0
Secondary truck route = 0.5
Primary truck route or NHS = 1.0</td><td>Data Sources: Truck Routes and National Highway System</td><td>Data Gaps/ Validation: Secondary truck routes in Lancaster County identified by County Engineer’s office</td></tr>
</table>

<table>
<tr><td rowspan="2"> 
Environmental Sustainability</td><td colspan="2">Evaluation Question: Will the project impact the natural, cultural, or built environment?</td></tr>
<tr><td colspan="2">Evaluation Metric: Presence of red-flag environmental resources within the project area</td></tr>
<tr><td>Decision Lens Scale:
The number of red-flag environmental considerations within the project area was counted. Value of 1 in Decision Lens was set based on the lowest value in the dataset.</td><td>Data Sources: Natural, cultural, and built environmental data mapping including floodplains, wetlands, native prairie, tree mass, threatened and endangered species, parks and open space, historic sites</td><td>Data Gaps/ Validation: None anticipated</td></tr>
</table>

<table>
<tr><td rowspan="2"> 
Funding and Cost Effectiveness</td><td colspan="2">Evaluation Question: How does the cost of the project compare to the benefits?</td></tr>
<tr><td colspan="2">Evaluation Metric: Benefit/Cost Ratio (NOTE: FHU calculated the Funding and Cost Effectiveness score after the other seven scores were established)</td></tr>
<tr><td>Decision Lens Scale:
Benefits were calculated as the sum of the prior seven evaluation scores (maximum possible value of 7). That score was divided by the project cost. Value of 1 in Decision Lens was set based on the highest value in the dataset.</td><td>Data Sources: LTU and Lancaster County (project costs)</td><td>Data Gaps/ Validation: None anticipated</td></tr>
</table>

<table>
<tr><td rowspan="2"> 
Optional Community Support Bonus</td><td colspan="2">Evaluation Question: Does the project have strong community support?</td></tr>
<tr><td colspan="2">Evaluation Metric: Number of “votes”</td></tr>
<tr><td>Decision Lens Scale:
The number of “votes” for each project was counted. Value of 1 in Decision Lens was set based on the highest value in the dataset.</td><td>Data Sources: Phase 2 public engagement</td><td>Data Gaps/ Validation: None anticipated</td></tr>
</table>

Trail Project Evaluation

The LRTP goals were used as the basis for trail project evaluation. Each evaluation criterion (linked to a goal) was scored from 0 to 1, with 0 being the least favorable and 1 being the most favorable. The following sections describe the evaluation criteria scoring guidance that was provided to the Trails Subcommittee for individual scoring. Scores for the trail projects included in the 2040 LRTP were revisited by the Trails Subcommittee and adjusted to account for current conditions.



Maintenance

Evaluation Question: Will the project improve the condition an existing trail?

Assessment	Score
Project will reconstruct or replace a trail segment that is in poor condition.	1
Project will reconstruct or replace a trail segment that is in fair or better condition.	0.67
Project will have no impact on the condition of the existing trail.	0.33
Project will result in higher demands on a trail segment that is in poor condition.	0



Mobility and System Reliability

Evaluation Question: Will the project complete a gap in the trail system?

Assessment	Score
Project will fully complete a gap in the trail system.	1
Project will extend the trail system.	0.67
Project will partially complete a gap in the trail system.	0.33
Project will detract from the connectivity of the trail system.	0



Livability and Travel Choice

Evaluation Question: Will the project encourage the use of alternative transportation?

Assessment	Score
Project will serve a significant commuter travel pattern **– AND –** will improve access to a major employment area **– AND –** will improve access to transit.	1
Project will serve a significant commuter travel pattern **– OR –** will improve access to a major employment area **– OR –** will improve access to transit.	0.67
Project will serve a minor commuter travel pattern **– OR –** will improve access to a minor employment area **– OR –** will marginally improve access to transit.	0.33
Project will not encourage the use of alternatives modes of transportation.	0



Safety and Security

Evaluation Question: Will the project alleviate a known safety problem?

Assessment	Score
Project will directly address a major identified safety problem.	1
Project will improve (but not eliminate) an identified safety problem.	0.67
Project will only marginally improve safety; no safety problems are identified.	0.33
Project will have no identifiable safety benefits.	0



Economic Vitality

Evaluation Question: Will the project improve access to and/or add value to surrounding land uses?

Assessment	Score
Project will significantly improve access to a major employment base and/or commercial area **– OR –** project will support a more attractive environment that adds value to adjacent uses.	1
Project will moderately improve access to an employment base and/or commercial area **– OR –** project will moderately contribute to the value of adjacent uses.	0.67
Project will not improve access to a major employment base or commercial area nor will the project contribute to the value of adjacent uses.	0.33
Project will detract from the value of surrounding land uses.	0

	Environmental Sustainability	**Evaluation Question:** Will the project impact the natural, cultural, or built environment?
		Evaluation Metric: Presence of red-flag environmental resources within the project area

Decision Lens Scale: The number of red-flag environmental considerations within the project area was counted. Value of 1 in Decision Lens was set based on the lowest value in the dataset.	**Data Sources:** Natural, cultural, and built environmental data mapping including floodplains, wetlands, native prairie, tree mass, threatened and endangered species, parks and open space, historic sites	**Data Gaps/ Validation:** None anticipated

Assessment	Score
No red-flag environmental resources have been identified within the project buffer.	1
Some environmental resources exist within the project buffer, but avoidance is expected.	0.67
Some environmental resources exist within the project buffer, but mitigation is expected.	0.33
Red-flag environmental resources may be negatively impacted within the project buffer.	0

<table>
<tr><td rowspan="2"> 
Transportation Equity</td><td colspan="2">Evaluation Question: Is the project located in an area with a high number of underserved and overburdened communities?</td></tr>
<tr><td colspan="2">Evaluation Metric: Underserved and overburdened communities (NOTE: Felsburg Holt & Ullevig (FHU) calculated the Transportation Equity score using a GIS spatial overlay)</td></tr>
<tr><td>Decision Lens Scale:
Equity index category
▪ Low = 0
▪ Low to moderate = 0.33
▪ Moderate to high = 0.67
▪ High = 1.0
If the project passes through areas with different equity index categories, the score defaults to the higher score.
All trail projects are assumed to be beneficial (i.e., no adverse impacts).</td><td>Data Sources: Equity index which includes older adults, people with disabilities, people with limited English proficiency, single parent households, people with low income, minority populations, and people without access to a vehicle).</td><td>Data Gaps: None</td></tr>
</table>



Funding and Cost Effectiveness

Evaluation Question: How does the cost of the project compare to the benefits?

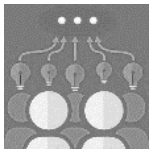
Evaluation Metric: Benefit/Cost Ratio (NOTE: FHU calculated the Funding and Cost Effectiveness score after the other seven scores were established)

Decision Lens Scale:

Benefits were calculated as the sum of the prior seven evaluation scores (maximum possible value of 7). That score was divided by the project cost. Value of 1 in Decision Lens was set based on the highest value in the dataset.

Data Sources: Project Costs from Lincoln Parks & Recreation Department

Data Gaps: None anticipated.



Optional Community Support Bonus

Evaluation Question: Does the project have strong community support?

Evaluation Metric: Number of "votes"

Decision Lens Scale:

The number of "votes" for each project was counted. Value of 1 in Decision Lens was set based on the highest value in the dataset.

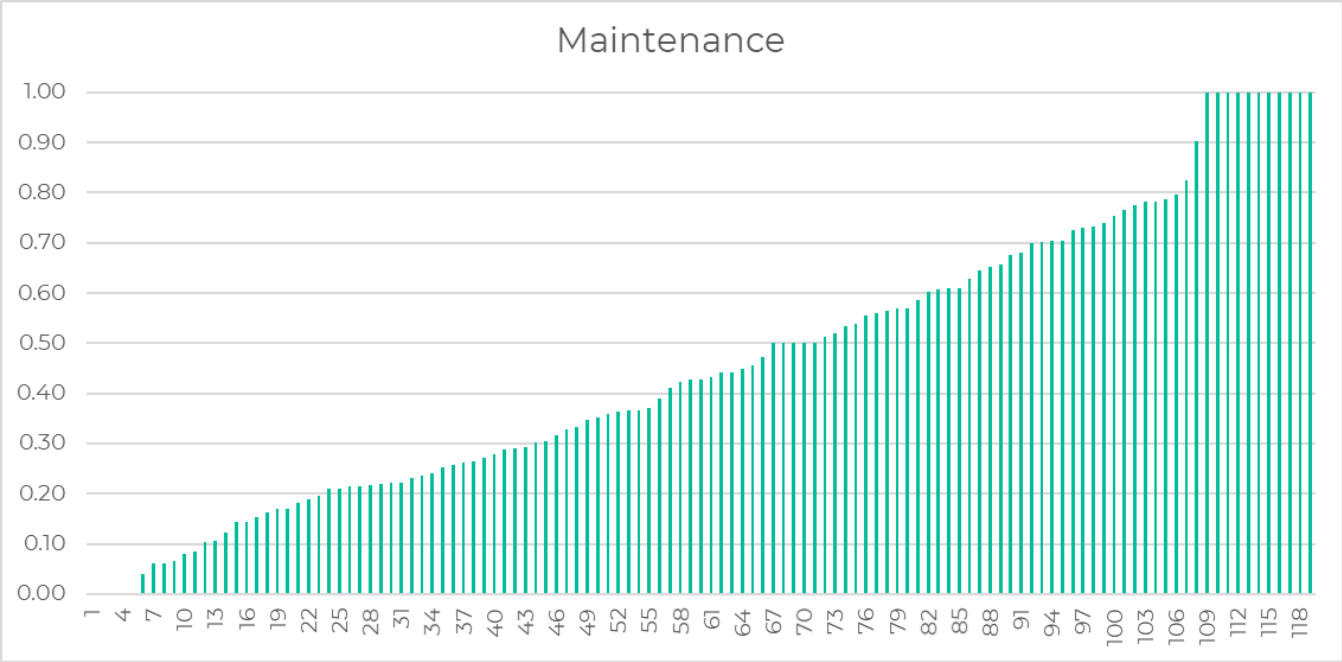
Data Sources: Phase 2 public engagement

Data Gaps: None anticipated

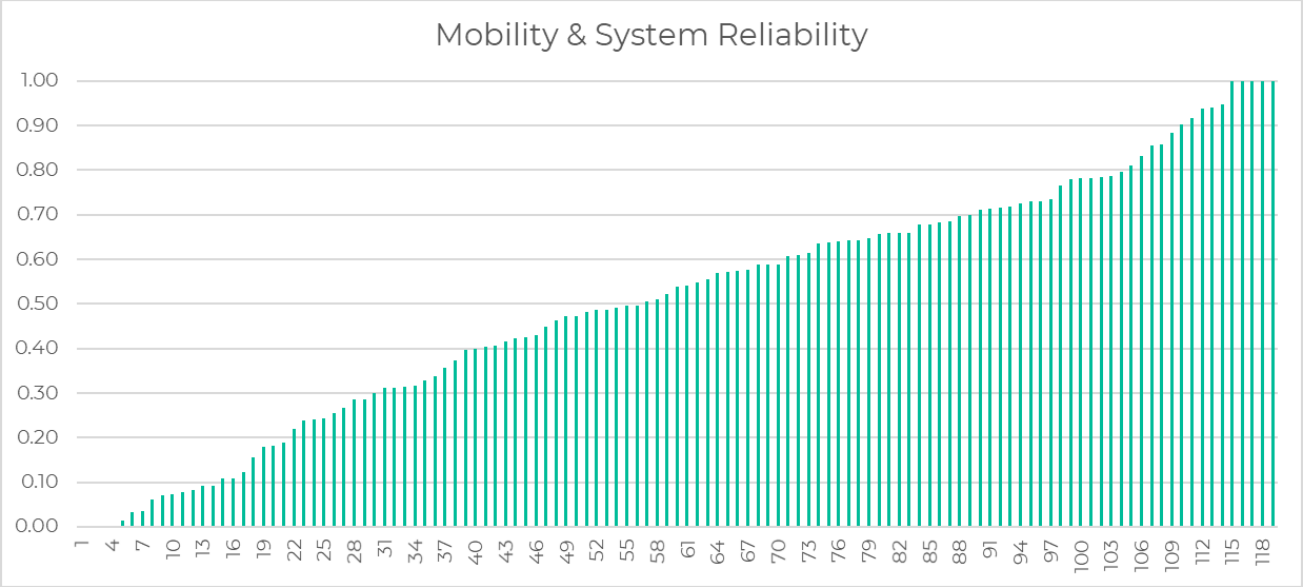
Project Scoring Distribution and Adjustments

In March 2021, the preliminary urban and rural roadway project scores were presented and discussed with the Roadway Subcommittee. The distribution of scores for each evaluation criteria were discussed, and some adjustments were made to account for anomalies in the project scoring. The following sections document the preliminary scores (as of March 2021) and the associated adjustments that were made (which are reflected in the final scoring results documented in **Appendix G**).

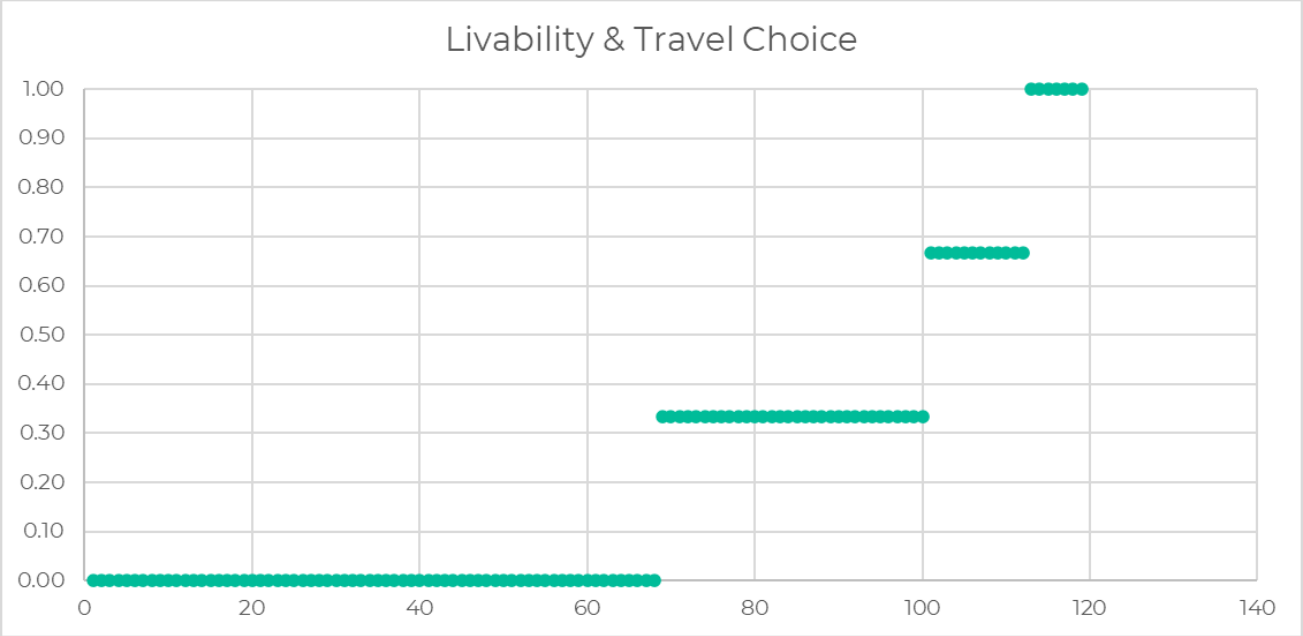
Urban Roadway Projects (Lincoln)



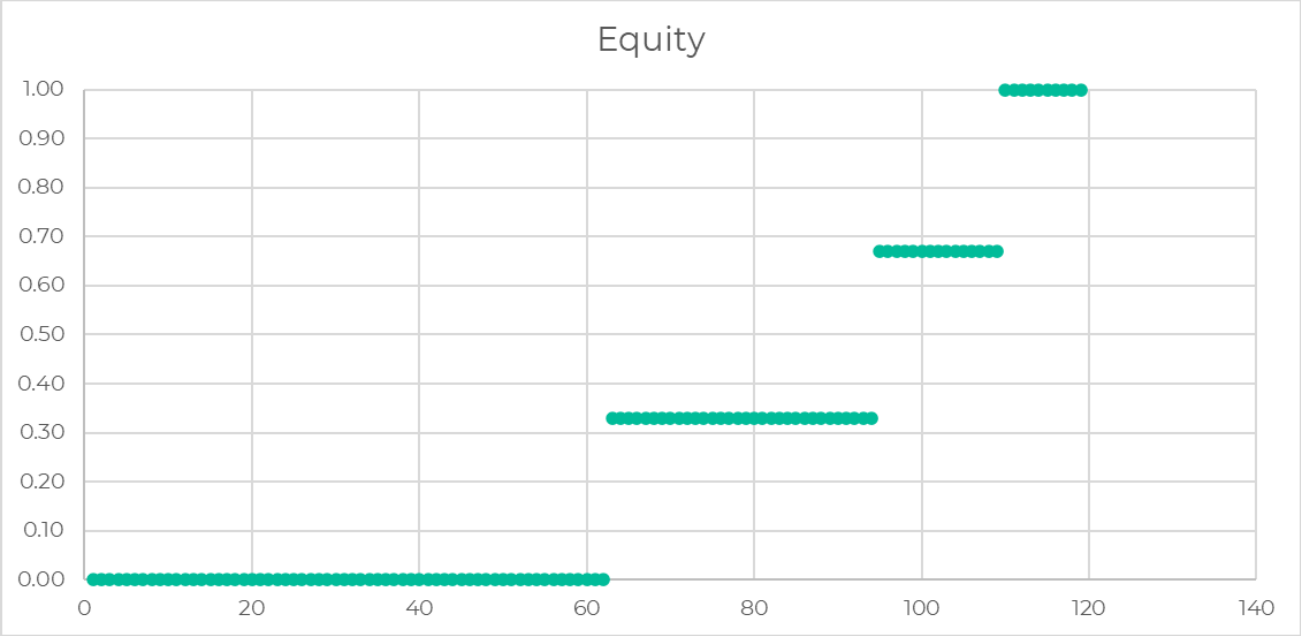
- Projects with poor pavement (or bridge) condition get a higher score
- Gravel roads automatically get a maximum score
- Good distribution of scores – no adjustment



- Based on 2019, 2035, and 2050 volume to capacity ratios (from model)
- Gravel roads – used capacity of 400 vpd
- Mobility scores were scaled based on 5th highest score, where distribution of scores started to smooth; top 5 projects receive a score of 1.0



- Based on the number of modes that would benefit from the project
- Over half of the roadway projects would not benefit another mode
- No adjustment

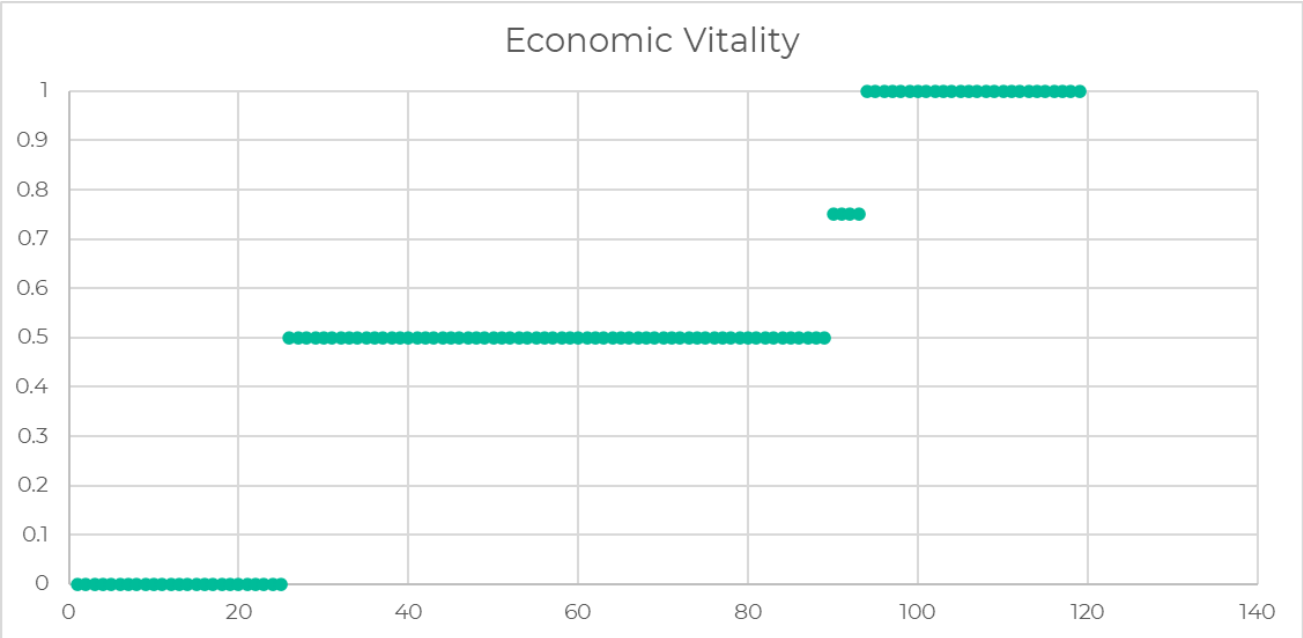


- Based on four levels of underserved and overburdened communities in the study area; projects with the highest concentrations of underserved and overburdened communities get the highest score
- Over half of the roadway projects are located in areas with low concentrations of underserved and overburdened communities.
- No adjustment

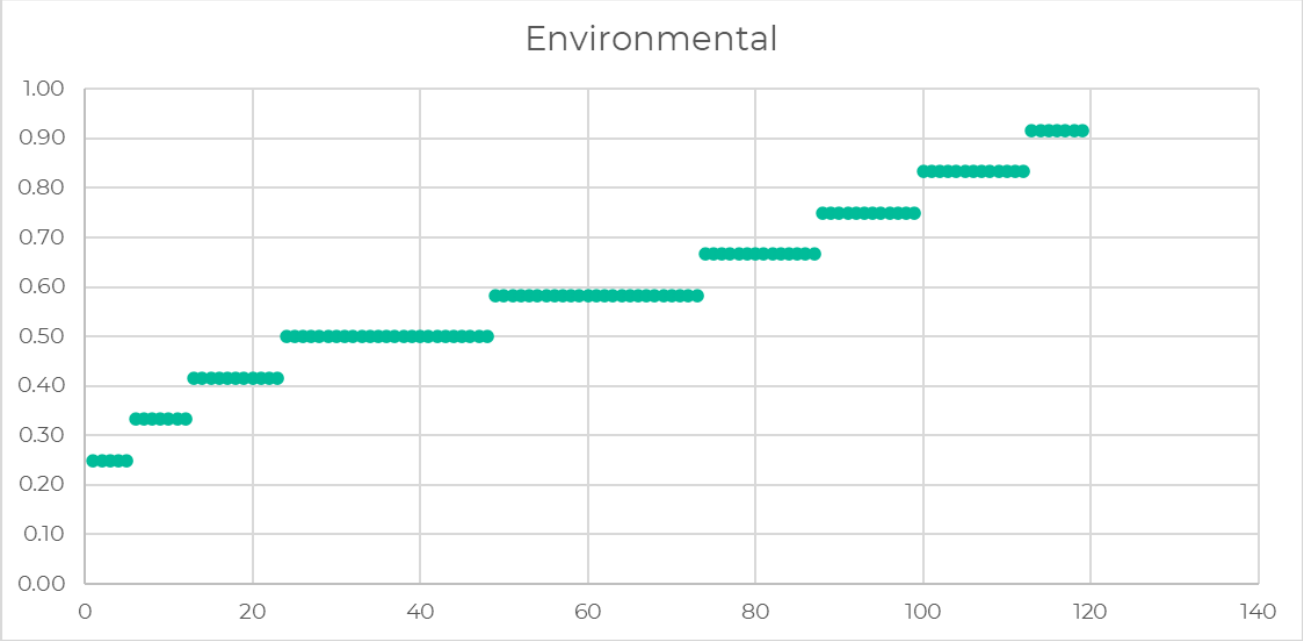


- Based on crash rate (crashes per million vehicles); fatal & injury crashes; bicycle and pedestrian crashes
- Applied a minimum score of 0.1 – although these projects don't have a crash history, they would still offer safety improvements

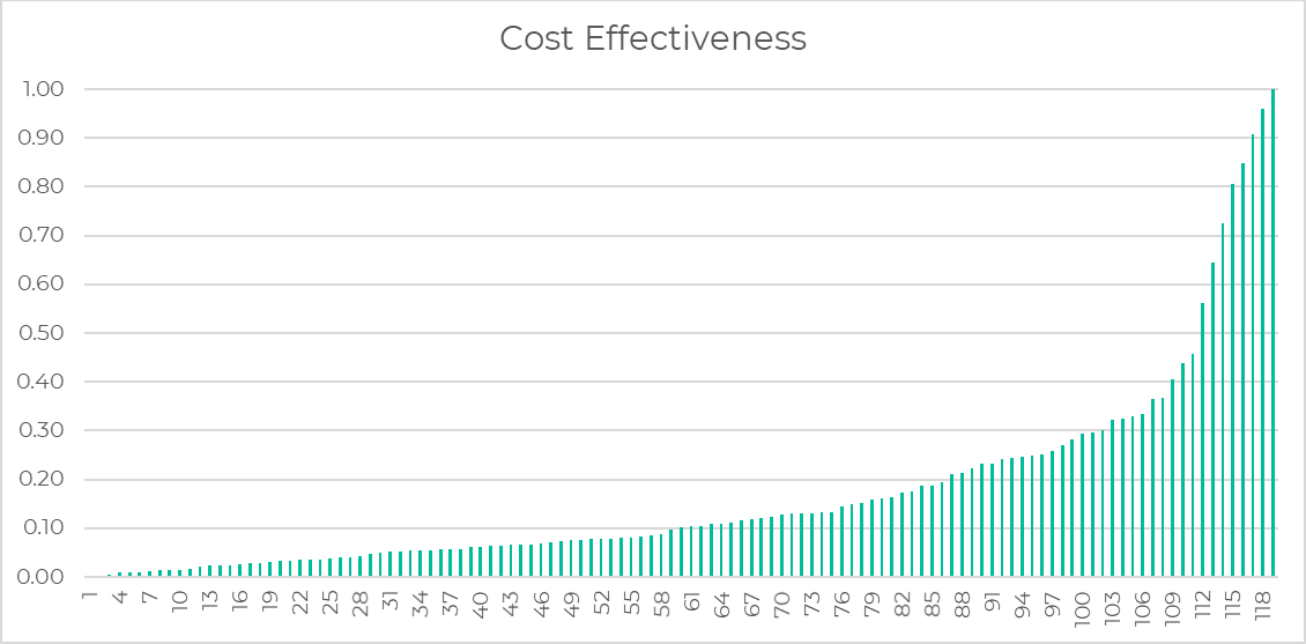
- Safety scores were scaled based on 3rd highest score, where distribution of scores started to smooth; top 3 projects receive a score of 1.0



- Based on proximity to commercial/industrial land use AND NHS/primary truck route/secondary truck route
- No adjustment



- Based on number of red flag environmental resources in project area; few environmental resources in the area results in a higher score
- No projects score a 1.0 – they all have at least one environmental resource within the project buffer.
- No adjustment



- Based on sum of the score for the other 7 categories divided by the project score
- Only the Top 8 projects get a score greater than 0.5:
- No adjustment

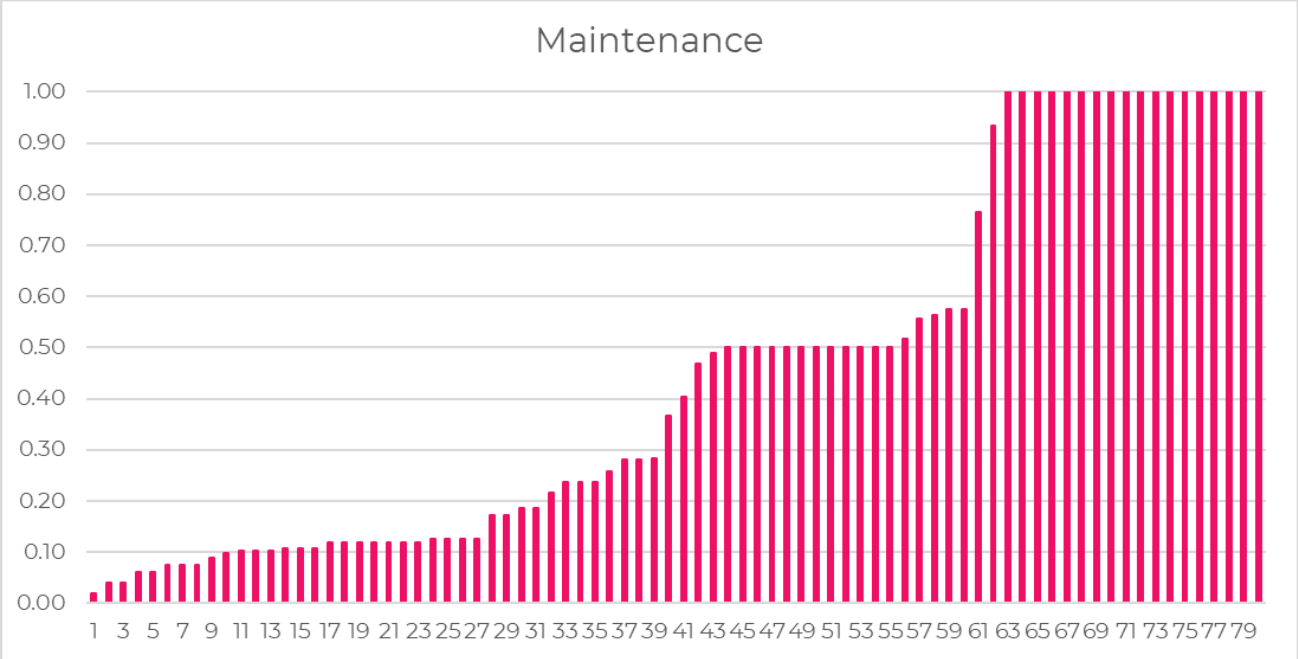
Other Scoring Adjustments

The benefits of new roadways like South Beltway and East Beltway are underrepresented by scoring process

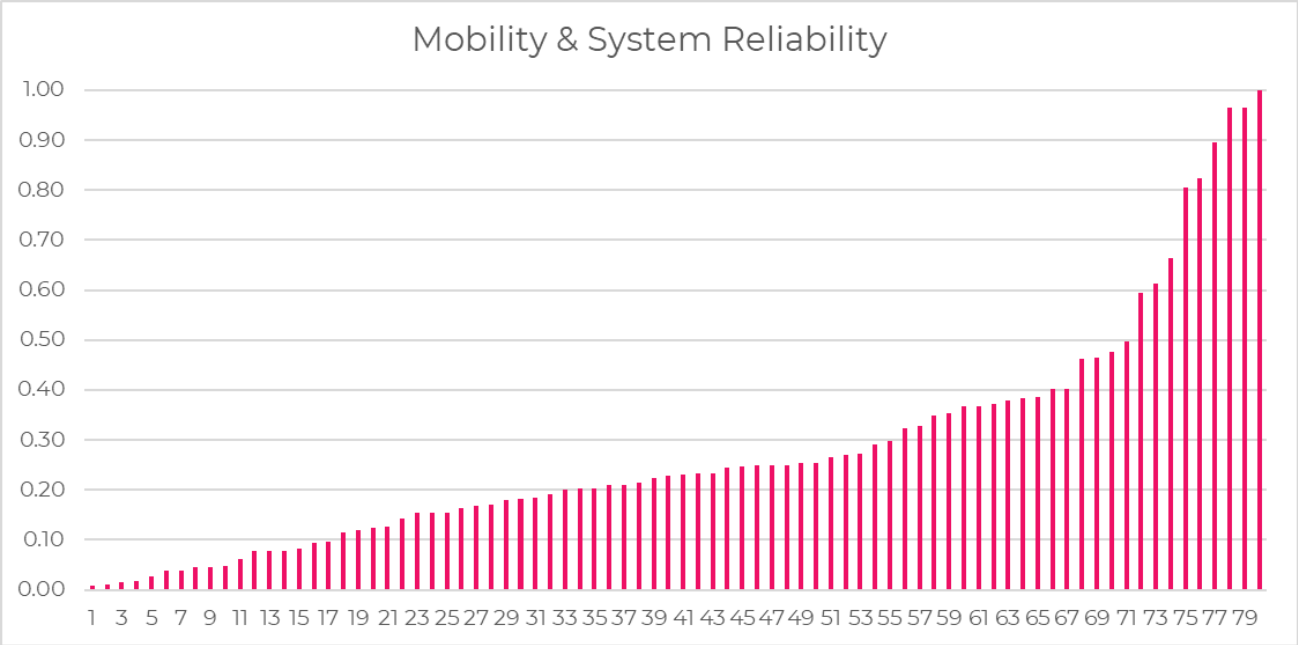
- Mobility
- Safety
- Economic

Economic – added "Primary Truck Route" designation to both corridors; giving both the highest economic score (1.0)
Used N & S 84th Street as a surrogate for the mobility and safety scores for East Beltway
Used Hwy 2 as a surrogate for the mobility and safety scores for South Beltway

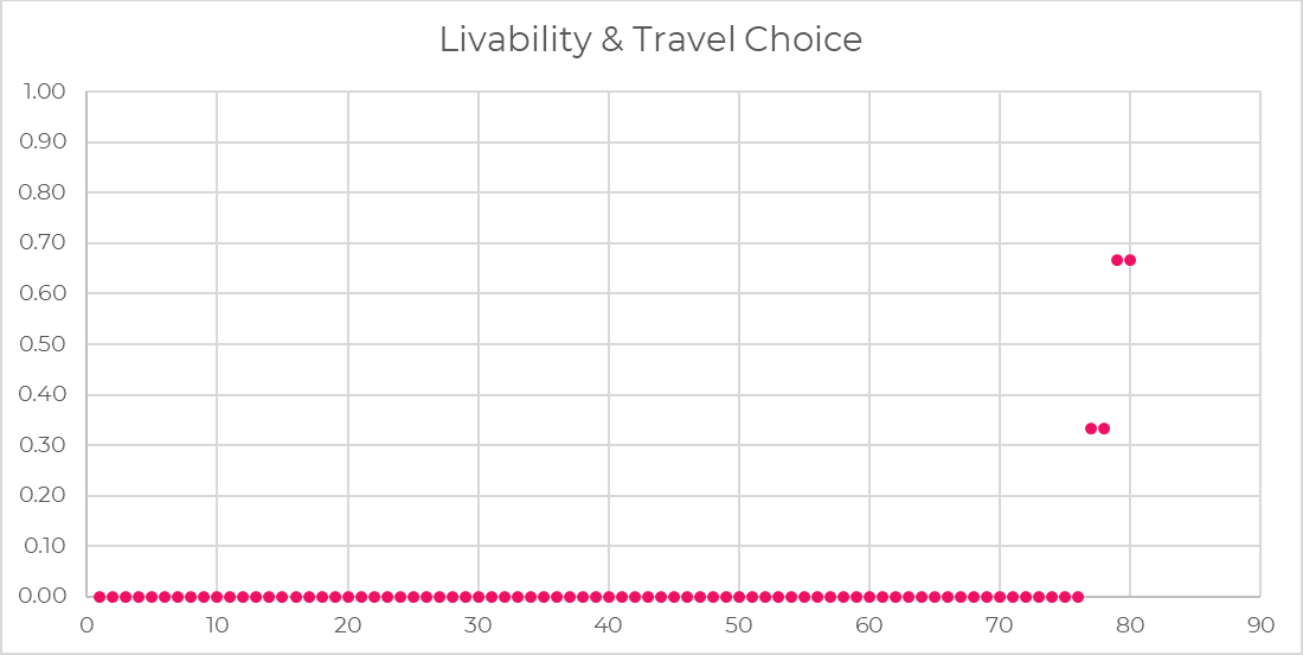
Rural Road and Bridge Projects (Lancaster County)



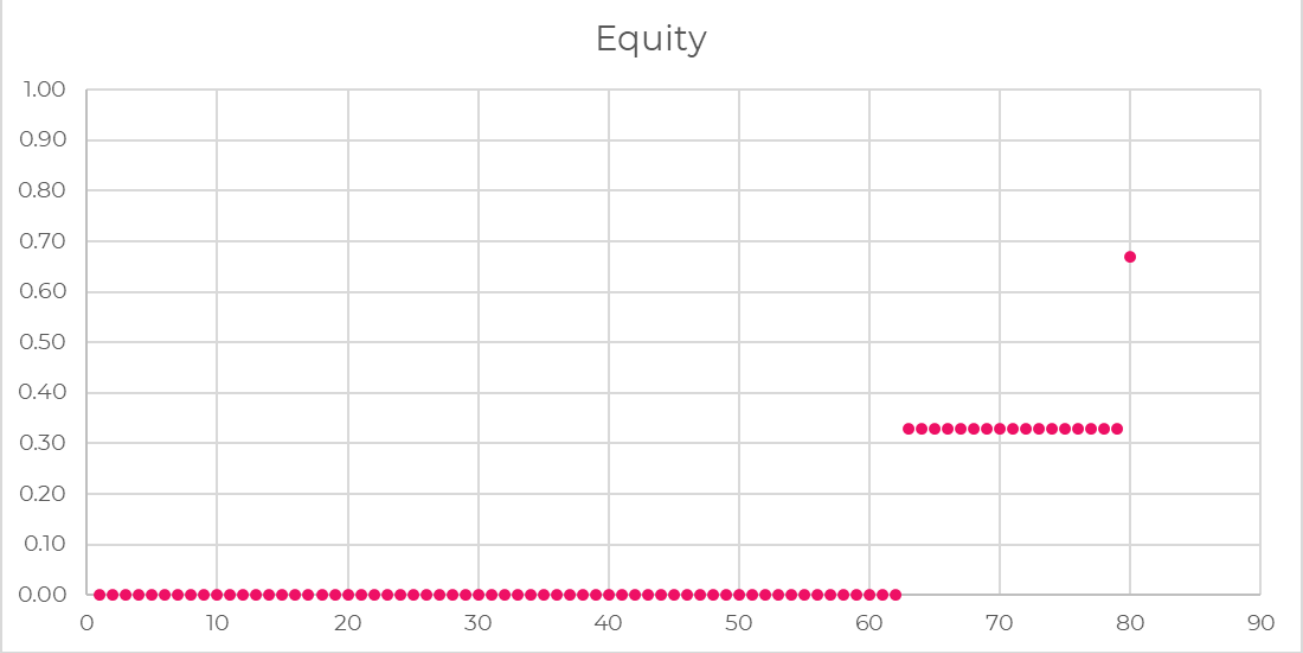
- Projects with poor pavement (or bridge) condition get a higher score
- Gravel roads automatically get a maximum score
- No adjustment



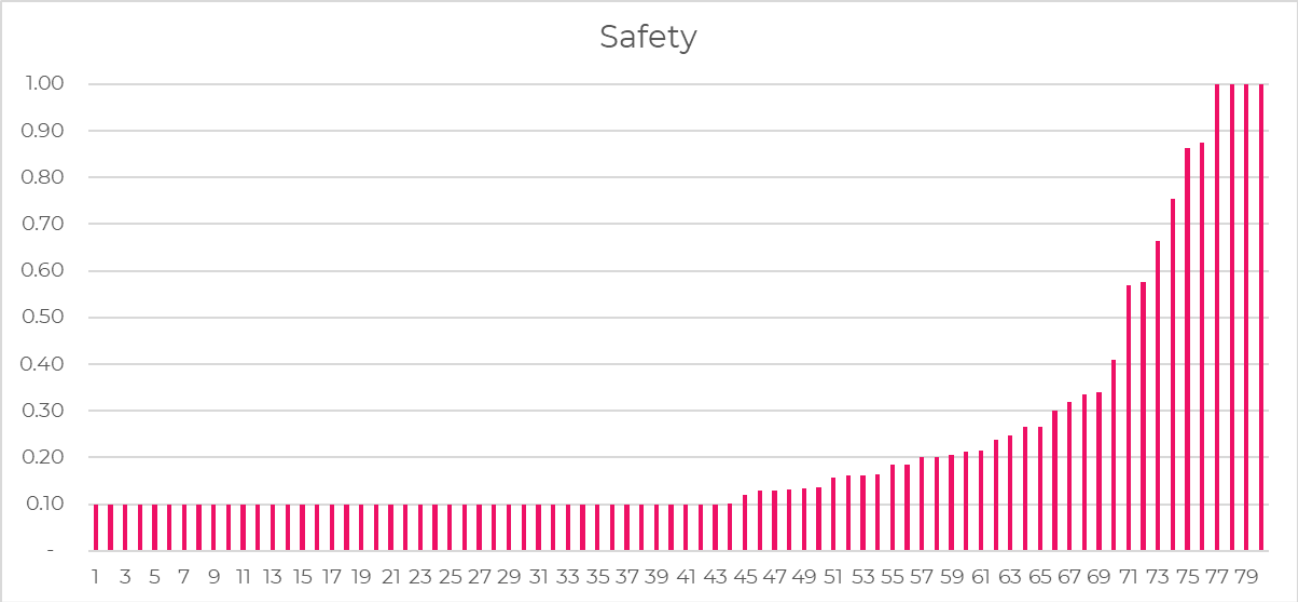
- Based on 2019, 2035, and 2050 volume to capacity ratios (from model)
- Gravel roads – used capacity of 400 vpd
- Roads outside of model; assumed 1% annual increase in daily traffic
- No adjustment



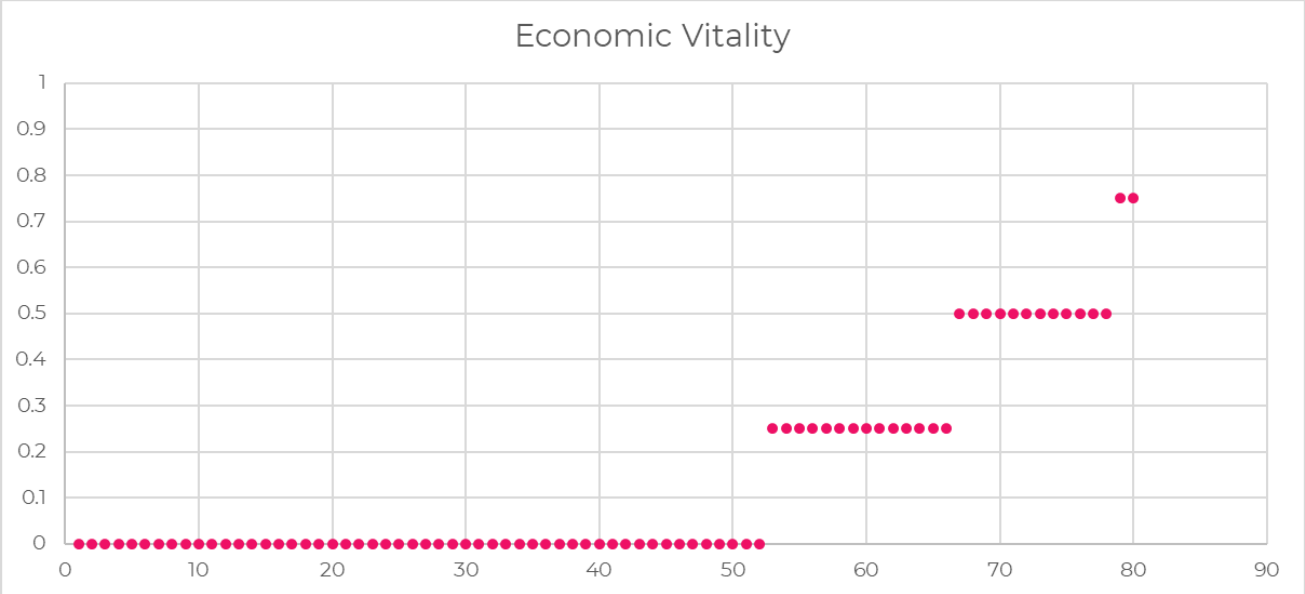
- Based on the number of modes that would benefit from the project
- Only four projects improve multiple modes; none improve transit.
- No adjustment



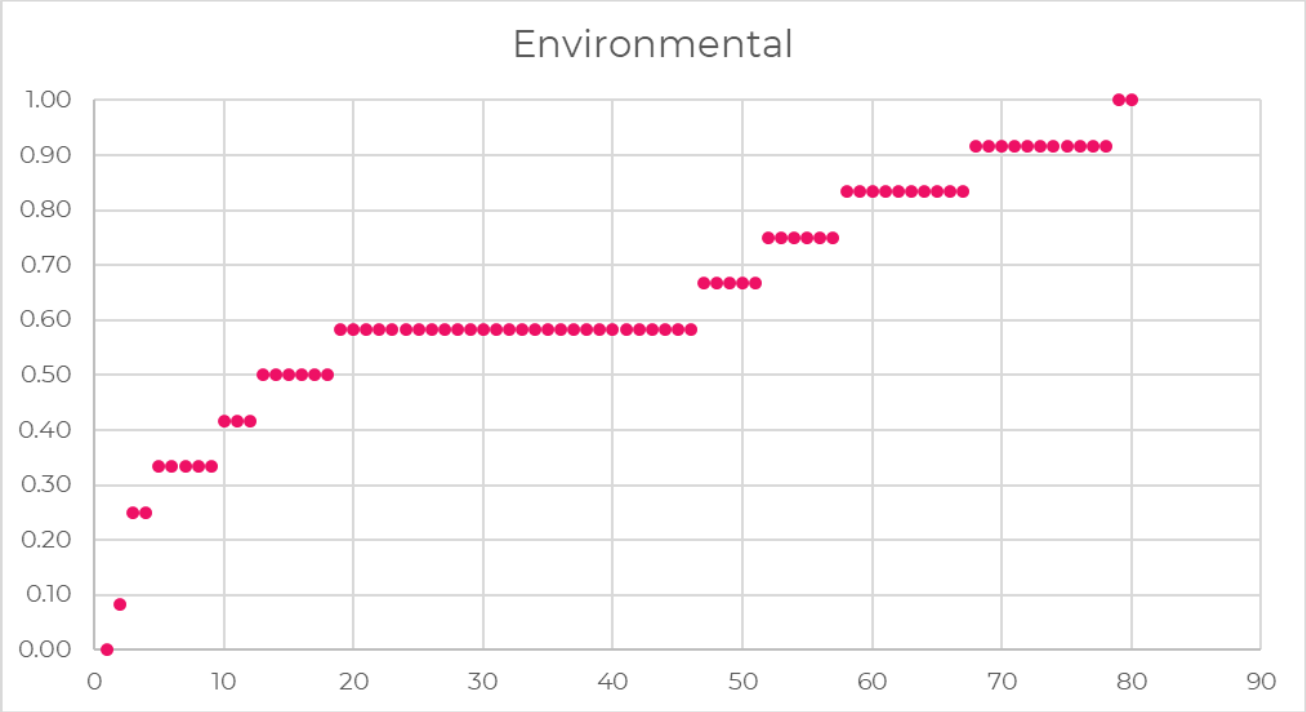
- Based on four levels of underserved and overburdened communities in the study area; projects with the highest concentrations of underserved and overburdened communities get the highest score
- More than ¾ of the projects are in areas with low concentrations of underserved and overburdened communities; none are in areas with high concentrations.
- No adjustment



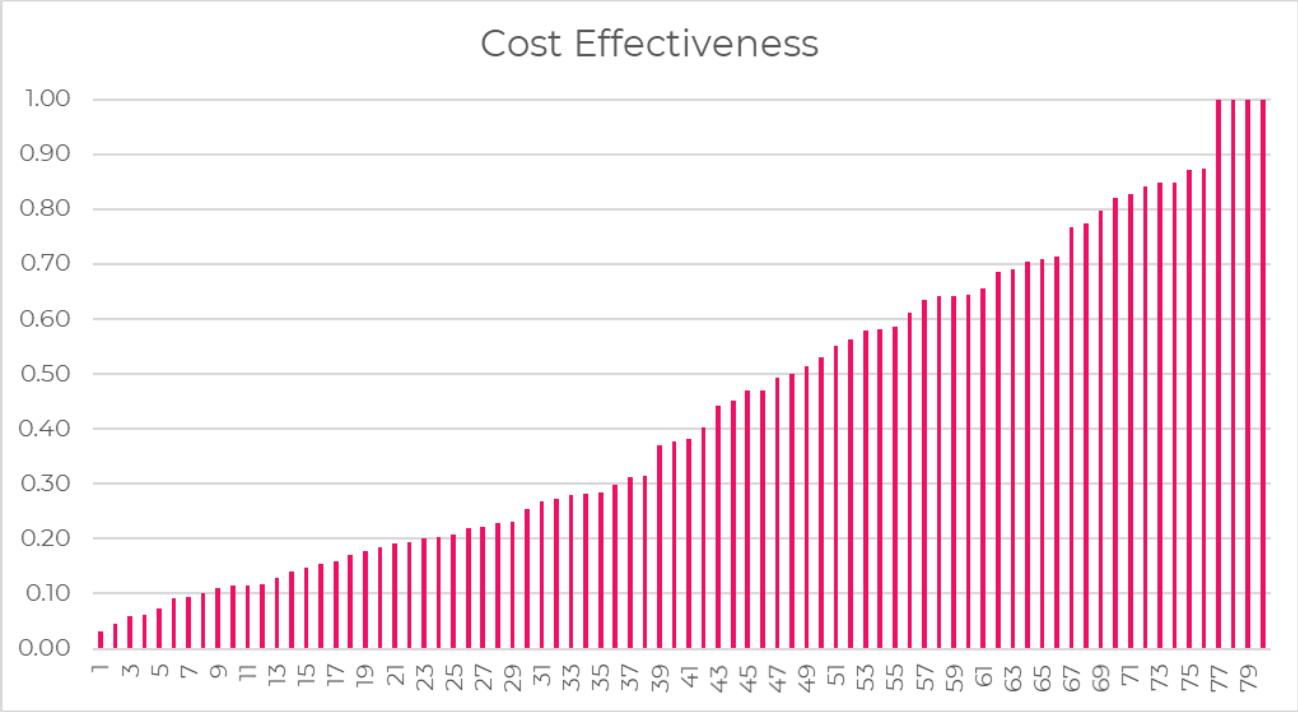
- Based on crash rate (crashes per million vehicles); fatal & injury crashes; bicycle and pedestrian crashes
- Applied a minimum score of 0.1 – although these projects don't have a crash history, they would still offer safety improvements
- Safety scores were scaled based on 4th highest score, where distribution of scores started to smooth; top 4 projects receive a score of 1.0



- Based on proximity to commercial/industrial land use AND NHS/primary truck route/secondary truck route
- No projects score a 1.00; highest score is 0.75.
- No adjustment



- Based on number of red flag environmental resources in project area; few environmental resources in the area results in a higher score
- No adjustment



- Based on sum of the score for the other 7 categories divided by the project score
- Funding scores were scaled based on 4th highest score, where distribution of scores started to smooth; top 4 projects receive a score of 1.0



APPENDIX G

Roadway and Trail Project Scoring Results

Table G-1. Lancaster County Rural Road & Bridge Projects - Project ID Order

							22.1	12.1	5.8	6.7	13.8	8.9	12.2	13.4	5.0		
ID	**Street Name**	**Limits**	**Description**	**Project Length (Miles)**	**Project Cost (2021$)**	**Status**	**Maintenance Score**	**Mobility Score**	**Livability Score**	**Equity Score**	**Safety Score**	**Economic Score**	**Enviro Score**	**Funding Score**	**Public Input Score**	**Total Score**	**Rank**
91	S 68th Street	Hickman to Roca Road	Two Lane Widening with Shoulc	2.0	$2,000,000	Fiscally Constrained	0.04	0.42	0.33	0.00	0.95	0.5	0.67	0.43	1.00	**44.27**	**21**
92	Saltillo Road	S 27th Street to S 68th Street	Two Lane Widening	2.8	$7,500,000	Committed											
93	W A Street	SW 84th Street to SW 52nd Street	Programmed Paving	2.0	$2,600,000	Fiscally Constrained	1.00	0.83	0.00	0.00	0.21	0	0.58	0.30	0.63	**49.26**	**10**
94	Havelock Avenue	Stevens Creek to N 112th Street	Potential Paving	1.4	$1,820,000	Fiscally Constrained	1.00	0.63	0.00	0.00	0.20	0	0.58	0.39	0.47	**47.24**	**12**
95	NW 27th Street	Hwy-34 to W Waverly Road	Potential Paving	3.5	$4,550,000	Fiscally Constrained	1.00	0.39	0.67	0.00	0.35	0.5	0.50	0.22	0.53	**51.64**	**9**
96	S 68th Street	Firth Road to Stagecoach Road	Two Lane Widening with Shoulc	5.0	$5,400,000	Illustrative Plan	0.22	0.24	0.33	0.00	1.00	0	0.58	0.13	0.25	**33.47**	**39**
97	N 14th Street	Waverly Road to Raymond Road	Two Lane Widening	2.0	$1,000,000	Illustrative Plan	0.13	0.23	0.00	0.00	1.00	0	0.33	0.50	0.25	**31.37**	**44**
98	S 98th Street	Old Cheney Road to US-34	Programmed Paving	4.0	$2,600,000	Committed											
99	N 14th Street	Arbor Road to Waverly Road	Two Lane Widening	2.5	$1,250,000	Illustrative Plan	0.57	0.21	0.00	0.00	0.45	0	0.25	0.35	0.25	**30.42**	**46**
100	SW 14th Street	NE-33 to W Bennet Road	Programmed Paving	2.0	$1,300,000	Fiscally Constrained	1.00	0.85	0.00	0.00	0.30	0.5	0.58	0.73	0.13	**58.58**	**3**
101	Fletcher Avenue	N 84th Street to N 148th Street	Programmed Paving	4.4	$5,000,000	Fiscally Constrained	1.00	0.93	0.00	0.00	0.17	0.75	0.58	0.20	0.34	**53.92**	**8**
102	N 98th Street	Holdrege Street to US-6	Potential Paving	4.0	$7,700,000	Fiscally Constrained	1.00	0.36	0.00	0.00	0.22	0.5	0.33	0.09	0.66	**42.57**	**24**
103	W Van Dorn Street	SW 112th Street to SW 84th Street	Programmed Paving	2.0	$1,300,000	Fiscally Constrained	1.00	1.00	0.00	0.00	0.37	0	0.58	0.66	0.19	**56.21**	**4**
104	S 120th Street	Bennet Road North 0.5 Miles	Potential Paving	0.5	$650,000	Fiscally Constrained	1.00	0.93	0.00	0.33	0.59	0	0.92	1.00	0.13	**68.96**	**1**
105	Arbor Road	N 27th Street to US-77	Potential Paving	2.0	$4,400,000	Fiscally Constrained	1.00	0.90	0.67	0.67	0.11	0.5	0.08	0.26	0.59	**54.82**	**5**
107	W Van Dorn Street	SW 140th Street to SW 112th Street	Potential Paving	2.0	$1,300,000	Fiscally Constrained	1.00	1.00	0.00	0.00	0.11	0	0.75	0.64	0.22	**54.52**	**6**
108***	S 1st Street	Old Cheney Road to Pioneers Boulevard	Programmed Paving	1.0	$1,000,000	Illustrative Plan	1.00	0.25	0.00	0.33	0.10	0	0.42	0.61	0.69	**45.49**	**16**
109	W Waverly Road	NW 112th Street to NE-79	Potential Paving	4.0	$5,200,000	Illustrative Plan	1.00	0.21	0.00	0.00	0.24	0	0.58	0.11	0.09	**37.09**	**32**
110	W Waverly Road	NE-79 to N 14th Street	Potential Paving	5.0	$6,500,000	Illustrative Plan	1.00	0.37	0.00	0.00	0.43	0	0.33	0.10	0.09	**38.32**	**29**
111	N 1st Street	Alvo Road to McKelvie Road	Potential Paving	1.0	$1,300,000	Fiscally Constrained	1.00	0.31	0.00	0.33	0.24	0	0.50	0.54	0.19	**45.61**	**15**
112	N 27th Street	Arbor Road to Waverly Road	Potential Paving	2.5	$3,250,000	Illustrative Plan	1.00	0.01	0.00	0.00	0.10	0	0.00	0.10	0.16	**25.75**	**63**
114	W Adams Street	NW 84th Street to NW 56th Street	Potential Paving	2.0	$2,600,000	Fiscally Constrained	1.00	0.48	0.00	0.00	0.39	0	0.58	0.28	0.22	**45.17**	**20**
115	Van Dorn Street	S 120th Street to S 148th Street	Potential Paving	2.0	$2,600,000	Fiscally Constrained	1.00	0.49	0.00	0.33	0.15	0	0.50	0.28	0.19	**43.17**	**22**
116	Panama Road	US-77 to S 54th Street	Potential Paving	3.0	$3,900,000	Illustrative Plan	1.00	0.39	0.00	0.00	0.21	0	0.58	0.16	0.16	**39.77**	**27**
117	McKelvie Road	NW 27th Street to N 14th Street	Potential Paving	3.0	$3,900,000	Illustrative Plan	1.00	0.04	0.00	0.33	0.11	0	0.25	0.13	0.13	**31.76**	**43**
118	Bluff Road	I-80 to N 190th Street	Potential Paving	1.1	$1,430,000	Illustrative Plan	1.00	0.04	0.00	0.00	0.10	0	0.67	0.37	0.03	**37.19**	**31**
156	NW 56th Street	W O to W Holdrege Street	Potential Paving	1.0	$1,200,000	Fiscally Constrained	1.00	0.89	0.00	0.33	0.28	0.5	0.75	0.92	0.50	**67.36**	**2**
157	S 148th Street	Yankee Hill Road to O Street	Two Lane Widening	6.0	$4,900,000	Illustrative Plan	0.09	0.38	0.00	0.33	1.00	0.25	0.42	0.15	0.34	**33.55**	**38**
158	N 148th Street	O Street to McKelvie Road	Two Lane Widening	6.0	$4,018,000	Illustrative Plan	0.12	0.40	0.00	0.00	1.00	0.75	0.58	0.21	0.22	**38.94**	**28**
159	S 148th Street	Yankee Hill Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.08	0.19	0.00	0.33	0.10	0.25	0.92	0.84	0.22	**33.31**	**40**
160	S 148th Street	Pine Lake Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.08	0.21	0.00	0.33	0.10	0.25	0.75	0.77	0.19	**30.39**	**47**
161	S 148th Street	Old Cheney Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.08	0.24	0.00	0.33	0.17	0.25	0.92	0.89	0.31	**36.08**	**33**
162	S 148th Street	Pioneers Boulevard	Intersection improvements	0.0	$650,000	Illustrative Plan	0.10	0.28	0.00	0.33	0.10	0.25	0.83	0.85	0.19	**33.97**	**37**
163	S 148th Street	Van Dorn Street	Intersection improvements	0.0	$650,000	Illustrative Plan	0.10	0.19	0.00	0.33	0.10	0.25	0.92	0.85	0.25	**34.18**	**36**
164	S 148th Street	A Street	Intersection improvements	0.0	$650,000	Illustrative Plan	0.10	0.25	0.00	0.00	0.10	0.25	0.83	0.69	0.13	**29.02**	**55**
165	N 148th Street	Holdrege Street	Intersection improvements	0.0	$650,000	Committed											
166	N 148th Street	Adams Street	Intersection improvements	0.0	$650,000	Illustrative Plan	0.12	0.19	0.00	0.00	0.10	0.25	0.92	0.71	0.06	**29.48**	**53**
167	N 148th Street	Havelock Avenue	Intersection improvements	0.0	$650,000	Illustrative Plan	0.12	0.26	0.00	0.00	0.10	0.25	1.00	0.78	0.16	**32.78**	**41**
168	N 148th Street	Fletcher Avenue	Intersection improvements	0.0	$650,000	Illustrative Plan	0.12	0.18	0.00	0.00	0.10	0.25	0.83	0.67	0.13	**28.11**	**58**
169	N 148th Street	Prairie Home	Intersection improvements	0.0	$1,300,000	Illustrative Plan	0.12	0.40	0.00	0.00	0.10	0.75	0.83	0.50	0.00	**32.37**	**42**
170	N 148th Street	Alvo Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.12	0.22	0.00	0.00	0.10	0.25	0.92	0.72	0.03	**29.92**	**49**
171	N 162nd Street	US-6 to Ashland Road	Potential Paving	7.9	$5,530,000	Fiscally Constrained	1.00	0.62	0.00	0.00	0.30	0.25	0.58	0.15	0.09	**45.43**	**18**
173	S 68th Street	Pella Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.19	0.16	0.00	0.00	0.10	0	0.92	0.61	0.06	**27.12**	**61**
174	S 68th Street	Princeton Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.24	0.16	0.00	0.00	0.23	0	0.83	0.66	0.03	**29.50**	**52**
175	S 68th Street	Olive Creek Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.19	0.16	0.00	0.00	0.29	0	0.92	0.70	0.03	**30.76**	**45**
176	S 68th Street	Panama Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.24	0.26	0.00	0.00	0.15	0	0.83	0.67	0.06	**30.00**	**48**
177	S 68th Street	Stagecoach Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.24	0.26	0.00	0.00	0.10	0	0.83	0.65	0.13	**29.27**	**54**
178	S 68th Street	Martel Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.04	0.42	0.00	0.00	0.10	0.5	0.92	0.89	0.22	**35.95**	**34**
179	S 68th Street	Wittstruck Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.28	0.20	0.00	0.00	0.10	0	0.83	0.64	0.19	**29.66**	**50**
180	S 68th Street	Bennett Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.28	0.22	0.00	0.00	0.10	0	0.58	0.53	0.16	**25.37**	**65**
181	Saltillo Road	S 68th Street to S 120th Street	Two Lane Widening	3.6	$2,450,000	Fiscally Constrained	0.56	0.13	0.00	0.00	0.82	0.5	0.58	0.31	0.91	**45.48**	**17**
182	N 14th Street	Arbor Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.56	0.30	0.00	0.33	0.13	0	0.58	0.86	0.28	**40.06**	**25**
183	N 14th Street	Bluff Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.17	0.13	0.00	0.00	0.10	0	0.58	0.44	0.06	**20.14**	**76**

Table G-1. Lancaster County Rural Road & Bridge Projects - Project ID Order

							22.1	12.1	5.8	6.7	13.8	8.9	12.2	13.4	5.0		
ID	Street Name	Limits	Description	Project Length (Miles)	Project Cost (2021$)	Status	Maintenance Score	Mobility Score	Livability Score	Equity Score	Safety Score	Economic Score	Enviro Score	Funding Score	Public Input Score	Total Score	Rank
184	N 14th Street	Waverly Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.17	0.12	0.00	0.00	0.22	0	0.67	0.53	0.06	**23.81**	**74**
185	N 14th Street	Mill Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.13	0.24	0.00	0.00	0.11	0	0.58	0.48	0.09	**21.16**	**75**
186	N 14th Street	Raymond Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.13	0.26	0.00	0.00	0.10	0	0.75	0.56	0.16	**24.68**	**72**
187	N 14th Street	Branched Oak Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.11	0.26	0.00	0.00	0.10	0	0.83	0.58	0.06	**25.17**	**69**
188	N 14th Street	Davey Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.11	0.08	0.00	0.00	0.14	0	0.92	0.56	0.03	**24.24**	**73**
189	N 14th Street	Rock Creek Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.11	0.08	0.00	0.00	0.10	0	1.00	0.58	0.09	**25.18**	**68**
190	N 14th Street	Agnew Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.06	0.08	0.00	0.00	0.43	0	0.75	0.60	0.03	**25.68**	**64**
191	N 14th Street	Raymond Road to Agnew Road	Two Lane Widening	4.0	$2,000,000	Illustrative Plan	0.13	0.17	0.00	0.00	1.00	0	0.33	0.24	0.09	**26.39**	**62**
192	N 14th Street	Agnew Road to Ashland Rd	Two Lane Widening	2.0	$1,000,000	Illustrative Plan	0.06	0.07	0.00	0.00	0.12	0	0.75	0.29	0.09	**17.40**	**77**
195	Arbor Road	Bridge F-201 near N 27th Street	Bridge Replacement	0.0	$1,530,000	Illustrative Plan	0.50	0.28	0.00	0.00	0.10	0	0.33	0.23	0.41	**25.04**	**70**
196	N 112th Street	Bridge J-126 near Holdrege Street	Bridge Replacement	0.0	$1,571,000	Illustrative Plan	0.50	0.34	0.00	0.00	0.10	0	0.58	0.28	0.25	**28.67**	**56**
197	Van Dorn Street	Bridge K-37 near S 98th Street	Replace CBC	0.0	$652,000	Illustrative Plan	0.50	0.10	0.00	0.00	0.10	0.5	0.58	0.80	0.47	**38.22**	**30**
198	S 56th Street	Bridge P-92 near Rokeby Road	Replace with CBC	0.0	$1,460,000	Illustrative Plan	0.50	0.38	0.00	0.00	0.10	0	0.58	0.31	0.25	**29.61**	**51**
199	A Street	Bridge J-47 near S 120th Street	Replace with CCS	0.0	$739,000	Illustrative Plan	0.50	0.05	0.00	0.00	0.10	0	0.58	0.49	0.13	**27.25**	**60**
200	S 112th Street	Bridge J-135 near A Street	Replace with CBC	0.0	$612,000	Fiscally Constrained	1.00	0.15	0.00	0.00	0.10	0	0.58	0.87	0.22	**45.18**	**19**
201	S 120th Street	Bridge J-138 near A Street	Replace with CBC	0.0	$612,000	Fiscally Constrained	0.50	0.01	0.00	0.00	1.00	0	0.58	1.00	0.03	**45.61**	**14**
202	Old Cheney Road	Bridge O-37 near S 1st Street	Bridge Replacement	0.0	$3,465,000	Illustrative Plan	0.50	0.52	0.00	0.33	0.10	0.25	0.50	0.19	0.63	**34.86**	**35**
203	Van Dorn Street	Bridge J-22 near S 134th Street	Bridge Replacement	0.0	$1,060,000	Illustrative Plan	0.50	0.03	0.00	0.33	0.10	0	0.50	0.40	0.25	**27.71**	**59**
204	Adams Street	Bridge K-123 near N 102nd Street	Bridge Replacement	0.0	$1,940,000	Illustrative Plan	0.50	0.17	0.00	0.00	0.10	0	0.50	0.19	0.34	**24.93**	**71**
205	Havelock Avenue	Bridge K-144 near N 98th Street	Bridge Replacement	0.0	$2,079,000	Illustrative Plan	0.50	0.08	0.00	0.00	0.10	0	0.58	0.18	0.47	**25.30**	**66**
206	SW 16th Street	Bridge O-1 near W Calvert Street	Replace CB	0.0	$168,000	Fiscally Constrained	1.00	0.05	0.00	0.00	0.10	0	0.67	1.00	0.38	**47.49**	**11**
207	SW 15th Street	Bridge O-140 near W Stockwell Street	Replace CB	0.0	$168,000	Fiscally Constrained	1.00	0.12	0.00	0.00	0.10	0	0.67	1.00	0.09	**46.98**	**13**
208	Pioneers Blvd	Bridge Q-72 near S 138th Street	Bridge Replacement	0.0	$1,188,000	Illustrative Plan	0.50	0.02	0.00	0.33	0.10	0	0.58	0.38	0.22	**28.13**	**57**
210	A Street	Bridge J-46 near S 134th Street	Bridge Replacement	0.0	$1,237,000	Illustrative Plan	0.50	0.05	0.00	0.00	0.14	0	0.58	0.30	0.09	**25.19**	**67**
211	S 46th Street	Bridge S-59 near Bennet Road	Replace CB	0.0	$925,000	Illustrative Plan	1.00	0.10	0.00	0.00	0.10	0	0.58	0.56	0.09	**39.84**	**26**
213	SW 42nd Street	W Hallam Road to W Pella Road	Potential Paving	1.0	$920,000	Fiscally Constrained	1.00	0.69	0.00	0.00	0.10	0	0.83	0.83	0.22	**54.26**	**7**
215	Pine Lake Road	S 112th Street to S 134th Street	Grading and Pavement; bridge Q-110 near S 134th St	1.5	$3,188,000	Fiscally Constrained	1.00	0.59	0.00	0.33	0.10	0	0.58	0.24	0.00	**43.15**	**23**
***Project ID 108 is shown in the illustrative plan (even though it scored high enough to be included in the FC plan) due to uncertainty of the Old Cheney configuration at the West Beltway - closure vs. overpass, and therefore the need for this project will be determined at a later date																	

Table G-2. Lancaster County Rural Road & Bridge Projects - Rank Order

							22.1	12.1	5.8	6.7	13.8	8.9	12.2	13.4	5.0		
ID	**Street Name**	**Limits**	**Description**	**Project Length (Miles)**	**Project Cost (2021$)**	**Status**	**Maintenance Score**	**Mobility Score**	**Livability Score**	**Equity Score**	**Safety Score**	**Economic Score**	**Enviro Score**	**Funding Score**	**Public Input Score**	**Total Score**	**Rank**
165	N 148th Street	Holdrege Street	Intersection improvements	0.0	$650,000	Committed											
98	S 98th Street	Old Cheney Road to US-34	Programmed Paving	4.0	$2,600,000	Committed											
92	Saltillo Road	S 27th Street to S 68th Street	Two Lane Widening	2.8	$7,500,000	Committed											
104	S 120th Street	Bennet Road North 0.5 Miles	Potential Paving	0.5	$650,000	Fiscally Constrained	1.00	0.93	0.00	0.33	0.59	0	0.92	1.00	0.13	**68.96**	**1**
156	NW 56th Street	W O to W Holdrege Street	Potential Paving	1.0	$1,200,000	Fiscally Constrained	1.00	0.89	0.00	0.33	0.28	0.5	0.75	0.92	0.50	**67.36**	**2**
100	SW 14th Street	NE-33 to W Bennet Road	Programmed Paving	2.0	$1,300,000	Fiscally Constrained	1.00	0.85	0.00	0.00	0.30	0.5	0.58	0.73	0.13	**58.58**	**3**
103	W Van Dorn Street	SW 112th Street to SW 84th Street	Programmed Paving	2.0	$1,300,000	Fiscally Constrained	1.00	1.00	0.00	0.00	0.37	0	0.58	0.66	0.19	**56.21**	**4**
105	Arbor Road	N 27th Street to US-77	Potential Paving	2.0	$4,400,000	Fiscally Constrained	1.00	0.90	0.67	0.67	0.11	0.5	0.08	0.26	0.59	**54.82**	**5**
107	W Van Dorn Street	SW 140th Street to SW 112th Street	Potential Paving	2.0	$1,300,000	Fiscally Constrained	1.00	1.00	0.00	0.00	0.11	0	0.75	0.64	0.22	**54.52**	**6**
213	SW 42nd Street	W Hallam Road to W Pella Road	Potential Paving	1.0	$920,000	Fiscally Constrained	1.00	0.69	0.00	0.00	0.10	0	0.83	0.83	0.22	**54.26**	**7**
101	Fletcher Avenue	N 84th Street to N 148th Street	Programmed Paving	4.4	$5,000,000	Fiscally Constrained	1.00	0.93	0.00	0.00	0.17	0.75	0.58	0.20	0.34	**53.92**	**8**
95	NW 27th Street	Hwy-34 to W Waverly Road	Potential Paving	3.5	$4,550,000	Fiscally Constrained	1.00	0.39	0.67	0.00	0.35	0.5	0.50	0.22	0.53	**51.64**	**9**
93	W A Street	SW 84th Street to SW 52nd Street	Programmed Paving	2.0	$2,600,000	Fiscally Constrained	1.00	0.83	0.00	0.00	0.21	0	0.58	0.30	0.63	**49.26**	**10**
206	SW 16th Street	Bridge O-1 near W Calvert Street	Replace CB	0.0	$168,000	Fiscally Constrained	1.00	0.05	0.00	0.00	0.10	0	0.67	1.00	0.38	**47.49**	**11**
94	Havelock Avenue	Stevens Creek to N 112th Street	Potential Paving	1.4	$1,820,000	Fiscally Constrained	1.00	0.63	0.00	0.00	0.20	0	0.58	0.39	0.47	**47.24**	**12**
207	SW 15th Street	Bridge O-140 near W Stockwell Street	Replace CB	0.0	$168,000	Fiscally Constrained	1.00	0.12	0.00	0.00	0.10	0	0.67	1.00	0.09	**46.98**	**13**
201	S 120th Street	Bridge J-138 near A Street	Replace with CBC	0.0	$612,000	Fiscally Constrained	0.50	0.01	0.00	0.00	1.00	0	0.58	1.00	0.03	**45.61**	**14**
111	N 1st Street	Alvo Road to McKelvie Road	Potential Paving	1.0	$1,300,000	Fiscally Constrained	1.00	0.31	0.00	0.33	0.24	0	0.50	0.54	0.19	**45.61**	**15**
181	Saltillo Road	S 68th Street to S 120th Street	Two Lane Widening	3.6	$2,450,000	Fiscally Constrained	0.56	0.13	0.00	0.00	0.82	0.5	0.58	0.31	0.91	**45.48**	**17**
171	N 162nd Street	US-6 to Ashland Road	Potential Paving	7.9	$5,530,000	Fiscally Constrained	1.00	0.62	0.00	0.00	0.30	0.25	0.58	0.15	0.09	**45.43**	**18**
200	S 112th Street	Bridge J-135 near A Street	Replace with CBC	0.0	$612,000	Fiscally Constrained	1.00	0.15	0.00	0.00	0.10	0	0.58	0.87	0.22	**45.18**	**19**
114	W Adams Street	NW 84th Street to NW 56th Street	Potential Paving	2.0	$2,600,000	Fiscally Constrained	1.00	0.48	0.00	0.00	0.39	0	0.58	0.28	0.22	**45.17**	**20**
91	S 68th Street	Hickman to Roca Road	Two Lane Widening with Shoulc	2.0	$2,000,000	Fiscally Constrained	0.04	0.42	0.33	0.00	0.95	0.5	0.67	0.43	1.00	**44.27**	**21**
115	Van Dorn Street	S 120th Street to S 148th Street	Potential Paving	2.0	$2,600,000	Fiscally Constrained	1.00	0.49	0.00	0.33	0.15	0	0.50	0.28	0.19	**43.17**	**22**
215	Pine Lake Road	S 112th Street to S 134th Street	Grading and Pavement; bridge Q-110 near S 134th St	1.5	$3,188,000	Fiscally Constrained	1.00	0.59	0.00	0.33	0.10	0	0.58	0.24	0.00	**43.15**	**23**
102	N 98th Street	Holdrege Street to US-6	Potential Paving	4.0	$7,700,000	Fiscally Constrained	1.00	0.36	0.00	0.00	0.22	0.5	0.33	0.09	0.66	**42.57**	**24**
182	N 14th Street	Arbor Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.56	0.30	0.00	0.33	0.13	0	0.58	0.86	0.28	**40.06**	**25**
211	S 46th Street	Bridge S-59 near Bennet Road	Replace CB	0.0	$925,000	Illustrative Plan	1.00	0.10	0.00	0.00	0.10	0	0.58	0.56	0.09	**39.84**	**26**
116	Panama Road	US-77 to S 54th Street	Potential Paving	3.0	$3,900,000	Illustrative Plan	1.00	0.39	0.00	0.00	0.21	0	0.58	0.16	0.16	**39.77**	**27**
158	N 148th Street	O Street to McKelvie Road	Two Lane Widening	6.0	$4,018,000	Illustrative Plan	0.12	0.40	0.00	0.00	1.00	0.75	0.58	0.21	0.22	**38.94**	**28**
110	W Waverly Road	NE-79 to N 14th Street	Potential Paving	5.0	$6,500,000	Illustrative Plan	1.00	0.37	0.00	0.00	0.43	0	0.33	0.10	0.09	**38.32**	**29**
197	Van Dorn Street	Bridge K-37 near S 98th Street	Replace CBC	0.0	$652,000	Illustrative Plan	0.50	0.10	0.00	0.00	0.10	0.5	0.58	0.80	0.47	**38.22**	**30**
118	Bluff Road	I-80 to N 190th Street	Potential Paving	1.1	$1,430,000	Illustrative Plan	1.00	0.04	0.00	0.00	0.10	0	0.67	0.37	0.03	**37.19**	**31**
109	W Waverly Road	NW 112th Street to NE-79	Potential Paving	4.0	$5,200,000	Illustrative Plan	1.00	0.21	0.00	0.00	0.24	0	0.58	0.11	0.09	**37.09**	**32**
161	S 148th Street	Old Cheney Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.08	0.24	0.00	0.33	0.17	0.25	0.92	0.89	0.31	**36.08**	**33**
178	S 68th Street	Martel Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.04	0.42	0.00	0.00	0.10	0.5	0.92	0.89	0.22	**35.95**	**34**
202	Old Cheney Road	Bridge O-37 near S 1st Street	Bridge Replacement	0.0	$3,465,000	Illustrative Plan	0.50	0.52	0.00	0.33	0.10	0.25	0.50	0.19	0.63	**34.86**	**35**
163	S 148th Street	Van Dorn Street	Intersection improvements	0.0	$650,000	Illustrative Plan	0.10	0.19	0.00	0.33	0.10	0.25	0.92	0.85	0.25	**34.18**	**36**
162	S 148th Street	Pioneers Boulevard	Intersection improvements	0.0	$650,000	Illustrative Plan	0.10	0.28	0.00	0.33	0.10	0.25	0.83	0.85	0.19	**33.97**	**37**
157	S 148th Street	Yankee Hill Road to O Street	Two Lane Widening	6.0	$4,900,000	Illustrative Plan	0.09	0.38	0.00	0.33	1.00	0.25	0.42	0.15	0.34	**33.55**	**38**
96	S 68th Street	Firth Road to Stagecoach Road	Two Lane Widening with Shoulc	5.0	$5,400,000	Illustrative Plan	0.22	0.24	0.33	0.00	1.00	0	0.58	0.13	0.25	**33.47**	**39**
159	S 148th Street	Yankee Hill Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.08	0.19	0.00	0.33	0.10	0.25	0.92	0.84	0.22	**33.31**	**40**
167	N 148th Street	Havelock Avenue	Intersection improvements	0.0	$650,000	Illustrative Plan	0.12	0.26	0.00	0.00	0.10	0.25	1.00	0.78	0.16	**32.78**	**41**
169	N 148th Street	Prairie Home	Intersection improvements	0.0	$1,300,000	Illustrative Plan	0.12	0.40	0.00	0.00	0.10	0.75	0.83	0.50	0.00	**32.37**	**42**
117	McKelvie Road	NW 27th Street to N 14th Street	Potential Paving	3.0	$3,900,000	Illustrative Plan	1.00	0.04	0.00	0.33	0.11	0	0.25	0.13	0.13	**31.76**	**43**
97	N 14th Street	Waverly Road to Raymond Road	Two Lane Widening	2.0	$1,000,000	Illustrative Plan	0.13	0.23	0.00	0.00	1.00	0	0.33	0.50	0.25	**31.37**	**44**
175	S 68th Street	Olive Creek Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.19	0.16	0.00	0.00	0.29	0	0.92	0.70	0.03	**30.76**	**45**
99	N 14th Street	Arbor Road to Waverly Road	Two Lane Widening	2.5	$1,250,000	Illustrative Plan	0.57	0.21	0.00	0.00	0.45	0	0.25	0.35	0.25	**30.42**	**46**
160	S 148th Street	Pine Lake Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.08	0.21	0.00	0.33	0.10	0.25	0.75	0.77	0.19	**30.39**	**47**
176	S 68th Street	Panama Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.24	0.26	0.00	0.00	0.15	0	0.83	0.67	0.06	**30.00**	**48**
170	N 148th Street	Alvo Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.12	0.22	0.00	0.00	0.10	0.25	0.92	0.72	0.03	**29.92**	**49**
179	S 68th Street	Wittstruck Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.28	0.20	0.00	0.00	0.10	0	0.83	0.64	0.19	**29.66**	**50**

Table G-2. Lancaster County Rural Road & Bridge Projects - Rank Order

							22.1	12.1	5.8	6.7	13.8	8.9	12.2	13.4	5.0		
ID	Street Name	Limits	Description	Project Length (Miles)	Project Cost (2021$)	Status	Maintenance Score	Mobility Score	Livability Score	Equity Score	Safety Score	Economic Score	Enviro Score	Funding Score	Public Input Score	Total Score	Rank
198	S 56th Street	Bridge P-92 near Rokeby Road	Replace with CBC	0.0	$1,460,000	Illustrative Plan	0.50	0.38	0.00	0.00	0.10	0	0.58	0.31	0.25	**29.61**	**51**
174	S 68th Street	Princeton Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.24	0.16	0.00	0.00	0.23	0	0.83	0.66	0.03	**29.50**	**52**
166	N 148th Street	Adams Street	Intersection improvements	0.0	$650,000	Illustrative Plan	0.12	0.19	0.00	0.00	0.10	0.25	0.92	0.71	0.06	**29.48**	**53**
177	S 68th Street	Stagecoach Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.24	0.26	0.00	0.00	0.10	0	0.83	0.65	0.13	**29.27**	**54**
164	S 148th Street	A Street	Intersection improvements	0.0	$650,000	Illustrative Plan	0.10	0.25	0.00	0.00	0.10	0.25	0.83	0.69	0.13	**29.02**	**55**
196	N 112th Street	Bridge J-126 near Holdrege Street	Bridge Replacement	0.0	$1,571,000	Illustrative Plan	0.50	0.34	0.00	0.00	0.10	0	0.58	0.28	0.25	**28.67**	**56**
208	Pioneers Blvd	Bridge Q-72 near S 138th Street	Bridge Replacement	0.0	$1,188,000	Illustrative Plan	0.50	0.02	0.00	0.33	0.10	0	0.58	0.38	0.22	**28.13**	**57**
168	N 148th Street	Fletcher Avenue	Intersection improvements	0.0	$650,000	Illustrative Plan	0.12	0.18	0.00	0.00	0.10	0.25	0.83	0.67	0.13	**28.11**	**58**
203	Van Dorn Street	Bridge J-22 near S 134th Street	Bridge Replacement	0.0	$1,060,000	Illustrative Plan	0.50	0.03	0.00	0.33	0.10	0	0.50	0.40	0.25	**27.71**	**59**
199	A Street	Bridge J-47 near S 120th Street	Replace with CCS	0.0	$739,000	Illustrative Plan	0.50	0.05	0.00	0.00	0.10	0	0.58	0.49	0.13	**27.25**	**60**
173	S 68th Street	Pella Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.19	0.16	0.00	0.00	0.10	0	0.92	0.61	0.06	**27.12**	**61**
191	N 14th Street	Raymond Road to Agnew Road	Two Lane Widening	4.0	$2,000,000	Illustrative Plan	0.13	0.17	0.00	0.00	1.00	0	0.33	0.24	0.09	**26.39**	**62**
112	N 27th Street	Arbor Road to Waverly Road	Potential Paving	2.5	$3,250,000	Illustrative Plan	1.00	0.01	0.00	0.00	0.10	0	0.00	0.10	0.16	**25.75**	**63**
190	N 14th Street	Agnew Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.06	0.08	0.00	0.00	0.43	0	0.75	0.60	0.03	**25.68**	**64**
180	S 68th Street	Bennett Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.28	0.22	0.00	0.00	0.10	0	0.58	0.53	0.16	**25.37**	**65**
205	Havelock Avenue	Bridge K-144 near N 98th Street	Bridge Replacement	0.0	$2,079,000	Illustrative Plan	0.50	0.08	0.00	0.00	0.10	0	0.58	0.18	0.47	**25.30**	**66**
210	A Street	Bridge J-46 near S 134th Street	Bridge Replacement	0.0	$1,237,000	Illustrative Plan	0.50	0.05	0.00	0.00	0.14	0	0.58	0.30	0.09	**25.19**	**67**
189	N 14th Street	Rock Creek Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.11	0.08	0.00	0.00	0.10	0	1.00	0.58	0.09	**25.18**	**68**
187	N 14th Street	Branched Oak Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.11	0.26	0.00	0.00	0.10	0	0.83	0.58	0.06	**25.17**	**69**
195	Arbor Road	Bridge F-201 near N 27th Street	Bridge Replacement	0.0	$1,530,000	Illustrative Plan	0.50	0.28	0.00	0.00	0.10	0	0.33	0.23	0.41	**25.04**	**70**
204	Adams Street	Bridge K-123 near N 102nd Street	Bridge Replacement	0.0	$1,940,000	Illustrative Plan	0.50	0.17	0.00	0.00	0.10	0	0.50	0.19	0.34	**24.93**	**71**
186	N 14th Street	Raymond Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.13	0.26	0.00	0.00	0.10	0	0.75	0.56	0.16	**24.68**	**72**
188	N 14th Street	Davey Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.11	0.08	0.00	0.00	0.14	0	0.92	0.56	0.03	**24.24**	**73**
184	N 14th Street	Waverly Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.17	0.12	0.00	0.00	0.22	0	0.67	0.53	0.06	**23.81**	**74**
185	N 14th Street	Mill Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.13	0.24	0.00	0.00	0.11	0	0.58	0.48	0.09	**21.16**	**75**
183	N 14th Street	Bluff Road	Intersection improvements	0.0	$650,000	Illustrative Plan	0.17	0.13	0.00	0.00	0.10	0	0.58	0.44	0.06	**20.14**	**76**
192	N 14th Street	Agnew Road to Ashland Rd	Two Lane Widening	2.0	$1,000,000	Illustrative Plan	0.06	0.07	0.00	0.00	0.12	0	0.75	0.29	0.09	**17.40**	**77**
108***	S 1st Street	Old Cheney Road to Pioneers Boulevard	Programmed Paving	1.0	$1,000,000	Illustrative Plan	1.00	0.25	0.00	0.33	0.10	0	0.42	0.61	0.69	**45.49**	**16**

***Project ID 108 is shown in the illustrative plan (even though it scored high enough to be included in the FC plan) due to uncertainty of the Old Cheney configuration at the West Beltway - closure vs. overpass, and therefore the need for this project will be determined at a later date

Table G-3. Lincoln Roadway Projects - Project ID Order

							17.8	12.4	11.0	10.0	13.5	7.5	12.8	10.0	5.0		
ID	**Street Name**	**Limits**	**Description**	**Project Length (Miles)**	**Project Cost (2021$)**	**Status**	**Maintenance Score**	**Mobility Score**	**Livability Score**	**Equity Score**	**Safety Score**	**Economic Score**	**Enviro Score**	**Funding Score**	**Public Input Score**	**Total Score**	**Rank**
2	S 40th Street	Normal Blvd and South Street	Major intersection area work	0.0	$10,000,000	Fiscally Constrained	0.37	0.73	0.00	0.67	0.59	0.5	0.75	0.08	0.82	**48.49**	**12**
3	W Superior Street	NW 70th Street to NW 56th Street	2 lanes + intersection improvem	1.0	$7,000,000	Illustrative Plan	1.00	0.07	0.00	0.00	0.10	0	0.58	0.05	0.08	**28.46**	**62**
4	W Adams Street	NW 70th Street to NW 56th Street	2 lanes + intersection improvem	1.0	$7,000,000	Illustrative Plan	0.44	0.12	0.00	0.00	0.63	0	0.58	0.05	0.07	**26.28**	**70**
5	NW 56th Street	W Partridge Lane to W "O" Street	2 lanes + intersection improvem	1.3	$9,000,000	Illustrative Plan	0.78	0.29	0.67	0.33	0.11	0.5	0.50	0.07	0.10	**40.89**	**37**
6	NW 38th Street	W Adams Street to W Holdrege Street	2 lanes + intersection improvem	1.0	$7,200,000	Illustrative Plan	1.00	0.00	0.33	0.33	0.10	0.5	0.42	0.08	0.03	**36.16**	**42**
7	NW 70th Street	W Superior Street to W Adams Street	2 lanes + intersection improvem	1.0	$7,000,000	Illustrative Plan	1.00	0.08	0.00	0.00	0.48	0	0.58	0.07	0.07	**33.72**	**51**
8	W Van Dorn Street	SW 40th Street to Coddington Avenue	2 lanes + intersection improvem	1.5	$10,500,000	Illustrative Plan	0.55	0.40	0.67	0.00	0.18	0.5	0.42	0.06	0.13	**34.91**	**48**
10	W Holdrege Street	NW 56th Street to NW 48th Street	2 lanes + intersection improvem	0.6	$4,700,000	Committed											
11	NW 40th Street	W Vine Street to US-6, including I-80 Overpass	Overpass	0.5	$11,250,000	Illustrative Plan	0.65	0.56	0.33	0.33	0.10	0.5	0.50	0.06	0.07	**37.78**	**40**
12	NW 40th Street	W Holdrege Street to W Vine Street	2 lanes + intersection improvem	0.5	$3,500,000	Illustrative Plan	1.00	0.24	0.33	0.33	0.10	0.5	0.58	0.19	0.00	**42.20**	**31**
13	W Van Dorn Street	Coddington Avenue to US-77	2 lanes + intersection improvem	1.0	$6,900,000	Illustrative Plan	0.19	0.58	0.33	0.00	0.21	0.5	0.33	0.07	0.10	**26.20**	**71**
14	NW 48th Street	Adams Street to Cuming Street	2 lanes + intersection improvem	1.4	$10,000,000	Fiscally Constrained	0.53	0.72	1.00	0.00	0.18	1	0.33	0.08	0.12	**45.04**	**16**
15	NW 56th Street	W Cuming Street to W Superior Street	2 lanes + intersection improvem	0.4	$2,900,000	Illustrative Plan	1.00	0.00	0.33	0.33	0.10	0	0.58	0.17	0.00	**35.31**	**45**
16	W Cuming Street	NW 56th Street to NW 52nd Street	2 lanes + intersection improvem	0.2	$1,600,000	Illustrative Plan	0.06	0.00	0.33	0.33	0.10	0	0.50	0.18	0.00	**17.54**	**82**
17	NW 12th Street	Aster Road to Missoula Road	2 lanes + turn lanes	0.3	$2,300,000	Illustrative Plan	0.00	0.00	0.00	0.33	0.10	0.5	0.83	0.16	0.00	**20.70**	**81**
19	O Street (US-34)	Wedgewood Drive to 98th Street	Intersection Improvements	1.0	$6,080,000	Illustrative Plan	0.30	0.84	0.33	0.00	0.46	1	0.50	0.12	0.05	**40.97**	**35**
20	Rokeby Road	S 31st Street to S 40th Street	2 lanes + intersection improvem	0.7	$3,000,000	Public-Private Partnership											
21	Saltillo Road	S 14th Street to S 27th Street	2 lanes + intersection improvements, reconstruction to address flooding	1.1	$7,600,000	Illustrative Plan	0.44	0.72	0.00	0.00	0.12	0.5	0.42	0.06	0.55	**30.87**	**55**
22	W Denton Road	Amaranth Lane to S Folsom Street	2 additional lanes	0.3	$2,200,000	Illustrative Plan	0.09	0.36	0.33	0.00	0.10	0.5	0.83	0.21	0.03	**27.70**	**63**
23	S 56th Street	Thompson Creek Boulevard to Yankee Hill Road	4 lanes + intersection improvem	0.7	$9,800,000	Illustrative Plan	0.00	1.00	0.33	0.33	0.10	0.5	0.75	0.07	0.12	**35.30**	**46**
24	Yankee Hill Road	S 56th Street to S 70th Street	2 lanes + intersection improvem	1.0	$6,900,000	Illustrative Plan	0.54	0.50	0.67	0.00	0.16	0.5	0.50	0.09	0.23	**37.51**	**41**
25	S 84th Street	Amber Hill Road to Yankee Hill Road	4 lanes + intersection improvem	0.4	$5,700,000	Illustrative Plan	0.42	0.61	0.33	0.00	0.10	0.5	0.33	0.09	0.10	**29.47**	**59**
27	Yankee Hill Road	S 40th Street to S 48th Street	2 lanes + intersection improvem	0.5	$5,700,000	Public-Private Partnership											
28	Rokeby Road	S 48th Street to S 56th Street	2 lanes + intersection improvem	0.5	$3,500,000	Illustrative Plan	0.68	0.29	0.00	0.00	0.10	0.5	0.58	0.13	0.07	**29.88**	**57**
29	Rokeby Road	S 77th Street to S 84th Street	2 lanes + intersection improvem	0.4	$3,500,000	Committed											
30	S 70th Street	Yankee Hill Road to Rokeby Road	2 lanes + intersection improvem	1.0	$14,000,000	Illustrative Plan	0.22	0.43	0.33	0.00	0.12	0.5	0.50	0.03	0.12	**25.68**	**73**
31	S 70th Street	Pine Lake Road to Yankee Hill Road	4 lanes + intersection improvem	1.0	$14,000,000	Illustrative Plan	0.61	0.74	1.00	0.00	0.18	0.5	0.42	0.05	0.12	**43.63**	**23**
32	O Street (US-34)	Antelope Valley N/S Rdwy. (19th St.) to 46th Street	Intersection Improvements	1.4	$6,840,000	Fiscally Constrained	0.35	1.00	0.33	0.00	1.00	1	0.50	0.13	0.27	**52.26**	**6**
33	N 84th Street	O Street to Adams Street	Intersection Improvements	2.0	$15,200,000	Fiscally Constrained	0.29	0.91	0.67	0.00	0.70	1	0.50	0.06	0.10	**48.15**	**13**
35	S 9th Street	Van Dorn Street to South Street	3 lanes + intersection improvem	0.5	$5,300,000	Illustrative Plan	0.46	1.00	0.00	0.33	0.33	0.5	0.67	0.13	0.30	**43.40**	**25**
37	Cornhusker Hwy (US-6)	N 20th Street to N 33rd Street	Intersection Improvements per (	1.1	$1,200,000	Fiscally Constrained	0.21	0.65	0.67	1.00	0.92	1	0.33	0.85	0.33	**63.56**	**2**
38	Cornhusker Hwy (US-6)	N 11th Street to N 20th Street	Intersection Improvements per (	0.8	$975,000	Fiscally Constrained	0.28	0.70	0.33	1.00	0.42	1	0.67	0.96	0.25	**59.82**	**4**
40	Van Dorn Street	S 70th Street to S 84th Street	Intersection Improvements	1.0	$4,560,000	Illustrative Plan	0.37	0.61	0.00	0.67	0.39	0.5	0.58	0.15	0.12	**39.38**	**39**
41	N 48th Street	Adams Street to Superior Street	4 lanes + intersection improvem	1.0	$14,100,000	Fiscally Constrained	0.73	0.79	1.00	0.00	0.98	0.75	0.42	0.07	0.23	**59.86**	**3**
42	Havelock Avenue	N 70th Street to N 84th Street	2 lanes + intersection improvem	1.0	$7,000,000	Illustrative Plan	0.16	0.78	0.67	0.33	0.31	0.5	0.67	0.10	0.05	**40.94**	**36**
43	N 98th Street	Adams Street to Holdrege Street	2 lanes + intersection improvem	1.0	$7,000,000	Illustrative Plan	0.29	0.18	0.00	0.00	0.22	0	0.50	0.04	0.07	**17.53**	**83**
45	S 98th Street	A Street to Pioneers Boulevard	4 lanes + intersection improvem	2.0	$28,000,000	Illustrative Plan	0.63	0.25	0.00	0.00	0.20	0.5	0.42	0.02	0.10	**26.60**	**69**
46	S 112th Street	US-34 to Van Dorn Street	2 lanes + intersection improvem	2.0	$14,000,000	Illustrative Plan	0.90	0.19	0.00	0.00	0.16	0	0.50	0.03	0.03	**27.40**	**64**
47	N 98th Street	Holdrege Street to O Street	Additional 2 lanes	1.1	$7,500,000	Illustrative Plan	0.33	0.31	0.33	0.00	0.10	0.5	0.58	0.06	0.10	**27.14**	**67**
48	N 112th Street	Holdrege Street to US-34	2 lanes + intersection improvem	1.0	$7,000,000	Illustrative Plan	1.00	0.43	0.00	0.00	0.10	0	0.58	0.06	0.03	**32.70**	**53**
50	Havelock Avenue	N 84th Street to N 98th Street	2 lanes + intersection improvem	1.0	$7,000,000	Illustrative Plan	0.04	0.11	0.00	0.00	0.59	0.5	0.58	0.06	0.03	**21.99**	**80**
51	N 33rd Street	Cornhusker Hwy to Superior Street	4 lanes + int. impr. & bridge	1.0	$20,000,000	Illustrative Plan	0.18	0.26	0.33	0.33	1.00	0.5	0.33	0.03	0.17	**36.03**	**43**
52	A Street	S 98th Street to 105th Street	2 lanes + intersection improvem	0.5	$3,500,000	Illustrative Plan	0.70	0.32	0.00	0.00	0.10	0	0.67	0.11	0.00	**27.36**	**65**
53	W Fletcher Avenue	NW 31st Street to NW 27th Street	2 lanes + intersection improvem	0.4	$2,800,000	Illustrative Plan	0.26	0.24	0.00	0.00	0.16	0.5	0.83	0.15	0.05	**25.86**	**72**
54	Adams Street	N 90th Street to N 98th Street	2 lanes + intersection improvem	0.6	$4,300,000	Illustrative Plan	0.43	0.33	0.67	0.00	0.10	0	0.42	0.10	0.02	**26.86**	**68**
55	S 98th Street	US-34 (O Street) to A St	4 lanes + intersection improvem	1.0	$14,000,000	Illustrative Plan	0.45	0.47	0.00	0.00	0.14	0.5	0.75	0.04	0.10	**29.96**	**56**
56	Holdrege Street	N 70th Street to N 80th Street	4 lanes + intersection improvem	0.7	$10,000,000	Illustrative Plan	0.39	0.95	0.33	0.33	0.38	0.5	0.58	0.07	0.12	**43.26**	**27**
57	Yankee Hill Road	S 14th Street to S 27th Street	Additional 2 lanes	1.0	$7,200,000	Illustrative Plan	0.10	0.79	1.00	0.67	0.11	0.5	0.50	0.11	0.15	**42.77**	**30**
58	S 56th Street	Van Dorn Street to Pioneers Boulevard	4 lanes + intersection improvem	0.9	$13,200,000	Illustrative Plan	0.67	0.94	0.00	0.67	0.37	0	0.50	0.05	0.32	**43.89**	**21**
59	East Beltway	Nebraska Hwy 2 to I-80	New 4 lane divided highway	12.6	$315,000,000	Illustrative Plan	0.00	0.64	0.00	0.00	0.26	1	0.33	0.00	0.82	**27.31**	**66**
60	Rokeby Road	S 40th Street to Snapdragon Road	2 lanes + intersection improvem	0.3	$2,152,000	Public-Private Partnership											
61	S 27th Street	Yankee Hill Road to Saltillo Road	2 lane realignment + int. impr.	2.0	$14,100,000	Illustrative Plan	0.41	0.49	0.67	0.00	0.10	0.5	0.50	0.04	0.12	**33.27**	**52**
62	S 70th Street	Rokeby Rd to Saltillo Rd	4 lanes + intersection improvem	1.0	$14,000,000	Illustrative Plan	0.20	0.40	0.00	0.00	0.10	0.5	0.67	0.03	0.05	**22.59**	**79**
63	S 84th Street	Yankee Hill Road to Rokeby Road	4 lanes + intersection improvem	1.0	$14,000,000	Illustrative Plan	0.47	0.68	0.33	0.00	0.10	0.5	0.42	0.04	0.02	**31.41**	**54**
64	S 84th Street	Rokeby Road to Saltillo Road	4 lanes + intersection improvem	1.0	$14,000,000	Illustrative Plan	0.27	0.42	0.00	0.00	0.10	0.5	0.58	0.03	0.03	**23.03**	**78**

Table G-3. Lincoln Roadway Projects - Project ID Order

							17.8	12.4	11.0	10.0	13.5	7.5	12.8	10.0	5.0		
ID	**Street Name**	**Limits**	**Description**	**Project Length (Miles)**	**Project Cost (2021$)**	**Status**	**Maintenance Score**	**Mobility Score**	**Livability Score**	**Equity Score**	**Safety Score**	**Economic Score**	**Enviro Score**	**Funding Score**	**Public Input Score**	**Total Score**	**Rank**
66	W Alvo Road	NW 12th Street to Tallgrass Parkway	2 lanes + intersection improvem	0.2	$1,300,000	Illustrative Plan	0.06	0.11	0.33	0.33	0.31	0	0.67	0.30	0.02	**25.25**	**74**
67	S 40th Street	Yankee Hill Road to Rokeby Road	3 lane section with raised median and turn lanes as appropriate	1.0	$14,000,000	Committed											
75	Salt Creek Roadway**	State Fair Park Drive to Cornhusker Hwy	6 lanes + intersection improvem	0.4	$26,000,000	Illustrative Plan	0.25	0.53	0.33	0.33	0.51	0.5	0.50	0.07	0.03	**35.93**	**44**
77	W A Street	SW 36th Street to SW 24th Street	2 lanes + intersection improvem	2.4	$14,000,000	Committed											
79	S 14th Street/Warlick/Old Cheney	14th/Warlick/Old Cheney	Intersection improvements and	0.0	$26,400,000	Committed											
81	W Holdrege Street	NW 48th Street to Chitwood Lane (east 1/4 mile)	2 lanes + intersection improvem	0.2	$2,000,000	Public-Private Partnership											
82	Nebraska Hwy 2	S 84th Street to Van Dorn Street	Corridor Improvements (TBD by	6.7	$50,000,000	Fiscally Constrained	0.22	0.86	0.00	0.00	1.00	1	0.25	0.01	1.00	**43.97**	**20**
83	Yankee Hill Road	S 48th Street to S 56th Street	2 lanes + intersection improvem	0.5	$2,200,000	Public-Private Partnership											
85	NW 12th Street	Fletcher Avenue to Aster Road with overpass of US-34	2 lanes + Overpass	0.4	$9,370,000	Fiscally Constrained	0.65	0.45	0.33	0.67	0.11	0.5	0.83	0.08	0.05	**44.52**	**18**
86	Saltillo Road	S 56th Street to S 70th Street	2 lanes + intersection improvem	1.0	$7,000,000	Illustrative Plan	0.36	0.58	0.00	0.00	0.12	0.5	0.67	0.07	0.10	**28.61**	**61**
87	W Holdrege Street	Chitwood Lane to NW 40th Street	2 lanes + intersection improvem	0.3	$1,950,000	Fiscally Constrained	1.00	1.00	0.67	0.33	0.10	0.5	0.58	0.46	0.02	**58.04**	**5**
88	Rokeby Road	S 27th Street to S 31st Street	2 lanes + intersection improvem	0.3	$2,400,000	Illustrative Plan	0.60	0.18	0.00	0.00	0.10	0	0.58	0.13	0.00	**23.07**	**77**
89	W Alvo Road	NW 27th Street to NW 12th Street	2 lanes + intersection improvem	1.0	$7,100,000	Illustrative Plan	0.06	0.08	0.00	0.33	0.10	0	0.50	0.03	0.00	**13.46**	**84**
120	A Street	S 89th Street to S 93rd Street	2 lanes with raised median, roundabouts at 89th St and 93rd St	0.4	$3,000,000	Committed											
121	A Street	S 40th Street to S 56th Street	Intersection improvements 40th, 48th and 50th/Cotner and widening of A Street from 40th to 48th for a center turn lane	1.0	$10,500,000	Committed											
124	S Folsom Street	W Old Cheney Road to 1/4 mile south	Paving one lane in each direction with raised center medians; roundabout at the future Palm Canyon Road intersection and intersection improvements at W Old Cheney and S Folsom	0.3	$2,400,000	Public-Private Partnership											
125	S 40th Street	Rokeby Road to 1/4 south	2 lanes with raised median and roundabout 1/4 mile south of Rokeby Rd	0.3	$3,400,000	Public-Private Partnership											
126	W Old Cheney Road	S Folsom Street to SW12th Street	2 lanes with raised median	0.5	$3,500,000	Illustrative Plan	0.36	0.03	0.00	0.00	0.18	0.5	0.83	0.12	0.00	**24.92**	**75**
127	Holdrege Street	87th Street to Cedar Cove	2 lanes with raised median	0.3	$2,300,000	Public-Private Partnership											
128	Holdrege Street	N 104th Street	Roundabout	0.0	$1,600,000	Public-Private Partnership											
129	Saltillo Road	S 70th Street to 1/2 mile east	Roadway and intersection improvements including on S 7th St from Saltillo Rd to Carger Ln	0.9	$7,095,000	Public-Private Partnership											
130	N 14th Street	Cornhusker Hwy (and N Antelop Valley Pkwy and Oak Cre	Bridge Replacements	0.0	$10,000,000	Fiscally Constrained	1.00	0.86	1.00	1.00	0.10	1	0.83	0.12	0.42	**72.33**	**1**
131	Huntington Avenue	Dead Mans Run	Bridge Replacement	0.0	$3,500,000	Illustrative Plan	0.50	0.30	0.67	1.00	0.10	0	0.50	0.19	0.03	**39.77**	**38**
133	S 27th Street	SE Upper Salt Creek	Bridge Replacement	0.0	$4,500,000	Fiscally Constrained	0.50	0.79	0.00	0.33	0.79	0.5	0.50	0.16	0.20	**45.37**	**15**
134	W South Street	Salt Creek	Bridge Replacement	0.0	$3,200,000	Fiscally Constrained	1.00	0.43	0.33	1.00	0.12	0.5	0.42	0.25	0.12	**50.54**	**10**
135	Southwood Drive	Beal Slough	Bridge Replacement	0.0	$2,200,000	Illustrative Plan	1.00	0.09	0.00	0.33	0.26	0	0.50	0.21	0.05	**34.45**	**49**
136	S 1st Street	Cardwell Branch Salt Creek	Bridge Replacement	0.0	$850,000	Illustrative Plan	0.50	0.89	0.00	0.33	0.10	0.5	0.58	0.73	0.02	**43.14**	**28**
137	N 70th Street	Salt Creek	Bridge Replacement	0.0	$3,000,000	Fiscally Constrained	0.50	0.47	0.33	1.00	0.10	0.75	0.50	0.26	0.05	**44.70**	**17**
138	S 40th Street	Antelope Creek	Bridge Replacement	0.0	$2,500,000	Illustrative Plan	0.50	0.95	0.00	0.67	0.10	0.5	0.58	0.28	0.15	**43.56**	**24**
139	Rosa Parks Way	K Street and L Street	Bridge Rehab and Preventive Ma	0.0	$3,400,000	Illustrative Plan	0.00	0.66	0.00	1.00	0.23	1	0.83	0.23	0.22	**42.90**	**29**
141	A Street	S 6th Street to S 17th Street	Intersections improvements at 13th and 17th and widening from 6th to 17th for a center turn lane	0.9	$6,586,000	Committed											
142	Fremont Street	Touzalin Avenue	Remove existing traffic signal and construct roundabout	0.0	$2,700,000	Fiscally Constrained	0.78	0.54	0.33	0.67	0.23	0.5	0.75	0.30	0.00	**50.51**	**11**

Table G-3. Lincoln Roadway Projects - Project ID Order

							17.8	12.4	11.0	10.0	13.5	7.5	12.8	10.0	5.0		
ID	**Street Name**	**Limits**	**Description**	**Project Length (Miles)**	**Project Cost (2021$)**	**Status**	**Maintenance Score**	**Mobility Score**	**Livability Score**	**Equity Score**	**Safety Score**	**Economic Score**	**Enviro Score**	**Funding Score**	**Public Input Score**	**Total Score**	**Rank**
143	N 84th Street	Cornhusker Hwy (US-6)	Intersection improvements	0.0	$5,500,000	Committed											
144	S 33rd Street	D Street	Remove existing traffic signal and construct mini roundabout	0.0	$1,000,000	Illustrative Plan	0.52	0.50	0.00	0.33	0.38	0	0.92	0.56	0.12	**41.78**	**33**
145	Cotner Boulevard	O Street to Starr Street	Intersection improvements at Starr and Holdrege, pavement repair, and mill and overlay	1.2	$6,671,000	Committed											
146	N 70th Street	Havelock Avenue	Remove existing traffic signal and construct roundabout	0.0	$2,000,000	Fiscally Constrained	0.24	0.65	0.33	0.67	0.57	0.75	0.92	0.44	0.00	**51.98**	**7**
147	S 56th Street	Cotner Boulevard/Randolph Street	Remove signal and evaluate roundabout or new signal	0.0	$2,750,000	Fiscally Constrained	0.61	0.55	0.00	0.67	0.39	0	0.92	0.24	0.13	**44.43**	**19**
148	O Street (US-34)	98th Street	Construct roundabout with S 98th Street project OR when signal otherwise warranted	0.0	$2,750,000	Illustrative Plan	0.26	0.69	0.00	0.00	0.10	1	0.83	0.22	0.03	**35.06**	**47**
149	S 27th Street	Pine Lake Road	Intersection Improvement: eastbound right-turn lane	0.0	$760,000	Fiscally Constrained	0.12	0.62	0.00	0.33	0.51	0.75	0.92	0.91	0.10	**47.00**	**14**
151	O Street (US-34)	84th Street	Intersection Improvement: dual eastbound left-turn lanes and eastbound right-turn lane and widening to east; maybe northbound right-turn lane	0.0	$2,280,000	Fiscally Constrained	0.43	0.68	0.33	0.00	0.67	1	0.83	0.37	0.07	**50.90**	**9**
152	S 84th Street	A Street	Intersection Improvements: dual northbound left turn lanes and NB right turn lane	0.0	$1,520,000	Illustrative Plan	0.59	0.66	0.00	0.00	0.32	0.5	0.83	0.41	0.05	**41.64**	**34**
153	Cornhusker Hwy (US-6)	State Fair Park Drive	Intersection Improvements: dual westbound left turn lanes	0.0	$760,000	Fiscally Constrained	0.22	0.59	0.00	0.33	0.77	1	0.67	1.00	0.02	**51.03**	**8**
154	Cornhusker Hwy (US-6)	N 70th Street / Railroad viaduct	Intersection/viaduct reconfigura	0.0	$10,000,000	Illustrative Plan	0.30	0.41	0.00	1.00	0.10	1	0.92	0.08	0.02	**41.90**	**32**
155	S 84th Street	Yankee Woods Drive	Roundabout	0.0	$2,750,000	Illustrative Plan	0.56	0.74	0.33	0.00	0.43	0.5	0.67	0.25	0.02	**43.38**	**26**
193	NW 12th Street	W Alvo Road to Missoula Road	2 lanes + turn lanes	0.3	$2,400,000	Illustrative Plan	0.00	0.09	0.67	0.33	0.78	0	0.75	0.23	0.00	**34.16**	**50**
194	W Old Cheney Road	SW 9th Street	Roundabout	0.0	$900,000	Illustrative Plan	0.37	0.01	0.00	0.00	0.10	0	0.92	0.33	0.03	**23.21**	**76**
212	27th Street Realignment	Saltillo Road to Rokeby Road	New Two Lane Road	1.1	$20,200,000	Illustrative Plan	0.56	0.47	0.00	0.00	0.10	0.5	0.58	0.02	0.07	**28.94**	**60**
214	Normal Boulevard	Van Dorn Street	Intersection improvements	0.0	$750,000	Illustrative Plan	0.22	0.80	0.00	0.67	0.40	0	0.75	0.81	0.00	**43.64**	**22**
216	Adams Street	N 36th Street to N 48th Street	Widening for a center turn lane and pavement rehabilitation	0.8	$3,010,000	Committed											
217	Rokeby Road	Snapdragon Road to S 48th Street	2 lanes + intersection improvem	0.3	$10,330,000	Illustrative Plan	0.73	0.27	0.00	0.00	0.10	0.5	0.58	0.05	0.03	**29.57**	**58**

**ID 75 had incorrect name, limits, and cost in scoring process.

Table G-4. Lincoln Roadway Projects - Rank Order

							17.8	12.4	11.0	10.0	13.5	7.5	12.8	10.0	5.0		
ID	**Street Name**	**Limits**	**Description**	**Project Length (Miles)**	**Project Cost (2021$)**	**Status**	**Maintenance Score**	**Mobility Score**	**Livability Score**	**Equity Score**	**Safety Score**	**Economic Score**	**Enviro Score**	**Funding Score**	**Public Input Score**	**Total Score**	**Rank**
121	A Street	S 40th Street to S 56th Street	Intersection improvements 40th, 48th and 50th/Cotner and widening of A Street from 40th to 48th for a center turn lane	1.0	$10,500,000	Committed											
79	S 14th Street/Warlick/Old Cheney	14th/Warlick/Old Cheney	Intersection improvements and	0.0	$26,400,000	Committed											
145	Cotner Boulevard	O Street to Starr Street	Intersection improvements at Starr and Holdrege, pavement repair, and mill and overlay	1.2	$6,671,000	Committed											
141	A Street	S 6th Street to S 17th Street	Intersections improvements at 13th and 17th and widening from 6th to 17th for a center turn lane	0.9	$6,586,000	Committed											
77	W A Street	SW 36th Street to SW 24th Street	2 lanes + intersection improvem	2.4	$14,000,000	Committed											
67	S 40th Street	Yankee Hill Road to Rokeby Road	3 lane section with raised median and turn lanes as appropriate	1.0	$14,000,000	Committed											
143	N 84th Street	Cornhusker Hwy (US-6)	Intersection improvements	0.0	$5,500,000	Committed											
216	Adams Street	N 36th Street to N 48th Street	Widening for a center turn lane and pavement rehabilitation	0.8	$3,010,000	Committed											
10	W Holdrege Street	NW 56th Street to NW 48th Street	2 lanes + intersection improvem	0.6	$4,700,000	Committed											
29	Rokeby Road	S 77th Street to S 84th Street	2 lanes + intersection improvem	0.4	$3,500,000	Committed											
120	A Street	S 89th Street to S 93rd Street	2 lanes with raised median, roundabouts at 89th St and 93rd St	0.4	$3,000,000	Committed											
20	Rokeby Road	S 31st Street to S 40th Street	2 lanes + intersection improvem	0.7	$3,000,000	Public-Private Partnership											
27	Yankee Hill Road	S 40th Street to S 48th Street	2 lanes + intersection improvem	0.5	$5,700,000	Public-Private Partnership											
60	Rokeby Road	S 40th Street to Snapdragon Road	2 lanes + intersection improvem	0.3	$2,152,000	Public-Private Partnership											
81	W Holdrege Street	NW 48th Street to Chitwood Lane (east 1/4 mile)	2 lanes + intersection improvem	0.2	$2,000,000	Public-Private Partnership											
83	Yankee Hill Road	S 48th Street to S 56th Street	2 lanes + intersection improvem	0.5	$2,200,000	Public-Private Partnership											
124	S Folsom Street	W Old Cheney Road to 1/4 mile south	Paving one lane in each direction with raised center medians; roundabout at the future Palm Canyon Road intersection and intersection improvements at W Old Cheney and S Folsom	0.3	$2,400,000	Public-Private Partnership											
125	S 40th Street	Rokeby Road to 1/4 south	2 lanes with raised median and roundabout 1/4 mile south of Rokeby Rd	0.3	$3,400,000	Public-Private Partnership											
127	Holdrege Street	87th Street to Cedar Cove	2 lanes with raised median	0.3	$2,300,000	Public-Private Partnership											
128	Holdrege Street	N 104th Street	Roundabout	0.0	$1,600,000	Public-Private Partnership											
129	Saltillo Road	S 70th Street to 1/2 mile east	Roadway and intersection improvements including on S 7th St from Saltillo Rd to Carger Ln	0.9	$7,095,000	Public-Private Partnership											
130	N 14th Street	Cornhusker Hwy (and N Antelop Valley Pkwy and Oak Cre	Bridge Replacements	0.0	$10,000,000	Fiscally Constrained	1.00	0.86	1.00	1.00	0.10	1	0.83	0.12	0.42	**72.33**	**1**
37	Cornhusker Hwy (US-6)	N 20th Street to N 33rd Street	Intersection Improvements per	1.1	$1,200,000	Fiscally Constrained	0.21	0.65	0.67	1.00	0.92	1	0.33	0.85	0.33	**63.56**	**2**
41	N 48th Street	Adams Street to Superior Street	4 lanes + intersection improvem	1.0	$14,100,000	Fiscally Constrained	0.73	0.79	1.00	0.00	0.98	0.75	0.42	0.07	0.23	**59.86**	**3**
38	Cornhusker Hwy (US-6)	N 11th Street to N 20th Street	Intersection Improvements per	0.8	$975,000	Fiscally Constrained	0.28	0.70	0.33	1.00	0.42	1	0.67	0.96	0.25	**59.82**	**4**
87	W Holdrege Street	Chitwood Lane to NW 40th Street	2 lanes + intersection improvem	0.3	$1,950,000	Fiscally Constrained	1.00	1.00	0.67	0.33	0.10	0.5	0.58	0.46	0.02	**58.04**	**5**
32	O Street (US-34)	Antelope Valley N/S Rdwy. (19th St.) to 46th Street	Intersection Improvements	1.4	$6,840,000	Fiscally Constrained	0.35	1.00	0.33	0.00	1.00	1	0.50	0.13	0.27	**52.26**	**6**

Table G-4. Lincoln Roadway Projects - Rank Order

							17.8	12.4	11.0	10.0	13.5	7.5	12.8	10.0	5.0		
ID	**Street Name**	**Limits**	**Description**	**Project Length (Miles)**	**Project Cost (2021$)**	**Status**	**Maintenance Score**	**Mobility Score**	**Livability Score**	**Equity Score**	**Safety Score**	**Economic Score**	**Enviro Score**	**Funding Score**	**Public Input Score**	**Total Score**	**Rank**
146	N 70th Street	Havelock Avenue	Remove existing traffic signal and construct roundabout	0.0	$2,000,000	Fiscally Constrained	0.24	0.65	0.33	0.67	0.57	0.75	0.92	0.44	0.00	**51.98**	**7**
153	Cornhusker Hwy (US-6)	State Fair Park Drive	Intersection Improvements: dual westbound left turn lanes	0.0	$760,000	Fiscally Constrained	0.22	0.59	0.00	0.33	0.77	1	0.67	1.00	0.02	**51.03**	**8**
151	O Street (US-34)	84th Street	Intersection Improvement: dual eastbound left-turn lanes and eastbound right-turn lane and widening to east; maybe northbound right-turn lane	0.0	$2,280,000	Fiscally Constrained	0.43	0.68	0.33	0.00	0.67	1	0.83	0.37	0.07	**50.90**	**9**
134	W South Street	Salt Creek	Bridge Replacement	0.0	$3,200,000	Fiscally Constrained	1.00	0.43	0.33	1.00	0.12	0.5	0.42	0.25	0.12	**50.54**	**10**
142	Fremont Street	Touzalin Avenue	Remove existing traffic signal and construct roundabout	0.0	$2,700,000	Fiscally Constrained	0.78	0.54	0.33	0.67	0.23	0.5	0.75	0.30	0.00	**50.51**	**11**
2	S 40th Street	Normal Blvd and South Street	Major intersection area work	0.0	$10,000,000	Fiscally Constrained	0.37	0.73	0.00	0.67	0.59	0.5	0.75	0.08	0.82	**48.49**	**12**
33	N 84th Street	O Street to Adams Street	Intersection Improvements	2.0	$15,200,000	Fiscally Constrained	0.29	0.91	0.67	0.00	0.70	1	0.50	0.06	0.10	**48.15**	**13**
149	S 27th Street	Pine Lake Road	Intersection Improvement: eastbound right-turn lane	0.0	$760,000	Fiscally Constrained	0.12	0.62	0.00	0.33	0.51	0.75	0.92	0.91	0.10	**47.00**	**14**
133	S 27th Street	SE Upper Salt Creek	Bridge Replacement	0.0	$4,500,000	Fiscally Constrained	0.50	0.79	0.00	0.33	0.79	0.5	0.50	0.16	0.20	**45.37**	**15**
14	NW 48th Street	Adams Street to Cuming Street	2 lanes + intersection improvem	1.4	$10,000,000	Fiscally Constrained	0.53	0.72	1.00	0.00	0.18	1	0.33	0.08	0.12	**45.04**	**16**
137	N 70th Street	Salt Creek	Bridge Replacement	0.0	$3,000,000	Fiscally Constrained	0.50	0.47	0.33	1.00	0.10	0.75	0.50	0.26	0.05	**44.70**	**17**
85	NW 12th Street	Fletcher Avenue to Aster Road with overpass of US-34	2 lanes + Overpass	0.4	$9,370,000	Fiscally Constrained	0.65	0.45	0.33	0.67	0.11	0.5	0.83	0.08	0.05	**44.52**	**18**
147	S 56th Street	Cotner Boulevard/Randolph Street	Remove signal and evaluate roundabout or new signal	0.0	$2,750,000	Fiscally Constrained	0.61	0.55	0.00	0.67	0.39	0	0.92	0.24	0.13	**44.43**	**19**
82	Nebraska Hwy 2	S 84th Street to Van Dorn Street	Corridor Improvements (TBD by	6.7	$50,000,000	Fiscally Constrained	0.22	0.86	0.00	0.00	1.00	1	0.25	0.01	1.00	**43.97**	**20**
58	S 56th Street	Van Dorn Street to Pioneers Boulevard	4 lanes + intersection improvem	0.9	$13,200,000	Illustrative Plan	0.67	0.94	0.00	0.67	0.37	0	0.50	0.05	0.32	**43.89**	**21**
214	Normal Boulevard	Van Dorn Street	Intersection improvements	0.0	$750,000	Illustrative Plan	0.22	0.80	0.00	0.67	0.40	0	0.75	0.81	0.00	**43.64**	**22**
31	S 70th Street	Pine Lake Road to Yankee Hill Road	4 lanes + intersection improvem	1.0	$14,000,000	Illustrative Plan	0.61	0.74	1.00	0.00	0.18	0.5	0.42	0.05	0.12	**43.63**	**23**
138	S 40th Street	Antelope Creek	Bridge Replacement	0.0	$2,500,000	Illustrative Plan	0.50	0.95	0.00	0.67	0.10	0.5	0.58	0.28	0.15	**43.56**	**24**
35	S 9th Street	Van Dorn Street to South Street	3 lanes + intersection improvem	0.5	$5,300,000	Illustrative Plan	0.46	1.00	0.00	0.33	0.33	0.5	0.67	0.13	0.30	**43.40**	**25**
155	S 84th Street	Yankee Woods Drive	Roundabout	0.0	$2,750,000	Illustrative Plan	0.56	0.74	0.33	0.00	0.43	0.5	0.67	0.25	0.02	**43.38**	**26**
56	Holdrege Street	N 70th Street to N 80th Street	4 lanes + intersection improvem	0.7	$10,000,000	Illustrative Plan	0.39	0.95	0.33	0.33	0.38	0.5	0.58	0.07	0.12	**43.26**	**27**
136	S 1st Street	Cardwell Branch Salt Creek	Bridge Replacement	0.0	$850,000	Illustrative Plan	0.50	0.89	0.00	0.33	0.10	0.5	0.58	0.73	0.02	**43.14**	**28**
139	Rosa Parks Way	K Street and L Street	Bridge Rehab and Preventive Ma	0.0	$3,400,000	Illustrative Plan	0.00	0.66	0.00	1.00	0.23	1	0.83	0.23	0.22	**42.90**	**29**
57	Yankee Hill Road	S 14th Street to S 27th Street	Additional 2 lanes	1.0	$7,200,000	Illustrative Plan	0.10	0.79	1.00	0.67	0.11	0.5	0.50	0.11	0.15	**42.77**	**30**
12	NW 40th Street	W Holdrege Street to W Vine Street	2 lanes + intersection improvem	0.5	$3,500,000	Illustrative Plan	1.00	0.24	0.33	0.33	0.10	0.5	0.58	0.19	0.00	**42.20**	**31**
154	Cornhusker Hwy (US-6)	N 70th Street / Railroad viaduct	Intersection/viaduct reconfigura	0.0	$10,000,000	Illustrative Plan	0.30	0.41	0.00	1.00	0.10	1	0.92	0.08	0.02	**41.90**	**32**
144	S 33rd Street	D Street	Remove existing traffic signal and construct mini roundabout	0.0	$1,000,000	Illustrative Plan	0.52	0.50	0.00	0.33	0.38	0	0.92	0.56	0.12	**41.78**	**33**
152	S 84th Street	A Street	Intersection Improvements: dual northbound left turn lanes and NB right turn lane	0.0	$1,520,000	Illustrative Plan	0.59	0.66	0.00	0.00	0.32	0.5	0.83	0.41	0.05	**41.64**	**34**
19	O Street (US-34)	Wedgewood Drive to 98th Street	Intersection Improvements	1.0	$6,080,000	Illustrative Plan	0.30	0.84	0.33	0.00	0.46	1	0.50	0.12	0.05	**40.97**	**35**
42	Havelock Avenue	N 70th Street to N 84th Street	2 lanes + intersection improvem	1.0	$7,000,000	Illustrative Plan	0.16	0.78	0.67	0.33	0.31	0.5	0.67	0.10	0.05	**40.94**	**36**
5	NW 56th Street	W Partridge Lane to W "O" Street	2 lanes + intersection improvem	1.3	$9,000,000	Illustrative Plan	0.78	0.29	0.67	0.33	0.11	0.5	0.50	0.07	0.10	**40.89**	**37**
131	Huntington Avenue	Dead Mans Run	Bridge Replacement	0.0	$3,500,000	Illustrative Plan	0.50	0.30	0.67	1.00	0.10	0	0.50	0.19	0.03	**39.77**	**38**
40	Van Dorn Street	S 70th Street to S 84th Street	Intersection Improvements	1.0	$4,560,000	Illustrative Plan	0.37	0.61	0.00	0.67	0.39	0.5	0.58	0.15	0.12	**39.38**	**39**
11	NW 40th Street	W Vine Street to US-6, including I-80 Overpass	Overpass	0.5	$11,250,000	Illustrative Plan	0.65	0.56	0.33	0.33	0.10	0.5	0.50	0.06	0.07	**37.78**	**40**
24	Yankee Hill Road	S 56th Street to S 70th Street	2 lanes + intersection improvem	1.0	$6,900,000	Illustrative Plan	0.54	0.50	0.67	0.00	0.16	0.5	0.50	0.09	0.23	**37.51**	**41**
6	NW 38th Street	W Adams Street to W Holdrege Street	2 lanes + intersection improvem	1.0	$7,200,000	Illustrative Plan	1.00	0.00	0.33	0.33	0.10	0.5	0.42	0.08	0.03	**36.16**	**42**
51	N 33rd Street	Cornhusker Hwy to Superior Street	4 lanes + int. impr. & bridge	1.0	$20,000,000	Illustrative Plan	0.18	0.26	0.33	0.33	1.00	0.5	0.33	0.03	0.17	**36.03**	**43**
75	State Fair Park Dr	Salt Creek Roadway to Cornhusker Hwy	6 lanes + intersection improvem	0.4	$9,300,000	Illustrative Plan	0.25	0.53	0.33	0.33	0.51	0.5	0.50	0.07	0.03	**35.93**	**44**
15	NW 56th Street	W Cuming Street to W Superior Street	2 lanes + intersection improvem	0.4	$2,900,000	Illustrative Plan	1.00	0.00	0.33	0.33	0.10	0	0.58	0.17	0.00	**35.31**	**45**
23	S 56th Street	Thompson Creek Boulevard to Yankee Hill Road	4 lanes + intersection improvem	0.7	$9,800,000	Illustrative Plan	0.00	1.00	0.33	0.33	0.10	0.5	0.75	0.07	0.12	**35.30**	**46**

Table G-4. Lincoln Roadway Projects - Rank Order

							17.8	12.4	11.0	10.0	13.5	7.5	12.8	10.0	5.0		
ID	**Street Name**	**Limits**	**Description**	**Project Length (Miles)**	**Project Cost (2021$)**	**Status**	**Maintenance Score**	**Mobility Score**	**Livability Score**	**Equity Score**	**Safety Score**	**Economic Score**	**Enviro Score**	**Funding Score**	**Public Input Score**	**Total Score**	**Rank**
148	O Street (US-34)	98th Street	Construct roundabout with S 98th Street project OR when signal otherwise warranted	0.0	$2,750,000	Illustrative Plan	0.26	0.69	0.00	0.00	0.10	1	0.83	0.22	0.03	**35.06**	**47**
8	W Van Dorn Street	SW 40th Street to Coddington Avenue	2 lanes + intersection improvem	1.5	$10,500,000	Illustrative Plan	0.55	0.40	0.67	0.00	0.18	0.5	0.42	0.06	0.13	**34.91**	**48**
135	Southwood Drive	Beal Slough	Bridge Replacement	0.0	$2,200,000	Illustrative Plan	1.00	0.09	0.00	0.33	0.26	0	0.50	0.21	0.05	**34.45**	**49**
193	NW 12th Street	W Alvo Road to Missoula Road	2 lanes + turn lanes	0.3	$2,400,000	Illustrative Plan	0.00	0.09	0.67	0.33	0.78	0	0.75	0.23	0.00	**34.16**	**50**
7	NW 70th Street	W Superior Street to W Adams Street	2 lanes + intersection improvem	1.0	$7,000,000	Illustrative Plan	1.00	0.08	0.00	0.00	0.48	0	0.58	0.07	0.07	**33.72**	**51**
61	S 27th Street	Yankee Hill Road to Saltillo Road	2 lane realignment + int. impr.	2.0	$14,100,000	Illustrative Plan	0.41	0.49	0.67	0.00	0.10	0.5	0.50	0.04	0.12	**33.27**	**52**
48	N 112th Street	Holdrege Street to US-34	2 lanes + intersection improvem	1.0	$7,000,000	Illustrative Plan	1.00	0.43	0.00	0.00	0.10	0	0.58	0.06	0.03	**32.70**	**53**
63	S 84th Street	Yankee Hill Road to Rokeby Road	4 lanes + intersection improvem	1.0	$14,000,000	Illustrative Plan	0.47	0.68	0.33	0.00	0.10	0.5	0.42	0.04	0.02	**31.41**	**54**
21	Saltillo Road	S 14th Street to S 27th Street	2 lanes + intersection improvements, reconstruction to address flooding	1.1	$7,600,000	Illustrative Plan	0.44	0.72	0.00	0.00	0.12	0.5	0.42	0.06	0.55	**30.87**	**55**
55	S 98th Street	US-34 (O Street) to A St	4 lanes + intersection improvem	1.0	$14,000,000	Illustrative Plan	0.45	0.47	0.00	0.00	0.14	0.5	0.75	0.04	0.10	**29.96**	**56**
28	Rokeby Road	S 48th Street to S 56th Street	2 lanes + intersection improvem	0.5	$3,500,000	Illustrative Plan	0.68	0.29	0.00	0.00	0.10	0.5	0.58	0.13	0.07	**29.88**	**57**
217	Rokeby Road	Snapdragon Road to S 48th Street	2 lanes + intersection improvem	0.3	$10,330,000	Illustrative Plan	0.73	0.27	0.00	0.00	0.10	0.5	0.58	0.05	0.03	**29.57**	**58**
25	S 84th Street	Amber Hill Road to Yankee Hill Road	4 lanes + intersection improvem	0.4	$5,700,000	Illustrative Plan	0.42	0.61	0.33	0.00	0.10	0.5	0.33	0.09	0.10	**29.47**	**59**
212	27th Street Realignment	Saltillo Road to Rokeby Road	New Two Lane Road	1.1	$20,200,000	Illustrative Plan	0.56	0.47	0.00	0.00	0.10	0.5	0.58	0.02	0.07	**28.94**	**60**
86	Saltillo Road	S 56th Street to S 70th Street	2 lanes + intersection improvem	1.0	$7,000,000	Illustrative Plan	0.36	0.58	0.00	0.00	0.12	0.5	0.67	0.07	0.10	**28.61**	**61**
3	W Superior Street	NW 70th Street to NW 56th Street	2 lanes + intersection improvem	1.0	$7,000,000	Illustrative Plan	1.00	0.07	0.00	0.00	0.10	0	0.58	0.05	0.08	**28.46**	**62**
22	W Denton Road	Amaranth Lane to S Folsom Street	2 additional lanes	0.3	$2,200,000	Illustrative Plan	0.09	0.36	0.33	0.00	0.10	0.5	0.83	0.21	0.03	**27.70**	**63**
46	S 112th Street	US-34 to Van Dorn Street	2 lanes + intersection improvem	2.0	$14,000,000	Illustrative Plan	0.90	0.19	0.00	0.00	0.16	0	0.50	0.03	0.03	**27.40**	**64**
52	A Street	S 98th Street to 105th Street	2 lanes + intersection improvem	0.5	$3,500,000	Illustrative Plan	0.70	0.32	0.00	0.00	0.10	0	0.67	0.11	0.00	**27.36**	**65**
59	East Beltway	Nebraska Hwy 2 to I-80	New 4 lane divided highway	12.6	$315,000,000	Illustrative Plan	0.00	0.64	0.00	0.00	0.26	1	0.33	0.00	0.82	**27.31**	**66**
47	N 98th Street	Holdrege Street to O Street	Additional 2 lanes	1.1	$7,500,000	Illustrative Plan	0.33	0.31	0.33	0.00	0.10	0.5	0.58	0.06	0.10	**27.14**	**67**
54	Adams Street	N 90th Street to N 98th Street	2 lanes + intersection improvem	0.6	$4,300,000	Illustrative Plan	0.43	0.33	0.67	0.00	0.10	0	0.42	0.10	0.02	**26.86**	**68**
45	S 98th Street	A Street to Pioneers Boulevard	4 lanes + intersection improvem	2.0	$28,000,000	Illustrative Plan	0.63	0.25	0.00	0.00	0.20	0.5	0.42	0.02	0.10	**26.60**	**69**
4	W Adams Street	NW 70th Street to NW 56th Street	2 lanes + intersection improvem	1.0	$7,000,000	Illustrative Plan	0.44	0.12	0.00	0.00	0.63	0	0.58	0.05	0.07	**26.28**	**70**
13	W Van Dorn Street	Coddington Avenue to US-77	2 lanes + intersection improvem	1.0	$6,900,000	Illustrative Plan	0.19	0.58	0.33	0.00	0.21	0.5	0.33	0.07	0.10	**26.20**	**71**
53	W Fletcher Avenue	NW 31st Street to NW 27th Street	2 lanes + intersection improvem	0.4	$2,800,000	Illustrative Plan	0.26	0.24	0.00	0.00	0.16	0.5	0.83	0.15	0.05	**25.86**	**72**
30	S 70th Street	Yankee Hill Road to Rokeby Road	2 lanes + intersection improvem	1.0	$14,000,000	Illustrative Plan	0.22	0.43	0.33	0.00	0.12	0.5	0.50	0.03	0.12	**25.68**	**73**
66	W Alvo Road	NW 12th Street to Tallgrass Parkway	2 lanes + intersection improvem	0.2	$1,300,000	Illustrative Plan	0.06	0.11	0.33	0.33	0.31	0	0.67	0.30	0.02	**25.25**	**74**
126	W Old Cheney Road	S Folsom Street to SW12th Street	2 lanes with raised median	0.5	$3,500,000	Illustrative Plan	0.36	0.03	0.00	0.00	0.18	0.5	0.83	0.12	0.00	**24.92**	**75**
194	W Old Cheney Road	SW 9th Street	Roundabout	0.0	$900,000	Illustrative Plan	0.37	0.01	0.00	0.00	0.10	0	0.92	0.33	0.03	**23.21**	**76**
88	Rokeby Road	S 27th Street to S 31st Street	2 lanes + intersection improvem	0.3	$2,400,000	Illustrative Plan	0.60	0.18	0.00	0.00	0.10	0	0.58	0.13	0.00	**23.07**	**77**
64	S 84th Street	Rokeby Road to Saltillo Road	4 lanes + intersection improvem	1.0	$14,000,000	Illustrative Plan	0.27	0.42	0.00	0.00	0.10	0.5	0.58	0.03	0.03	**23.03**	**78**
62	S 70th Street	Rokeby Rd to Saltillo Rd	4 lanes + intersection improvem	1.0	$14,000,000	Illustrative Plan	0.20	0.40	0.00	0.00	0.10	0.5	0.67	0.03	0.05	**22.59**	**79**
50	Havelock Avenue	N 84th Street to N 98th Street	2 lanes + intersection improvem	1.0	$7,000,000	Illustrative Plan	0.04	0.11	0.00	0.00	0.59	0.5	0.58	0.06	0.03	**21.99**	**80**
17	NW 12th Street	Aster Road to Missoula Road	2 lanes + turn lanes	0.3	$2,300,000	Illustrative Plan	0.00	0.00	0.00	0.33	0.10	0.5	0.83	0.16	0.00	**20.70**	**81**
16	W Cuming Street	NW 56th Street to NW 52nd Street	2 lanes + intersection improvem	0.2	$1,600,000	Illustrative Plan	0.06	0.00	0.33	0.33	0.10	0	0.50	0.18	0.00	**17.54**	**82**
43	N 98th Street	Adams Street to Holdrege Street	2 lanes + intersection improvem	1.0	$7,000,000	Illustrative Plan	0.29	0.18	0.00	0.00	0.22	0	0.50	0.04	0.07	**17.53**	**83**
89	W Alvo Road	NW 27th Street to NW 12th Street	2 lanes + intersection improvem	1.0	$7,100,000	Illustrative Plan	0.06	0.08	0.00	0.33	0.10	0	0.50	0.03	0.00	**13.46**	**84**

Table G-5. NDOT Highway Projects - Project ID Order

							17.8	12.4	11.0	10.0	13.5	7.5	12.8	10.0	5.0		
ID	**Street Name**	**Limits**	**Description**	**Project Length (Miles)**	**Project Cost (2021$)**	**Status**	**Maintenance Score**	**Mobility Score**	**Livability Score**	**Equity Score**	**Safety Score**	**Economic Score**	**Enviro Score**	**Funding Score**	**Public Input Score**	**Total Score**	**Rank**
1	I-80	I-80 and I-180	Major interchange work	0.0	$52,300,000	Illustrative Plan	0.15	0.48	0.00	0.33	0.10	0.5	0.92	0.01	0.33	**30.49**	**5**
34	US-6 (Sun Valley)	Cornhusker Hwy (US-6) to WO St.(US-6)	4 lanes + turn lanes	2.0	$20,400,000	Illustrative Plan	0.57	0.77	0.00	0.33	0.47	1	0.25	0.04	0.15	**41.14**	**2**
44	O Street (US-34)	84th Street to 120th Street	4 lanes + intersection improvem	2.5	$17,900,000	Illustrative Plan	0.61	0.72	0.67	0.00	0.22	1	0.42	0.04	0.08	**43.74**	**1**
68	O Street (US-34)	120th Street to east county line	4 lanes + intersection improvem	5.0	$37,000,000	Illustrative Plan	0.15	0.49	0.00	0.00	0.10	1	0.42	0.01	0.02	**23.20**	**7**
70	US-34	NE-79 to Malcolm Spur	4 lanes + intersection improvem	1.9	$15,300,000	Illustrative Plan	0.08	0.34	0.00	0.00	0.10	0.5	0.50	0.02	0.03	**17.51**	**8**
71	I-80	Pleasant Dale to NW 56th Street	6 lanes + bridges	6.0	$97,000,000	Illustrative Plan	0.21	0.79	0.00	0.00	0.10	1	0.50	0.01	0.13	**29.46**	**6**
72	I-180	I-80 to US-6	Reconstruction + bridges	2.9	$51,200,000	Illustrative Plan	0.32	0.59	0.00	1.00	0.32	1	0.25	0.01	0.08	**38.51**	**4**
73	US-34	US-34 and Fletcher Avenue	New interchange	0.0	$31,900,000	Illustrative Plan	0.33	0.72	0.00	0.33	0.30	1	0.75	0.02	0.15	**40.18**	**3**
76	West Beltway (US 77)	I-80 to Saltillo Road	Freeway with new interchanges	9.6	$34,520,000	Committed											
78	South Beltway	US-77 to Nebraska Hwy 2	4 lane freeway	8.2	$255,000,000	Committed											

Table G-6. NDOT Highway Projects - Rank Order

							17.8	12.4	11.0	10.0	13.5	7.5	12.8	10.0	5.0		
ID	**Street Name**	**Limits**	**Description**	**Project Length (Miles)**	**Project Cost (2021$)**	**Status**	**Maintenance Score**	**Mobility Score**	**Livability Score**	**Equity Score**	**Safety Score**	**Economic Score**	**Enviro Score**	**Funding Score**	**Public Input Score**	**Total Score**	**Rank**
78	South Beltway	US-77 to Nebraska Hwy 2	4 lane freeway	8.2	$255,000,000	Committed											
76	West Beltway (US 77)	I-80 to Saltillo Road	Freeway with new interchanges	9.6	$34,520,000	Committed											
44	O Street (US-34)	84th Street to 120th Street	4 lanes + intersection improvem	2.5	$17,900,000	Illustrative Plan	0.61	0.72	0.67	0.00	0.22	1	0.42	0.04	0.08	**43.74**	**1**
34	US-6 (Sun Valley)	Cornhusker Hwy (US-6) to WO St.(US-6)	4 lanes + turn lanes	2.0	$20,400,000	Illustrative Plan	0.57	0.77	0.00	0.33	0.47	1	0.25	0.04	0.15	**41.14**	**2**
73	US-34	US-34 and Fletcher Avenue	New interchange	0.0	$31,900,000	Illustrative Plan	0.33	0.72	0.00	0.33	0.30	1	0.75	0.02	0.15	**40.18**	**3**
72	I-180	I-80 to US-6	Reconstruction + bridges	2.9	$51,200,000	Illustrative Plan	0.32	0.59	0.00	1.00	0.32	1	0.25	0.01	0.08	**38.51**	**4**
1	I-80	I-80 and I-180	Major interchange work	0.0	$52,300,000	Illustrative Plan	0.15	0.48	0.00	0.33	0.10	0.5	0.92	0.01	0.33	**30.49**	**5**
71	I-80	Pleasant Dale to NW 56th Street	6 lanes + bridges	6.0	$97,000,000	Illustrative Plan	0.21	0.79	0.00	0.00	0.10	1	0.50	0.01	0.13	**29.46**	**6**
68	O Street (US-34)	120th Street to east county line	4 lanes + intersection improvem	5.0	$37,000,000	Illustrative Plan	0.15	0.49	0.00	0.00	0.10	1	0.42	0.01	0.02	**23.20**	**7**
70	US-34	NE-79 to Malcolm Spur	4 lanes + intersection improvem	1.9	$15,300,000	Illustrative Plan	0.08	0.34	0.00	0.00	0.10	0.5	0.50	0.02	0.03	**17.51**	**8**

Table G-7. Trail Projects - Project ID Order

							13	12.2	13.7	13.1	5.8	12.4	12.1	7.7	10		
ID	**Trail Name**	**Limits**	**Description**	**Project Length (Miles)**	**Project Cost (2021$)**	**Status**	**Maintenance**	**Mobility and System Reliability**	**Livability and Travel Choice**	**Safety and Security**	**Economic Vitality**	**Environmental Sustainability**	**Transportation Equity**	**Funding and Cost Effectiveness**	**Community Input**	**Total Score**	**Rank**
T-03	Woodlands	Jensen Park to Rokeby Rd	New Trail	1.18	$500,000	Illustrative Plan	0.25	0.50	0.42	0.46	0.42	0.54	0.00	0.12	0.24	**33.5**	**49**
T-04	Woodlands	Rokeby Rd to S 70th St to Yankee Hill Rd	New Trail	1.50	$950,000	Committed											
T-07	Landmark Fletcher	33rd St & Superior St to 27th St	New Trail; Sidepath	1.79	$700,000	Illustrative Plan	0.25	0.67	0.79	0.58	0.63	0.50	0.33	0.12	0.48	**49.4**	**18**
T-09	Wilderness Hills	Yankee Hill Rd to Rokeby Rd and S 40th St	New Trail	0.95	$1,200,000	Committed											
T-11	Waterford	N 84th St to Stevens Creek	New Trail	2.74	$900,000	Committed											
T-12	Stevens Creek	Murdock Trail to Waterford Trail	New Trail	1.79	$1,300,000	Illustrative Plan	0.33	0.67	0.39	0.44	0.56	0.50	0.00	0.05	0.14	**34.9**	**45**
T-13	Cardwell Branch Trail	GPTN Connector to Folsom Trail	New Trail	1.15	$800,000	Illustrative Plan	0.33	0.56	0.50	0.44	0.56	0.67	0.33	0.10	0.17	**41.7**	**29**
T-15	W Holdrege Street Trail	NW 48th St to NW 56th St	Sidepath	0.48	$250,000	Bundle with Roadway FC Project 10											
T-16	N 48th Street Trail	Murdock Trail to Superior St	Sidepath	0.52	$200,000	Bundle with Roadway FC Project 41											
T-18	Deadmans Run Trail	Murdock Trail to Cornhusker Hwy and Railroad grade separation	New Trail and Grade Separation	0.65	$300,000	Priority Project	0.25	0.92	0.71	0.79	0.71	0.38	0.33	0.32	0.50	**54.7**	**12**
T-19	Boosalis - Bison Connector	Van Dorn St to S 17th St/Burnam St	Sidepath	1.09	$300,000	Priority Project	0.42	0.92	0.75	0.75	0.75	0.79	0.33	0.36	1.00	**67.7**	**1**
T-20	Deadmans Run Trail	N 48th St to Mo Pac Trail	New Trail	1.35	$550,000	Priority Project	0.25	0.75	0.71	0.67	0.54	0.54	0.67	0.17	0.69	**57.0**	**7**
T-21	East Campus Trail	Leighton St to Holdrege St	New Trail	0.15	$150,000	Priority Project	0.25	0.75	0.67	0.63	0.54	0.79	1.00	0.71	0.45	**64.8**	**3**
T-23	S 27th Street Connector	Rokeby Rd to South Beltway	New Trail	1.87	$800,000	Illustrative Plan	0.33	0.72	0.50	0.39	0.56	0.67	0.00	0.09	0.31	**40.4**	**33**
T-24	S 56th Street Connector	Rokeby Rd to South Beltway	New Trail	1.92	$1,200,000	Illustrative Plan	0.33	0.72	0.50	0.39	0.56	0.67	0.00	0.06	0.19	**39.0**	**38**
T-25	S 84th Street Connector	Rokeby Rd to South Beltway	New Trail	1.36	$700,000	Illustrative Plan	0.33	0.72	0.50	0.39	0.56	0.67	0.00	0.10	0.26	**40.0**	**35**
T-26	South Beltway Trail - Phase I	S 27th St to S 56th St	New Trail	1.26	$1,500,000	Illustrative Plan	0.33	0.67	0.50	0.67	0.78	0.56	0.00	0.05	0.26	**42.5**	**26**
T-27	Greenway Corridor Trail/Haines Branch	Pioneers Park Nature Center to Spring Creek Prairie Audubon Center	New Trail	8.01	$4,500,000	Committed											
T-28	NW 56th Street Trail	W Adams St to W Superior St	New Trail	1.63	$600,000	Illustrative Plan	0.25	0.67	0.63	0.63	0.63	0.67	0.33	0.15	0.33	**48.5**	**19**
T-29	South Street	Folsom St to Jamaica Trail	Sidepath	1.07	$750,000	Priority Project	1.00	0.67	0.79	0.46	0.58	0.54	0.33	0.14	0.45	**57.7**	**6**
T-30	W. O Street	SW 40th St to SW 48th St	Sidepath	0.51	$260,000	Committed											
T-31	W A Street Connector	A Street from SW 36th to SW 40th; SW 40th from A St to F St	Sidepath	0.69	$120,000	Priority Project	0.27	1.00	0.83	0.90	0.77	0.67	0.33	0.92	0.19	**64.6**	**4**
T-33	Stevens Creek	Murdock trail to Hwy 6	New Trail	1.93	$1,000,000	Illustrative Plan	0.33	0.67	0.50	0.44	0.67	0.56	0.00	0.07	0.19	**38.4**	**39**
T-34	N 48th Street/Bike Park Trail	Superior St to N 56th St	New Trail; Sidepath	2.09	$900,000	Priority Project	0.25	0.75	0.63	0.46	0.50	0.46	1.00	0.10	0.21	**50.6**	**17**
T-35	N 1st Street	N 1st St crossing of Hwy 34	Sidepath	0.28	$400,000	Priority Project	0.27	1.00	0.63	0.79	0.67	0.75	0.00	0.24	0.21	**51.7**	**14**
T-36	NW 12th Street	W Fletcher Ave to Aster St with US 34 grade separated crossing	Sidepath; Grade Sepa	1.03	$400,000	Priority Project	0.25	0.75	0.63	0.75	0.67	0.67	0.33	0.23	0.24	**51.1**	**16**
T-37	Rock Island	Old Cheney grade separated crossing	Grade Separation	0.00	$1,200,000	Committed - As part of Committed Roadway Project											
T-38	Tierra Williamsburg	Old Cheney grade separated crossing	Grade Separation	0.00	$1,200,000	Illustrative Plan	0.30	0.33	0.42	1.00	0.25	0.54	0.33	0.06	0.48	**44.2**	**22**
T-39	10th Street Trail	Hwy 2 intersection improvements	Crossing Improveme	0.00	$2,200,000	Bundle with Roadway FC Project 82											
T-40	S 91st Street Trail	Hwy 2 grade separated crossing	Grade Separation	0.00	$2,200,000	Illustrative Plan	0.29	0.38	0.54	1.00	0.42	0.63	0.00	0.03	0.07	**40.0**	**34**
T-41	Mo Pac Trail	S 112th Street grade separated crossing	Grade Separation		$1,210,000	Illustrative Plan	0.30	0.30	0.43	0.77	0.27	0.63	0.00	0.33	0.07	**36.2**	**42**
T-42	Mo Pac Trail	S 84th Street grade separated crossing	Grade Separation	0.00	$1,700,000	Illustrative Plan	0.29	0.29	0.46	0.83	0.25	0.63	0.00	0.04	0.17	**35.7**	**43**
T-43	Yankee Hill Rd	S 56th St to S 70th St	Sidepath	0.97	$350,000	Priority Project	0.33	1.00	0.67	0.67	0.67	1.00	0.00	0.29	0.36	**56.4**	**9**
T-44	S 14th Street & Yankee Hill Connector (w/RTSD project)	South LPS Property Line to Yankee Hill	Sidepath	0.98	$400,000	Priority Project	0.33	1.00	0.67	1.00	0.67	1.00	0.67	0.31	0.19	**67.4**	**2**
T-45	Landmark Fletcher	Fletcher Ave from N 27th St to N 14th St	Sidepath	1.22	$990,000	Committed											
T-46	Prairie Village Trail	N 84th St to Stevens Creek, South of Adams	New Trail; Sidepath	1.16	$500,000	Illustrative Plan	0.33	0.67	0.67	0.33	0.67	0.67	0.00	0.15	0.02	**39.5**	**37**
T-47	Van Dorn Trail	S 84th St and Van Dorn to S 106th and MoPac Trail	New Trail	1.70	$1,200,000	Illustrative Plan	0.33	0.67	0.67	0.33	0.67	0.67	0.00	0.06	0.40	**42.6**	**25**
T-48	Air Park Connector - Phase I	NW 13th St to NW 27th St	Sidepath	0.98	$600,000	Priority Project	0.33	1.00	1.00	1.00	1.00	0.67	0.00	0.19	0.21	**61.0**	**5**
T-49	Air Park Connector - Phase II	NW 27th St to NW 48th St	Sidepath	2.00	$900,000	Priority Project	0.33	1.00	1.00	0.33	1.00	0.67	0.00	0.11	0.17	**51.2**	**15**
T-51	South Beltway Trail - Phase II	S 56th St to S 84th St	New Trail	2.23	$3,500,000	Illustrative Plan	0.33	0.83	0.33	0.00	0.83	0.67	0.00	0.02	0.14	**33.7**	**48**
T-52	South Beltway Trail - Phase III	S 84th Street to Hwy 2	New Trail	2.12	$3,500,000	Illustrative Plan	0.33	0.67	0.33	0.00	0.67	0.67	0.00	0.02	0.10	**30.3**	**50**

Table G-7. Trail Projects - Project ID Order

							13	12.2	13.7	13.1	5.8	12.4	12.1	7.7	10		
ID	**Trail Name**	**Limits**	**Description**	**Project Length (Miles)**	**Project Cost (2021$)**	**Status**	**Maintenance**	**Mobility and System Reliability**	**Livability and Travel Choice**	**Safety and Security**	**Economic Vitality**	**Environmental Sustainability**	**Transportation Equity**	**Funding and Cost Effectiveness**	**Community Input**	**Total Score**	**Rank**
T-53	NW 56th Street Trail	W Holdrege to W Partridge	Sidepath	0.22	$100,000	Priority Project	0.33	1.00	0.67	0.33	0.67	1.00	0.00	0.93	0.14	**54.9**	**11**
T-54	Chris Buetler Trail - Jamaica North Conr	J Street to N Street	New Trail	0.34	$250,000	Committed											
T-55	Yankee Hill Road	S 40th St to S 56th St	Sidepath	1.02	$350,000	Bundle with Roadway FC Project 27 & 83											
T-61	Beal Slough Trail	S 56th St and London Rd to S 70th St and Yankee Hill	New Trail	2.22	$1,480,000	Committed											
T-63	Folsom Street	W Old Cheney south 1/2 mile	Sidepath	0.49	$65,000	Illustrative Plan	0.27	0.38	0.31	0.50	0.51	0.83	0.00	1.00	0.07	**40.7**	**31**
T-64	S 70th Street Connector	Old Post Rd to MoPac Trail	Sidepath	1.87	$700,000	Priority Project	0.47	0.99	0.79	0.57	0.69	0.83	0.00	0.14	0.36	**55.3**	**10**
T-65	Pine Lake Rd/S 98th St	Billy Wolff Trail to Napa Ridge Dr	Sidepath	0.66	$300,000	Illustrative Plan	0.40	0.70	0.44	0.43	0.55	0.82	0.00	0.26	0.07	**41.5**	**30**
T-66	Yankee Hill Road	S 14th St to S 27th St	Sidepath	1.02	$350,000	Priority Project	0.40	0.77	0.60	0.53	0.56	0.89	0.67	0.29	0.24	**56.8**	**8**
T-67	Old Cheney Rd	Warlick Blvd to Jamaica North	Sidepath	0.54	$250,000	Committed - As part of Committed Roadway Project											
T-68	Folsom St	Old Cheney to Pioneers Blvd	Sidepath	1.02	$350,000	Illustrative Plan	0.27	0.44	0.36	0.50	0.41	0.77	0.00	0.18	0.07	**34.3**	**46**
T-69	Pioneers Blvd	Jamaica North Trail to Coddington Ave	Sidepath	1.84	$700,000	Illustrative Plan	0.27	0.55	0.37	0.50	0.41	0.67	0.00	0.09	0.10	**34.1**	**47**
T-70	Coddington Ave	Pioneers Blvd to South St	Sidepath	1.57	$650,000	Illustrative Plan	0.39	0.59	0.35	0.50	0.49	0.67	0.00	0.11	0.12	**36.8**	**41**
T-71	Van Dorn St	SW 40th St to Prairie Corridor Trail	Sidepath	1.26	$500,000	Illustrative Plan	0.27	0.61	0.41	0.50	0.45	0.67	0.33	0.15	0.14	**40.6**	**32**
T-72	SW 40th St	Van Dorn St to W A Street	Sidepath	1.00	$350,000	Illustrative Plan	0.27	0.52	0.41	0.50	0.45	0.67	0.33	0.21	0.12	**39.7**	**36**
T-74	Oak Creek Trail	Saline Wetlands Nature Center to N 1st St	New Trail	0.58	$300,000	Illustrative Plan	0.27	0.65	0.47	0.41	0.61	0.52	0.33	0.25	0.31	**42.3**	**27**
T-75	Arbor Road Trail	N 14th St to I-80 with grade separation at I-80	Sidepath and Grade Separation	1.55	$600,000	Illustrative Plan	0.27	0.60	0.40	0.47	0.48	0.60	1.00	0.15	0.19	**47.7**	**20**
T-76	Arbor Road Trail	I-80 to Salt Creek Trail	Sidepath	2.94	$2,400,000	Illustrative Plan	0.27	0.48	0.41	0.47	0.51	0.60	1.00	0.04	0.07	**44.6**	**21**
T-77	Little Salt Creek Trail	Arbor Rd to Landmark Fletcher	New Trail	1.63	$2,000,000	Illustrative Plan	0.27	0.53	0.41	0.37	0.54	0.47	1.00	0.04	0.14	**43.2**	**23**
T-78	Salt Creek Trail	N 56th St to Stevens Creek	New Trail	1.73	$900,000	Illustrative Plan	0.27	0.49	0.40	0.37	0.45	0.51	1.00	0.09	0.07	**42.1**	**28**
T-79	Stevens Creek Trail	Salt Creek Trail to Cornhusker Hwy with grade separation of Cornhusker Hwy	New Trail	1.05	$1,000,000	Illustrative Plan	0.27	0.47	0.40	0.42	0.46	0.56	1.00	0.08	0.07	**43.2**	**24**
T-80	NW 12th Street	NW 10th St to W Fletcher Ave	Sidepath	0.46	$200,000	Priority Project	0.39	0.71	0.75	0.57	0.74	0.97	0.00	0.48	0.10	**52.2**	**13**
T-81	Folsom Street Connector	1/2 mile north of W Denton Rd to Cardwell Branch Trail	Trail	0.77	$800,000	Illustrative Plan	0.27	0.51	0.31	0.50	0.51	0.87	0.00	0.09	0.02	**35.1**	**44**
T-82	Stevens Creek	Waterford Trail to MoPac Trail	New Trail	2.43	$1,700,000	Illustrative Plan	0.30	0.67	0.39	0.37	0.61	0.57	0.00	0.04	0.38	**36.9**	**40**

Table G-8. Trail Projects - Rank Order

							13	12.2	13.7	13.1	5.8	12.4	12.1	7.7	10		
ID	**Trail Name**	**Limits**	**Description**	**Project Length (Miles)**	**Project Cost (2021$)**	**Status**	**Maintenance**	**Mobility and System Reliability**	**Livability and Travel Choice**	**Safety and Security**	**Economic Vitality**	**Environmental Sustainability**	**Transportation Equity**	**Funding and Cost Effectiveness**	**Community Input**	**Total Score**	**Rank**
T-45	Landmark Fletcher	Fletcher Ave from N 27th St to N 14th St	Sidepath	1.22	$990,000	Committed											
T-61	Beal Slough Trail	S 56th St and London Rd to S 70th St and Yankee Hill	New Trail	2.22	$1,480,000	Committed											
T-54	Chris Buetler Trail - Jamaica North Conr	J Street to N Street	New Trail	0.34	$250,000	Committed											
T-04	Woodlands	Rokeby Rd to S 70th St to Yankee Hill Rd	New Trail	1.50	$950,000	Committed											
T-09	Wilderness Hills	Yankee Hill Rd to Rokeby Rd and S 40th St	New Trail	0.95	$1,200,000	Committed											
T-11	Waterford	N 84th St to Stevens Creek	New Trail	2.74	$900,000	Committed											
T-30	W. O Street	SW 40th St to SW 48th St	Sidepath	0.51	$260,000	Committed											
T-27	Greenway Corridor Trail/Haines Branch	Pioneers Park Nature Center to Spring Creek Prairie Audubon Center	New Trail	8.01	$4,500,000	Committed											
T-37	Rock Island	Old Cheney grade separated crossing	Grade Separation	0.00	$1,200,000	Committed - As part of Committed Roadway Project											
T-67	Old Cheney Rd	Warlick Blvd to Jamaica North	Sidepath	0.54	$250,000	Committed - As part of Committed Roadway Project											
T-16	N 48th Street Trail	Murdock Trail to Superior St	Sidepath	0.52	$200,000	Bundle with Roadway FC Project 41											
T-55	Yankee Hill Road	S 40th St to S 56th St	Sidepath	1.02	$350,000	Bundle with Roadway FC Project 27 & 83											
T-15	W Holdrege Street Trail	NW 48th St to NW 56th St	Sidepath	0.48	$250,000	Bundle with Roadway FC Project 10											
T-39	10th Street Trail	Hwy 2 intersection improvements	Crossing Improveme	0.00	$2,200,000	Bundle with Roadway FC Project 82											
T-19	Boosalis - Bison Connector	Van Dorn St to S 17th St/Burnam St	Sidepath	1.09	$300,000	Priority Project	0.42	0.92	0.75	0.75	0.75	0.79	0.33	0.36	1.00	**67.7**	**1**
T-44	S 14th Street & Yankee Hill Connector (w/RTSD project)	South LPS Property Line to Yankee Hill	Sidepath	0.98	$400,000	Priority Project	0.33	1.00	0.67	1.00	0.67	1.00	0.67	0.31	0.19	**67.4**	**2**
T-21	East Campus Trail	Leighton St to Holdrege St	New Trail	0.15	$150,000	Priority Project	0.25	0.75	0.67	0.63	0.54	0.79	1.00	0.71	0.45	**64.8**	**3**
T-31	W A Street Connector	A Street from SW 36th to SW 40th; SW 40th from A St to F St	Sidepath	0.69	$120,000	Priority Project	0.27	1.00	0.83	0.90	0.77	0.67	0.33	0.92	0.19	**64.6**	**4**
T-48	Air Park Connector - Phase I	NW 13th St to NW 27th St	Sidepath	0.98	$600,000	Priority Project	0.33	1.00	1.00	1.00	1.00	0.67	0.00	0.19	0.21	**61.0**	**5**
T-29	South Street	Folsom St to Jamaica Trail	Sidepath	1.07	$750,000	Priority Project	1.00	0.67	0.79	0.46	0.58	0.54	0.33	0.14	0.45	**57.7**	**6**
T-20	Deadmans Run Trail	N 48th St to Mo Pac Trail	New Trail	1.35	$550,000	Priority Project	0.25	0.75	0.71	0.67	0.54	0.54	0.67	0.17	0.69	**57.0**	**7**
T-66	Yankee Hill Road	S 14th St to S 27th St	Sidepath	1.02	$350,000	Priority Project	0.40	0.77	0.60	0.53	0.56	0.89	0.67	0.29	0.24	**56.8**	**8**
T-43	Yankee Hill Rd	S 56th St to S 70th St	Sidepath	0.97	$350,000	Priority Project	0.33	1.00	0.67	0.67	0.67	1.00	0.00	0.29	0.36	**56.4**	**9**
T-64	S 70th Street Connector	Old Post Rd to MoPac Trail	Sidepath	1.87	$700,000	Priority Project	0.47	0.99	0.79	0.57	0.69	0.83	0.00	0.14	0.36	**55.3**	**10**
T-53	NW 56th Street Trail	W Holdrege to W Partridge	Sidepath	0.22	$100,000	Priority Project	0.33	1.00	0.67	0.33	0.67	1.00	0.00	0.93	0.14	**54.9**	**11**
T-18	Deadmans Run Trail	Murdock Trail to Cornhusker Hwy and Railroad grade separation	New Trail and Grade Separation	0.65	$300,000	Priority Project	0.25	0.92	0.71	0.79	0.71	0.38	0.33	0.32	0.50	**54.7**	**12**
T-80	NW 12th Street	NW 10th St to W Fletcher Ave	Sidepath	0.46	$200,000	Priority Project	0.39	0.71	0.75	0.57	0.74	0.97	0.00	0.48	0.10	**52.2**	**13**
T-35	N 1st Street	N 1st St crossing of Hwy 34	Sidepath	0.28	$400,000	Priority Project	0.27	1.00	0.63	0.79	0.67	0.75	0.00	0.24	0.21	**51.7**	**14**
T-49	Air Park Connector - Phase II	NW 27th St to NW 48th St	Sidepath	2.00	$900,000	Priority Project	0.33	1.00	1.00	0.33	1.00	0.67	0.00	0.11	0.17	**51.2**	**15**
T-36	NW 12th Street	W Fletcher Ave to Aster St with US 34 grade separated crossing	Sidepath; Grade Sepa	1.03	$400,000	Priority Project	0.25	0.75	0.63	0.75	0.67	0.67	0.33	0.23	0.24	**51.1**	**16**
T-34	N 48th Street/Bike Park Trail	Superior St to N 56th St	New Trail; Sidepath	2.09	$900,000	Priority Project	0.25	0.75	0.63	0.46	0.50	0.46	1.00	0.10	0.21	**50.6**	**17**
T-07	Landmark Fletcher	33rd St & Superior St to 27th St	New Trail; Sidepath	1.79	$700,000	Illustrative Plan	0.25	0.67	0.79	0.58	0.63	0.50	0.33	0.12	0.48	**49.4**	**18**
T-28	NW 56th Street Trail	W Adams St to W Superior St	New Trail	1.63	$600,000	Illustrative Plan	0.25	0.67	0.63	0.63	0.63	0.67	0.33	0.15	0.33	**48.5**	**19**
T-75	Arbor Road Trail	N 14th St to I-80 with grade separation at I-80	Sidepath and Grade Separation	1.55	$600,000	Illustrative Plan	0.27	0.60	0.40	0.47	0.48	0.60	1.00	0.15	0.19	**47.7**	**20**
T-76	Arbor Road Trail	I-80 to Salt Creek Trail	Sidepath	2.94	$2,400,000	Illustrative Plan	0.27	0.48	0.41	0.47	0.51	0.60	1.00	0.04	0.07	**44.6**	**21**
T-38	Tierra Williamsburg	Old Cheney grade separated crossing	Grade Separation	0.00	$1,200,000	Illustrative Plan	0.30	0.33	0.42	1.00	0.25	0.54	0.33	0.06	0.48	**44.2**	**22**
T-77	Little Salt Creek Trail	Arbor Rd to Landmark Fletcher	New Trail	1.63	$2,000,000	Illustrative Plan	0.27	0.53	0.41	0.37	0.54	0.47	1.00	0.04	0.14	**43.2**	**23**

Table G-8. Trail Projects - Rank Order

							13	12.2	13.7	13.1	5.8	12.4	12.1	7.7	10		
ID	**Trail Name**	**Limits**	**Description**	**Project Length (Miles)**	**Project Cost (2021$)**	**Status**	**Maintenance**	**Mobility and System Reliability**	**Livability and Travel Choice**	**Safety and Security**	**Economic Vitality**	**Environmental Sustainability**	**Transportation Equity**	**Funding and Cost Effectiveness**	**Community Input**	**Total Score**	**Rank**
T-79	Stevens Creek Trail	Salt Creek Trail to Cornhusker Hwy with grade separation of Cornhusker Hwy	New Trail	1.05	$1,000,000	Illustrative Plan	0.27	0.47	0.40	0.42	0.46	0.56	1.00	0.08	0.07	**43.2**	**24**
T-47	Van Dorn Trail	S 84th St and Van Dorn to S 106th and MoPac Trail	New Trail	1.70	$1,200,000	Illustrative Plan	0.33	0.67	0.67	0.33	0.67	0.67	0.00	0.06	0.40	**42.6**	**25**
T-26	South Beltway Trail - Phase I	S 27th St to S 56th St	New Trail	1.26	$1,500,000	Illustrative Plan	0.33	0.67	0.50	0.67	0.78	0.56	0.00	0.05	0.26	**42.5**	**26**
T-74	Oak Creek Trail	Saline Wetlands Nature Center to N 1st St	New Trail	0.58	$300,000	Illustrative Plan	0.27	0.65	0.47	0.41	0.61	0.52	0.33	0.25	0.31	**42.3**	**27**
T-78	Salt Creek Trail	N 56th St to Stevens Creek	New Trail	1.73	$900,000	Illustrative Plan	0.27	0.49	0.40	0.37	0.45	0.51	1.00	0.09	0.07	**42.1**	**28**
T-13	Cardwell Branch Trail	GPTN Connector to Folsom Trail	New Trail	1.15	$800,000	Illustrative Plan	0.33	0.56	0.50	0.44	0.56	0.67	0.33	0.10	0.17	**41.7**	**29**
T-65	Pine Lake Rd/S 98th St	Billy Wolff Trail to Napa Ridge Dr	Sidepath	0.66	$300,000	Illustrative Plan	0.40	0.70	0.44	0.43	0.55	0.82	0.00	0.26	0.07	**41.5**	**30**
T-63	Folsom Street	W Old Cheney south 1/2 mile	Sidepath	0.49	$65,000	Illustrative Plan	0.27	0.38	0.31	0.50	0.51	0.83	0.00	1.00	0.07	**40.7**	**31**
T-71	Van Dorn St	SW 40th St to Prairie Corridor Trail	Sidepath	1.26	$500,000	Illustrative Plan	0.27	0.61	0.41	0.50	0.45	0.67	0.33	0.15	0.14	**40.6**	**32**
T-23	S 27th Street Connector	Rokeby Rd to South Beltway	New Trail	1.87	$800,000	Illustrative Plan	0.33	0.72	0.50	0.39	0.56	0.67	0.00	0.09	0.31	**40.4**	**33**
T-40	S 91st Street Trail	Hwy 2 grade separated crossing	Grade Separation	0.00	$2,200,000	Illustrative Plan	0.29	0.38	0.54	1.00	0.42	0.63	0.00	0.03	0.07	**40.0**	**34**
T-25	S 84th Street Connector	Rokeby Rd to South Beltway	New Trail	1.36	$700,000	Illustrative Plan	0.33	0.72	0.50	0.39	0.56	0.67	0.00	0.10	0.26	**40.0**	**35**
T-72	SW 40th St	Van Dorn St to W A Street	Sidepath	1.00	$350,000	Illustrative Plan	0.27	0.52	0.41	0.50	0.45	0.67	0.33	0.21	0.12	**39.7**	**36**
T-46	Prairie Village Trail	N 84th St to Stevens Creek, South of Adams	New Trail; Sidepath	1.16	$500,000	Illustrative Plan	0.33	0.67	0.67	0.33	0.67	0.67	0.00	0.15	0.02	**39.5**	**37**
T-24	S 56th Street Connector	Rokeby Rd to South Beltway	New Trail	1.92	$1,200,000	Illustrative Plan	0.33	0.72	0.50	0.39	0.56	0.67	0.00	0.06	0.19	**39.0**	**38**
T-33	Stevens Creek	Murdock trail to Hwy 6	New Trail	1.93	$1,000,000	Illustrative Plan	0.33	0.67	0.50	0.44	0.67	0.56	0.00	0.07	0.19	**38.4**	**39**
T-82	Stevens Creek	Waterford Trail to MoPac Trail	New Trail	2.43	$1,700,000	Illustrative Plan	0.30	0.67	0.39	0.37	0.61	0.57	0.00	0.04	0.38	**36.9**	**40**
T-70	Coddington Ave	Pioneers Blvd to South St	Sidepath	1.57	$650,000	Illustrative Plan	0.39	0.59	0.35	0.50	0.49	0.67	0.00	0.11	0.12	**36.8**	**41**
T-41	Mo Pac Trail	S 112th Street grade separated crossing	Grade Separation		$1,210,000	Illustrative Plan	0.30	0.30	0.43	0.77	0.27	0.63	0.00	0.33	0.07	**36.2**	**42**
T-42	Mo Pac Trail	S 84th Street grade separated crossing	Grade Separation	0.00	$1,700,000	Illustrative Plan	0.29	0.29	0.46	0.83	0.25	0.63	0.00	0.04	0.17	**35.7**	**43**
T-81	Folsom Street Connector	1/2 mile north of W Denton Rd to Cardwell Branch Trail	Trail	0.77	$800,000	Illustrative Plan	0.27	0.51	0.31	0.50	0.51	0.87	0.00	0.09	0.02	**35.1**	**44**
T-12	Stevens Creek	Murdock Trail to Waterford Trail	New Trail	1.79	$1,300,000	Illustrative Plan	0.33	0.67	0.39	0.44	0.56	0.50	0.00	0.05	0.14	**34.9**	**45**
T-68	Folsom St	Old Cheney to Pioneers Blvd	Sidepath	1.02	$350,000	Illustrative Plan	0.27	0.44	0.36	0.50	0.41	0.77	0.00	0.18	0.07	**34.3**	**46**
T-69	Pioneers Blvd	Jamaica North Trail to Coddington Ave	Sidepath	1.84	$700,000	Illustrative Plan	0.27	0.55	0.37	0.50	0.41	0.67	0.00	0.09	0.10	**34.1**	**47**
T-51	South Beltway Trail - Phase II	S 56th St to S 84th St	New Trail	2.23	$3,500,000	Illustrative Plan	0.33	0.83	0.33	0.00	0.83	0.67	0.00	0.02	0.14	**33.7**	**48**
T-03	Woodlands	Jensen Park to Rokeby Rd	New Trail	1.18	$500,000	Illustrative Plan	0.25	0.50	0.42	0.46	0.42	0.54	0.00	0.12	0.24	**33.5**	**49**
T-52	South Beltway Trail - Phase III	S 84th Street to Hwy 2	New Trail	2.12	$3,500,000	Illustrative Plan	0.33	0.67	0.33	0.00	0.67	0.67	0.00	0.02	0.10	**30.3**	**50**



APPENDIX H
Environmental Overview

H. Environmental Overview

Introduction

Environmental stewardship of the natural, social, and cultural environment is a priority for the Lincoln MPO. This Appendix provides an overview of the potential environmental, social, and cultural resources that could prompt further analyses for the proposed transportation system improvements considered for this Plan. The following sections provide a general description of the resources, potential project overlap indicating future assessment needs, and recommended mitigation measures associated with proposed multimodal alternatives. This overview is broad in scope and meant to assist in the prioritization of future projects; specific improvement projects would still require separate resource reviews, as needed, for environmental compliance.

Federal Requirements

FAST Act states that the MPO will communicate with state and local agencies concerning land use management, natural resources, environmental protection, conservation, and historic preservation during the LRTP planning process. Discussions are to include the identification of potential mitigation measures, in consultation with Federal, State, and tribal wildlife agencies, as well as land management and regulatory agencies. This Appendix documents assessments conducted to comply with these requirements. The assessments were used to identify additional planning needs or mitigation measures associated with proposed projects.

Location of Projects

Lancaster County is located in southeast Nebraska and encompasses an area of 847 square miles or 542,080 acres. Lincoln is the largest city in Lancaster County with an estimated population of 283,839 (US Census Bureau 2019). Twelve other cities and villages are located in the county. Most of the proposed projects occur within the future service limit of the City of Lincoln.

Environmental Study Area (ESA)

Each fiscally constrained roadway project under consideration in the Plan was assigned a 120-foot (ft) right-of-way (ROW) regardless of its hierarchy, such as two-lane or four-lane (i.e., 60 feet on either side of the centerline of the alignment). In addition to ROW, a 100-ft buffer was established on both sides of the ROW to represent an area of potential disturbance to natural, social and cultural environment resources (for a total ESA width of 320 ft). For fiscally constrained trail projects, a 100-ft buffer was used around the trail alignment (for a total ESA width of 200 ft).

Resource Assessment Methodology

For most of the environmental, social, and cultural resources, maps were created in ArcMap to identify potential areas of concern associated with the 44 fiscally constrained urban and NDOT roadway, 26 rural roadway and 31 trail projects (**Chapter 7**). A few resources required other inventory methods. The ESA boundary for each fiscally constrained roadway (rural and urban areas) and trail project was overlaid onto each resource map to determine potential concerns requiring further investigation. **Table H.1** provides as a summary of the number of projects identified during the resources assessment which are explained further in this Appendix.

Table H.1 Number of Fiscally Constrained Roadway and Trail Project Overlapping with Environmental, Social, and Cultural Resources

Resource Reviewed	Rural Area Roadway Projects (Lancaster County)	Urban Area Roadway Projects (Lincoln)	Trail Projects (County-wide)
Floodplains	18	23	17
Stream Corridors	20	34	26
Freshwater Wetlands	21	23	22
Saline Wetlands	6	11	6
Northern Long-Eared Bat	22	21	18
Northern Long-Eared Bat Hibernaculum	0	1	2
Western Prairie Fringed Orchid	5	2	2
Saltwort	1	8	7
Salt Creek Tiger Beetle	1	0	2
Salt Creek Tiger Beetle Critical Habitat	1	0	1
Parks/Open Space and Trails (potential Section 4(f) resources)	5	21	21
Schools	0	3	6
Environmental Justice - Minority Populations	6	31	27
Environmental Justice - Low Income Populations	0	5	1
Equity Index – Highest Quartile	1	9	4
Equity Index – Moderate to High Quartile	0	7	4
Equity Index – Low to Moderate Quartile	5	10	9
Equity Index – Lowest Quartile	20	18	14
Historic Sites	0	4	0
Historic Districts	0	3	1

Natural Environment

Topography

Lancaster County is located in the Rolling Hills, Valleys, and Plains Topographic Regions. The general topography of the county consists of hilly land with moderate to steep slopes and rounded ridge crests composed mostly of glacial till that has been eroded and mantled by loess. The hills slope towards the Valley regions and gradually flatten near the historic floodplains of creek channels. At the southwest edge of the county, the topography transitions from Rolling Hills to Plains region, the flat land that lies above the valley. Elevations range from a high of 1,520 feet above sea level (asl) in the northwest and southwest part of the county to a low of 1,080 feet asl in the northeast.

Hydrology

Surface water flows in over 400 miles of warm water streams that meander through Lancaster County. Most notably Salt Creek flows from across the county southwest to northeast towards the Platte River. Major Salt Creek tributaries include Middle Creek, Oak Creek, Haines Branch, Beal Slough, and Stevens Creek. Several tributaries of the Nemaha River drain to the southeast in the southeast corner of the county. Many of the streams and their adjoining corridors consist of a variety of floodplain and riparian habitats. The floodplains for these streams account for 13.8% of the land area of the county.

Vegetation

Historically, tallgrass prairie dominated the landscape of Lancaster County; however, only approximately 8,640 acres of native prairie remain and is mostly concentrated in the west-central portion of the county. Forested areas generally occur along stream corridors, within recreational areas, and on city/state properties. Planted trees are also common along residential streets. The Salt Creek basin is designated as a Saline Wetlands biologically unique landscape by the Nebraska Natural Legacy Project's State Wildlife Action Plan (Schneider et al. 2011). Freshwater wetlands occur throughout the county within floodplain depressions, closed depressions, ditch depressions and within stream or riparian corridors. Agricultural land uses surround the City of Lincoln and other urban areas and consist of row crops, pasture, hay land, other farming operations.

Natural Areas

There are 10 state wildlife management or recreation areas with reservoirs within the county, including Branched Oak, Pawnee, Conestoga Lake, Bluestem, Olive Creek, and Stagecoach. Several other natural areas at the edge of or outside of urban boundaries are managed by the City of Lincoln, Lower Platte South Natural Resource District (LPSNRD), Nebraska Game and Parks Commission (NGPC), and other organizations. These include Pioneers Park, Arbor Lake, Frank Shoemaker Marsh, Marsh Wren, Helmuth Marsh Public Access Area, Nine-Mile Prairie, and several others.

Natural Resource Assessments

The following resource assessments summarize potential impacts needing environmental review for future projects. These resource assessments are based on data from the City of Lincoln/Lancaster County Planning Department utilizing their Natural Resource Geographic Information Systems (NRGIS) dataset (Lincoln-Lancaster County Planning Department 2001). The NRGIS dataset was initiated in 2000 to inventory county natural resources and complement a Greenprint Challenge guidance document for Lancaster County and the City of Lincoln (City of Lincoln and Lancaster County 2001).

Figure H.1 Watersheds

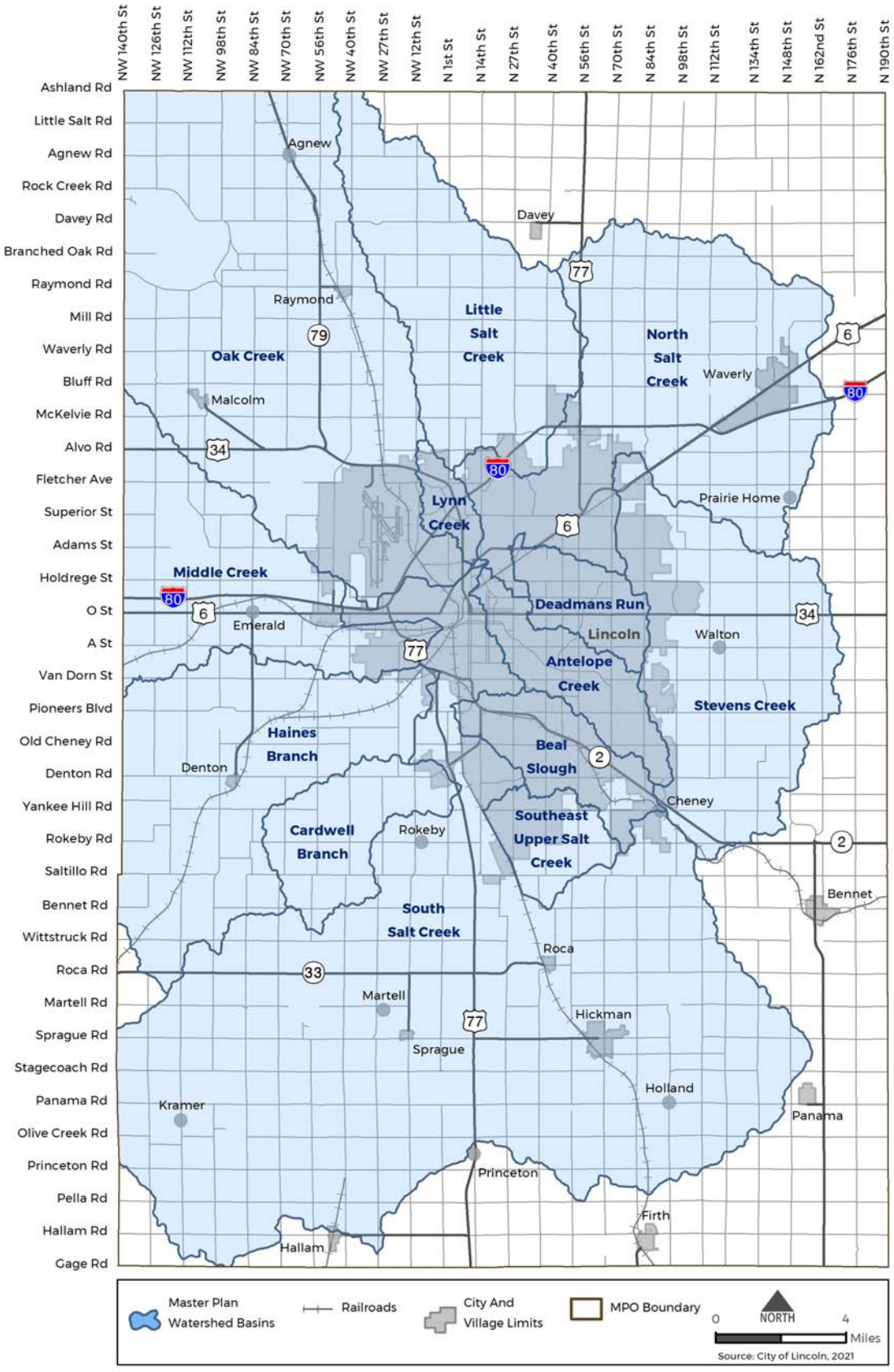


Figure H.2 Floodplains

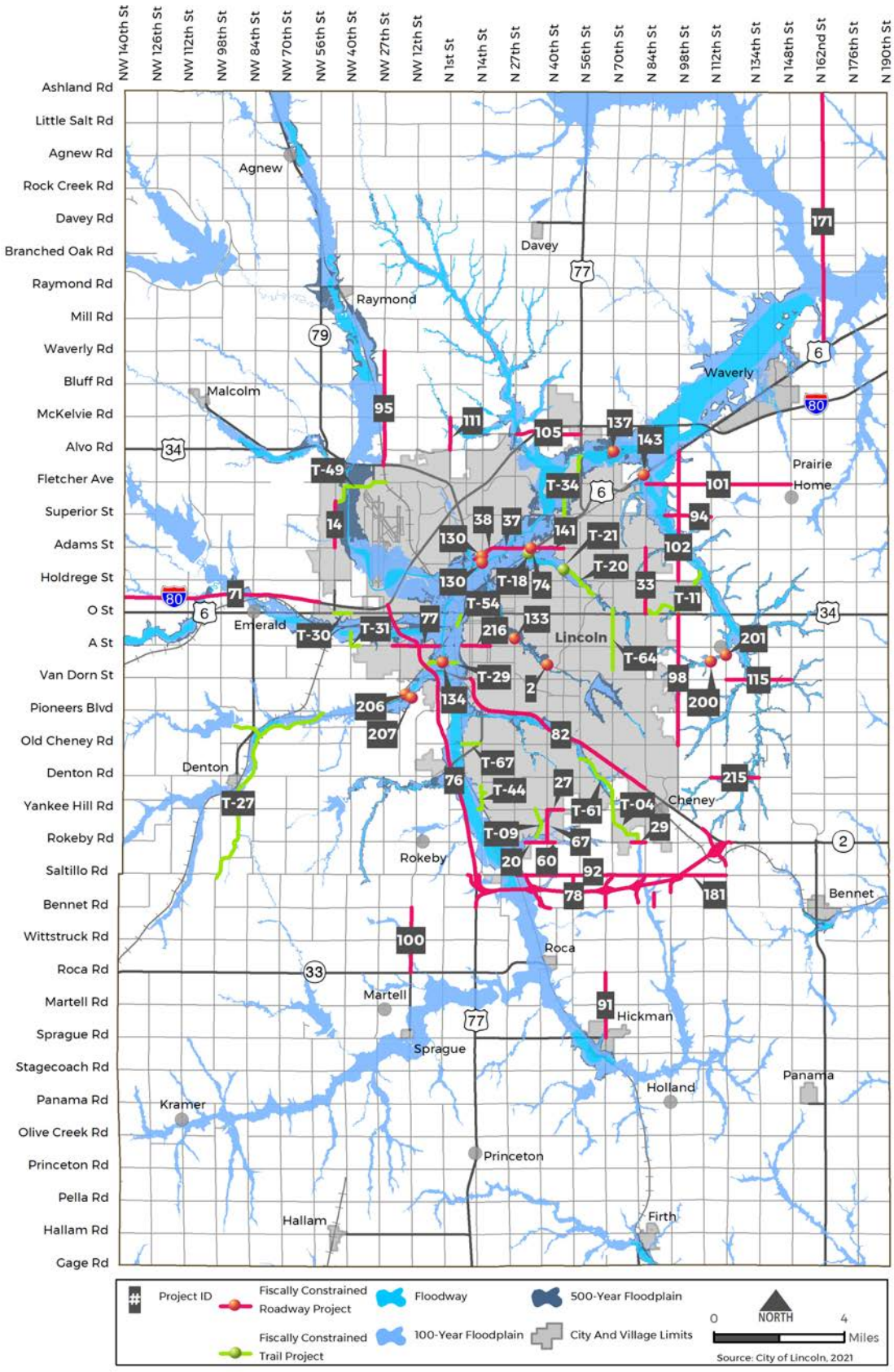
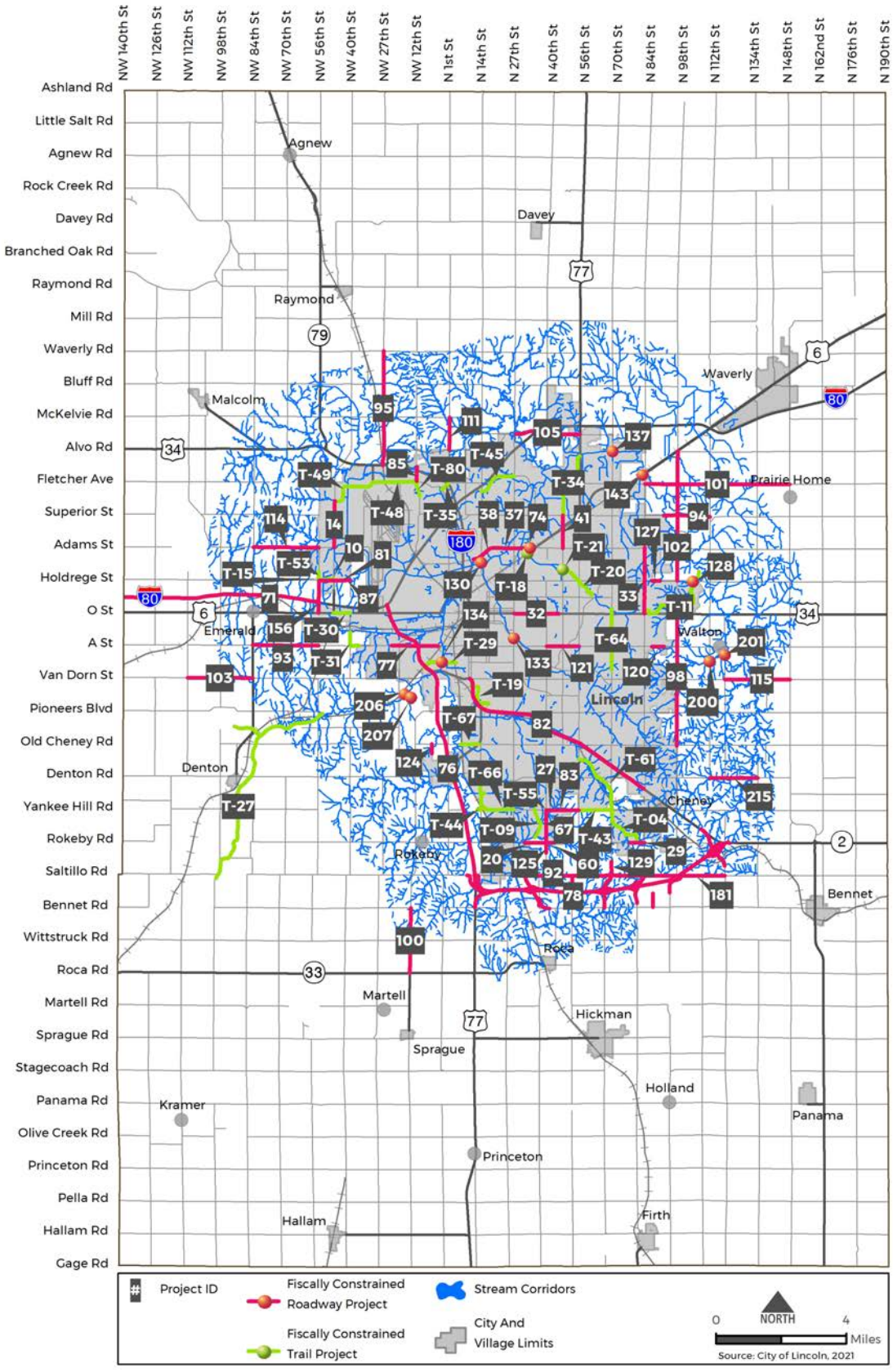


Figure H.3 Stream Corridors



Water Quality and Watershed Master Plans

The protection of water quality is important because of the need for a reliable drinking water supply, for swimming and recreation, for fish and shellfish consumption, for adequate agricultural production, for fish and wildlife habitat, and other beneficial uses. Clean water is pivotal in the protection of human health and the environment.

Watershed Master Plans were created to provide long-term planning tools and guidance to address water quality, flood management, and stream stability for sustainable urban growth in each major Lancaster County watershed. An important component of water quality management involves monitoring and managing pollutants in stormwater runoff. Stormwater runoff can carry sediment, nutrients, road salts, heavy metals, bacteria, oil, and other pollutants that deteriorate water quality within a watershed or adjacent wetlands.

City of Lincoln regulations are in place to address water quality, including post-construction stormwater management, stormwater best management practices, and Stormwater Pollution Prevention Plans (SWPPP) for erosion and sediment control. These regulations were developed to minimize adverse effects of pollutants entering waterways from stormwater runoff associated with the continued development of hard surfaces, such as roads, parking lots, sidewalks, and trails.

The boundary for 13 watershed master plans were provided by the Lincoln City/Lancaster County Planning Department (**Figure H.1**). Based on the resource assessment, only one roadway project (#104 west of Bennett) lies outside of a watershed master plan area and some roadway projects cross into as many as four watersheds. Fiscally constrained trail projects are located in all watersheds, except for the Little Salt Creek and Cardwell Branch watersheds.

Additional coordination may be needed to adhere to each watershed master plan. In addition to utilizing the Watershed Master Plans, all future projects would need to develop SWPPP documents for erosion and sediment management.

Floodplains

Floodplains are defined as the land area adjacent to a stream, river, or other waterbody that is subject to periodic inundation by regular flooding. The floodplain includes the floodway, which consists of the channel and overbank areas, and the flood fringe, which begins at the edge of the floodway and continues outward to the transitional upland fringe. The surface hydrology of floodplains is important because it affects the risk of flooding and flooding can create erosion or sedimentation problems.

To reduce the risk of flooding and flood damage, floodplains are protected by city ordinances, which require a floodplain development permit for construction in the floodplain. A National Pollutant Discharge Elimination System (NPDES) permit is required from the Nebraska Department of Environment and Energy (NDEE) for any construction sites greater than 1.0 acre.

Floodplains were identified using Flood Insurance Rate Maps (FIRMs) provided by the Federal Emergency Management Agency (FEMA) (FEMA 2011-2013). These maps identify the base floodplain, which is the area subject to a one percent or greater chance of flooding in any given year (also known as the 100-year flood). Based on the resource assessment, 41 roadway and 17 trail projects are located within the base floodplain (**Table H.1** and **Figure H.2**). These projects may require a floodplain development permit and may be subject to restrictions

concerning raises in floodplain surface elevations.

Similar to stream corridors, projects can be designed to avoid or minimize impacts to the base floodplain. Construction grading and future maintenance for trails located in floodplains may require additional consideration due to potential sediment and debris deposit during flood events, movement of the base material due to high water table, and increased vegetative growth. Mitigation may consist of onsite solutions to restore the flood corridor and habitat or offsite solutions to attenuate flood levels or preserve, restore, or establish similar habitat. If unavoidable, changes in floodplain surface elevations within the base floodplain may require submittal of a conditional letter of map revision (CLOMR) to FEMA.

Stream Corridors

Stream corridors consist of the waterway, its floodplain, and the transitional upland fringe. The corridors generally include diverse habitat types which are supported by a close connection to the hydrology of the waterway. These ecosystems can be important to wildlife because they provide water, shelter, a source of food, and connections to other habitat areas, especially in the areas surrounding Little Salt Creek where the federally endangered Salt Creek tiger beetle (*Cicindela nevadica lincolniana*) and state endangered saltwort (*Salicornia rubra*) occur. Stream corridors also provide floodwater attenuation and improve water quality by filtering runoff and collecting sediment before it enters the waterway.

The City of Lincoln has a building code regulation that limits the placement of buildings or fill within a 60-ft buffer surrounding drainageways (i.e., streams or creeks) and is referred to as the "minimum flood corridor" (LMC Ordinance 26.07.126). Stream channels are also protected under the Clean Water Act which requires compliance with Section 404 regulations for excavation or fill activities.

Stream corridors were identified using the National Hydrography Dataset which is available online (USGS 2020). For this resource review, a 60-ft buffer area was created along all streams within the 3-mile ETJ of the City of Lincoln to identify the "minimum flood corridor". Based on the resource assessment, 54 roadway and 26 trail projects cross streams and/or occur within the minimum flood corridor (**Table H.1** and **Figure H.3**).

Project constraints or resource impacts associated with stream corridors would be reduced through avoidance, minimization, and mitigation measures. Project designs would be developed to avoid or minimize fill within the "minimum flood corridor" and to lessen disturbance within the natural habitat. If impacts cannot be avoided or minimized, then mitigation would be developed. Mitigation may consist of on-site solutions to restore the flood corridor and habitat, or off-site solutions to attenuate flood levels or preserve, restore, or establish similar habitat. NDEE guidelines may require a 30-ft vegetated buffer along impacted channels and be planted with perennial, native species. Impacts to stream channels or wetlands within the corridor would require Section 404 permitting.

Figure H.4 Freshwater Wetlands

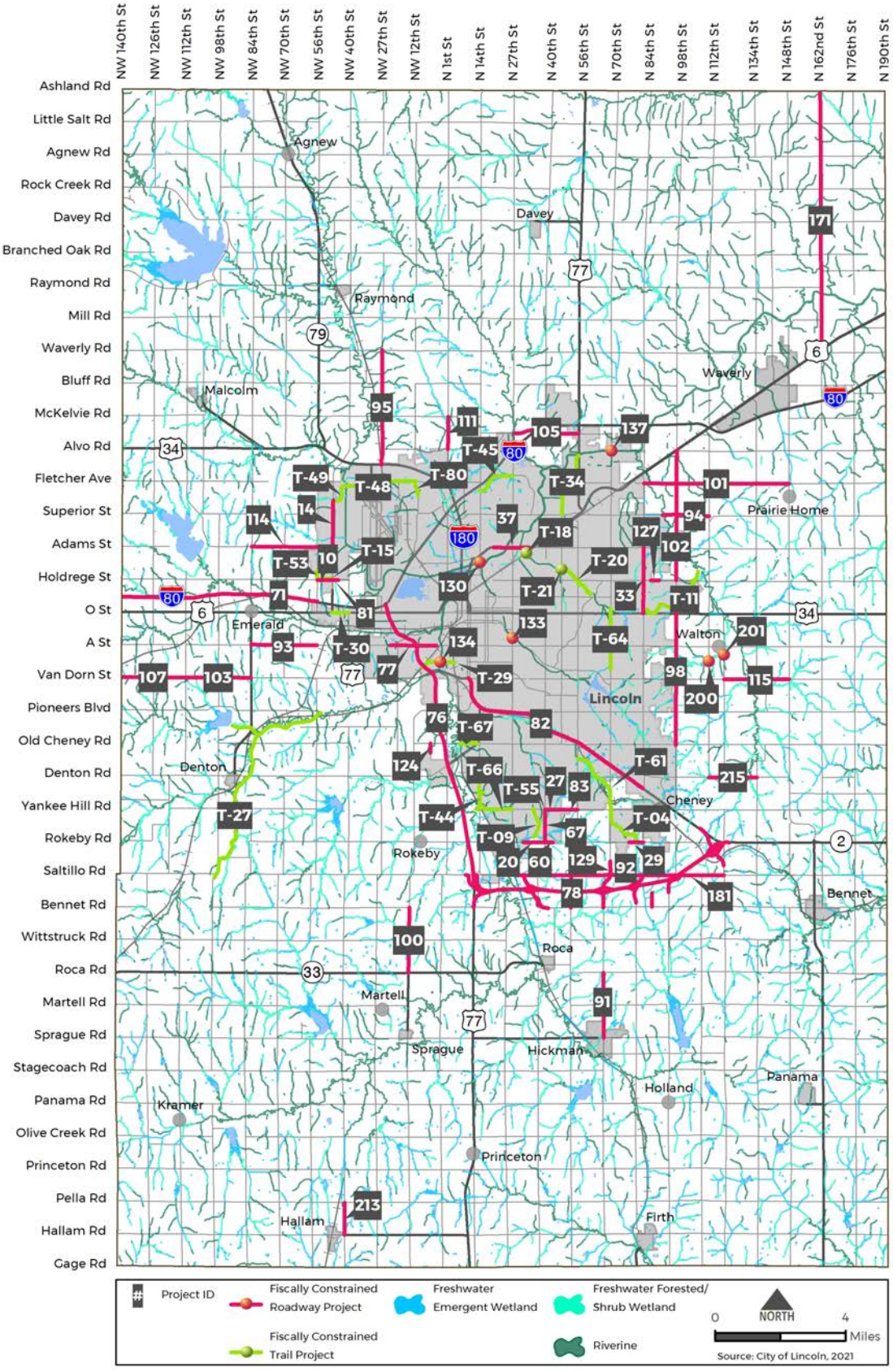
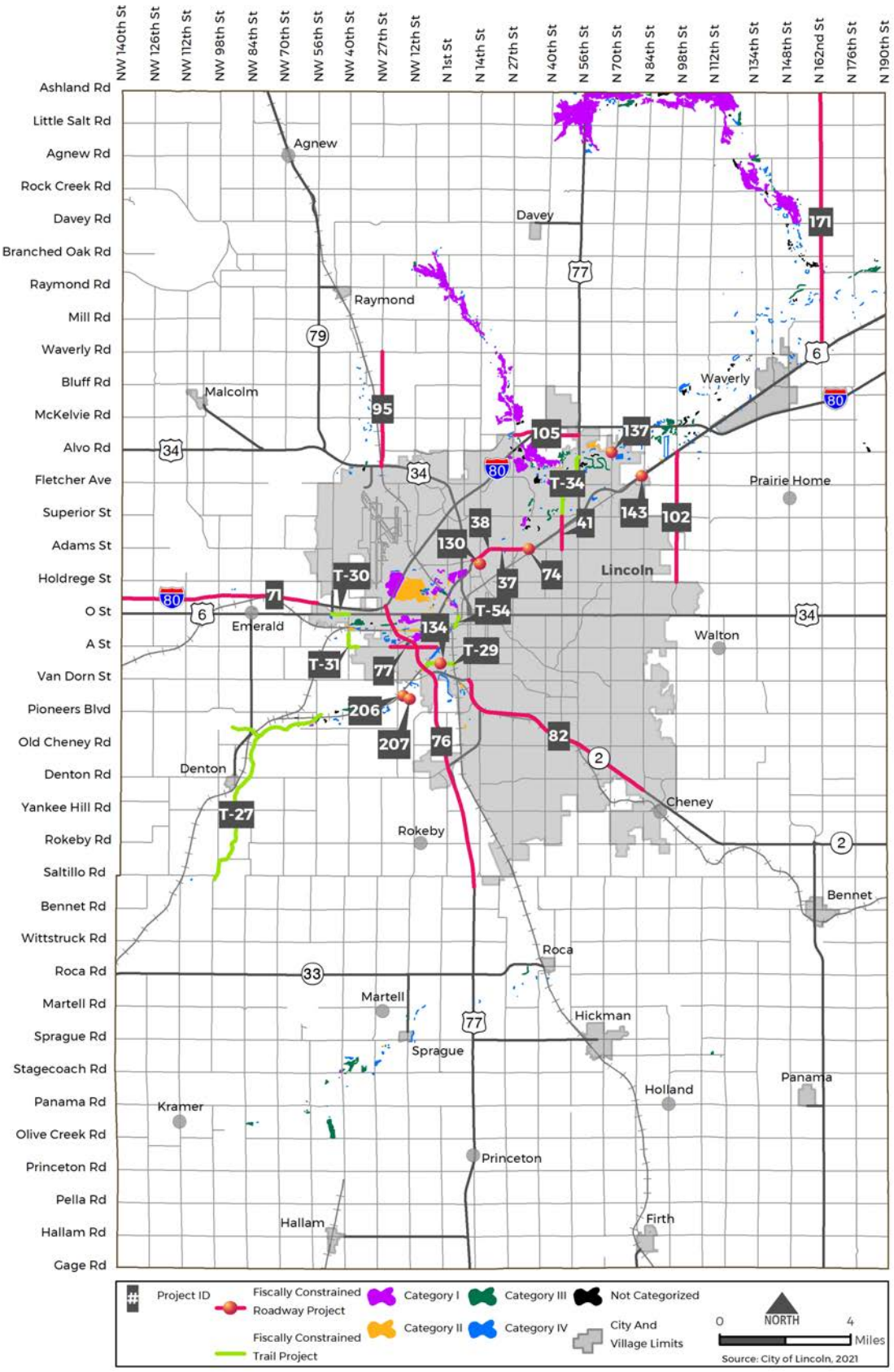


Figure H.5 Saline Wetlands



Freshwater and Saline Wetlands

Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328). Wetlands and riparian areas are important because they provide habitat for plants, fish, and wildlife; serve as groundwater recharge areas; provide storage areas for storm and flood waters; serve as natural water filtration areas; and provide protection from wave action, erosion, and storm damage.

Eastern Nebraska saline wetlands are found only in Lancaster and southern Saunders counties and are categorized as a measure of their functionality and restoration potential (**Table H.2**).

Table H.2 Saline Wetland Categorization

Category	Description
I	These wetlands support salt-loving plants, occur on saline soils, and have high value saline wetland functions or the potential to provide high values following restoration or enhancement measures.
II	These wetlands occur on saline soils but are significantly disturbed or degraded by adjacent land use or altered hydrology. Salt-loving plants may occur as part of the site's flora, but the degree of degradation would not allow restoration to a higher quality saline character.
III	These wetlands occur on saline soils but support freshwater vegetation. These sites represent former saline wetlands that had an influx of freshwater runoff due to urban or agricultural modifications within the watershed, thus diluting soil slat concentrations.
IV	These freshwater wetlands on non-saline soils occur within the saline wetland study area boundary (additional freshwater wetlands are mapped separately).

Saline wetlands are unique in that they support salt-adapted plant communities and provide habitat for the federally endangered Salt Creek tiger beetle and state endangered saltwort. Saline wetlands were historically present along the terraces of Salt Creek and its tributaries but have been greatly reduced due to urban development, agriculture, and flood control projects along Salt Creek and its tributaries.

All wetlands are protected under Title 117 of the Nebraska Administrative Code as implemented by NDEE and wetlands meeting the definitions for Waters of the U.S. in the Navigable Waters Projection Rule are protected by Section 404 of the Clean Water Act by the U.S. Army Corps of Engineers (USACE).

Wetlands were identified using the National Wetland Inventory (NWI) (USFWS 2021c), supplemented by NRGIS dataset. Freshwater and saline wetlands were mapped separately because mitigation requirements are often greater for saline wetlands. Based on the resource assessment, 44 roadway and 22 trail projects would cross freshwater wetlands (**Table H.1** and **Figure H.4**). Seventeen roadway and six trail projects would cross saline wetlands (**Table H.1** and **Figure H.5**). These projects may require a Section 404 permit and may be subject to restrictions concerning temporary and permanent wetland impacts. Similar to stream corridors and floodplains, project designs would be developed to avoid or minimize impacts to wetlands. If permanent

impacts to wetlands are unavoidable and greater than 0.1 acre, then compensatory mitigation may be required with a Section 404 permit issued by USACE, and potentially Water Quality Certification by the Nebraska Department of Environment and Energy (NDEE).

Wetland impacts would be offset by one of the following methods:

- Use of mitigation bank credits
- Construction of permittee-responsible mitigation consisting of either on-site or off-site wetland restoration, enhancement, establishment, or preservation, in addition to yearly monitoring for five years

Compensatory mitigation may be required at a 2:1 or higher ratio depending on the type and quality of wetland being impacted. Impacts to saline wetlands would require higher mitigation ratios, especially for Category I saline wetlands (Taylor and Krueger 1997).

Threatened and Endangered Species

Endangered species are plants or animals that are in danger of extinction throughout all or a significant portion of their range; threatened species are likely to become endangered within the foreseeable future. Conservation of threatened and endangered (T & E) species and their habitats help maintain the diversity and functioning of natural areas. T & E species are protected by the Endangered Species Act and the Nebraska Nongame and Endangered Species Conservation Act, which are administered by U.S. Fish and Wildlife Service (USFWS) and NGPC, respectively. Information on the potential presence of T & E species and their habitat was collected using the Conservation and Environmental Review Tool (CERT) (NGPC 2021) and the Information for Planning and Conservation (IPaC) website (USFWS 2021a). **Table H.3** identifies the eight species listed as potentially occurring in Lancaster County. Only four of the species listed in **Table H.3** have mapped ranges extending into Lancaster County. Suitable habitat within a designated range may be limited. For example, the ranges of the northern long-eared bat and western prairie fringed orchid cover all of Lancaster County; therefore, the resource assessment would have indicated that all of the roadway and trail projects occur within the ranges of those two species. However, the northern long-eared bat would likely only occur in areas with tree masses and low urban development, whereas the western prairie fringed orchid would likely only occur in rural areas with native prairie or wet meadows. Therefore, the potential habitats for northern long-eared bats and western prairie fringed orchids are further described in the below subsections relative to tree masses and native prairie.

Tree Mass and Northern Long-Eared Bat

Tree masses are defined as various wooded areas, which are mostly located in the periphery of Lincoln, in public parks, or in rural areas. Trees are important because they provide habitat for wildlife, such as the northern long-eared bat, sustain soil stabilization, attenuate wind disturbance, and provide shade. The City of Lincoln has been designated as a “Tree City USA” by the Arbor Day Foundation since 1976 (Arbor Day Website 2021). Hickman and Waverly also hold the distinction as a “Tree City USA” (Arbor Day Website 2021).

Natural wooded areas are protected by the Fish and Wildlife Coordination Act and in some cases the Endangered Species Act, which are administered by USFWS and NGPC. The Lincoln Parks and Recreation

Department Community Forestry Section is responsible for all trees on public property.

Tree mass areas were identified using the NRGIS dataset, which utilized information from updates in 2004 and 2007 (Lincoln-Lancaster County Planning Department 2001). The dataset primarily maps tree masses in rural, riparian and park settings. Although many residential areas have tree-lined streets, this data was not available for the resource assessment and in general, northern long-eared bats avoid urban areas. Based on the resource assessment, 43 roadway and 18 trail projects cross tree mass areas within the range of the northern long-eared bat (**Table H.1** and **Figure H.6**). Additionally, a known hibernacula for the northern long-eared bat requires consideration within a 0.25 mile buffer. One roadway project and two trail projects are located within the buffer for the hibernacula.

Project construction could indirectly impact tree masses by altering the area hydrology through grade changes or damaging roots through compaction. The use of retaining walls may minimize the effects of extensive grade changes. Where possible, tree removals would be minimized during planning and design. If tree removal is unavoidable and within potential habitat for the northern long-eared bat, then removal needs to avoid pups rearing season (June 1 – July 31) or may need surveys to confirm presence or absence per USFWS guidelines.

In areas not considered potential habitat for northern long-eared bats, replacement tree planting would be a suitable mitigation measure; however, special consideration should be given to the location and variety of re-planted trees. For example, several alternatives to replace ash trees (*Fraxinus* spp.) are provided by the Lincoln Parks and Recreation Department Community Forestry unit to minimize the spread and adverse impacts of the emerald ash borer (*Agrilus planipennis*) (Lincoln Parks and Recreation, 2021; Lincoln Emerald Ash Borer Response and Recovery Plan, 2018). The emerald ash borer was confirmed in the City of Lincoln in August 2018.

Native Prairie and Western Prairie Fringed Orchid

Native prairie is a grassland ecosystem lacking trees and dominated by native grasses, such as big bluestem, little bluestem, and Indian grass in the eastern Nebraska tallgrass prairie. Prairie grasslands are an important natural resource for wildlife and plant species, such as the western prairie fringed orchid, and provide a variety of ecological benefits, such as protection of water quality through sediment retention, forming and protecting soil, maintaining biodiversity, and providing seasonal habitat for migratory birds. Native prairies are protected by the Fish and Wildlife Coordination Act, which is administered by the NGPC and USFWS.

Native prairies were identified using the NRGIS dataset, which used information from prairie inventories conducted in 1990 and 1997 (Lincoln-Lancaster County Planning Department 2001). Based on the resource assessment, seven roadway and two trail projects cross native prairies within the range of the western prairie fringed orchid (**Table H.1** and **Figure H.7**). Similar to other resources, impacts to prairies would be minimized through planning and design, and could be mitigated through prairie restoration efforts. Surveys may be needed during the blooming period (June 15 – July 7) to confirm the presence or absence of western prairie fringed orchids. Additional coordination with USFWS and NGPC would be needed if these plants were present.

Figure H.6 Tree Masses and Northern Long-Eared Bat

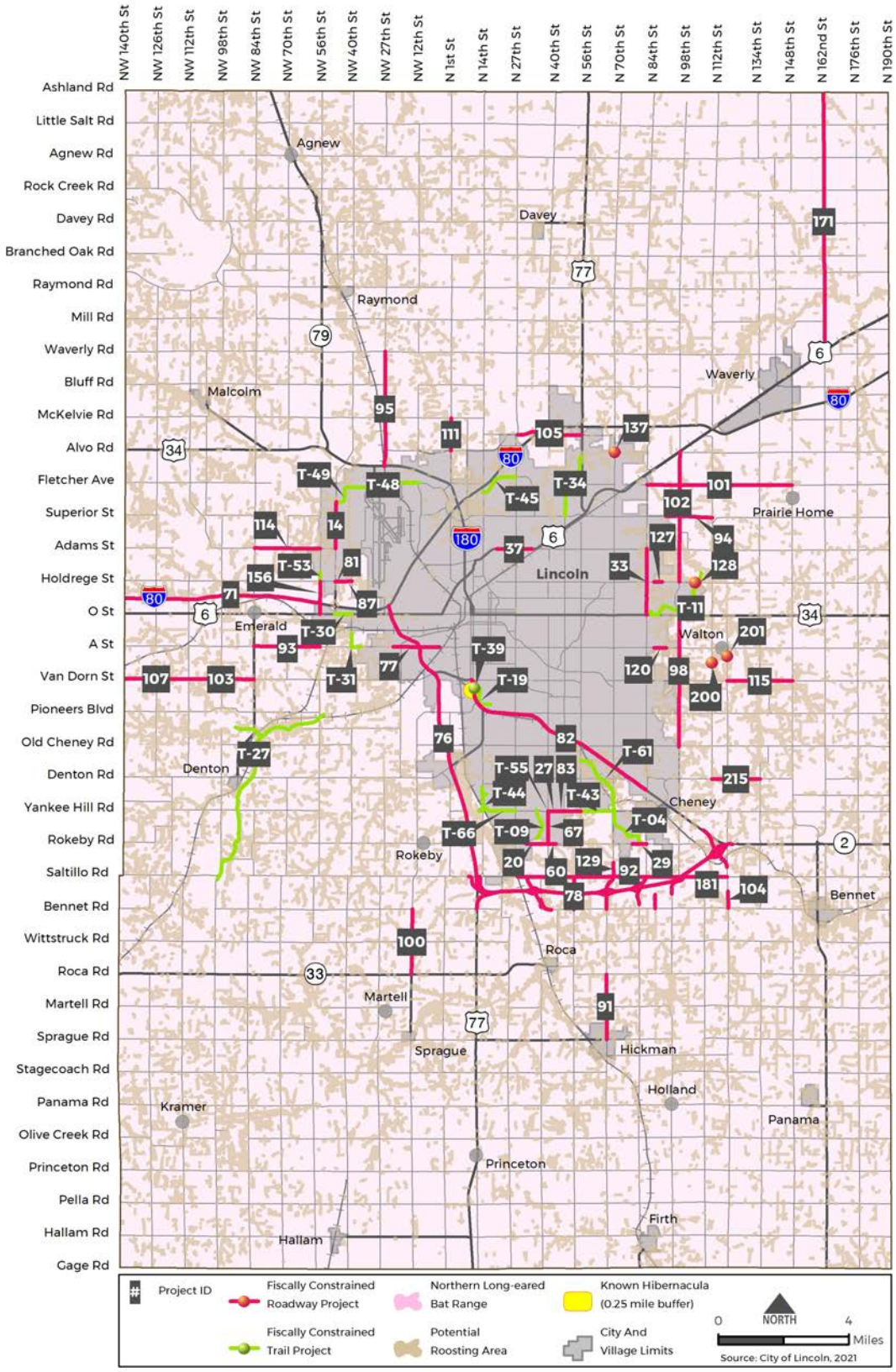


Figure H.7 Native Prairie and Western Prairie Fringed Orchid

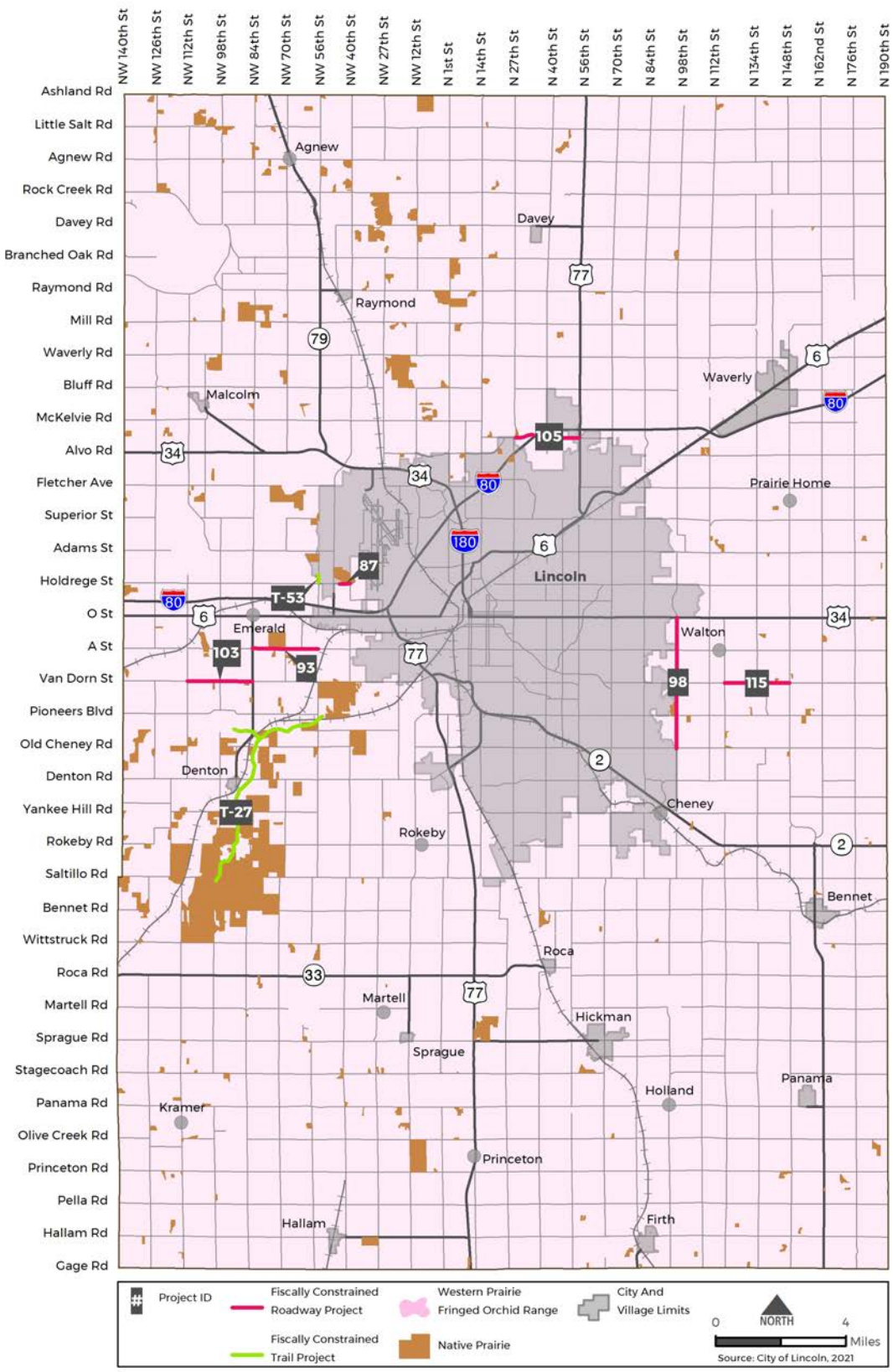


Figure H.8 Saltwort

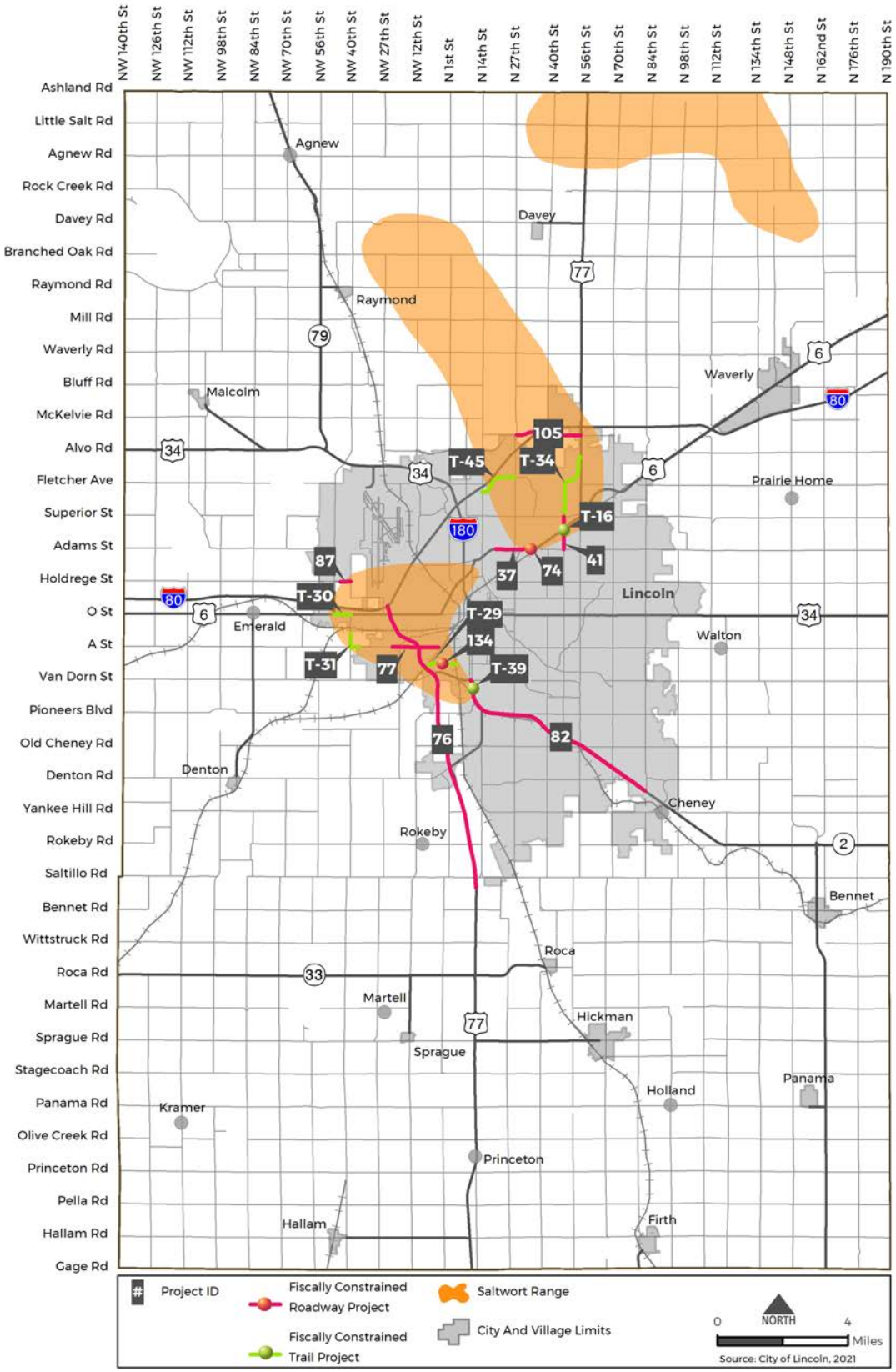


Figure H.9 Salt Creek Tiger Beetle

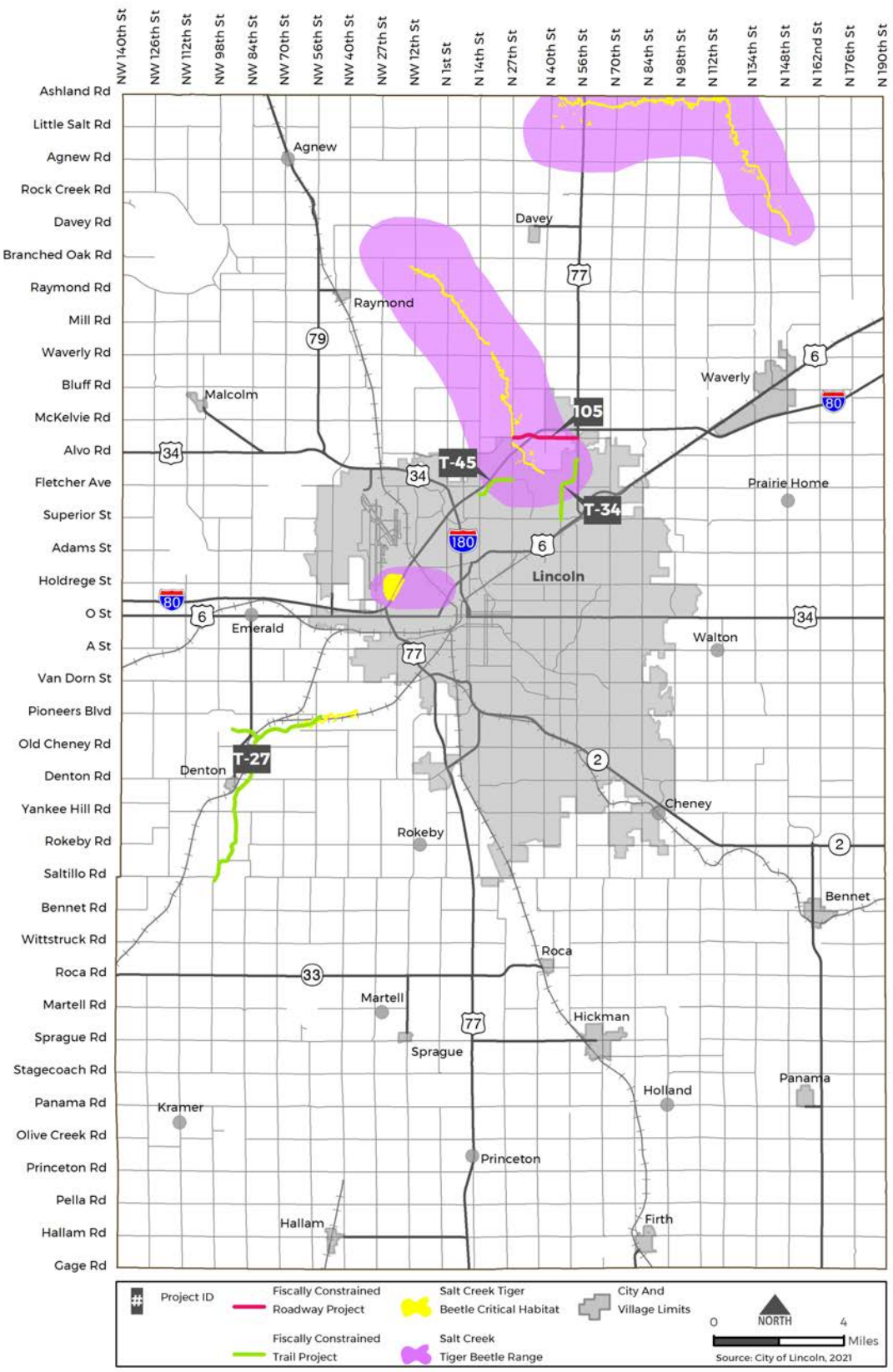


Table H.3 Threatened and Endangered Species Listed in Lancaster County

Common Name (Scientific Name)	Status[1]	Range within Lancaster County[2]
Birds		
Eastern black rail (*Laterallus jamaicensis*)	FT, ST	No[3]
Piping plover (*Charadrius melodus*)	FT, ST	No
Whooping crane (*Grus americana*)	FE, SE	No
Fishes		
Pallid sturgeon (*Scaphirhynchus albus*)	FE, SE	No
Invertebrates		
Salt Creek tiger beetle (*Cicindela nevadica lincolniana*)	FE, SE	Yes
Mammals		
Northern long-eared bat *(Myotis septentrionalis)*	FT, ST	Yes
Plants		
Saltwort *(Salicornia rubra)*	SE	Yes
Western prairie fringed orchid *(Platanthera praeclara)*	FT, ST	Yes

[1]FE = Federally Endangered, FT = Federally Threatened, SE = State Endangered, ST = State Threatened

[2]Ranges were provided by Nebraska Game and Parks Commission (NGPC 2021).

[3]This species was recently listed and may not have a range updated in CERT.

Based on the resource assessment, nine roadway and seven trail projects occur within the range of the saltwort, and one roadway and two trail projects occur within the range of the Salt Creek tiger beetle (**Table H.1**, **Figure H.8,** and **Figure H.9**).

Each project utilizing federal-aid funds would be evaluated for potential T & E presence using the Nebraska Biological Evaluation Process (NDOT 2017) to ensure that proper conservation measures are incorporated into the project planning and design to avoid and minimize impacts to T & E species or their habitat. If impacts are not sufficiently mitigated with the use of conservation measures, then further consultation with NGPC and USFWS would be required.

When possible, trails would be located outside of sensitive habitats to avoid impacting T & E species. If design and planning considerations involve T & E conservation, then trails can provide educational signage and increase awareness.

T & E Critical Habitat

The designation of critical habitat by USFWS provides special protection to areas that are considered essential to species conservation. The Salt Creek tiger beetle (SCTB) is the only T & E species in **Table H.3** with critical habitat occurring in Lancaster County. The SCTB is a sub-species that is endemic (i.e., not found in any other part of the world) to the remnant saline wetland ecosystems within the county. These beetles are an insect predator on saline mudflats and along the muddy stream banks of Salt Creek and its tributaries.

Federal agencies are required to avoid destruction or adverse modification of designated critical habitat (USFWS 2017). Critical habitat for SCTB is protected by the

Endangered Species Act, which is administered by USFWS.

Critical habitat was identified using data provided by USFWS (2021b). Based on the resource assessment, one roadway and one trail project crosses critical habitat for SCTB (**Table H.1** and **Figure H.9**). To avoid, minimize or mitigate impacts to SCTB critical habitat, coordination with USFWS would be initiated as early as possible during project planning.

Bald and Golden Eagles

Bald eagles utilize mature, forested riparian areas along large rivers and lakes throughout the state. There are several areas within Lancaster County with suitable habitat for bald eagles, such as at Branched Oak Lake and along Salt Creek. Golden eagles use shortgrass and mixed-grass prairie habitat in western Nebraska; therefore, no golden eagle habitat is present in Lancaster County.

Bald and golden eagles have specific protection under the Bald and Golden Eagle Protection Act (BGEPA), administered by the USFWS. This act prohibits the "taking" or possession of bald or golden eagles or their parts, feathers, nests, or eggs. The BGEPA also protects bald eagles from disturbance that may interfere with their normal behavior or cause abandonment of nests.

Specific habitat and ranges were not available for the roadway and trail project resource assessments; however, it is likely that much of the City of Lincoln future service limit area does not contain suitable habitat for bald eagles because of the urban setting.

If bald eagles, bald eagle nests, or suitable habitat are found within 0.5 miles of a project area, then certain conservation measures, such as presence/absence surveys, would be implemented to help avoid impacts. A qualified biologist would conduct a survey prior to construction to determine the presence or absence of nesting/roosting eagles or bald eagle nests. The implementation of surveys ensures that no bald eagles nesting within the project area would be directly displaced from their active nest by construction activities. NDOT has developed an Avian Protection Plan (APP) to help avoid and minimize project impacts to bald eagles. The APP is a useful reference because it includes standard evaluation procedures and protocols for compliance with BGEPA (NDOT 2018).

Migratory Birds

Migratory birds are species that travel from one habitat to another at specific times of the year and often over long distances. These birds are important components of the ecosystems they migrate to and from because they help balance the food web, disperse seeds, and function in plant pollination. According to the USFWS IPaC website (USFWS 2021a), over 25 species of migratory birds could utilize trees, shrub-scrub, wetland, stream, and grassland habitats within Lancaster County for breeding and nesting. Bridges and large culverts also provide habitat for various species of swallows.

Most migratory birds in Nebraska are provided protection under Nebraska Revised Statute §37-540, which prohibits take and destruction of nests or eggs of protected birds (as defined in Nebraska Revised Statute §37-237.01). The Migratory Bird Treaty Act (MBTA) also provides protection against the taking of migratory birds, which includes shooting, wounding, killing, trapping, capturing and collecting. Incidental take of protected birds is prohibited by the state statute. Construction activities that would result in the "taking" of migratory birds, eggs, young, and/or active nests, should be avoided. Although the provisions for protected birds are applicable year-round, most migratory bird nesting activity in Nebraska is from April 1 to September 1 and

from February 1 to July 15 for raptors. Nonnative species such as European starlings, rock (feral) pigeons, house sparrows, and mute swans, as well as upland gamebirds such as grouse, turkey and quail, are not included in the definition of protected birds in Nebraska nor the MBTA.

While specific habitat and species ranges have not been evaluated, general considerations can be applied to all of the fiscally constrained roadway and trail projects to avoid or minimize impacts to migratory birds.

To avoid impacts to these species, construction activities would include certain conservation measures. Removal of vegetation in suitable nesting areas would occur outside the primary nesting season (i.e., April 1 to September 1) and when no birds are actively nesting (note: some may be ground nesting birds). Work on bridges or culverts would also occur outside the primary nesting season. If removal of potential nesting habitat cannot be avoided during the primary nesting season, then a qualified biologist would survey prior to construction to determine the presence or absence of breeding birds and active nests. The NDOT APP is a useful reference because it includes standard evaluation procedures and protocols for compliance with MBTA (NDOT 2018).

Socioeconomic Environment

Public Use Properties

Parks and recreation resources are important community facilities that warrant consideration in the planning process. These public use areas include parks, open space areas, trails, and some school playgrounds that offer opportunities for recreation.

The Department of Transportation Act (DOT Act) of 1966 includes a special provision, Section 4(f), which stipulates that the Federal Highway Administration (FHWA) and other DOT agencies cannot approve the use of land from publicly owned parks, recreation areas, wildlife and waterfowl refuges, and public or private historical sites (**Cultural Environment** discusses historic sites) unless the following conditions apply:

- There is no feasible and prudent avoidance alternative to the use of land; and
- The action includes all possible planning to minimize harm to the property resulting from such use;

OR

- The Administration determines that the use of the property will have a *de minimis* impact.

In certain cases, school playgrounds may be considered Section 4(f) properties. Project activities that restrict access may also be considered a “use” under Section 4(f).

Recreation resources developed with federal funding through the Land and Water Conservation Fund (LWCF) are protected under Section 6(f) of the LWCF Act, which prohibits the conversion of these properties to anything other than public outdoor recreation uses.

Figure H.10 Parks/Open Space

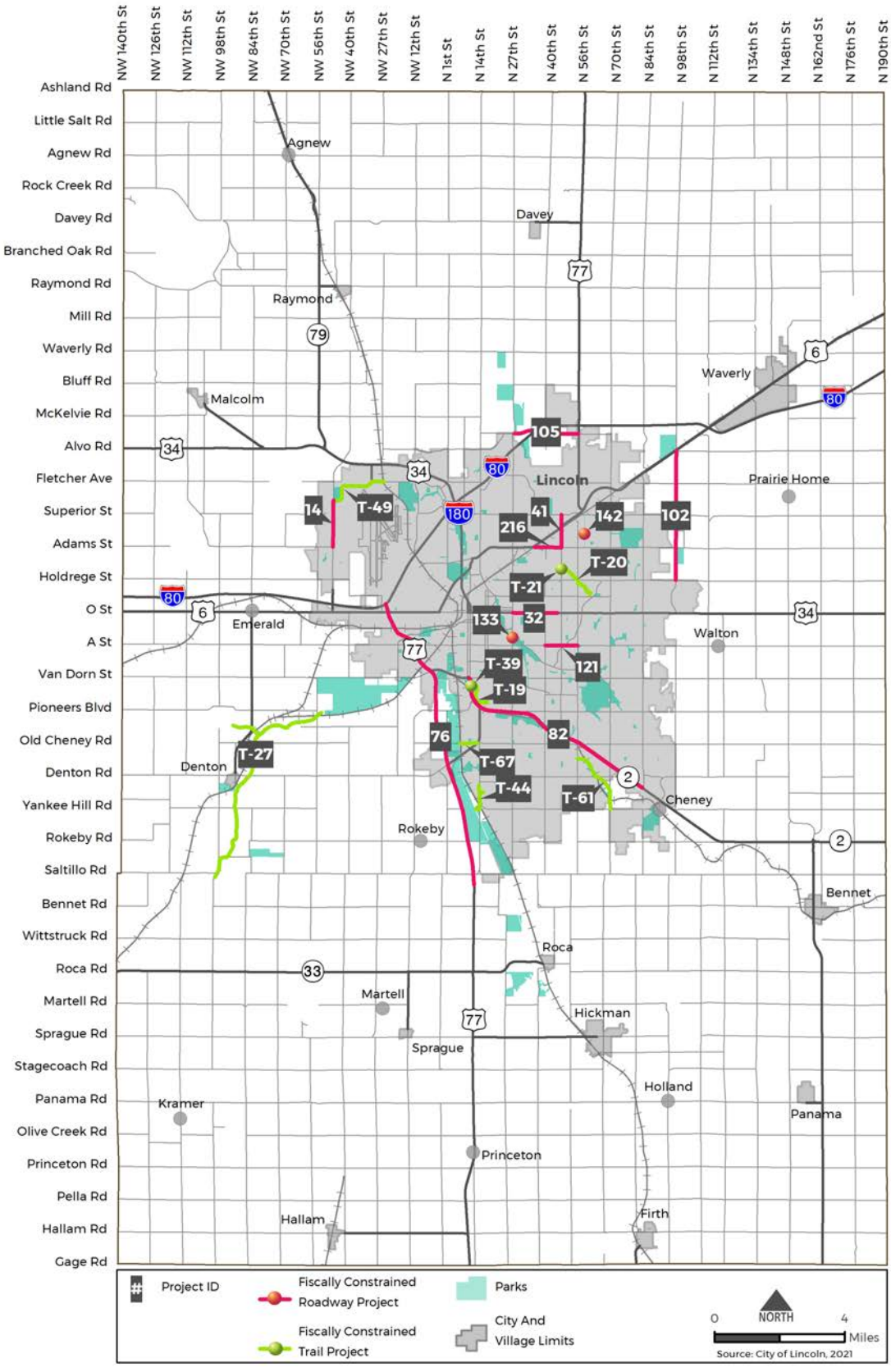


Figure H.11 Trails

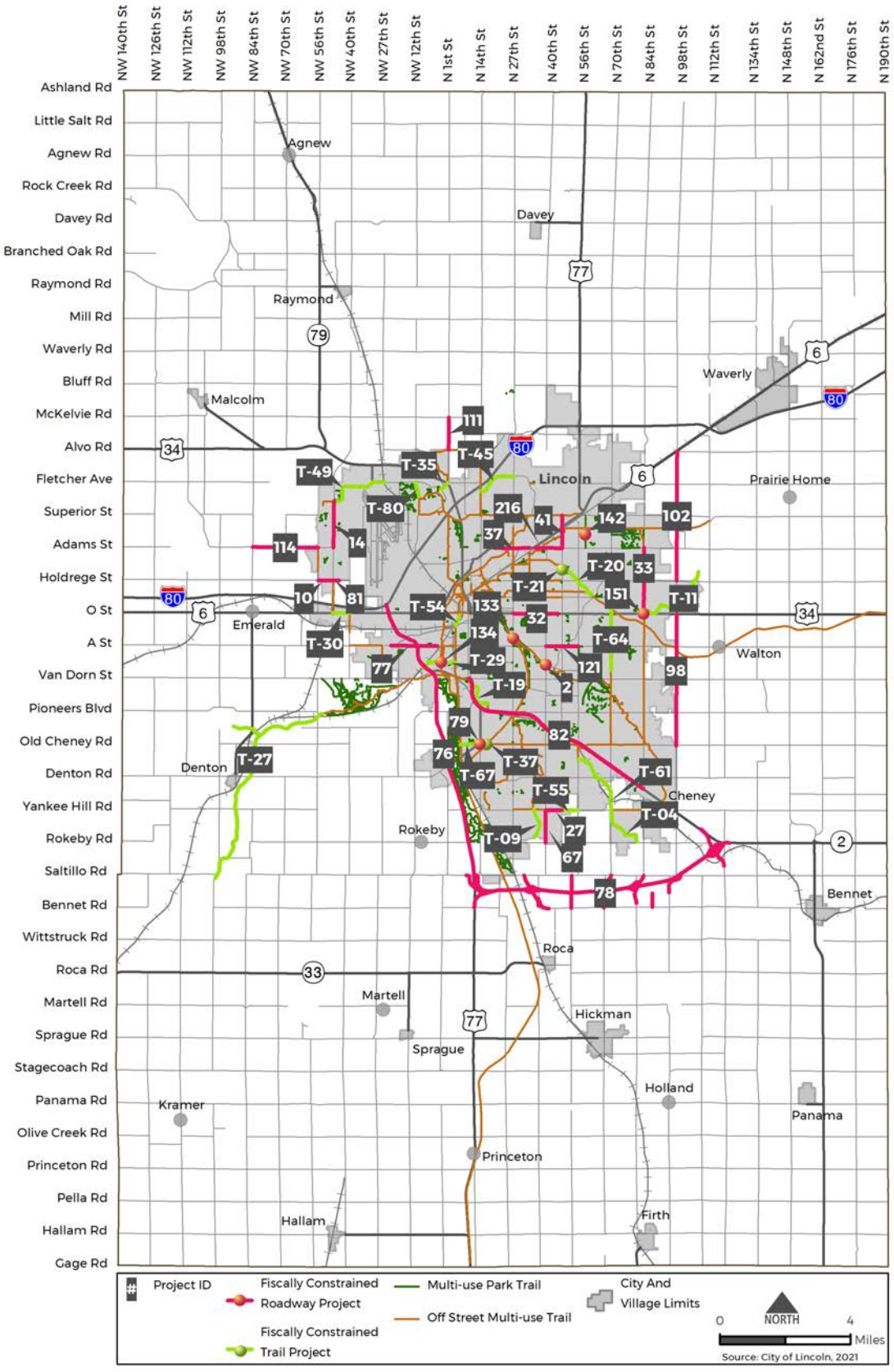
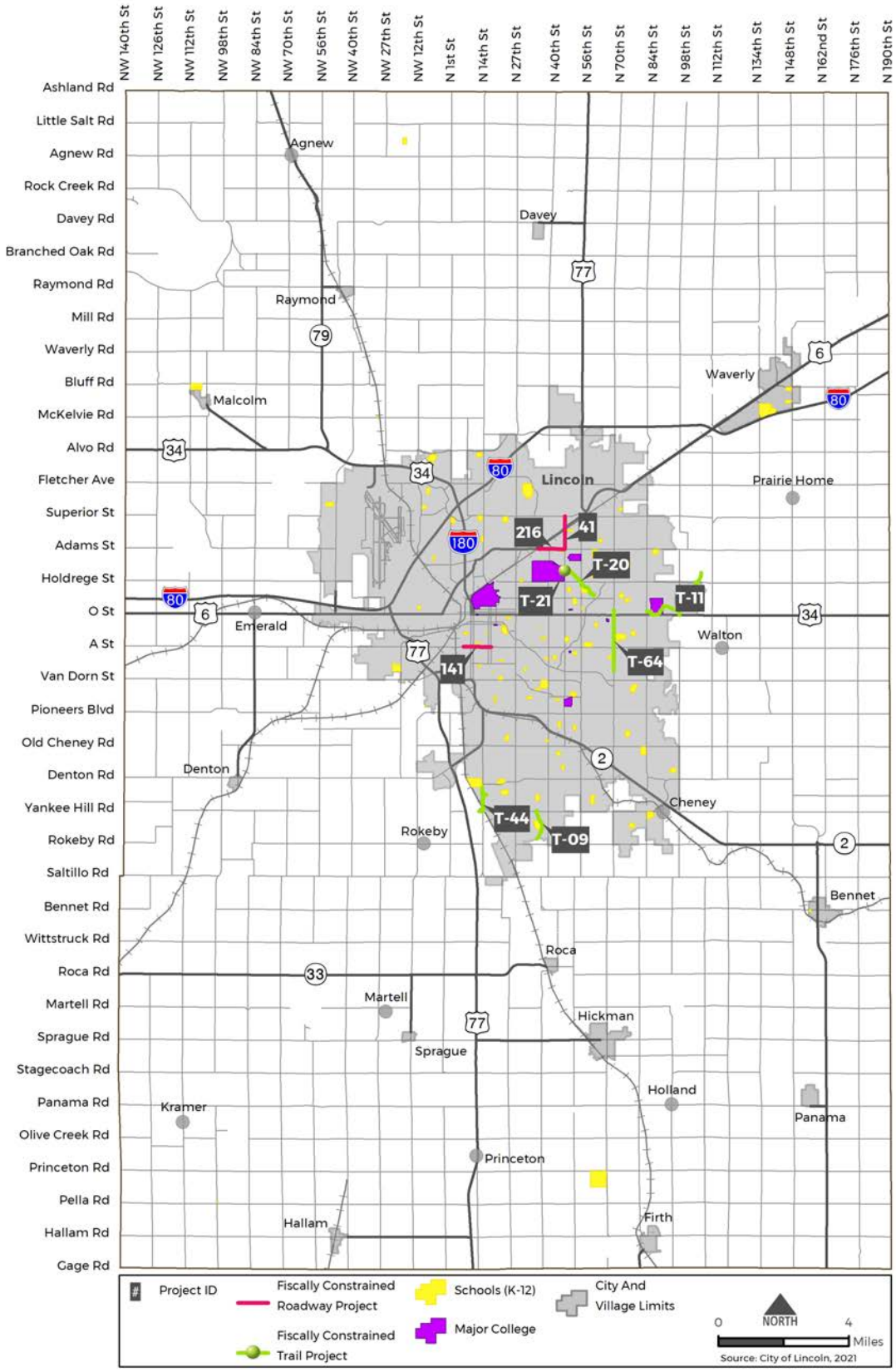


Figure H.12 Schools



Parks, Open Space, and Trails

Parks, open space areas, and bike trail locations were identified using GIS data provided by the Lincoln City Planning Department. Each of these resources was evaluated as a potential Section 4(f) property. Based on the resource assessment, 26 roadway and 21 trail projects potentially cross Section 4(f) properties (**Table H.1, Figure H.10,** and **Figure H.11**).

Schools

While some school properties may not meet Section 4(f) criteria, the resource assessment identified all school locations using GIS data provided by the Lincoln City Planning Department. Based on the resource assessment, three roadway and six trail projects are located near school properties and may need Section 4(f) consideration (**Table H.1** and **Figure H.12**).

Projects would require assessment of impacts on the activities, features and attributes of the 4(f) resource. Depending on the type and size of the impact, and the type and size of the 4(f) resource a number of options may be available to minimize harm to the property and resolve the impact, including programmatic evaluations, *de minimis* determinations, exceptions, and Individual 4(f) evaluations.

Environmental Justice and Transportation Equity

Federal requirements that protect low-income and minority populations from adverse impacts of transportation projects have additional value when combined with a wider scope of criteria that define an overburdened and underserved portion of the community. Environmental Justice reflects the intent of minimizing or mitigating harm from transportation investments to vulnerable populations. The broader goal of providing Transportation Equity within a community intends to reduce the existing disparity between population groups by improving conditions for underserved and overburdened communities by directing transportation investments accordingly. NDOT added one additional State project (ID 71) to the fiscally constrained project list after screening for Environmental Justice was completed and is therefore not included.

Environmental Justice

Title VI of the Civil Rights Act of 1964 (Title VI) ensures that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving Federal financial assistance on the basis of race, color, or national origin (42 United States Code [USC] 2000d et seq.). Executive Order 12898 on Environmental Justice (EJ) sets forth US DOT's policy to promote the principles of EJ in all programs, policies, and activities under its jurisdiction. It directs that programs, policies, and activities not have a disproportionately high and adverse human health or environmental effect on minority and low-income populations (59 FR 7629). The three fundamental EJ principles include:

1. Avoiding, minimizing, or mitigating disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations.
2. Ensuring the full and fair participation by all potentially affected communities in the transportation decision making process.
3. Preventing the denial of, reduction of, or significant delay in the receipt of benefits by minority and low-income populations.

Table H.4 Environmental Justice Definitions

Term	FHWA Definition
Adverse Effects	The totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to: bodily impairment, infirmity, illness or death; air, noise, and water pollution and soil contamination; destruction or disruption of human-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects; displacement of persons, businesses, farms, or nonprofit organizations; increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community; and the denial of, reduction in, or significant delay in the receipt of, benefits of FHWA programs, policies, or activities.
Disproportionately High and Adverse Effect to Low-Income and Minority Populations	An adverse effect that: 1. is predominately borne by a minority population and/or a low-income population; OR 2. will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the nonminority population and/or non-low-income population.
Minority	A person who is: 1. Black: a person having origins in any of the black racial groups of Africa; 2. Hispanic or Latino: a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race; 3. Asian American: a person having origins in any of the original peoples of the Far East, Southeast Asia or the Indian subcontinent; 4. American Indian and Alaskan Native: a person having origins in any of the original people of North America, South America (including Central America), and who maintains cultural identification through tribal affiliation or community recognition; OR 5. Native Hawaiian and Other Pacific Islander: a person having origins in any of the original peoples of Hawaii, Guam, Samoa or other Pacific Islands.
Low-Income Person	A person whose median household income is at or below the U.S. Department of Health and Human Services (DHHS) poverty guidelines. (Note – DHHS does not publish tabulations of the number of people below the DHHS poverty guidelines. The federal poverty thresholds are used for calculating all official poverty population statistics, and are updated annually by the Census Bureau. The best approximation for the number of people below the DHHS poverty guidelines in a particular area is the number of persons below the Census Bureau poverty thresholds in that area.)
Minority Population	Any readily identifiable group of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FHWA program, policy, or activity.
Low-Income Population	Any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FHWA program, policy, or activity.

Figure H.13 Minority Populations

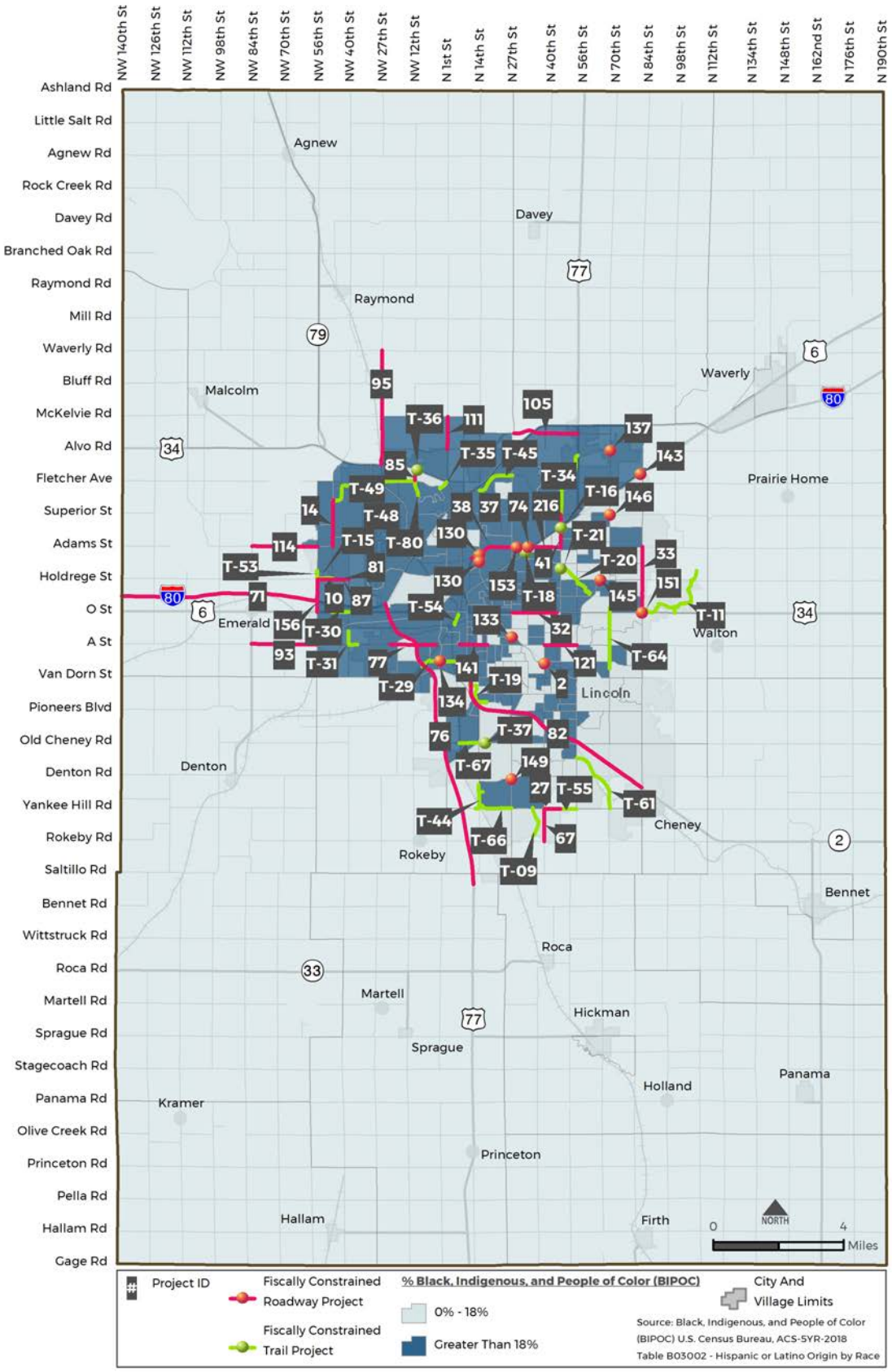


Figure H.14 Low Income Populations

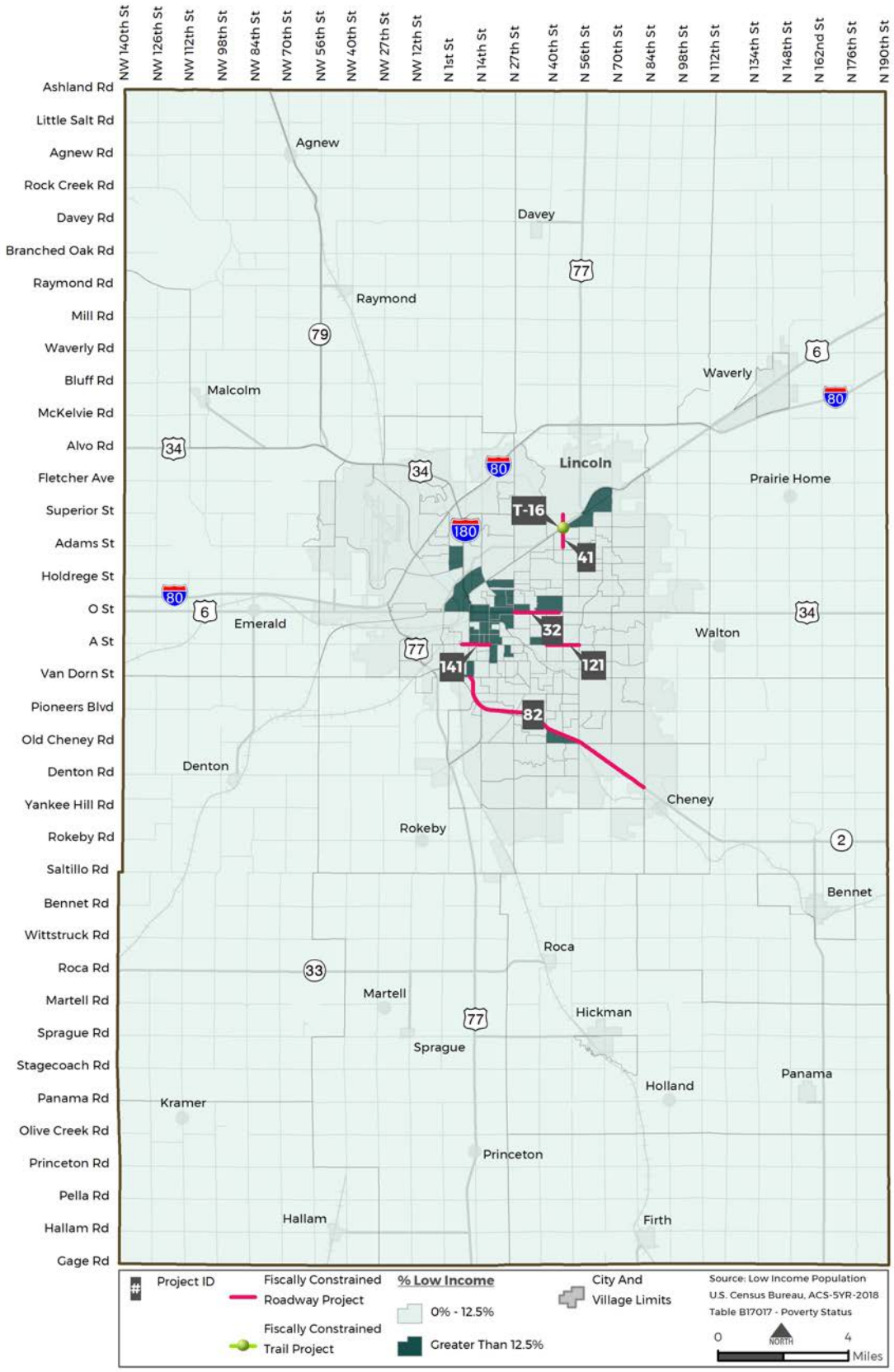
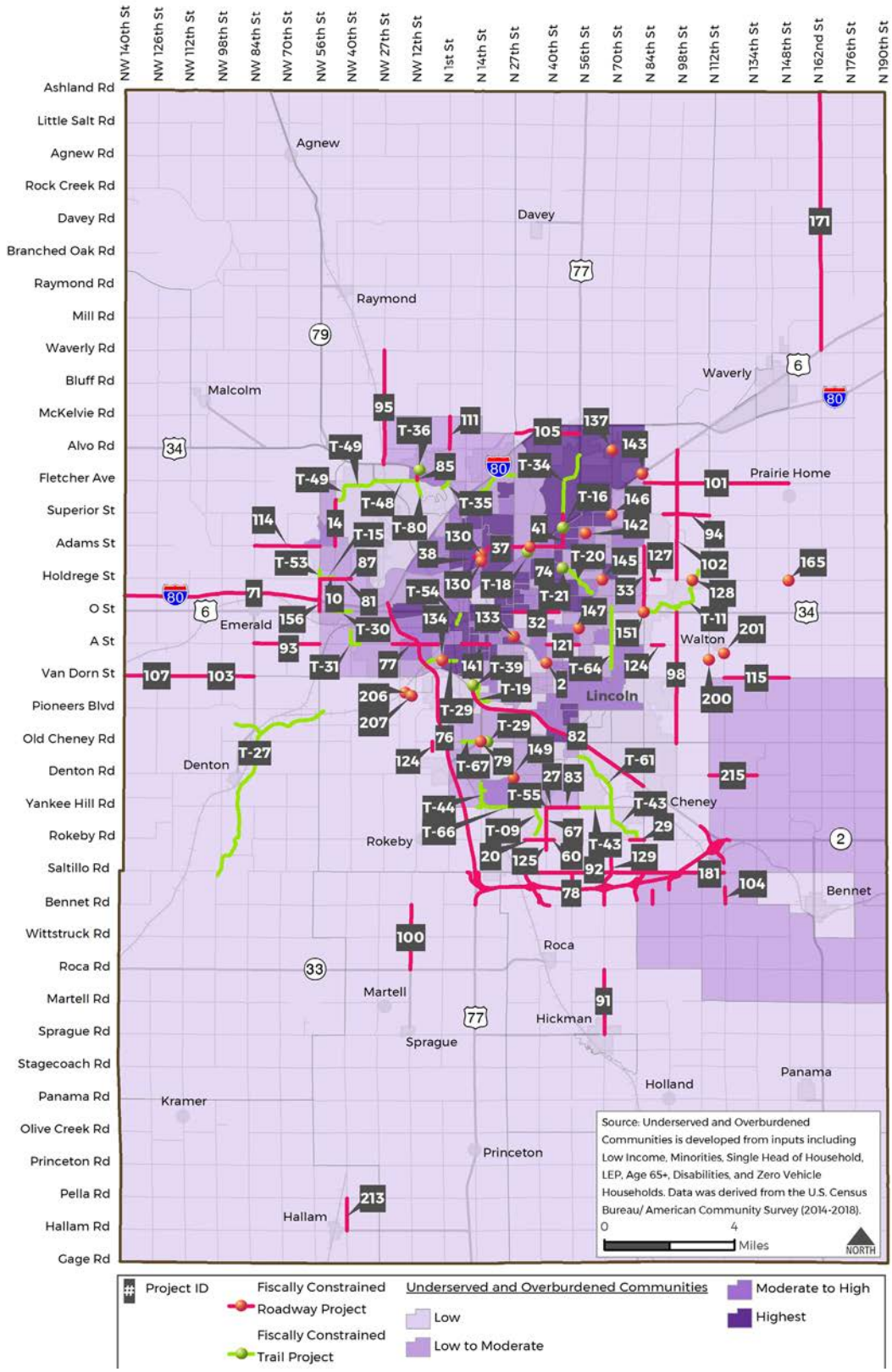


Figure H.15 Equity Index for Overburdened and Underserved Communities



On June 14, 2012, FHWA issued Order 6640.23A, Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which established policies and procedures for FHWA and state transportation agencies to use in complying with Executive Order 12898. The Order provided definitions for terms and concepts applicable to this type of analysis (**Table H.4**).

To comply with Title VI and Executive Order 12898, the demographic characteristics within the Metropolitan Planning Area (Lancaster County) were examined to determine if any of the proposed projects had the potential to disproportionately affect minority or low-income populations. The demographic and economic character of each Census Block Group was compared with that of Lancaster County and the City of Lincoln using the EPA's EJ Screening and Mapping (EJ Screen) Tool (EPA 2021), which utilizes data from the 2010 Census of Population and Housing and 5-year American Community Surveys (ACS) data from 2018.

Census Block Group data was used to determine whether or not roadway or trail projects occur within low-income, or minority population areas. A conservative threshold to identify both the Minority Populations and Low-Income Populations was established by determining the city and county thresholds and using the lower percentage of the two measures as the threshold for block groups. For example, the Minority Population threshold was based on the EJ Screen tool using (5-year ACS average values) and was determined to be 18% for Lancaster County and 20% for the City of Lincoln; therefore, the assessment threshold was 18%.

The US Census Bureau lists the median household income for Lancaster County and the City of Lincoln as $60,527 and $57,746, respectively (US Census Bureau 2019). These are both lower than the median income listed for Nebraska by the 2019 ACS 1-year estimates, which was $63,229. The Low-Income Population threshold was determined by the US Census (5-year ACS average values) poverty rate statistic, which was 12.5% for Lancaster County and 13.5% for the City of Lincoln; therefore, the assessment threshold was 12.5%. To put this into perspective, the US Census poverty threshold for a two adult and two children household was $25,926 and a one adult household (under 65 years old) was $13,300.

Based on the resource assessment, 37 roadway and 27 trail projects occur within a block group above the minority population threshold (**Table H.1** and **Figure H.13**). Five roadway and one trail projects occur within a block group above the low income population threshold (**Table H.1** and **Figure H.14**).

On federally funded projects, an EJ analysis would be completed by the NDOT EJ specialist during the design and NEPA phase. Requirements would vary based on funding for the projects (e.g., federal-aid or local funds). Projects located in areas that exceed the thresholds would likely need additional project specific coordination and require public outreach to determine potential adverse effects. If minority populations are present, then it may be likely that public outreach could involve the translation of materials into other languages to ensure communication is not a limiting factor. If low-income populations are present, then compensatory mitigation may be needed. For example, if a detour limits accessibility to essential services or resources, such as groceries, then conservation measures may need to provide affordable and/or alternative modes of transportation.

Transportation Equity

The EJ criteria for low income and minority populations help to frame the understanding of equity within the community, but EJ requirements and the Transportation Equity goal are measured differently. The Lincoln MPO established this as a new goal within

the 2050 LRTP. Federal requirements and executive orders are not yet established to direct the methods of measuring equity or defining the underserved and overburdened communities. The socioeconomic criteria used to measure Transportation Equity and define performance measures that will be used to evaluate progress toward the new goal are describe in **Chapter 4**.

The Lincoln MPO established seven socioeconomic indicators (**Table H.4**) to use as measures for the distribution of overburdened and underserved communities. The data associated with each of these indicators were represented individually and then combined to establish a visual representation of the Equity Index. **Figure H.15** displays fiscally constrained projects over the census blocks within the MPO represented as "low" to highest" in four quartiles. The darkest blocks reflect the block groups with the highest aggregate of socioeconomic indicators present. Based on the resource assessment, 10 roadway and four trail projects occur within block groups designated as "high," whereas seven roadway and four trail projects occur within block groups designated as "moderate to high" (**Table H.1** and **Figure H.15**). All but one rural area roadway projects was within block groups designated as "low" or "low to moderate."

The method chosen to establish the Equity Index involved a sequence of step used to establish a composite score for each census block group within the planning area. The first step was to collect the socioeconomic data for seven criteria. Some data represents the number of households while other data represents population. Criteria data were aggregated into quartiles (**Table H.5**) representing one quarter of either the total households or total population. For each criteria, a census block was given a score of four if it was in the highest quartile and a score of one for the lowest quartile.

Once the seven criteria scores were measured for each block group, the scores were combined to create a composite score. Block group composite scores within the planning area ranged from nine to 26. The lowest possible score that a block group could receive was seven (one for each criteria), and the highest potential score would be 28 (four for each criteria). Block groups with scores approaching 28 are considered to have the greatest number of population/households that are underserved and overburdened.

Table H.5 Equity Index Quartile Scores

Equity Index Quartile	Composite Score Range	Initial Transportation Equity Points
Highest	21-26	1
High to Moderate	17-20	.66
Moderate to Low	14-16	.33
Lowest	9-13	0

The next step used composite scores to divide block groups into Equity Index quartiles. Populations represented by each block group were distributed evenly between the quartiles. This process accomplished the intended outcome of identifying census blocks that may benefit the greatest by transportation investments considered for the LRTP. It is important to recognize that the approach is not intended to replace or satisfying EJ requirements which may be more stringent and exceed the level of analysis required for establishing the Equity Index. One example of this difference is the socioeconomic criteria of Limited English Proficiency (LEP). While NDOT and FHWA standards may require LEP population to be accommodated for project planning if it exceeds 5% or 1,000 persons within the project study area, the LEP criteria for the LRTP Equity Index is broad and serves as a

range for scoring rather than a trigger for requiring specific actions.

The project prioritization process is documented in **Chapter 7**. It describes how each project was evaluated against the eight Transportation Goals of the LRTP and how the scoring committee used available and relevant data to review the project evaluation results. In most cases, the Transportation Equity scores shown in **Table H.5** were applied to the project's equity score. The scoring committee could use discretion and adjust the score if a project was perceived to have a cumulative or indirect negative or positive impact outside of the immediate census block group. An example of a negative impact could be adding new lanes to an existing roadway that would reduce the connectivity between housing and schools or essential services. An example of a positive impact could be a grade separated crossing in a block group with a lower Equity Index score that will improve network safety, access, and commute reliability for adjacent block groups with a higher Equity Index. The number of projects included in the fiscally constrained plan are organized by type and Equity Index Quartile in **Table H.1**. Roadway and Trail Project Scoring Results are included for review in **Appendix G**.

Cultural Environment

The cultural environment consists of historic resources, including historic standing structures, historic districts, and archeological sites. These resources are important because they add value to a community's sense of culture and provide a tangible link with the past.

Historic resources encompass man-made features and physical remains of past human activity. These resources are generally at least 50 years old (properties constructed in 1970 or earlier), and include buildings, bridges, railroads, roads, other structures, landmarks, and archeological sites. Section 106 of the National Historic Preservation Act of 1966 requires evaluation of project effects on historic properties that are on, or eligible for, the National Register of Historic Places (NRHP). Criteria for determinations of eligibility are set forth in 36 Code of Federal Regulations (CFR) Part 60.4 (70) and are described in National Register Bulletin How to Apply the National Register Criteria for Evaluation (36 CFR Part 60). For a property to be determined eligible, it must meet at least one of the NRHP criteria for historic significance and retain a high degree of historic integrity.

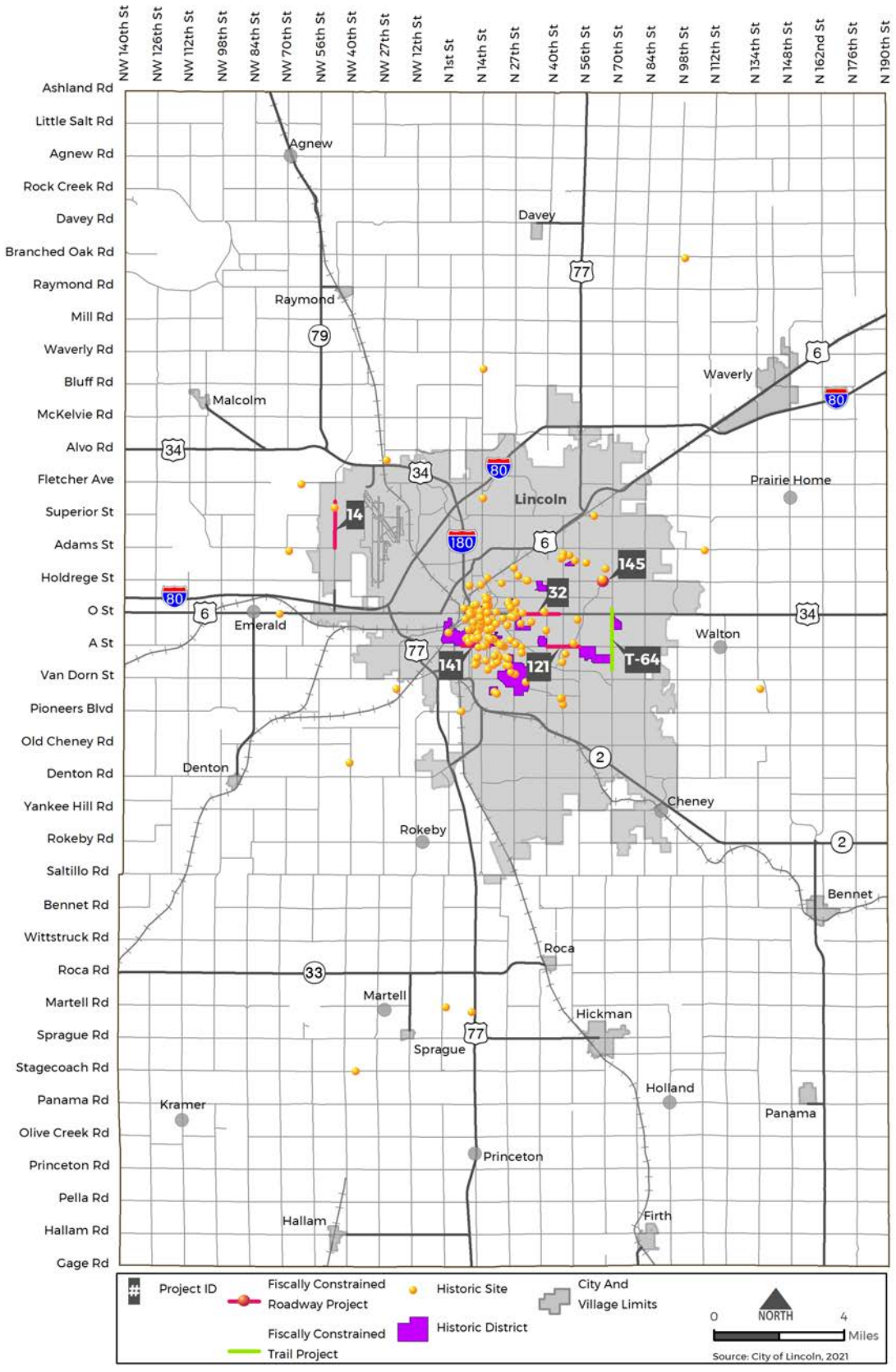
- Historic significance may be present in one of four categories: (1) important historic events; (2) significant people in history; (3) significant architecture, design, or property type; and (4) potential to yield important historic information.
- Historic integrity is characterized by one of seven aspects defined by the NRHP: (1) location, (2) design, (3) setting, (4) materials, (5) workmanship, (6) feeling, and (7) association. In general, a property will always possess several, and usually most, of these aspects.

Records searches were conducted with the City of Lincoln, Nebraska State Historic Preservation Office (SHPO), and Nebraska State Historical Society Highway Archeology Division to identify known historic sites, historic districts, and archeological sites previously surveyed, recommended NRHP eligible, listed in the NRHP, or listed as local landmarks.

Historic Sites and Districts

The records search identified 165 historic sites and 23 historic districts located within Lancaster County. Based on the resource assessment, four roadway and zero trail projects **Figure H.16**), and three roadway and one trail projects cross historic district areas. These sites would also be considered Section 4(f) properties (see **Socioeconomic Environment**).

Figure H.16 Historic Sites and Historic Districts



Archeological Sites

The locations of archeological sites are not readily available to the public and would be addressed when a specific project moves forward. Each project would require consultation with Nebraska SHPO during planning, including possible surveys for historic standing structures and archeological sites, and assessment of eligibility.

Avoidance and minimization of impacts, and mitigation if needed, would be situational and likely different for each project, but could consist of vibration restrictions or modifications to design plans to avoid specific structures or areas. Proximity alone does not constitute adverse impact, and well-designed improvements and especially system maintenance can benefit historic resources, especially neighborhood districts. Similarly, trails may have no adverse impact or even be beneficial to the livability of historic residential areas and revitalization of commercial areas.

Air Quality

The projects and decisions contained within the Lincoln MPO 2050 LRTP can influence local air quality. Estimated vehicle emissions of select air pollutants that are typically related to mobile transportation sources were assessed for the LRTP.

Because Lincoln/Lancaster County is currently in attainment or unclassifiable for the National Ambient Air Quality Standards (NAAQS) under the Clean Air Act, the air quality evaluation was primarily for informational, planning and stewardship purposes and not for regulatory compliance. For example, the City of Lincoln Climate Action Plan has an "80 by 50" goal to reduce net greenhouse gas (GHG) emissions 80 percent by year 2050—the LRTP can inform on the progress being made toward the goal in the transportation sector.

The air quality evaluation was based on traffic data developed through the MPO's regional travel models. NDOT added one additional State project (ID 71) to the fiscally constrained project list after modeling for congestion had been completed and is therefore not included in air quality analysis. The current US Environmental Protection Agency Motor Vehicle Emission Simulator software (MOVES3) was used to develop pollutant emission data.

Evaluation Overview

The evaluation for air pollution emissions included five traffic situations covering the entire MPO area: 2020 current conditions, "existing plus committed" (without any new planned projects) conditions (E+C) for 2035 and 2050, and the future fiscally constrained road networks (FC) planned by the MPO for 2035 and 2050. Air pollutant emissions data for each of these situations for the entire traffic model network were calculated using MOVES3. Because of the potential atypical traffic volumes and patterns experienced in calendar year 2020 due to COVID, the 2020 emissions analysis used 2019 traffic data from the regional model (believed to be more typical) but calculated for calendar year 2020.

The evaluation examined four air pollutants of concern commonly associated with motor vehicles: particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), two precursor pollutants for ozone (volatile organic compounds [VOC] and oxides of nitrogen [NOx]), and overall GHGs expressed as carbon dioxide (CO_2) equivalents. These pollutants are of concern for several reasons:

- Particulate Matter: $PM_{2.5}$, a complex mix of very small solid particles and liquid droplets, is a concern because it can be inhaled deeply into the lungs and can interfere with lung function or lead to other health effects. $PM_{2.5}$ can aggravate asthma, diminish lung

capacity, and cause lung or heart problems. Particulate matter can also cause haze. Sources of particulate matter include smoke, diesel engine exhaust and road dust. Particulate matter can be a localized concern near the sources or can cause regional concerns through dispersion. This evaluation included $PM_{2.5}$ emissions from tailpipes, brake wear and tire wear.

- Ozone and Precursors: A strong oxidizing agent, ozone can damage cells in lungs and vegetation and can cause eye irritation and coughing. Ozone is not emitted directly; rather, it is formed by chemical reactions between other precursor pollutants in the atmosphere. VOC and NOx in the presence of sunlight and certain weather conditions can form ground-level ozone. So, ozone concentrations can be affected through the concentrations of the precursor pollutants. Automotive sources of ozone precursors include vehicle exhaust, fuel evaporation, and vehicle refueling. Ozone is a regional concern because it takes time for ozone to form and the pollutants can drift some distance in that time. Ozone generally is most problematic in summer. Combined with GHG emissions and climate change, warmer temperatures in the future may lead to higher ozone concentrations.
- Greenhouse gases: CO_2 is the largest component of vehicle GHG emissions. Other prominent transportation-related GHGs include methane and nitrous oxide. Water vapor is the most abundant GHG and makes up approximately two-thirds of the natural greenhouse effect. GHGs are a concern in terms of global climate change. Human-generated GHG emissions can contribute to climate change through the burning of fossil fuels and other activities. For this evaluation, overall GHG emissions from vehicles have been quantified in terms of an equivalent amount of CO_2 emissions.

MOVES3 Modeling

MOVES3 was the software used to develop two groups of vehicle air pollutant emission results for the four air pollutants described above. The first group of results was a representative set of average pollutant emission rates in grams per mile traveled for various vehicle speeds for years 2020, 2035 and 2050. A weekday in May was selected as an intermediate condition as a basis for comparison. The second group of results was a set of cumulative daily totals of emissions for a weekday in May for the five traffic situations described above.

MOVES3 requires a considerable amount of technical data for input to generate these results. Some of the needed data can be difficult and costly to develop specifically for a region/locality, so it is often not readily available. The MPO has developed data for vehicle miles of travel (VMT) and average vehicle speeds for the road networks through the traffic models, which were used in MOVES3 modeling. However, other input data were not available locally so the necessary inputs were derived from the MOVES3 national dataset. “National scale” MOVES3 runs for Lancaster County provided input data for the vehicle mix and some VMT distribution. MOVES3 national data were also used for inputs such as fuel types and weather conditions.

The air quality evaluation is intended to illustrate general trends for the MPO region. Changes to any of the inputs would affect the emission results to some extent.

Pollutant Emissions Results

For the first group of emission results, graphs of pollutant emission rates versus vehicle speeds were developed for the three years of interest (**Figure H.17**) to illustrate how emissions can vary with changes in traffic congestion levels. Note that **Figure H.17** represents averaged results for the entire vehicle fleet for a single set of weather conditions; other conditions may provide different rates but would be expected to show similar patterns. The graphs illustrate that traffic flow improvements (higher speeds) generally reduce emissions.

Future years are expected to see lower emission rates due to federal emission regulations and improvements in vehicle technologies (**Figure H.17**). As older vehicles are replaced with newer ones, lower emissions are expected. Because of this, total vehicle emission levels in future years may be lower even with more vehicles and VMT. The change in emission rates from 2020 to 2050 will be greatest for VOC and smallest for GHGs. The emission rates for 2035 and 2050 are very similar so the differences in total emissions between these years will be due mainly to differences in VMT.

For a simpler comparison of emission rates, a set of overall composite average rates were calculated. **Table H.6** results are condensed from a full day and include more weather conditions than the single hour shown in **Figure H.17**.

Table H.6 Composite Vehicle Pollutant Emission Rates

Pollutant	2020 (g/mile)	2035 (g/mile)	2050 (g/mile)
$PM_{2.5}$	0.018	0.0081	0.0075
NOx	0.63	0.24	0.21
VOC	0.076	0.018	0.015
GHGs as CO2	473	362	342

For the second group of emission results, total daily emissions from the MPO road network for an average May weekday was calculated (**Figure H.18**). Note that the emission amounts at other times would differ due to several factors—time of year, temperature, day of week, VMT, level of congestion, etc. The evaluation was intended to illustrate general trends (**Table H.7**).

For $PM_{2.5}$, NOx and VOC, total emissions in 2050 are calculated to be substantively lower than 2020 even with more VMT (**Table H.6**). Cleaner vehicles with lower emission factors will be important improvements in the near term (to 2035). Beyond 2035, the gains from cleaner traditional vehicles will lessen.

GHG emissions are expected to be higher in 2035 and 2050 than 2020 because the expected growth in VMT will more than overtake the expected reduction in GHG emission rates. Note that these results do not include widespread use of electric vehicles or other emerging technologies that currently are not well defined.

Table H.7 Composite Daily Pollutant Total Emissions (tons per day)

Pollutant	2020	2035 E+C	2035 FC	2050 E+C	2050 FC
$PM_{2.5}$	0.12	0.07	0.07	0.08	0.08
NOx	4.3	2.1	2.1	2.3	2.3
VOC	0.52	0.16	0.16	0.16	0.16
GHGs as CO_2	3,241	3,264	3,263	3,718	3,700
LRTP Daily VMT (miles)	6,220,000	8,179,000	8,183,000	9,869,000	9,835,000

Figure H.17 Example Pollutant Emission Rates for Lincoln Arterial Streets (May weekday during 11 AM hour)

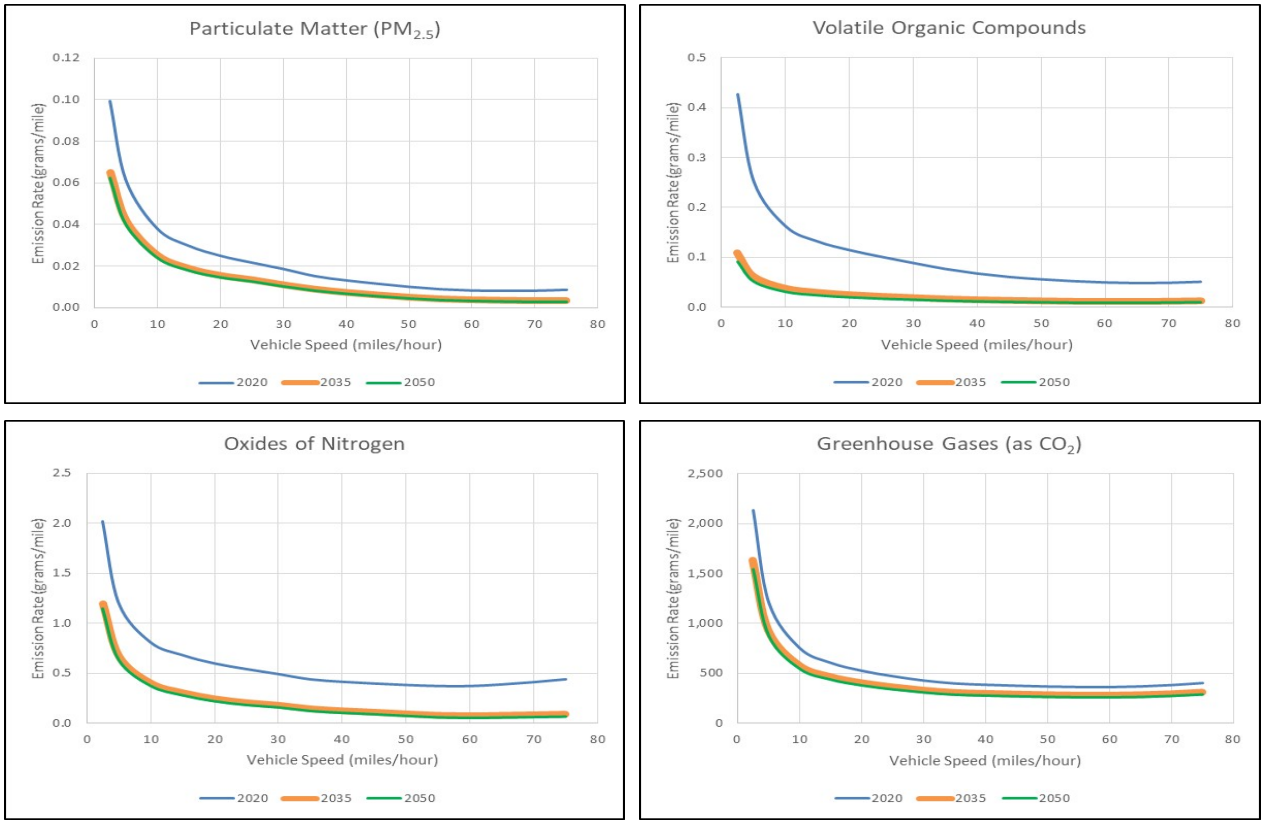
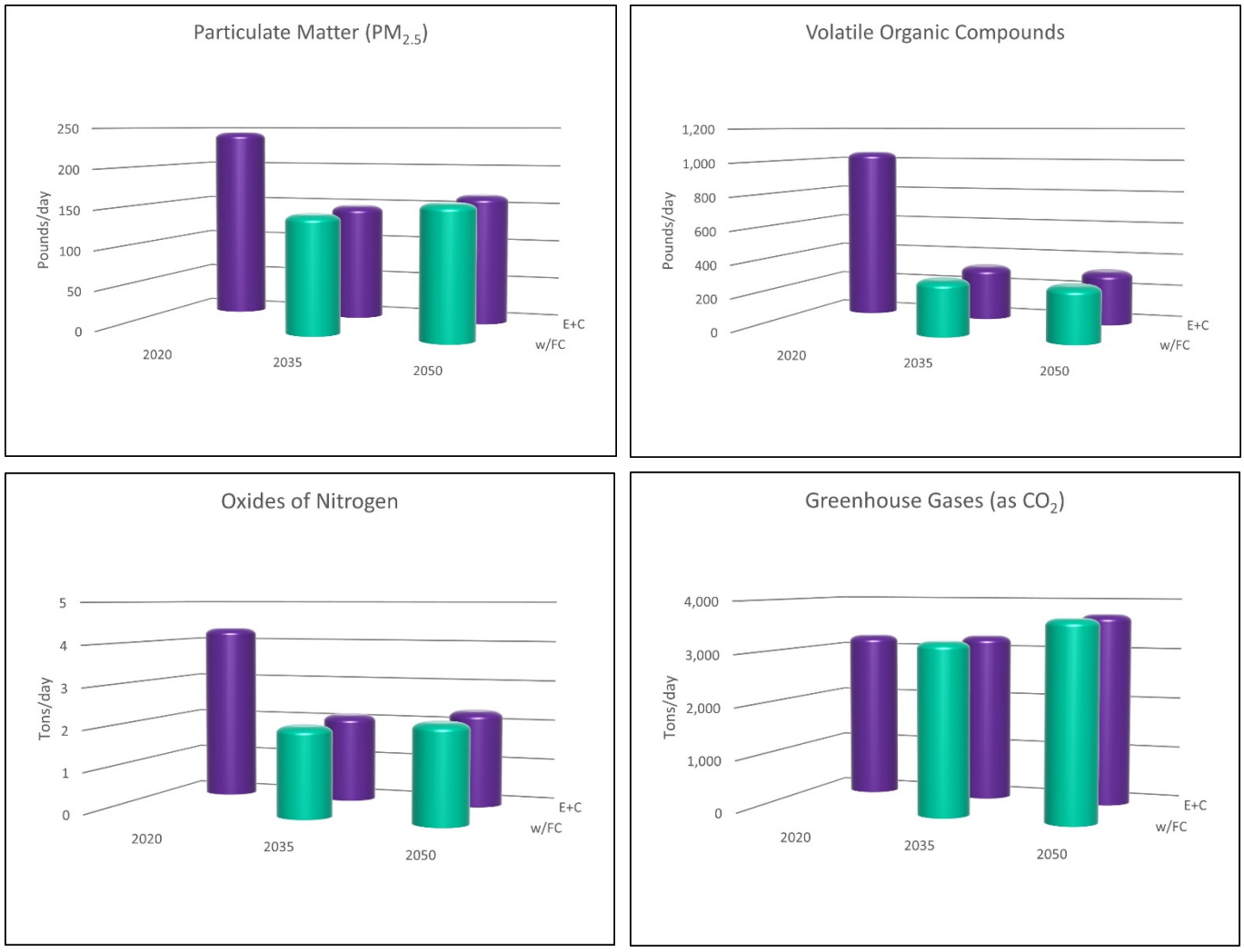


Figure H.18 Typical Weekday Pollutant Emission Totals for Fiscally Constrained Road Network



E+C is existing plus committed projects
w/FC is with Fiscally Constrained projects

Agency Coordination

This document will be provided to the following environmental, socioeconomic, and cultural agencies for review and comment to comply with SAFETEA-LU requirements. A summary of comments received is provided in **Table H.8**.

Environmental Agencies

1. Lower Platte South NRD
2. Lincoln Parks and Recreation Department
3. Sustainability and Compliance Administrator for City of Lincoln
4. Lincoln Watershed Management Division of Transportation and Utilities Department
5. Nebraska Game and Parks Commission
6. Nebraska Department of Environment and Energy
7. US Army Corps of Engineers
8. Nebraska Department of Natural Resources
9. US Fish and Wildlife Service
10. Natural Resource Conservation Service
11. Mayor's Environmental Task Force
12. Nebraska Land Trust
13. The Nature Conservancy Nebraska Field Office
14. University of Nebraska Foundation (Nine-Mile Prairie Director)
15. Lower Platte River Corridor Alliance
16. Nebraska Environmental Trust
17. Wachiska Audubon Society
18. Nebraska Audubon
19. Nebraska Chapter Sierra Club
20. Nebraska Chapter Bluestem Group
21. Nebraska League of Conservation Voters
22. Friends of Wilderness Park
23. Great Plains Trails Network
24. Joslyn Institute for Sustainable Communities
25. Lincoln Public Schools (Sustainability Coordinator)
26. Community Forestry Advisory Board

Socioeconomic and Cultural Agencies

1. Cause Collective Lincoln (previously Human Services Federation)
2. Lincoln Housing Authority
3. NE Commission for the Blind and Visually Impaired
4. Lincoln-Lancaster County Board of Health
5. Lancaster County Human Services
6. NeighborWorks Inc.
7. Malone Center
8. The Indian Center
9. Nebraska Commission on Latino-Americans (previously the Mexican American Commission)
10. The Asian Cultural and Community Center
11. El Centro de las Americas
12. Nebraska Commission on Indian Affairs
13. People's City Mission
14. Community Action Partnership
15. Center for People in Need
16. History Nebraska (State Historical Society)
17. Historic Preservation Planner, Lincoln-Lancaster County Planning Department
18. Aging Partners
19. Good Neighbor Community Center

Table H.8 Agency Review Comments and Responses

Author	Page Ref.	Comment	Response
Nebraska State Historic Preservation Office	N/A	Thank you for inviting us to participate in this long range plan. We tend to only get involved when plans come under development, and I think we will probably have to wait in this case too. We do appreciate you thinking of us.	No edit
Nebraska State Historic Preservation Office	N/A	Make sure that historic preservation review process is followed for federally and state assisted undertaking. Early coordination works best!	No edit
Aging Partners	N/A	Your use of the decision lens scale, which provides an equity index to older adults is much appreciate.	No edit
Aging Partners	N/A	One element that we see missing is accessibility and transportation time to major medical centers in our community.	No edit
Aging Partners	N/A	Creative transportation solutions such as door to door pick-up and delivery have been tested and we encourage additional investments in this service. At the current level of investment, we do not believe we are prepared for future aging growth.	No edit
U.S. Fish and Wildlife Service	N/A	Thank you for the opportunity to provide comments. If we have substantive input, we will respond by the Oct 6th deadline.	No edit
People's City Mission	N/A	Thanks for including me in this planning process! I think the LRTP looks fine and shows a lot of thought and care. My only advice would be to make sure you clearly communicate how all the feedback from agencies directly impacted and/or changed your final proposal.	No edit
Partnership for Healthy Lincoln	N/A	We at Partnership for a Healthy Lincoln would like to submit the attached letter of support regarding the Long Range Transportation Plan. I have also included a copy of our letter of support for the Lincoln Lancaster County 2050	No edit

		Comprehensive Plan that we also shared with the city. We are sending these letters to you as the online comment sections provided on each site does not have the ability to upload an attachment. Thank you for sharing our support for goals and policies to ensure transportation equity for all.	

References

33 CFR 328. Definition of Waters of the United States.

36 CFR Part 60. National Register of Historic Places. Section 60.4. Criteria for Evaluation.

59 FR 7629. 1994. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations.

Arbor Day Website. 2021. 2020 Tree City USA Communities. https://www.arborday.org/programs/treecityusa/directory.cfm. Accessed 12 July 2021.

City of Lincoln and Lancaster County. 2001. Greenprint Challenge. Nebraska.

City of Lincoln-Lancaster County, NE. 2021. GIS Viewer: Development Viewer. Accessed from: https://maps.lincoln.ne.gov/default/index.html?viewer=devrev.

Federal Emergency Management Agency (FEMA). 2011-2013. Flood Insurance Rate Maps, FEMA Flood Map Service Center. Lancaster County. Retrieved from https://msc.fema.gov/portal.

Lincoln-Lancaster County Planning Department. 2001. Natural Resources Geographic Information Systems (NRGIS), Interpretative Summary Report.

Lincoln Municipal Code (LMC) Ordinance 26.07.126. Minimum Flood Corridor. Retrieved from: https://www.lincoln.ne.gov/city/attorn/lmc/contents.htm.

Lincoln Parks and Recreation. 2021. Community Forestry, Street Trees Webpage. https://www.lincoln.ne.gov/City/Departments/Parks-and-Recreation/Community-Forestry#section-7. Accessed 12 July 2021.

City of Lincoln. 2018. Emerald Ash Borer Response and Recovery Plan. 5 pp. https://www.lincoln.ne.gov/files/sharedassets/public/parks-amp-rec/community-forest/eabrandrplan.pdf. Accessed 12 July 2021.

Nebraska Department of Transportation (NDOT). 2017. Nebraska Biological Evaluation Process for the Federal-Aid Transportation Program. Environmental Section, Planning and Project Development. In coordination with Federal Highway Administration, Nebraska Game and Parks Commission, and the US Fish & Wildlife Service.

Nebraska Department of Transportation (NDOT). 2018. Avian Protection Plan. Environmental Section, Planning and Project Development.

Nebraska Game and Parks Commission (NGPC). 2021. Nebraska Conservation and Environmental Review Tool [Web Map and Reporting System]. https://cert.outdoornebraska.gov. Accessed 8 Jul 2021.

Schneider, R., K. Stoner, G. Steinauer, M. Panella, and M. Humpert (Eds). 2011. The Nebraska natural legacy project: State wildlife

action plan. 2nd Ed. The Nebraska Game and Parks Commission, Lincoln, NE.

Taylor, T.J., and L.D. Krueger, eds. 1997. Mitigation Guidelines for Nebraska's Eastern Saline Wetlands. Prepared for the Eastern Saline Wetlands Interagency Study Project. United States Environmental Protection Agency, Region VII, and United States Army Corps of Engineers, Omaha District. 46 pp.

United States (US) Census Bureau. 2019. American Community Survey data. Retrieved from https://www.census.gov/data.html. Accessed 6 July 2021.

United States Environmental Protection Agency (EPA). 2021. EJSCREEN: Environmental Justice Screening and Mapping Tool. https://ejscreen.epa.gov/mapper/. Accessed 6 July 2021.

United States Fish and Wildlife Service (USFWS). 2017. Critical Habitat factsheet. Endangered Species Program. https://www.fws.gov/endangered/esa-library/pdf/critical_habitat.pdf. Accessed 12 July 2021.

United States Fish and Wildlife Service (USFWS). 2021a. Information, Planning, and Conservation (IPaC) website. Environmental Conservation Online System. http://ecos.fws.gov/ipac/. Accessed 8 July 2021.

United States Fish and Wildlife Service (USFWS). 2021b. Environmental Conservation Online System, USFWS Threatened and Endangered Species Active Critical Habitat Report. Environmental Conservation Online System. http://ecos.fws.gov/ecp/report/table/critical-habitat.html. Accessed 12 July 2021.

United States Fish and Wildlife Service (USFWS). 2021c. Wetlands Online Mapper. National Wetlands Inventory (NWI) Layer. Accessed from: http://www.fws.gov/wetlands/Data/Mapper.html. Last Modified 1 May 2021.

United States Geological Service (USGS). 2020. National Hydrography Dataset (NHD). Retrieved from: http://nhd.usgs.gov/.