Elements

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 Livable, Equitable, Thriving, Resilient, and Innovative.
The PlanForward elements contain additional information that support the policies and action steps. Each element also relates to PlanForward goals.
Elements

**E1: Complete Neighborhoods and Housing**

This element discusses the desired pattern of development in newer and older neighborhoods and strategies for meeting future housing demand.

One of the essential elements of the community and PlanForward 2050 is housing and neighborhoods. Ensuring safe, adequate, and affordable housing is an important function in maintaining the vitality of neighborhoods and the city as a whole. The key to both developing and existing complete neighborhoods is land use diversity. For existing neighborhoods, the land use diversity is often already in place, but efforts must focus on maintaining this balance and variety. The diversity of architecture, housing types and sizes are central to what makes existing neighborhoods great places to live. New construction in existing neighborhoods should continue the architectural variety, but in a manner that is sympathetic to the character of existing neighborhoods. For developing neighborhoods, the land uses are typically kept separate and are accessible primarily by vehicles. PlanForward recognizes the value of diversifying land uses in developing areas to achieve more integrated neighborhoods.

The community continues its commitment to strong, diverse, and complete neighborhoods. Neighborhoods remain one of Lincoln’s great strengths and their conservation is fundamental to this plan. The health of Lincoln’s varied neighborhoods and districts depends on implementing appropriate and individualized policies. In existing neighborhoods, preservation, maintenance, and rehabilitation of existing housing should continue to be the focus. Infill and redevelopment needs to respect the street pattern, block sizes, and development standards of the area, such as parking at the rear and porches, windows, and doors on the front street side. In existing and developing neighborhoods, diversity of land uses, including commercial and a variety of housing types, is important provided the use fits within the character of the block and neighborhood. During the planning period, there will continue to be a need to accommodate group living which generally includes, but is not limited to: senior housing, assisted living facilities, group homes, domestic shelters, and children’s homes.

A complete neighborhood is more than housing – great neighborhoods combine all the elements of parks, education, commercial areas, environmental resources, and housing together in one place. A complete neighborhood is one where residents have safe and convenient access to goods and services needed for daily life activities. Benefits of complete neighborhoods include:

- Support for healthier lifestyles and convenience
- Stronger markets for neighborhood businesses
- Efficient and equitable public investment
- Energy efficiency and emissions reduction
- Affordability - Lower household costs

A statement in previous Comprehensive Plans encouraged single-family housing but left out the importance all other housing types. The statement has been updated as follows:

"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."
Fundamental elements of a complete neighborhood include a mix of housing options, open spaces, schools and childcare, access to food, and commercial goods and services. Thus, policies and action steps from multiple other elements also apply to complete neighborhoods and housing. A Complete Neighborhoods indicator will be created to evaluate the “completeness” of Lincoln neighborhoods. Factors to be evaluated will include presence of sidewalks and housing options, and proximity to trails, transit stops, parks, essential goods and service, and schools. This indicator can inform decision-making in order to guide investments as the community grows over the next 30 years. Cities such as Detroit, San Antonio, and Boulder have established Complete Neighborhoods goals and associated metrics.

“Put the stuff closer together so it’s easier to get to the stuff.”

Paul Mogush, Minneapolis Planner
1. Encourage a mix of compatible land uses to develop more complete neighborhoods:
   a. Similar uses on the same block face: residential faces residential.
   b. Similar housing densities developed near each other: single-family and “missing middle” residential (3-12 units) scattered throughout with higher density residential (more than 12 units) near the neighborhood edge or clustered near commercial centers.
   c. Non-residential uses, including parking lots, should be screened from residential areas.
   d. Locate Commercial Centers so as residents can safely access essential goods and services (i.e. not located across arterial streets) and no more than a 15-minute walk from all residences.

2. Require sidewalks on both sides of all streets.

3. Encourage locations within neighborhoods to grow local food.

4. Plan for residences to be located within 1 mile to an existing or planned multi-use trail.

5. Plan for residences to be located within 1/2 mile to an existing or planned neighborhood park.

6. Integrate transit stops into developing neighborhoods and within a ½ mile distance from residences.

7. Encourage employment areas to be within a 15-minute walking distance to residences.

8. Plan for elementary or middle schools to be within a 15-minute walking distance to residences.

9. Encourage pedestrian orientation with parking at rear of residential and neighborhood commercial uses.

10. Develop shorter block lengths to provide multiple connections across residential and commercial areas.

11. Provide pedestrian connections when maximum block lengths are exceeded.

12. Encourage shared City and School facilities (aka SPARKS).

13. Provide adequate curb space to allow for on-street parking.

14. Encourage alley access and shared driveways to reduce interruptions to pedestrians, to preserve on street parking capacity, and to reduce automobile conflict points.

15. Support preservation or restoration of natural areas, and limit stream or drainageway crossings.

* Items 1-8 above will inform the development of a Complete Neighborhoods assessment tool.
Figure E1.a: Strategies for Design, Sustainability and Complete Neighborhoods in Developing Areas
Figure E1.a: Strategies for Design, Sustainability and Complete Neighborhoods in Developing Areas
Figure E1.b: Strategies for Design, Sustainability and Complete Neighborhoods in Existing Areas
1. **Encourage a mix of compatible land uses to develop more complete neighborhoods:**
   a. Similar uses on the same block face: residential faces residential.
   b. Similar housing densities developed near each other: single-family and “missing middle” residential (3-12 units) scattered throughout with higher density residential (more than 12 units) near the neighborhood edge or clustered near commercial centers.
   c. Non-residential uses, including parking lots, should be screened from residential areas.
   d. Locate mixed-use centers so as residents can safely access essential goods and services (i.e. not located across arterial streets) and no more than a 15-minute walk from all residences.
   e. Support existing Commercial Centers and encourage inclusion of essential goods and services.
   f. Infill and redevelopment projects should meet or exceed Neighborhood or Commercial Design Standards.

2. **Require sidewalks on both sides of all streets or in alternative locations as allowed through design standards or review process.**

3. **Strive for residences to be located within 1 mile to an existing or planned multi-use trail.**

4. **Strive for residences to be located within 1/2 mile to an existing or planned neighborhood park.**

5. **Integrate transit stops into developing neighborhoods and within a ½ mile distance from residences.**

6. **Develop shorter block lengths to provide multiple connections across residential and commercial areas.**

7. **Encourage locations within neighborhoods to grow local food.**

8. **Infill development should balance expanding housing options and neighborhood character by complementing the character of the existing neighborhood and providing appropriate transitions, scale and context. Encourage pedestrian orientation with parking at rear of residential and neighborhood commercial uses.**

9. **Allow non-standard lots to be buildable.**

10. **Retain and encourage a mix of housing in order to provide a mix of housing types at a variety of price points.**

11. **Encourage historic preservation and the rehabilitation and maintenance of buildings.**

12. **Support retention of public and semi-public uses (elementary schools, churches) as centers of neighborhoods.**

13. **Maintain existing pattern of streets for connectivity.**

14. **Maintain arterial streets that are compatible with the existing neighborhood character with two through lanes and a center turn lane where applicable.**

15. **Utilize streets for commercial and residential parking.**

16. **Encourage shared parking whenever possible: permit minor incursions of accessory parking for public/semi-public uses into neighborhoods if properly screened.**

17. **Maintain alley access and encourage shared driveways to parking areas in order to reduce interruptions to pedestrian traffic, to preserve on-street parking capacity, and to reduce automobile conflict points.**

18. **Support the preservation and restoration of natural resources, and limit stream or drainageway crossings.**

19. **Encourage additional density of a variety of housing types and price points on open and available land areas.**

20. **Encourage middle housing in Neighborhood Edges.**

* Items 1-5 above will inform development of a Complete Neighborhoods assessment tool.*
**Existing Neighborhoods**

For existing neighborhoods, housing diversity is often already in place, and efforts must focus on maintaining this balance and variety. The diversity of architecture, housing types and sizes are central to what make existing neighborhoods great places to live. New construction should continue the architectural variety, but in a manner that is sensitive to the existing neighborhoods. Preservation, maintenance, and rehabilitation of existing housing should continue to be the focus. Preserving existing housing for owners and renters and a mix of supporting uses should remain the focus in established neighborhoods, with modest opportunities for infill and redevelopment.

Infill and redevelopment is supported and must respect the street pattern, block sizes, and development standards of the area, such as parking at the rear and porches, windows, and doors on the front street side. Neighborhood Design Standards apply within Lincoln’s 1950 corporate limits and will continue to be a useful tool to ensure compatibility of new construction. Areas annexed after 1950 are not currently covered by the City’s Neighborhood Design Standards. The City’s primary strategy for residential infill and redevelopment outside of the Greater Downtown is to encourage the redevelopment and reuse of sites and buildings in commercial areas in order to create new mixed use centers that are compatible and complementary to adjacent neighborhoods. Modest opportunities for redevelopment may also be appropriate along “neighborhood edges.” Neighborhood edges include arterial streets and transition zones between lower density residential and commercial areas. 1,000+ well-designed and appropriately-placed dwelling units are projected for neighborhoods in the existing city — roughly a one percent increase to the existing housing stock—on vacant lots, expansions of existing apartment complexes with undeveloped land, within redeveloping commercial and industrial areas, and through accessory dwelling units. Residential redevelopment in existing neighborhoods tends to occur naturally without public intervention over a long period of time, as individual properties become obsolete or are acquired piecemeal by private or nonprofit developers.

Existing neighborhoods often contain a mix of uses including neighborhood commercial uses, parks, and schools. The patterns of land use in existing neighborhoods support walkability and already achieve many of the Complete Neighborhoods recommendations. Neighborhood commercial centers provide goods and services closer to where people live and can increase desirability to live in the surrounding neighborhoods. Examples in Lincoln include Havelock, University Place, College View, and others. Efforts should be taken to preserve existing neighborhood commercial centers as a vital component in existing neighborhoods. Integration of the neighborhood commercial areas within existing neighborhoods is supported and can be viewed as a model for developing neighborhoods.

**Developing Neighborhoods**

Developing neighborhoods should have a variety of housing types and sizes, plus commercial and employment opportunities. While Lincoln has some good examples of complete developing neighborhoods, the land development patterns in developing neighborhoods are typically kept separate and are accessible primarily by vehicles.

PlanForward recognizes the value of diversifying land uses in developing areas to achieve more integrated neighborhoods. Developing a pedestrian orientation of buildings and street networks that provides substantial connectivity is also a priority for developing areas. There are notable differences between some types of housing...
and traditional multiple-family residential developments. Typically, group living complexes such as assisted living facilities will have fewer occupants per unit and will generate less traffic than housing built for the general marketplace. Thus, a location that is deemed appropriate for group living may not be deemed appropriate for other types of higher density housing such as apartments or town homes.

In support of housing variety, the City should review existing zoning tools to encourage greater housing diversity and development of missing middle housing in developing neighborhoods. Examples include revisions to Community Unit Plan requirements or modifications to current residential zoning districts. Easy access to commercial areas, parks, schools, and other daily needs is also important and should be planned for early on in development neighborhoods.

Affordable Housing

The Plan recognizes that preserving our existing housing stock is one of the best ways to provide for affordable housing in our community. The Lincoln City Council adopted the [Lincoln Affordable Housing Coordinated Action Plan](https://example.com) in December 2020. The Affordable Housing Coordinated Action Plan recognizes that the City alone cannot address the affordable housing needs. Many community partners are identified to help implement the plan recommendations. The Affordable Housing Coordinated Action Plan also acknowledges the gap in “missing middle” housing unit types. Whereas single-family detached and multi-family units are the predominant housing type developed in Lincoln, missing middle includes the units between such as duplex, triplex, quadplex, cottage clusters, and townhouses. Missing middle housing was more prominent in the 20th century. An important element to affordable housing and complete neighborhoods overall includes development of missing middle housing. Table E1.a below lists existing buildings by type and decade. The numbers are for the building totals and not unit totals. The Affordable Housing Coordinated Action Plan also acknowledges the gap in “missing middle” housing unit types. Whereas single-family detached and multi-family units are the predominant housing type developed in Lincoln, missing middle includes the units between such as duplex, triplex, quadplex, cottage clusters, and townhouses. Missing middle housing was more prominent in the 20th century. An important element to affordable housing and complete neighborhoods overall includes development of missing middle housing. Table E1.a below lists existing buildings by type and decade. The numbers are for the building totals and not unit totals.
Modifications to existing zoning districts should be explored to allow more missing middle housing units by right. The Residential Transition (R-T) District is intended to provide a buffer between neighborhoods and more intensive commercial or industrial uses, stressing compatibility with nearby residential areas. The R-5 residential District should be reviewed for potential amendments that would encourage missing middle, as that district already allows densities between 6 and 10 units per acre. Both zoning districts may offer opportunities for missing middle housing along neighborhood edges.

Neighborhoods with a mix of households of varying income are beneficial and promote equity and inclusiveness in contrast to the negative impacts of concentrated poverty. Mixed income neighborhoods generally provide access to more and improved services including health facilities, grocery stores, good schools, access to quality housing, neighborhood amenities such as parks and open space, and a safer environment for people of all incomes. A choice of housing types, including owner-occupied and renter-occupied affordable housing, is a key element in promoting mixed-income neighborhoods.

Through the City’s Urban Development Department, an Affordable Housing Fund provides local dollars tailored to meet specific needs identified in the Affordable Housing Coordinated Action Plan. The funding sources include a portion of the administrative fees received from Tax Increment Financing projects and Turnback Tax funds obtained from sales tax collected in relation to Pinnacle Bank Arena. State legislation allows a portion of the

<table>
<thead>
<tr>
<th>Decade</th>
<th>3-12 Units</th>
<th>12+ Units</th>
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<tr>
<td>1900-1910</td>
<td>20</td>
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<td>28</td>
<td>5</td>
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<tr>
<td>2011-2020</td>
<td>15</td>
<td>54</td>
</tr>
</tbody>
</table>

*Note: This table shows number of parcels containing the referenced units - it does not show number of individual buildings. For example, many large apartment complexes (12+units) have multiple buildings on one parcel and could contain dozens of units.*

A previous action step was considered burdensome on low-income housing developments. The action step was reworded as follows:

**Balance expanding housing options and neighborhood character.** Infill development includes housing for a variety of incomes and should complement the character of the existing neighborhood and provide appropriate transitions where needed. Site and building considerations include transitions, scale and context.
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Turnback Tax to be designated for affordable housing. The Affordable Housing Fund allows for local control and flexibility; however, funding is limited and additional sources for the Fund should be pursued.

Housing code enforcement continues to evolve with increased enforcement of the Neglected Building Registration, the continuation of proactive and performance based multifamily rental inspections, and the addition of UPLNK (SeeClickFix) reporting tool. Implementation of increased fines for violations of property maintenance codes and increased community awareness are also contributing to the improvement of housing in Lincoln. These are big steps to improving quality affordable housing, but there may be other strategies that should be explored.

Rural Housing

PlanForward supports the preservation of land in the bulk of the County for agricultural and natural resource purposes. Balancing the demand for rural living and the practical challenge of integrating acreages with traditional land uses will continue as Lincoln and Lancaster County continue to grow. New acreage development is not encouraged in any of the Growth Tiers except for areas already platted, zoned, or designated for low density residential development. Zoning currently allows development in these tiers under the “build-through” model and without use of Sanitary Improvement Districts (SIDs). However, careful consideration should be given to these current regulations. Compared to urban development, acreage developments consume large quantities of farmland and generate traffic that exceeds the rural capacities of gravel road. Since the growth tiers establish future urbanized areas for the City of Lincoln, additional acreage developments are a detriment to future urban growth. Eventually, all acreage areas in the growth tiers will be located within the City. Therefore, land within the growth tiers is encouraged to remain in agricultural uses.
Figure E1c: Rural Housing on the 2050 Future Land Use Map
Elements

All proposals for acreages, whether designated on the future land use map for low density residential or not, should be evaluated based on factors such as paved roads, adequate water quality and quantity, soil conditions for on-site wastewater management, availability of emergency services, agricultural productivity, land parcelization, the pattern of existing acreages, and plans for future urban development. Applications for acreage designation on the future land use map or rezoning to AGR, if planned for on-site wells, should be accompanied by information on water quality and quantity. If information becomes available that land already designated in the Plan for acreages is not suitable for acreage development, that designation should be reconsidered. Areas not designated for acreages should remain agriculturally zoned and retain the current overall density of 32 dwellings per square mile (1 dwelling unit per 20 acres). Grouping acreages together in specific areas will limit the areas of potential conflict between farms and acreages. It also may enable services to be provided more efficiently, by reducing the amount of paved routes, reducing the number and distance of school bus routes, and taking advantage of more effective rural water district service.

Clustering lots in one portion of a development site, while preserving both farmland and environmental resources on the remainder, should continue to be encouraged in agriculturally-zoned areas. A considerable supply of acreage lots has been platted in recent years in this manner. The County also should continue to pursue state enabling legislation to enable clustering lots by “transfer of development rights” between non-contiguous parcels of land. It is important to note that the value of this tool, by which property owners “buy” and transfer rights to develop additional lots, will be negated if the owners simply are “given” those additional lots through rezoning. Private nonprofit land trusts are operating successfully to preserve farmland in other rural areas experiencing pressure for development. They accept donations, and in some cases have funds to pay in part for land to be conserved, including land that is cropped or pastured as well as land that is held for its natural value such as prairie, wetland, or woodland. The donations of these easements qualify as charitable deductions to federal income tax. Some other states protecting farming close to cities also have adopted tax credit programs to help encourage the donation of agricultural easements. City and county officials should encourage the expansion of an existing private trust or formation of a new one to encourage more of these donations.

Many households are not well-informed of all the implications of rural living before they make that lifestyle choice. This includes an understanding of the state’s Right to Farm law, which protects farmers from nuisance claims when conducting normal agricultural practices, and an understanding of the difference between urban and rural public services (e.g. road maintenance, emergency medical, fire protection, and police). Objective information on the pros and cons of rural living should be provided to the public through continuing education efforts by the County’s extension service, handouts available to county departments and local realtors, and potentially, documents filed of record with new platted lots for disclosure to prospective buyers.
**Trends in Housing**

Dwelling units, particularly single family detached units, are being used in different ways than in the past. Our community will likely see more emphasis on home occupations. This is partly an outcome of teleworking during the pandemic as technological advancement has allowed this to happen more easily. Going forward, people may also want or need to have 1 or 2 employees or coworkers as part of their home occupation. A recommendation from LPlan 2040 was to explore options for allowing more home occupations that are compatible with neighborhoods. Home occupations are recognized and generally allowed so long as the occupation does not become a large-scale enterprise — one that would be harmful to the residential character of the neighborhood and would violate the purpose of zoning. Home occupation trends in Lincoln and Lancaster County should be monitored. Incremental changes to home occupation regulations may be considered while not changing the overall residential character.

Since 2010, multi-family dwellings have accounted for the majority of all residential building permits, followed by single-family detached and townhomes and duplexes. This is due to several reasons including more restrictive lending practices at the end of the recession and more young households who traditionally enter the market as renters. PlanForward recognizes this increasing trend in the proportion of dwelling units that will be multi-family such as apartments, townhouses, condominiums, etc.

An ordinance passed in 2017 that allowed Accessory Dwelling Units (ADUs) as a conditional use in the R-1 through R-4 residential zoning districts. About 26% of parcels in residential districts have sufficient size for two units which could include a single-family home and an attached or detached ADU. The ordinance was a first step toward allowing more flexibility in residential unit types in neighborhoods. Residents continue to desire detached accessory buildings for a variety of additional uses, including guest rooms, pool houses, and personal recreation space. There continues to be an increasing demand for ADUs that is not allowed by current regulations. A review and analysis of the adopted regulations may provide insight into ways that additional ADUs could be allowed without significantly changing the character of residential areas.

According to the U.S. Census Bureau, the number of housing units in Lancaster County rose from 120,875 units in 2010 to 135,484 units in 2020 – an increase in the housing stock of 14,609 units. The increase in housing units predominantly occurred in the City of Lincoln. Lincoln had 110,546 housing units in 2010 or 91.5 percent of the housing units in Lancaster County. This ratio is consistent with data from 2000 when about 91.3 percent of the housing units (95,199 units) in Lancaster County were in Lincoln. It is expected that Lincoln will continue to have roughly 90 percent of the County’s total housing units. In 2020, housing occupancy for Lancaster County stood at 94.3 percent. This rate is comparable to the 94.8 percent occupancy rate in 2010 and 95.2 occupancy rate in 2000.

**Policies Related to this Element:**

P1: Housing Affordability
P2: Existing Neighborhoods
P3: Developing Neighborhoods
P4: Rural Housing
P5: Downtown
P6: Nodes and Corridors
P7: Redevelopment Incentives
P8: Infill and Redevelopment
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P10: Supporting Small Businesses
P18: Conservation Design
P29: Neighborhood Parks
P37: Historic Preservation
P61: Industrial Zoning and Pipelines
P62: Transportation Equity
P68: Pedestrians
P69: Bicycles
P70: Transit

Goals Related to this Element

G1: Safe, Affordable, and Accessible Housing
G2: Complete Neighborhoods
G5: Equity and Inclusion
E2: Infill and Redevelopment

This element describes the strategy for mixed use infill and redevelopment that strives for compatibility with surroundings while accomplishing various principles of the Plan.

As discussed in the Growth Framework section a significant shift in demographics is expected during the planning period, which will likely create a demand for some smaller dwellings, smaller lots and more walkable neighborhoods that have retail and services integrated to serve residents. In addition, local trends show that urban living is becoming more popular as infill residential development has steadily increased in the past decade. The infill and redevelopment concept for PlanForward focuses on three elements: 1) the existing and expected large supplies of undeveloped or under-utilized commercial land, including Downtown and commercial and industrial areas, which provide the potential for high-density mixed-use redevelopment, 2) neighborhood edges that present the opportunity for "missing middle" and other higher-density housing, and 3) small-scale redevelopment within existing neighborhoods.

Infill redevelopment benefits the community in a variety of ways. The benefits are discussed in the Growth Framework section and also summarized below:

- **A focus on maintaining existing infrastructure.** A higher proportion of infill development allows the city to focus more funds on enhancing and maintaining current infrastructure and services.

- **Shorter automobile trips.** In general, with more infill there would be less distance between housing and jobs/services. This would benefit all residents by reducing system-wide lane miles traveled: fewer drivers would need to make an “across town” commute, and people taking short trips would be more likely to use other modes of transportation, which would decrease added strain on the street network.

- **Increased viability for alternate modes of travel.** A higher proportion of infill supports multiple modes of transportation. Transit becomes more effective at higher densities, and increased infill development would create increased demand for more riders along existing routes. In addition, trail and on-street bicycle facility investments become more practical with more users. This is good not only for users of non-auto travel, but also for motorists as vehicular traffic growth and related congestion can be slowed.

- **Reduced carbon emissions.** Shorter automobile trips and more users of alternative transit will help to reduce the community’s carbon footprint over the next 30 years.

- **Balanced growth throughout the community, across both existing areas and new growth areas.** Continued investment within the city ensures that our existing neighborhoods and commercial areas remain vibrant and desirable locations. More “rooftops” near existing commercial areas help to support continued commercial investment.

- **Preservation of surrounding rural areas.** Increased infill in Lincoln will help preserve the rural character of Lancaster County, including the preservation of productive farmland and sensitive natural environments.
Infill and Redevelopment Approach

The Infill and Redevelopment Approach seeks to fulfill the following objectives:

1. To provide flexibility to the marketplace in siting future redevelopment locations;
2. To offer existing neighborhoods, present and future residents, developers, other businesses, and infrastructure providers a level of predictability as to where such redevelopment concentrations might be located; and
3. To promote high-quality, durable design for redevelopment projects, including TIF projects, that enhances the surrounding neighborhood.
4. To encourage and provide incentives for residential mixed use in redeveloping commercial and industrial areas.

Balancing these objectives in a meaningful way will require diligence, mutual understanding, and an ongoing planning dialogue.

PlanForward identifies the potential for 12,000 new dwelling units to be located within the existing built-out portion of the City, roughly 25 percent of the projected 48,000 new dwelling units to be built citywide by 2050. The scale and intensity of new dwelling units will vary based on context of the surrounding area. This section provides a guide for infill housing types within different districts of the existing City.
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<th>District</th>
<th>Housing Type</th>
<th>Units Per Acre</th>
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<td>Downtown and Greater Downtown</td>
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<td>Greater Downtown which includes Downtown proper, Antelope Valley, the Haymarket, South Haymarket, Telegraph District and Innovation Campus</td>
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<td>3-5</td>
<td>Existing, built-out residential neighborhoods</td>
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</table>
**Greater Downtown**

A major focus for new residential reuse, infill, and redevelopment is in the Greater Downtown area. Greater Downtown which includes Downtown proper, Antelope Valley, the Haymarket, South Haymarket, Telegraph District, Innovation Campus, and the neighborhoods immediately adjacent to downtown. It is roughly bounded by Salt Creek on the west and north, A Street on the south, and 27th Street on the east.

Over 1,600 dwelling units were added in Greater Downtown from 2011 to 2020, with over 1,100 dwelling units permitted from 2010 to 2015. The Plan envisions an additional 5,000 dwelling units in Greater Downtown by 2050. This area is the main hub of employment, entertainment, and higher education. Over the years, there have been significant public and private investments in new building construction, renovations, and infrastructure. In order to capitalize on these collective investments, further development in the Greater Downtown should be realized.

Information about specific action steps related to Downtown can be found in the [Downtown policy](#). Downtown is discussed in more detail with the [Downtown Lincoln Master Plan](#), which was adopted in 2018 and is part of the Comprehensive Plan.

**Mixed Use Redevelopment Nodes and Corridors**

The City’s primary strategy for residential infill and redevelopment outside of the Greater Downtown is to encourage the redevelopment and reuse of sites and buildings in underutilized commercial and industrial areas. Over 2,300 units were added in redevelopment nodes and corridors from 2011 to 2020. Nodes and corridors are mixed use and transit oriented. Residential development is strongly encouraged. This strategy is meant to create new mixed use areas that complement and enhance adjacent existing neighborhoods, while maximizing use of existing infrastructure.

**Redevelopment Nodes**

Nodes may include a broad range of land use types including civic, residential, group housing, retail, office, and service. Potential node locations are shown on the Future Land Use map as commercial or industrial and are typically over five acres. Nodes should have access to arterial streets, public transportation, and proximity to community facilities such as parks and schools. Examples of redeveloped nodes in recent years include 35th & Holdrege/Idylwild, 48th & Holdrege, and 48th & Leighton.

As the foundation of a great neighborhood, nodes should provide services and retail goods oriented to the residents in and adjacent to the development, with significant pedestrian orientation and access. The adaptive reuse of historic or other existing structures into mixed uses is encouraged.

The size, scope, and spacing of a node will depend on available land area and the surrounding context. In some cases node redevelopment includes complete redevelopment of a site, with removal of existing structures and development of a new site plan. In other cases node redevelopment includes adding new residential or mixed use structures to underutilized areas of a center, such as a rarely-used parking lot, while maintaining some existing commercial structures and uses.

Nodes should be located on arterials and have access to public transit. They should provide adequate facilities for multi-modal transportation including a complete sidewalk network, transit stops, automobile parking and circulation, and storage of bicycles. This concept is designed and intended to be mutually beneficial for existing adjacent neighborhoods and the new mixed use neighborhood created by the redeveloped center. Newer commercial centers
that are not yet fully developed are encouraged to utilize this concept as a guide for amending their approved plans to develop as mixed use centers.

**Redevelopment Corridors**

Corridors are located along major transportation corridors such as arterials. Corridors often link Mixed Use Redevelopment Nodes and/or other commercial centers. Residential mixed use redevelopment should be encouraged in these areas, and transportation enhancements may be targeted to support such redevelopment and provide a variety of housing types affordable to diverse income levels.

Corridors represent priorities for future public transportation enhancements (such as increases in level of service), areas to encourage mixed use redevelopment of commercial strips, and connections for Mixed Use Redevelopment Nodes and/or commercial centers. Corridors are typically a half block to a block wide along arterial streets in commercially or industrially-zoned areas. Since they are often located on major arterials between commercial centers, they experience a lot of traffic and usually have transit service. Corridors present opportunities for small-scale reuse or redevelopment projects and should include a mix of land use types, especially residential including a variety of housing types affordable to diverse income levels. The adaptive reuse of historic or other existing structures into mixed uses is encouraged. Due to the linear nature of Corridors, existing residential neighborhoods are often next door or across the alley from the commercial strip or industrial remnant. This close relationship makes the adoption of design standards very important in proceeding with this strategy.

**Location Criteria**

Mixed Use Redevelopment Nodes and Corridors should be located based on the following criteria:

- In areas where there is a predominance of commercial or industrial zoning and/or development, focusing on non-residential areas.
- In proximity to planned or existing neighborhoods and community services, to facilitate access to existing community services or to address a deficiency by providing services such as grocery stores, childcare centers, and restaurants.
- Where there is existing or potential for good access to transit, to enhance the public transit system by making it accessible to residents and to facilitate the development of neighborhood multimodal hubs where residents can drive, bike, or walk to a transit stop, go to work, and then shop for their daily needs before they return home.
- On at least one arterial street to help provide for traffic and utility capacity and access to transit.
- Outside of areas with existing or potential industrial use to avoid conflicts with health and safety.
- In areas that minimize floodplain and other environmental impacts. Areas within the floodplain that already have buildings and fill are appropriate for redevelopment; projects that receive public assistance should meet a higher standard to preserve flood storage. This criterion encourages redevelopment while protecting sensitive environmental areas. Preservation or restoration of natural resources within or adjacent to mixed use redevelopment areas should be encouraged.

**Design Strategies for Mixed Use Nodes and Corridors**

Figure E2.b displays design strategies that should be applied to future node and corridor redevelopment.
Figure E2.b: Design Strategies for Mixed Use Nodes and Corridors
Example 1
Figure E2.b: Design Strategies for Mixed Use Nodes and Corridors
Example 2
1. Maintain existing vehicular access, relocate drives as needed, share access where possible, and discourage additional vehicular access to an arterial street.

2. Encourage a higher Floor Area Ratio for commercial redevelopment.

3. Encourage a wide variety of commercial tenants.

4. Face existing residential uses with new residential uses rather than the backs of buildings, unless existing residential faces the opposite direction such as along an alley.

5. Align commercial driveways with existing streets where possible.

6. Discourage commercial driveways that interrupt the blockface of a residential street, especially when residences face the street.

7. Encourage shared driveways and interconnected parking lots where possible.

8. Orient buildings to the street, especially corners.

9. Maintain or adaptively reuse existing structures (especially historic structures) where possible.

10. Incorporate a variety of residential price ranges and use types such as rowhouses, apartment buildings, apartments in mixed use buildings, live-work units, and group housing. These buildings could also serve as a transition to the existing neighborhood.

11. Encourage a vertical mix of residential and commercial use types.

12. Encourage shared parking between land uses with different peak demand periods.

13. Create public/semi-public green or open spaces such as parks, plazas, or community gardens.

14. Establish or re-establish an internal public or private street network within the node that has substantial connectivity to adjacent neighborhoods to maximize access and mobility options.


16. Encourage supermarkets or specialty grocery stores to locate within nodes.

17. Encourage substantial connectivity and convenient access to neighborhood services (stores, schools, parks) from nearby residential areas.

18. Promote activities of daily living within walking distance, and provide sidewalks on both sides of all streets, or in alternative locations as allowed through design standards or review process.

**Primary Mixed Use Redevelopment Nodes and Corridors**

Primary Mixed Use Redevelopment Nodes and Corridors provide the opportunity for large-scale infill redevelopment, and the creation of new urban neighborhoods that function as “villages within the city” with a mix of uses and amenities that are accessible through multiple modes of transportation.

Existing Regional Centers, discussed in the *Business, Economy, and Workforce Element*, are identified as Primary Mixed Use Redevelopment Nodes. They present unique opportunities for large-scale mixed-use redevelopment given their size, prominent location, and shared B-5 Planned Regional Business zoning district.

O Street is a Primary Mixed Use Redevelopment Corridor. It is Lincoln’s “main street” and a key transportation route that provides connections through the heart of the community. The O Street corridor includes a mix of residential
and commercial uses and features prosperous commercial areas alongside underutilized commercial properties that present strong opportunities for redevelopment.

O Street is also expected to be Lincoln’s first candidate for an enhanced mass transit option, such as Bus Rapid Transit (BRT). Dense concentrations of jobs and housing are necessary for BRT or other enhanced transit options to be effective. Focusing efforts on the O Street corridor, and the nodes along the corridor, will help to extend Lincoln’s high-density urban core beyond Downtown.

An example of a Primary Mixed Use Redevelopment opportunity is the Gateway Mall area. Long-term implementation of the nodes and corridors concept could transform the area into a mixed-use neighborhood with higher density residential that supports a variety of commercial uses, high-quality transit options, and pedestrian and bicycle connectivity.

**Figure E2.c: Gateway Mall Area Long-Term Redevelopment Concept**
Neighborhood Edges

Neighborhood edges present an opportunity for missing middle housing, which can help expand affordable housing options and overall housing choice in the community. Missing middle housing includes “house-scale” buildings that provide typically 3 to 12 units and fit in with the character of single-family neighborhoods. Neighborhood edges exist across the community, both in older and newer neighborhoods. They typically are found adjacent to lower density
residential areas and are near or have access to an arterial street. Edges may filter or buffer the neighborhoods from commercial or industrial uses or they may act as a seam to adjoining neighborhoods.

Criteria to consider when locating and designing neighborhood edge redevelopment should include:

- Provide direct or adjacent access to an arterial street to minimize traffic impacts on neighborhood streets.
- In some cases a transition zone may be needed when creating higher-density redevelopment adjacent to lower-density neighborhoods.
- Target legacy commercial sites and abandoned, vacant, or blighted parcels for new missing middle housing.
- Consider the character of adjacent built environment in both the design and location of buildings.

Zoning tools should be examined for Neighborhood Edges in order to encourage missing middle housing. The R-T Residential Transition District and R-5 Residential District may be appropriate zoning districts for neighborhood edges. Amendments to those zoning districts should be considered to encourage appropriately-placed and well-designed missing middle housing in neighborhood edges.

**Existing Neighborhoods**

Infill of housing in existing neighborhoods should respect the existing pattern of development. Infill redevelopment should include housing for a variety of incomes and households and should complement the character of the existing neighborhood by including appropriate transitions, scale, and context.

Examples of infill redevelopment in existing neighborhoods includes:

- Replacement of blighted and deteriorating structures.
- Conversion of single-family homes, or vacant single-family parcels, to duplexes or other low-to-moderate density options when allowed by zoning.
- Adding an accessory dwelling unit (ADU) to a single family home.
- Redevelopment of large parcels, including former school sites, church sites, and acreage homes.
- Residential conversion of small-scale legacy commercial uses.
**High-Quality Design**

High-quality, durable design should be encouraged with all infill redevelopment projects. In many cases redevelopment projects seek to remove blighted conditions and the city should not encourage infill redevelopment with new low-quality structures that will create future blight, especially with projects utilizing TIF or other public incentives. Infill redevelopment should complement and enhance surrounding neighborhoods.

A key mechanism for supporting high-quality design is design standards. As of 2021, urban design standards generally only cover residential areas inside the 1950 City limits along with the Downtown and Capitol Environs. Most commercial areas of the city are not under any design review and sometimes create rough edges and poor entryways to neighborhoods.

PlanForward includes a recommendation to evaluate several options for new design standards.

- Updates to the B-5 Planned Regional Business zoning district for Primary Mixed Use Redevelopment Nodes and Corridors that would address items such as: density, site layout, parking, building scale, and design standards ([Nodes and Corridors policy](#)).
- Design standards to be utilized across all Mixed Use Redevelopment Nodes and Corridors ([Nodes and Corridors policy](#)).
- Design standards for TIF redevelopment projects ([Infill and Redevelopment policy](#)).
- Expanded commercial design standards that could be applied across various zoning districts or corridors ([Urban Design Standards policy](#)).

**Redevelopment Incentives**

Facilitating infill and redevelopment in the existing city requires both a nuanced understanding of the challenges associated with redevelopment projects and a well-thought out set of strategies to overcome them. Commonly cited challenges to infill and redevelopment include land cost and assembly, access to financing, and zoning requirements.

Tax Increment Financing (TIF), facilitated by redevelopment plans in blighted areas, has been the city’s most common tool for incentivizing infill redevelopment. TIF is authorized by Nebraska Community Development Law and has been utilized by the City of Lincoln since 1982. TIF uses the added tax revenue created by the redevelopment to finance project-related costs such as land acquisition, core and shell rehabilitation, and public improvements. Traditionally, the developer takes on the debt of the project, pays their full tax burden, and then is allocated back the increment to pay down the debt on the pre-identified project-related costs.

In 2019 the State legislature revised Nebraska Community Development Law to include an “extremely blighted” designation. Areas meeting the criteria of being extremely blighted are eligible for additional Housing Trust Fund dollars and state tax credits for owner-occupied home purchases.

There are many existing and potential redevelopment incentives beyond blighting and TIF (i.e. tax abatement, land value tax, impact fee exclusions). More information can be found in the [Redevelopment Incentives policy](#).
Policies Related to this Element

P1: Housing Affordability
P2: Existing Neighborhoods
P3: Downtown
P6: Nodes and Corridors
P7: Redevelopment Incentives
P8: Infill and Redevelopment
P11: Parking Requirements
P14: Commercial Infill
P34: Urban Design Standards
P37: Historic Preservation

Goals Related to this Element

G1: Safe, Affordable and Accessible Housing
G2: Complete Neighborhoods
G4: Economic Opportunity
G13: Community Appearance
E3: Business, Economy and Workforce

This element describes PlanForward's support for economic development, workforce development, and additional commercial and industrial activities.

Lancaster County is a growing county with a relatively stable economy. Continued economic growth in Lincoln and Lancaster County is expected over the plan period. In order to ensure that growth and employment occur in an organized fashion that meets the vision of PlanForward, principles and strategies are laid out to guide policies and future development.

Economy and Workforce Development

Lancaster County benefits from many quality of life factors that attract both employers and employees. Lancaster County’s educational systems are among the best in the country and provide a skilled workforce. Lincoln’s neighborhoods provide a good stock of quality housing of many sizes and types. The presence of State government and several college and university campuses creates an attractive economic environment for both employers and employees. Lancaster County provides a wide range of art, entertainment, and recreation opportunities. Public and private investment in Lincoln is evident in the Downtown, Antelope Valley, Innovation Campus, West Haymarket, and Telegraph District projects. All of these assets should be emphasized to encourage economic development.

Economic Sectors

The purposes of this discussion, the economy divided into four major sectors: Business and Commerce, Government, Industrial, and Agriculture. Below is a summary of recent trends in each sector. More details can be found in the Annual Community Indicators Report.

Business & Commerce: This sector has shown the most robust employment growth over the past decade. It is the largest sector in Lancaster County based on employment and number of establishments. Industries include Professional Services, Leisure and Hospitality, Education and Health, Financial Activities, Information, and Other Services. The decreased employment in 2020 represents impacts of the COVID-19 pandemic.
Government: The second largest sector in Lancaster County based on employment. This sector includes Federal, State and Local government. The top three employers in Lancaster County are all in the public sector: Lincoln Public Schools, State of Nebraska, and University of Nebraska. The decreased employment in 2020 represents impacts of the COVID-19 pandemic.
Industrial: The Industrial sector has experienced steady growth since having a record low number of employees in 2010 during the last recession. Industries in this sector include Manufacturing, Construction, Trade, and Mining. The decreased employment in 2020 represents impacts of the COVID-19 pandemic.

Agriculture: Agriculture is a major factor in Lancaster County’s economy with over 3/4 of the land area of the county being used for agricultural production. Niche farms have seen strong growth over the past decade and are expected to continue to grow as more local food is demanded by the growing population.

It is expected that employment in Lancaster County will continue to grow across all sectors during the planning period, matching the slow and steady projected population growth discussed in the Growth Framework section of the plan.

The Greater Lincoln Workforce Development Area Local Plan

Workforce development activities in Lancaster County are governed by the Greater Lincoln Workforce Development Board. The Board includes leaders from business, economic development, education, organized labor, and community organizations to provide oversight of employment and training programs in Lancaster and Saunders counties. The Board is responsible for planning the use of federal Workforce Innovation and Opportunity Act (WIOA) funds to positively impact employer and worker prosperity. Board members are appointed by the Mayor of Lincoln.

The Greater Lincoln Workforce Investment Plan, developed by the Workforce Development Board, coordinates and documents workforce development activities in the county. The Workforce Investment Plan identifies a vision and goals, with detailed strategies and benchmarks coordinated among multiple organizations, for achieving those goals.

The top goal identified in the Workforce Plan is to advance living wages and inclusivity. As stated in the plan:
Individuals that work full-time should achieve a measure of stability. The workforce board is committed to reducing poverty among our working people. We are committed to building career pathways that will support our people in achieving economic independence. We will foster economic inclusivity by investing in people with unrealized potential including youth and individuals with barriers to employment.

There are a variety of organizations that contribute to the local workforce development system and are included in the Workforce Investment Plan. They include but are not limited to:

- EmployLNK. A collaboration of multiple workforce development agencies that serves as the single point of contact for businesses to interact with the agencies that serve others and to organize job fairs and other employment-focused events.
- Lincoln Literacy. Provides services to adults who want to improve their language skills.
- Lincoln Manufacturing Council. The Lincoln Manufacturing Council’s Manufacturing Tech program includes 10 Lincoln manufacturers that are hiring in the community. The council provides training to individuals with no experience in manufacturing and are willing to learn more.
- Lincoln Partnership for Economic Development. The Lincoln Partnership for Economic Development (LPED) is a public-private collaboration charged with fulfilling Lincoln’s Economic Development goals.
- New Americans Task Force. NATF (New Americans Task Force) is a network of public and private organizations and community members, dedicated to supporting New Americans in our community.
- A variety of partners in the “One-Stop Delivery System” for workforce assistance including Proteus Inc, National Able Network, Adult Education, Carl Perkins Career & Tech Ed, Wagner-Peyser (Employment Services), Unemployment Insurance Benefits, Jobs for Veterans State Grant, Trade Act Programs, Nebraska VR, Nebraska Commission for the Blind and Visually Impaired, Community Action Partnership of Lancaster & Saunders Counties, Lincoln Housing Authority – Family Self Sufficiency Program, Workforce Innovation and Opportunity Act (WIOA) Adult Dislocated Worker and Youth, Ponca Tribe of Nebraska, Temporary Assistance for Needy Families (TANF), and Supplemental Nutrition Assistance Program (SNAP).

A key resource to implementing the Workforce Investment Plan is the American Job Center, which houses multiple job training service providers and provides services to both job seekers and businesses seeking employees. American Job Center partners provide on-site and networked career development information, education and training programs, case management, and job placement assistance.

The American Job Center facility that is located in Downtown Lincoln offers free access to a resource room which includes computers with internet, telephones, and fax machines. The resource rooms are open to the public on a self-service basis. Staff are available to assist job seekers with building a resume, general career exploration, and job search. The center provides a full array of employment and training related services for workers, youth and businesses.

American Job Center functions are primarily funded by the federal Workforce Innovation & Opportunity Act (WIOA), although the City funds certain staff and administrative functions. Because WIOA funds are targeted to certain populations of adults, dislocated workers and youth, the majority of American Job Center services are also targeted to benefit that part of the workforce.
The WIOA supported through the American Job Center provides a variety of services to support employers, including:

- **Job Postings:** Job openings are posted for free on NEworks, Nebraska’s Official Labor Exchange Market.
- **Tax Credits:** Employers can earn tax credits for hiring targeted groups of job seekers.
- **Data:** The American Job Center provides labor market research including economic and demographic data.
- **Hiring Assistance:** The American Job Center has interview space that can be reserved by employers. In addition, the American Job Center provides job fairs and hosts resumes on NEworks.
- **Temporary Work & Internships:** Employers may host a qualified employee for up to 500 hours at no cost.
- **Layoff Assistance:** Employers can access resources and support if they are considering laying off employees.
- **Wage Reimbursements & Training Matching:** Employers can receive 50-75% wage reimbursements for qualified new hire and 50-90% matching for potential or incumbent employee training.

The ideas found in the Greater Lincoln Workforce Investment Plan and implemented through WIOA, American Job Center, and other partners align with the PlanForward vision. The policies found in this Comprehensive Plan support the continued efforts of the Workforce Development Board along with the public and private organizations that contribute to a strong local workforce.

**Specialized Industries for Economic Development**

Lancaster County’s workforce, the presence of the University, and the strength of the agricultural economy make it particularly attractive for development of several specialized industries.

- **Biotechnology.** UNL has a strong biotechnology research program. Expansion and retention of start-ups and existing companies, particularly those that build on University research should be a focus.
- **Value Added Agriculture.** Food research at the University of Nebraska – Lincoln (UNL) is vital to attracting and retaining these industries in the Lincoln area. This category could include renewable energy development, such as ethanol plants, though these plants are primarily locating outside Lancaster County.
- **Specialty Electronics.** Expanding or using the Foreign Trade Zone in the Airpark area holds promise for this type of use and should be examined with the Airport Authority.
- **Technical Customer Support.** Interest in this category is returning after years of customer support jobs being sent overseas.
- **Insurance and Financial Services.** The success with job expansion of several local insurance companies points out the attractiveness of Lincoln. The State of Nebraska statutes and taxation policies provide a competitive advantage for insurance companies, as witnessed by several out-of-state companies also having located in Nebraska.
- **Entrepreneurship.** Lincoln has benefitted from entrepreneurs starting new businesses which have grown rapidly, adding many jobs to the economy. More should be done to encourage entrepreneurs, to utilize technology from UNL in the marketplace, and to promote entrepreneur education at UNL, Southeast Community College and other educational institutions.
- **Health Care.** Lincoln’s health care providers serve a larger region than just the city. This is an industry that is growing nationally and is expected to grow locally as well, especially as the population ages. Expansions of existing locations are expected and a wide variety of new facilities will likely come forward over time.
In relation to the strengths and opportunities within the local economy, the Greater Lincoln Workforce Development Area Local Plan identifies four priority areas for career pathways. Many and strategies within the Workforce plan relate to further developing the workforce within these industries.

- Advanced Manufacturing
- Agribusiness and Natural Resources (especially positions addressing conservation and energy efficiency)
- Healthcare
- Technology

**Mayor’s Economic Recovery Task Force**

In the summer of 2020 Mayor Gaylor-Baird formed the Mayor’s Economic Recovery Task Force. The group was tasked with developing data driven, locally informed strategies for supporting local businesses and employment as the local economy begins to recover from COVID-19, while fostering public health, inclusion, and resilience in Lincoln.

The Task Force released their report at the end of August 2020. The report includes strategies for both business and workforce development. Recommendations that will assist long-term recovery include:

- Promote economic resilience and inclusion by strategically investing in local businesses, small businesses, and women-and-minority-owned businesses.
- Connect employers with local workforce resources and opportunities.
- Upskill and reskill Lincoln’s workforce by creating public incentives to support professional development for workers displaced by COVID-19.
- Provide financial assistance to impacted businesses and invest in new businesses, focusing on businesses and industries particularly impacted by COVID-19.

View the entire *Mayor’s Economic Recovery Task Force Report.*
Downtown

Downtown continues to be the most economically productive area of the county on an acre-for-acre basis. According to the market assessment completed with the 2018 Downtown Master Plan, Downtown Lincoln has approximately 41,000 workers – 22 percent of Lincoln’s overall workforce. While the impacts of the COVID-19 pandemic has likely changed the makeup and location of employment across the country, including Lincoln, it is expected that Downtown Lincoln will remain the commercial and employment center of southeast Nebraska.

Downtown Lincoln stands as a unique community resource. Downtown is the County’s most intensive center of activity, offering a broad mix of retail, office, industrial, residential, and governmental uses. It is home to numerous public facilities — including the Nebraska State Capitol, the University of Nebraska-Lincoln’s main campus, and the County-City Building — as well as private endeavors— including finance, insurance, and other business services. Downtown Lincoln has historically served as the community’s dominant center of entertainment, and that role is expected to continue over the coming decades.

The Downtown Lincoln Master Plan was completed in 2018. The Plan identifies priorities for downtown physical improvements, catalyst developments, and policies to guide the City of Lincoln, the Downtown Lincoln Association, the development community and other Downtown stakeholders, and strengthen Downtown’s role as the region’s “center of opportunity.”

PlanForward supports implementation of the Downtown Master Plan to preserve and enhance Downtown’s role as:

- The major office and service employment center
- The center of all levels of government
- The principal cultural, entertainment, and tourism center
- The center for hotels and conventions
- The financial center
- The hub of higher education
- A regional retail center geared toward employees, area residents, visitors, and UNL students and staff
- A major focus for new residential reuse, infill, and redevelopment

Lancaster County, Outside of Lincoln

The majority of new development takes place in the urban area of Lincoln. However, it is important to strengthen existing commercial areas and support new development within all the incorporated communities of Lancaster County. Commercial development in towns also provides opportunities for businesses that support rural residents within the county. Farms are an important part of the history and economy of the region. Agriculture is the dominant land use in Lancaster County, accounting for over 3/4 of all land. While this land is largely considered “undeveloped,” it is still an important economic factor in the county’s future. Agriculture’s impact on the local economy goes beyond the sale at the end of production. Farms of all sizes make purchases of goods and services in the city and county throughout the year, which contribute to the local tax base and sustain growth for other businesses in the agriculture industry.

Development within the incorporated towns and their one-mile zoning jurisdiction will be determined by the communities themselves. PlanForward supports these communities and their efforts to maintain and improve their commercial and industrial base.
Commercial and Industrial Development

Lancaster County has experienced significant increases in commercial and industrial development over the last several decades. Numerous new shopping centers, office complexes, and industrial facilities have been built – representing valuable economic resources for the community.

Lincoln remains the county’s dominant home to both the commercial and industrial sectors of the local economy. Most of the recent growth in commercial and industrial space has occurred within the city limits of Lincoln, with other incorporated communities experiencing some growth as well. This clustering of commercial and industrial activity in the City of Lincoln has been completed in accordance with the goals of previous comprehensive plans, and PlanForward continues this development pattern.

Commercial and Industrial Centers in Lancaster County should be located:

- Within the City of Lincoln or incorporated villages.
- Outside of saline wetlands, signature habitat areas, native prairie and floodplain areas (except for areas of existing commercial and industrial zoning).
- Where urban services and infrastructure are available or planned for in the near term.
- In sites supported by adequate road capacity — commercial development should be linked to the implementation of the transportation plan.
- In areas compatible with existing or planned residential uses.
- In existing underdeveloped or redeveloping commercial and industrial areas in order to remove blighted conditions and to more efficiently utilize existing infrastructure.
- In areas accessible by various modes of transportation (i.e. automobile, bicycle, transit, and pedestrian).
- So that they enhance entryways or public way corridors, when developing adjacent to these corridors.
- In a manner that supports the creation and maintenance of green space as indicated in the environmental resources section of this Plan.

Commercial Centers

Based on the projected population growth rates, the Plan identifies the potential for a total of 57.6 million square feet of occupied retail, office, and service uses by 2050 – an increase of roughly 12 million square feet above the occupied commercial space in 2020. A substantial portion of this future commercial capacity will be accommodated on sites already zoned or approved for commercial development or that have been identified on the Future Land Use map for future commercial land use. It should be noted that these assumptions for commercial growth are based on
trends present prior to the COVID-19 pandemic. At the time of plan approval the long-term economic impacts of the pandemic are unclear, and it’s possible that PlanForward’s commercial assumptions will need to be re-evaluated as part of the next plan update.

“Commercial Centers” are defined as areas containing a mix of retail, office, service, and residential uses, with some light manufacturing and warehousing in selected circumstances. Other land uses such as child care centers, assisted living facilities, and recreational facilities may be integrated within the center as well. Commercial Centers are distinguished from Industrial Centers by their dominance of commercial uses over industrial uses, and in the types of industrial uses located in them — that is, the uses are less intrusive in terms of lighting, noise, odors, truck and vehicular traffic, and pollutants. Where properly sited, light manufacturing uses may be a part of larger Commercial Centers.

The Commercial Centers concept gives recognition to the evolving role of commercial uses in the life of cities. Commercial Centers encompass a broad range of land uses and are intended to encourage the mixing and integration of compatible land use types. Residential mixed use is encouraged.
Figure E3.d: Commercial Center Design Strategies
Figure E3.d: Commercial Center Design Strategies
1. Encourage a mix of office, retail, service, and residential uses. The center may include mixed-use buildings with residential or office above a first-floor retail or service use.

2. Discourage auto-oriented strip commercial development. Commercial Centers should not be developed in a linear strip along a roadway or be completely auto-oriented. Design new Commercial Centers in a manner that facilitates future development and intensification of land uses on the site.

3. Develop Commercial Centers as compact clusters or mixed-use nodes with appropriate site design features to accommodate shared parking in the rear of buildings and ease of pedestrian movement to minimize impacts on adjacent areas, and to encourage a unique character.

4. Locate the most intensive commercial uses, such as restaurants, car washes, grocery stores, gas stations/convenience stores and drive through facilities nearer to the major street or roadway and furthest from the residential area (unless contained within a mixed use center). Lighting, dumpsters, loading docks and other service areas should be screened from residences.

5. Design buildings and land uses at the edge of the center to be an appropriate transition to lower density residential uses. Examples of appropriate edge land uses include apartments, mixed use residential buildings, offices, assisted living facilities, or child care centers. Transitional elements such as greater setbacks and enhanced screening should be required for buildings that are out of character with the adjacent residential district, such as buildings that exceed the maximum allowed height of the adjacent district.

6. Develop smaller stores next to larger anchor stores in centers to encourage small businesses and to provide a variety of goods and services for customers utilizing the centers.

7. Encourage multiple street connections to adjacent residential neighborhoods to allow convenient access for neighboring residences and pedestrians without the use of arterial streets, but exercise care in designing the street network to minimize undesirable traffic impacts.

8. Encourage commercial development at ¼ or ½ mile between major intersections in order to create centers that are centrally-located within each square mile to facilitate easier pedestrian access and also allow for vehicular access points that meet the city’s Access Management Policy.

9. Discourage “four corner commercial development” – with commercial uses at all four corners of an intersection – in order to promote walkability and ease of movement within each commercial center.

10. Design streets, and public spaces, buildings, and parking areas to enhance pedestrian activity and support multiple modes of transportation, including transit.

11. Provide public amenities such as recreational facilities, plazas, squares and other types of green spaces and meeting areas open to public.

12. Provide for a variety of housing opportunities, including higher-density housing, within and adjacent to the Commercial Center.

Elements

There are many types of Commercial Centers, with different scales and functions. They can include shopping centers or districts (such as neighborhood centers, large scale retail malls, strip centers, and traditional store-front retail settings), residential mixed use centers, office parks, business parks, stand-alone corporate office campuses, research and technology parks, and Downtown Lincoln. Within Lincoln, outside of Downtown, the largest commercial centers are designated as Regional Centers. Regional centers have the greatest potential impact on adjacent land uses and public infrastructure, so it is important that they are sited well in advance of development.

The following section describes the general characteristics of Regional Centers along with their location. Other types of commercial centers are briefly described, and their location is generally in accordance with the Future Land Use map “Commercial” designation. Smaller commercial areas less than five acres in size need not be identified specifically on the Future Land Use map, but should still develop in accordance with the principles of the Plan.

**Regional Centers**

Regional Centers typically contain one million or more square feet of developed building space. They generally include a unique blend of commercial and other compatible land uses. Within this type of center, one may find retail shopping, restaurants, entertainment complexes, cultural and artistic institutions, offices, personal and business service facilities, public institutions and governmental functions, and the center should include residential uses. The scale of such centers can offer a sense of place with a unique character or cohesive theme. Regional Centers are also identified as Primary Mixed Use Redevelopment Nodes as discussed in more detail in the Infill and Redevelopment element.

Many Regional Centers are large scale retail centers that include a mall with several department store anchors and numerous small shops, as well as adjacent commercial development with stand-alone restaurants and stores, such as Gateway Mall or SouthPointe Pavilions.

Regional centers are unique in that they have their own zoning district (B-5, Planned Regional Business). Most notably, B-5 is the only zoning district outside of Downtown that allows for large movie theater complexes (up to six screens), with one complex allowed per regional center.

Regional Centers should be geographically well dispersed throughout the Lincoln urban area, roughly four to six miles apart. The locations of existing Regional Centers are shown on the Regional Commercial Centers map and they are shown as “Commercial” on the Future Land Use map. These existing centers are sufficient for the needs of the community through 2050 and no new additional Regional Centers are planned for at this time. Should any new Regional Centers be proposed during the planning period they should be sited on the map well in advance of development so that their potential impact may be considered as part of the development review process.
Figure E3.e: Regional Centers
Elements

**Community Centers**

Community Centers may vary in size from approximately 250,000 to 600,000 square feet of commercial space. They are intended to be smaller in scale and intensity of uses than Regional Centers and serve a more targeted market and geographic area. Community Centers tend to be dominated by retail and service activities, although they can also serve as campuses for corporate office facilities and should include a mix of residential uses.

Community Centers can have a community-wide appeal but primarily serve a geographic subarea within Lincoln and surrounding areas within the County. They should be located approximately 1 to 1 ½ miles apart, depending upon their size, scale, function, and area population. Community Centers are typically sited in advance of development and shown as “Commercial” on the Future Land Use map.

**Neighborhood Centers**

Neighborhood Centers typically range in size from 50,000 to 250,000 square feet of commercial space. They provide services and retail goods oriented to the neighborhood level, with significant pedestrian orientation and access. Residential mixed use is encouraged. Neighborhood centers are a key element of the Complete Neighborhoods concept discussed in the associated Goal and Element.

These centers typically serve the neighborhood level. Neighborhood Centers should be located approximately ½ mile apart, depending upon their size, scale, function and the population of the surrounding area. Future Neighborhood Centers are typically not sited on the Future Land Use map in advance but are identified as development plans are approved.

**Other Types of Commercial Centers**

Other types of commercial centers in Lincoln include office centers and highway-oriented commercial centers. These should generally be dispersed throughout the community in appropriate locations shown as “Commercial” on the Future Land Use map.

**Commercial Infill**

A variety of commercial land uses seek infill and redevelopment locations. There are numerous opportunities throughout the community including many existing commercial centers that are not fully occupied or do not fully utilize their site.

The [Commercial Infill Policy](#) includes general guidelines for commercial infill. The following text and image show how commercial design principles can be utilized to create a high-quality commercial redevelopment project that is compatible with the surrounding neighborhood.
Figure E3.f: Commercial Infill Design Strategies
Elements

Industrial Centers

Industrial employment is considered an employment sector with moderate growth potential for the city and county. Based on population projections, PlanForward expects the demand for nearly 1.9 square miles of additional industrial property over the planning period. There is currently nearly nine square miles of undeveloped land designated for Industrial on the Future Land Use map. This existing undeveloped area will absorb most new industrial demand in the planning period. Industrial areas are shown on the Future Land Use map well in advance of development in order to ensure public safety and adequate infrastructure. In addition, since industrial sites often have specific requirements - such as interstate/highway/rail access, utilities, minimal topography and separation from residential uses - it is important to identify sites that meet these criteria and reserve them for future industrial development capacity.

The Future Land Use map includes two types of industrial uses: Industrial and Light Industrial.

**Industrial**

In general the Industrial category is for a wide range of traditional industrial uses including manufacturing, processing and assembly uses such as Veyance, Archer Daniels Midland, and Kawasaki. In the past, large industrial users were often located in isolation from each other; preferably new industries should locate together in planned industrial centers. Many industrial centers also include some warehouse, storage and contractor yard uses with a minor amount of supporting commercial use — but they should be and usually are over 75% industrial use.

New industrial centers should be distant from existing or planned residential areas. Industrial uses should be located in close proximity to each other. Transitional uses (such as offices or commercial uses) should develop between industrial centers and residential uses. In redeveloping areas, lesser setbacks may be acceptable due to the existing conditions, as long as industrial zoning does not get closer to existing residences. Each planned industrial district should be established only after further consideration of site characteristics, buffering and appropriate zoning.

| 1. Encourage additional vehicular access to an arterial street. |
| 2. Encourage a Floor Area Ratio that exceeds to existing/previous commercial uses on the site. |
| 3. Face existing residential uses with new residential uses rather than the backs of commercial buildings unless existing residential faces the opposite direction such as along an alley. |
| 4. Discourage commercial driveways that interrupt the blockface of a residential street, especially when residences face the street. |
| 5. Encourage shared driveways and interconnected parking lots where possible. |
| 6. Orient buildings to the street, especially corners. |
| 7. Maintain or adaptively reuse existing structures (especially historical structures) where possible. |
| 8. Encourage a vertical mix of residential and commercial use types. |
| 9. Encourage shared parking between land uses with different peak demand periods. |
| 10. Maintain or enhance on-street parking resources, especially in established/historic commercial districts. |
**Light Industrial**

The Light Industrial category is for uses that have a minimal impact on surrounding properties. They could include lighter manufacturing uses with some additional office and retail uses located within the center, such as the Horizon Business Center located near 14th & Pine Lake Road south of Lincoln Southwest High School.

Light industrial centers can be located more closely to residential uses than traditional industrial centers, though residential uses should be buffered through landscaping, setbacks, and transitional uses, such as office or open space. In redeveloping areas, smaller setbacks may be acceptable due to the existing conditions, as long as existing industrial zoning does not get closer to existing residences.

The land use categories are shown on the Future Land Use map in the [Growth Framework section](#).

**Potential Large Employer Opportunity Areas**

When locating large employers all efforts should be made to utilize sites identified on the Future Land Use map for Commercial or Industrial uses. However, in some cases an employer may need to look elsewhere to find a viable site. These "second tier" sites may currently have limited infrastructure, but some employers may find them desirable due to their large size, highway and/or rail accessibility, and remoteness from residential areas. In some cases these sites may even be outside the Future Service Limit. In order to support economic development efforts, these "second tier" sites should be given serious consideration if needed for a large employer.

Listed below items to consider when looking at sites not currently shown on the Future Land Use map for Commercial or Industrial uses:

- The site must be annexed prior to development.
- City infrastructure and services, such as fire and police, should be available.
- The site should have direct access to an arterial street or highway to limit the impact on adjacent local streets. A traffic impact analysis may be required.
- Development of the site should have minimal impact on surrounding residences and sensitive environmental areas.

**Policies Related to this Element**

P5: Downtown  
P6: Nodes and Corridors  
P7: Redevelopment Incentives  
P8: Infill and Redevelopment  
P9: Skilled, Diverse, and Trained Workforce  
P10: Supporting Small Businesses  
P11: Parking Requirements  
P12: Economic Growth  
P13: Commercial and Industrial Centers  
P14: Commercial Infill  
P15: Infrastructure and Economic Development
Elements

P16: Rural Economy
P17: Predictability
P34: Urban Design Standards
P37: Historic Preservation
P67: Transportation and Economic Health

Goals Related to this Element

G3: High-Quality Workforce
G4: Economic Opportunity
G5: Equity and Inclusion
G14: Technology
E4: Environmental Resources

This chapter includes an outline of the guiding principles for environmental resources, a discussion of environmental resource features and a long range planning and implementation approach with associated strategies, entitled “The Greenprint Challenge.”

Lancaster County is characterized by flat and rolling plains, sloping toward the east from a high elevation of 1,520 feet in the southwest, to its lowest point of 1,080 feet where Salt Creek exits the northeastern portion of the county. The Salt Creek basin defines most of the County’s topography, with portions of the Middle Big Blue (southwest), Big Nemaha (southeast) and Little Nemaha (east) basins also entering the County borders.

Surface water flows in over 400 miles of warm water streams over the gentle slope, contributing to numerous ponds and lakes, including 16 major lakes between 20 and 1,800 acres each, most built in the 1960s by the Army Corps of Engineers. These lakes provide recreation and habitat to the people and animals of Lancaster County. Surface water is susceptible to pollution in the form of sedimentation and contamination from runoff. Fertilizers and sediment are the most common water quality problems in the County’s streams and lakes. Agriculture, construction, and urban runoff are the primary sources of water pollution. The Watershed Management division of Lincoln Transportation and Utilities and the Lower Platte South Natural Resource District (NRD) partner to design management plans that address both the quantity and quality of surface water.

Ground water seeps into the ground and collects, is stored, and moves slowly through layers of soil. Groundwater is almost exclusively the source of drinking water in Lancaster County. Generally, groundwater quality and quantity is higher in the southern portions of the County. Residential, agricultural, and industrial users outside the urbanized area obtain about 25% of the water used in the Dakota aquifer beneath Lancaster County. High salinity in the northern part of the county makes groundwater more difficult to acquire.

Groundwater contamination includes infiltration of agricultural chemicals into supplies. Small areas of contamination, mostly in the urban area, have also been identified. The Lower Platte South NRD, Nebraska Department of Environment and Energy, and other public and private non-profit entities work together in programs to cap abandoned wells, protect wellhead areas, and educate the public on proper use and disposal of potential contaminants.
A critical element to environmental resource protection is maintaining the natural systems that support wildlife. Wildlife includes white-tailed deer, a wide variety of songbirds, ground birds, and small mammals, migrating and resident water fowl, and a variety of fish species. Large mammals include predators such as fox, coyote, and bobcats. Many species such as raccoon, squirrel, and opossum are commonly seen in both urban and rural areas. Lancaster County is also home to several State and Federal threatened and endangered species which are discussed later in this element. Recent decreases in some pollinator species, drawing national attention, are also a priority for research and habitat restoration.

The soils of Lancaster County are intimately tied to groundwater. Soils are widely varied in the County with the most common being the Sharpsburg, Wymore, Pawnee, Judson, and Kennebec soil series. Generally, soils north of Lincoln show higher infiltration rates, are able to hold more water, and are more likely to be saline. Soils to the south have slower infiltration rates and higher run-off potential. Soil erosion is a primary concern as agricultural production forms a major economic base for Lincoln and Lancaster County. Thirty-one percent of soils in the non-urbanized areas of Lancaster County are classified as Prime Farmland and are located primarily along streams and bottomland.

Air quality in Lancaster County has historically been high. Lancaster County benefits from prevailing westerly winds and an extensive rural landscape between Lincoln and Denver, CO. The level of air pollution as measured against standards set by the US Environmental Protection Agency is low. The Lincoln – Lancaster County Health Department conducts regular air quality monitoring activities and provides up to date information on their website.

Lancaster County boasts a diverse set of environmental resources and landscape types that should be respected and maintained. The Greenprint Challenge, developed by the City of Lincoln-Lancaster County Planning Department, Parks and Recreation, and the Lower Platte South NRD in 2001, provides an approach for sound and sensitive urban and rural development that is interwoven with the community’s desire for maintaining and enhancing the ecological and economic benefits of our natural and cultural environment. Although over 20 years old, the resources identified, and the recommended principles for their protection, in the Greenprint Challenge are still applicable today and will continue to be in the future.

Lancaster County’s environmental resources reside within a broad range of settings that should be considered as policy and decisions are made. PlanForward should consider both the local and broader regional and global impacts of actions affecting environmental resources. Both the rural and urban areas should receive equal priority in the planning process as environmental resources are found throughout Lancaster County. Cooperative relationships with public and private partners should be reinforced with the emphasis on environmental resource features rather than patterns of ownership. The community should capitalize on the economic benefits that the preservation of environmental resources can provide. Well managed environmental resources generate and reinforce business opportunities.

Signature landscapes are those areas and natural features that are unique to a region and contribute to the identity of the community. The Lincoln and Lancaster County community’s landscape is primarily shaped by Salt Creek and its tributaries and the natural features in it include riparian and floodplain areas, freshwater and unique saline wetlands, wooded corridors and urban forests, and rolling hills covered in agricultural crops, pasture, and rare fragments of remnant tallgrass prairie. As open spaces are identified for conservation or inclusion as public parks, the preservation, enhancement and restoration of our environmental resources and signature landscapes should be included in planning.
The maintenance of healthy soil is critical for the long-term survival of both natural habitat and agriculturally productive land. Healthy soil is composed not only of minerals but also of the roots that wind through them, decaying organic matter, and the bacteria, fungus, and invertebrates that feed on them. The region known as the Great Plains once boasted a thick layer of healthy soil, rich in organic material and supporting one of the most diverse ecoregions on the planet - prairie. Maintaining a diverse range of plants ultimately supports a healthier environment for all plants and animals. Plants are a basic environmental building block. They provide habitat and food for animals, as well as aide in sustaining other vegetation that holds the soil and protects the water. Plants and animals do not exist in isolation. They interact with each other and reside within an integrated habitat. Implementation of PlanForward needs to respect biological connections that exist today and provide responsive means for maintaining those associations. Plants and soil work together as a natural solution for carbon sequestration. Healthy soil and plant communities hold carbon in their organic material and keep it from escaping into the atmosphere. Agricultural and development practices that work to protect soils and maintain healthy plant cover are important for reduction of carbon in the atmosphere.

Although Lincoln and Lancaster County are a part of the tallgrass prairie ecoregion, European settlement, which included the suppression of historic wildfires, led to the proliferation of trees, particularly along waterways. As Lincoln and surrounding villages began to grow, trees were planted to provide shade, firewood, building material, food, and to beautify neighborhoods and common spaces. This Urban Forest represents a significant community investment, both public and private. Although not technically part of the natural environment, the environmental benefits are far-reaching and highly important to the community.

The Urban Forest is composed of privately owned trees and the Community Forest, made up of trees in public right-of-way and on public land, such as parks and open spaces. Many of the trees have been deliberately planted, but some are volunteer trees from native stock or offspring of planted trees. Care for the Community Forest is a public obligation carried out primarily by the Parks and Recreation Department. Comprehensive and adaptive urban forestry management approaches should be applied to sustain the city’s urban forest; it is essential that adequate human and financial resources be allocated and specifically dedicated to sustaining our community’s expanding public green infrastructure in conjunction with increasing development and population growth.

While planning for future growth is integral to PlanForward, it is equally important that environmental resource features be accorded similar attention. The community should invest planning resources into the early identification of those areas that are most valued as part of the Greenprint Challenge. This principle supports the notion of “getting ahead of the game” by knowing what resources are most valued, where they are located, and what actions should be made within the broader planning process to secure their future for the community.

Maintaining a balance between the natural and human built environment is always delicate. The policies of PlanForward should strive to incorporate such uses in the full range of urban and rural landscapes. As cities and villages expand, establishing corridors and districts of green should be part of the growth process. This often requires the advance delineation of these areas and the means for securing their ongoing protection and maintenance. Securing the long-term permanence of green space is a basic dilemma in natural resources planning. The use of
“green space development incentives” (e.g., setting aside non-buildable areas, creating green space preserves, density bonuses) should be a primary consideration in implementing this plan.

**Local Food**

The local food movement was born of a desire to provide a secure source of nutritious food that has a reduced impact on the environment and increased benefit to the health of consumers. Many urban areas have few sources of fresh produce, meats, and dairy products, and many consumers must rely upon convenience foods and fast food restaurants.

Food that is transported over great distances, sometimes from other continents, consumes a great deal of energy in that transport and produces a corresponding amount of greenhouse gases. Production of food closer to the urban center, if not within it, reduces the distance food must be transported, increases the freshness of food available, supports the local agricultural economy, and provides nutritious food to those who might not otherwise be able to obtain it.

Local food may be produced in the rural area of the County, or counties nearby, or it may also be produced within the urban area itself. In any case, the preservation of land for food production both nearby and within the City is integral to local food opportunities. Prime farmland within the County should be preserved for its agricultural value as well as potential for food production.

Within the City, community gardens, bee keeping, chicken coops, farmer’s markets, and local cooperative markets are all important links in the local food chain. Building a strong local food network takes the cooperation of both public and private sectors. Organizations such as Community Crops, Nebraska Food Cooperative, and the University of Nebraska Extension Service have been at the forefront in the provision of local food program support.

**Environmental Resources Categories**

As a PlanForward land use category, “environmental resources” represent an important part of today’s urban and rural landscapes. Such features need to be valued and sustained as part of the overall planning process if they are to remain as vital parts of the natural heritage left for succeeding generations. These features help to define the County’s unique sense of place — geographically, culturally, and temporally. The Plan fully recognizes the harmony and connections that exist within and among these features. Thirteen separate environmental resource features are recognized in the Plan. The Greenprint Challenge map displays generalized locations within the county in which these resources categories may be found. For a more detailed map, the Natural Resources Geographic Information System (NRGIS) map can be accessed, and categories can be toggled off and on to view their location. A brief description of each of the Plan’s environmental resource features and specific strategies for protecting these features is provided below.
Native Prairie

This feature refers to the tallgrass prairie areas that are dominated by big bluestem, little bluestem, indiangrass, and sideoats grama grass species. Numerous wildflowers and forbs are also found in these prairies, including golden rod, purple coneflower, purple prairie clover, and black-eyed susan. Though historically they were the region’s prevailing natural condition, native prairies are an increasingly rare feature on the Nebraska landscape. The original tallgrass prairie stretched from Manitoba to Texas and east to Indiana covering approximately 200 million acres. According to the Nebraska Natural Legacy Project (2011), less than 1% of the original tallgrass prairie area remains today in the continental U.S. and about 2% in Nebraska in remnant pieces of 80 acres or less. Tallgrass Prairie is one of the most threatened ecosystems in North America and the world. Correspondingly grassland birds are the suite of birds experiencing the most significant decline in their global populations. This critical landscape is not only essential to provide habitat to birds and other wildlife species but is also essential to helping maintain water quality, grazing agriculture, historical features and scenic qualities of Lancaster County.

This resource thrives in conditions of disturbance caused by fires and grazing. Management strategies that mimic natural disturbance are important for diverse, healthy prairie. Lancaster County is fortunate to have about 8,640 acres of native prairie remaining, mainly in the west central portion of the county, although they are scattered throughout the county in patches of land that must remain whole if their integrity as a natural resource feature is to continue. Three of the larger massings of native grasslands in Lancaster County are Nine-Mile Prairie, Pioneers Park and Spring Creek Prairie and are noted below:

- Nine-Mile Prairie: Nine-Mile Prairie and surrounding environs are home to a wide variety of tallgrass prairie plants and animal species that constitute a subset of Nebraska species statewide. Based on research findings, Nine-Mile Prairie itself is home to over a quarter of the plant diversity across Nebraska and one-fifth of the bird species. The property is part of Nebraska’s land-grant university legacy as formative research on the theory of plant succession ecology was conducted on the property. While Nine-Mile Prairie itself is just 230 acres, the University of Nebraska actively cooperates with agencies and neighbors to conserve a grassland area of roughly 1000 acres.

- Pioneers Park: Restored tallgrass prairie, known as the Hands-on Prairie, was constructed in several phases throughout the 1990s and early 2000s. The 668 acres of land within the Nature Center contain tallgrass prairies, lowland prairies, wetlands, woodlands, and streams. Nearly 500 acres of this land is tallgrass prairie.
- Spring Creek Prairie: Spring Creek Prairie Audubon Center, established in 1998, is located 20 minutes southwest of Lincoln, Nebraska or 3 miles south of Denton, Nebraska. This 850-acre tallgrass prairie sanctuary offers refuge to over 235 species of birds and 370 species of plants as well as other mammals and insects. More than 12,000 guests visit annually to learn about the scenic landscape at SCPAC, comprised of 640 acres of native prairie, wetlands, streams, and woodland habitat. The visitor center, a straw bale-constructed building, overlooks the prairie, houses exhibits and a multi-use education room where visitors can attend a multitude of different programs on topics ranging from birdwatching and plant identification to prairie insects and animals in winter. Spring Creek Prairie Audubon Center and surrounding publicly and privately held tallgrass prairie parcels comprise one of the largest if not the largest remaining tracts of tallgrass prairie in Nebraska.

**Freshwater Wetlands**

This feature refers to areas that have hydric (i.e., water-bearing) soils, are frequently if not regularly moist, and are home to water tolerant plants. These types of wetlands are distinguished from “saline wetlands” by the lack of salt in the water that keep them wet. Freshwater wetlands are more prevalent in the county than are saline wetlands; however, they provide important water quality and habitat functions. The use of many freshwater and saline wetlands are regulated under Section 404 of the Federal Clean Water Act.

**Saline Wetlands**

This feature refers to those locations in the county where wetlands having a high salt content can be found. These wetlands played a large part in the founding of Lancaster County, as settlers were attracted by the salt deposits. Saline wetlands have four distinguishing characteristics: a type of soil usually associated with damp or soggy areas; the presence of water during most of the year; a high occurrence of saline (otherwise known as salt); and plants that are adapted to wet, salty soils. Eastern Nebraska saline wetlands are rare, with perhaps 1,400 acres remaining in the county. They tend to be found along Little Salt Creek and Rock Creek to the north and northeast of Lincoln. They provide habitat to a number of threatened and endangered species of plants and animals — the Salt Creek tiger beetle and the saltwort plant in particular. The Saline Wetlands Conservation Partnership (SWCP) was established in 2002. The partners include the City of Lincoln, Lancaster County, Lower Platte South Natural Resources District, the Nebraska Game and Parks Commission, and the Nature Conservancy.

The Implementation Plan for the Conservation of Nebraska’s Eastern Saline Wetlands was completed in 2003. This plan seeks a partnership approach to address the conservation of saline wetlands and the needs of the community.
The goal is “No net loss of saline wetlands and their associated functions with a long-term gain in sustaining wetland functions through the restoration of hydrology, prescribed wetland management, and watershed protection.” In 2015, the Upper Little Salt Creek Saline Wetlands Plan was completed. Goals and objectives of the plan are to: identify a planning area boundary and identify land management, rehabilitation and conservation goals for the planning area; collect field and spatial data to evaluate existing conditions and prioritize projects; evaluate techniques used in saline wetland rehabilitation; and assist Saline Wetlands Conservation Partnership with future decision making for the planning area.

### Threatened and Endangered Species

This feature refers to those plant and animal species whose continued existence have been identified by Federal and/ or State officials as being threatened or endangered. In Lancaster County these include the Salt Creek tiger beetle (State and Federal Endangered), Western Prairie Fringed Orchid (State and Federal Threatened), Saltwort or Western Glasswort (State Endangered), Red Knot (Federal Threatened), Whooping Crane (State and Federal Endangered), and the Northern Long-Eared Bat (State and Federal Threatened). Other vulnerable species having habitat or that have historically been found in Lancaster County include the Bald Eagle (State and Federal Threatened), River Otter (State Threatened), Small White Lady’s Finger Orchid (State Threatened), Topeka Shiner (State and Federal Endangered), Massasauga Rattle Snake (State Threatened) and American Burying Beetle (State and Federal Endangered). A final rule designating critical habitat for the Salt Creek tiger beetle was made in 2014, and a recovery plan was completed by the U.S. Fish and Wildlife Service.

### Basins and Streams

This feature refers to the region’s watersheds and the waterways they produce. These areas are demarcated by ridge lines that define the top of each basin. The majority of the county falls within the Salt Creek Basin with its numerous tributaries to Salt Creek forming smaller watersheds or sub-basins. A portion of the county in the extreme southeast also drains to the Nemaha River Basin. The Watershed Management section of the Energy & Utilities element further describes the Salt Creek and associated sub-basins and the management plans being created for them.
Elements

Floodplains

This feature refers to land that is susceptible to flooding or that has flood prone soils. Approximately 13.8% of Lancaster County is covered by floodplains. Floodplains provide multiple benefits to both the natural (flood storage, habitat, water quality) and built (recreation, public health and safety, economic) environments. The overriding policy for the floodplain is a "No Adverse Impact" policy for the City and County, which means that the community has a goal of insuring that the action of one property owner does not adversely impact the flooding risk for other properties. Further discussion of floodplain and stormwater management considerations and strategies can be found in the Watershed Management section of the Energy & Utilities element.

Riparian Areas

This feature refers to spaces immediately adjacent to water courses on each side of a stream. They are most often located in the floodplain. They frequently contain a large amount of woody vegetation. Riparian areas can serve as linear connections between natural and built areas, as well as boundaries and edges to a variety of adjacent land uses. They offer numerous benefits including flood storage, stormwater conveyance, wildlife habitat, recreation, visual appeal, and shaded areas.

Agricultural Lands

This feature refers to land — about 90.3 percent of the county — utilized for growing crops, raising livestock, or producing other agricultural products. Though agricultural activity is identified as a separate land use category in PlanForward, agricultural land does constitute a distinctive natural resource feature as well. These lands are an integral element in the natural landscape providing habitat as well as being a basic element of the County’s historic signature landscape. More information about agricultural areas can be found in the Complete Neighborhoods & Housing element of this Plan.

Cultural and Historic Landscapes

This feature refers to places that are significant because of their unique character, because significant activities or events occurred at those sites, or because persons who have had a significant impact on culture are associated with the sites. Cultural and historic landscapes are also considered in the Placemaking element, because they individually and collectively add value to the community’s sense of place and hold an important place in affirming memorable images of the County’s heritage. Further discussion of cultural and historic resources can be found in the Placemaking element.
Views and Vistas

This feature refers to important or unique natural resources, places, structures, and landmarks. The views of these features can be from nearby or afar. Vistas refer to areas that afford significant views. Views and vistas, such as those to the State Capitol, provide key points of reference and help create the County’s signature landscape. The Capitol View Corridors are also more thoroughly described in the *Placemaking element*.

Parks, Trail Corridors, and Other Recreational Areas

While PlanForward recognizes parks, trails, and recreational areas as a separate, distinctive land use category, they are an important part of the overall county’s natural resource base. They include a diverse collection of sites and facilities owned, managed, and maintained by public entities and accessible to the general community. They accommodate a variety of recreational uses including passive and active recreation, hunting, fishing, and boating. For continued discussion on other parks and recreation facilities, please see the *Parks, Recreation & Open Space element*.

Urban Forest

This feature refers to the trees and other woody plants that have been planted or grow naturally within the communities in Lancaster County. Though many may not consider the urban forest to be part of the natural environment, it represents a significant community investment — exemplified in Lincoln being a “Tree City” — with its elimination or neglect having substantially detrimental consequences. The urban forest is more thoroughly discussed in the *Parks, Recreation & Open Space element*.

Woodlands

This feature refers to the County’s natural wooded areas, especially those exhibiting bur oak/hickory associations. Woodlands in this context exclude the numerous stands of trees dominated by elm species, red cedar, mulberry, etc. This feature is also distinct from the riparian areas discussed earlier in this element.
Figure E4b: Environmental Resource
Policies Related to this Element

P18: Conservation Design
P19: Native Prairie
P20: Ecology and Habitat
P21: Floodplains and Riparian Areas
P22: Local Food
P23: Salt Valley Greenway and Connecting Green Corridors Concept Implementation
P24: Environmental Resource Protection
P25: Open Space with Development
P26: Community Forestry Management
P55: Watershed Planning

Goals Related to this Element

G7: Environmental Stewardship
G8: Community Resiliency
G11: Rural Environment
E5: Parks, Recreation and Open Space

This element describes principles and strategies for acquiring and managing parks, recreation and activity centers, open space, greenways, and other recreational facilities in the community.

The Lincoln Parks and Recreation Department is the primary public sector provider of recreational services to city residents. The Department manages 165 different sites on 7,718 acres of parks and open space land. These sites include Traditional Parks (i.e. Regional, Community, and Neighborhood Parks) as well as other land or facilities that are owned and maintained by the City, detailed in the following table.

<table>
<thead>
<tr>
<th>Site Type</th>
<th>Count</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Parks</td>
<td>107</td>
<td>2,351</td>
</tr>
<tr>
<td>Trails**/Trailheads*</td>
<td>3 (trailheads)</td>
<td>523</td>
</tr>
<tr>
<td>Gardens/Plazas/Boulevards</td>
<td>11</td>
<td>27</td>
</tr>
<tr>
<td>Pools*/Golf Courses/Dog Runs*</td>
<td>9</td>
<td>824</td>
</tr>
<tr>
<td>Conservancy/Undeveloped</td>
<td>33</td>
<td>3,993</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>0.6</td>
</tr>
<tr>
<td>Total</td>
<td>165</td>
<td>47,719</td>
</tr>
</tbody>
</table>

* Data reflects facilities not counted as part of another park.

** Trails are not included in the count.

Parks and open space enhance the quality of life of the community’s residents and are central to the community’s economic development strategy—the community’s ability to attract and retain viable businesses, industries, and employees is directly linked to quality of life issues, including indoor and outdoor recreational opportunities.
Signature landscapes are defined as those areas and natural features that are unique to Lincoln and Lancaster County and contribute to the identity of the community; acquisition and development of parks and open space areas should conserve and enhance these areas and features.
It is important that the community continue to acquire parkland and conserve open space areas commensurate with expanding development and population growth, and in accordance with the Parks Department's 10-Year Facilities Plan, with the responsibilities for acquisition and development of parkland and conservation of open space shared among many cooperating partner agencies and organizations. In addition, it is important to anticipate the transition of sites from management by the Lower Platte South Natural Resources District to the City as surrounding areas urbanize.

Comprehensive and adaptive urban forestry management approaches should be applied to sustain the city's urban forest; it is essential that adequate human and financial resources be allocated and specifically dedicated to sustaining our community's expanding public green infrastructure in conjunction with increasing development and population growth.

Public and private partnerships are important in the development of recreational opportunities and the preservation of environmental resources that bring a high quality of life to the City and County.

**Regional Parks and Tournament Facilities**

Regional Parks and Tournament Sports Facilities are tracts of land that encompass special or unique facilities and features that are of interest to diverse groups throughout the community. Regional Parks primarily provide opportunities for day use activities that may include community festival/gathering spaces, picnicking, hiking, sports, fishing, canoeing, boating, and environmental interpretation/appreciation. Fields and courts for organized sports activities may be secondary or primary uses.

One new Regional Park is anticipated for the Stevens Creek area during the plan period; one new Tournament Sports Facility is anticipated on the site of Oak Creek Park north of Oak Creek and as redevelopment of the existing Oak Lake Park to the south. The current citywide Level of Service (LOS) is 2.8 acres of Regional Park land per 1,000 Lincoln residents. No set LOS goal is stated in the Plan since the size may vary depending on the feature or facility. In addition, Regional Parks may attract visitors from outside the immediate area and thus do not have a defined service area.

**Community Parks**

Community Parks are typically 30 to 50 acre sites that are readily accessible from arterial streets and the commuter/recreational trail system. Community Parks may include play fields and play courts for organized sports, a playground with an accessible fall surface, facilities for day use activities including a picnic shelter and restroom, seating, walking paths, and off-street parking. They may also include a swimming pool and/or a recreation center. Community Parks often include areas left in a natural state with meadows, prairies, forest, wetlands and other natural features as part of
Parks and Recreation's FUNctional Landscapes program. Community Parks often include activity areas consistent with those located in neighborhood parks and as a result, Community Parks may serve as the Neighborhood Park for surrounding residential areas. PlanForward recognizes the need for about 150 acres of new Community Park land. Three new Community Park sites are anticipated.

The level of service (LOS) goal for Community Parks is based on both the financial resources anticipated to be available for park development and programmatic objectives. It is anticipated that development of future Community Parks will be financed primarily through voter-approved methods including general obligation bonds and local option sales tax. There are currently 20 Community Parks encompassing roughly 976 acres, with an average size of 49 acres. The current citywide LOS is 3.5 acres of Community Park land per 1,000 Lincoln residents. This LOS is calculated by dividing the total acres in such parks by the city's total population in thousands. PlanForward establishes an LOS goal of 1.3 acres per 1,000 new Lincoln residents in new growth areas and a service area radius of approximately 2 miles in the urban area. Given the new Community Parks developed in growth areas, the city-wide measure by the end of the plan period, 2040, is projected to be 2.4 acres of Community Park land per 1,000 Lincoln residents. While this goal is lower than the current LOS, it recognizes the financial resources projected to be available, and plans for the development of three 50-acre sites during the planning period of a size that will meet the programmatic objectives for Community Parks. There are currently three undeveloped Community Park sites in three quadrants of the City with a need for a fourth site in the northwest quadrant. During the period of this plan, two of these sites will be developed and the fourth, northwest, site should be acquired.
Neighborhood Parks

Neighborhood parks are centrally located within areas of residential development and intended to be accessible by no more than a ten-minute walk from residences within the neighborhood. Typical activity areas include playground equipment, open lawn areas for informal games and activities or play courts with a single basketball goal for informal games, shaded seating, and walking paths. When possible, neighborhood parks are co-located with elementary schools, a concept referred to as “Sparks”. Neighborhood parks that are associated with schools are typically 2 acres in size and located so that they can be accessed by students during the day and still easily accessible to the neighborhood when school is not in session. When parks are not located with schools, an area of about 4 acres is desirable to provide some of the open play area which is provided by school playfields in a “Spark”. In some cases, Neighborhood Park services are provided within larger Community Parks.

The level of service (LOS) goal for Neighborhood Parks is based on both the financial resources anticipated to be available for park development and on programmatic objectives. It is anticipated that development of Neighborhood Parks will be financed primarily through impact fees. It is important to note that while the cost for land and development of park facilities have grown since impact fees were first instituted, these fees have not increased to match inflation, creating a backlog of Neighborhood Park development.

Figure E5.c: Neighborhood Park Diagram
There are currently 53 Neighborhood Parks encompassing roughly 404 acres, with an average size of 7.6 acres. The current citywide LOS is 1.5 acres of Neighborhood Park land per 1,000 Lincoln residents. This LOS is calculated by dividing the total acres in such parks by the city's total population in thousands. The Plan establishes a LOS goal of one acre per 1,000 new Lincoln residents in new growth areas. Neighborhood Parks should generally be located within the center of each mile section and be located within a ten-minute walk of each residence. Given the new Neighborhood Parks developed in growth areas, the city-wide measure by the end of the plan period, 2050, is projected to be 1.3 acres of Neighborhood Park land per 1,000 Lincoln residents. While this goal is slightly lower than the current LOS, it recognizes the financial resources projected to be available. Projected funding is based upon the current level of impact fees for Neighborhood Parks, which supports the acquisition and development of about four acres of Neighborhood Park land per square mile of residential development. Four acres are adequate to accommodate the programmatic objectives for a Neighborhood Park.

**Recreation Centers/Community Learning Centers**

The Parks and Recreation Department operates six neighborhood recreation and community centers offering youth development (before and after school programs, summer day camps), recreation, leisure interest, fitness and human services programs. Three of the facilities are co-located with schools (Belmont, Calvert, and Irving), and three are freestanding buildings (Air Park leased from the Airport Authority, Easterday, and F Street). The City facilities were constructed between the 1970’s and early 2000’s. Therapeutic and adaptive recreation programs are a primary emphasis of programming at Easterday Recreation Center. A new recreation center replacing the current Air Park Recreation Center facility is anticipated to be completed in 2023. This facility will be co-located with the Williams
Branch Library and will be adjacent to Arnold Elementary School. A major update and expansion of the Easterday Recreation Center is also planned.

The programs and facilities offered by Parks and Recreation are part of a network of recreation and human service programs offered in the community. There are many other privately operated commercial fitness facilities, and facilities operated by non-profit organizations that offer a combination of fitness, recreation and human services programs (e.g., Lincoln YMCA facilities, Malone Community Center, Good Neighbor Center, Salvation Army, City Impact, El Centro de los Americas, Asian Community Center, Willard Community Center, Northeast Community Center, Lighthouse). Private fitness and wellness centers continue to develop and therefore no new recreation centers with an emphasis on fitness and wellness are anticipated in the planning period.

Community Learning Centers (CLCs) are a model for school facility-based delivery of neighborhood services that support youth development, strengthen families, and improve neighborhoods that emerged in Lincoln in the early 1990’s. CLCs are operated by community partners in elementary, middle and high schools with high need student populations coordinated by the Lincoln Community Learning Centers initiative overseen by Lincoln Public Schools. The Parks and Recreation Department operates four CLC’s (Belmont, Calvert, McPhee and Everett), and provides core youth services at Arnold CLC that is operated by the Lincoln Housing Authority. The City of Lincoln entered into an interlocal agreement with Lincoln Public Schools in 2018 to support and sustain CLC’s as a best practice model of delivering neighborhood-based services at school facilities. It is anticipated that the CLC initiative will continue to expand over time to include additional schools and neighborhoods in the future. The City should work with Lincoln Public Schools to explore the addition of “activity area” space in new elementary and middle schools to support CLC programming.

Aquatic Facilities

Aquatic Facilities are developed to provide opportunities for water recreation activities. The City of Lincoln owns and manages ten Aquatic Facilities: nine outdoor public pools, and one free-standing sprayground in Trago Park. The most recently constructed outdoor swimming pools (Highlands Pool and University Place Pool) are designed as “pool in a park” facilities. These pools feature zero depth entry, interactive water features, and a deep well for diving activities. Four of these facilities are classified as Community Pools (Highlands, Star City Shores, University Place, and Woods) and five are classified as Neighborhood Pools (Air Park, Ballard, Belmont, Eden, and Irvingdale). The City should maintain its commitment to outdoor water recreation activities; however, if consideration is given to provide new neighborhood pools, a financial model needs to be in place to support their ongoing operations and maintenance. New Aquatic Facilities should be located and designed to serve quadrant areas of the community and should be readily accessible by pedestrians and bicyclists.

The current citywide LOS is 3.2 outdoor public pools per 100,000 Lincoln residents. The range of LOS for benchmark cities is 1.1 to 6.0 outdoor public pools per 100,000 residents, with an average LOS of 3.7 outdoor public pools per 100,000 residents. No new neighborhood pools are proposed during the planning period. Thus, the City is not intending to maintain the current LOS, but will continue to provide opportunities for aquatic recreation as described in the action steps found under the Aquatic Facilities policy.

Other Recreational Facilities and Activities

Within Lancaster County, a wide variety of recreational opportunities are presented by both public and private sectors. Lincoln Parks and Recreation has facilities ranging from golf courses to wilderness trails, from horseshoe pits to skate parks, and from public gardens to dog runs. These park facilities serve a wide range of interests, ages, cultures and activity levels. Park facilities strive to reflect the ever-changing demographics of the community they
serve. Parks also serve an important economic development role and can play a large part in the decisions made by businesses and individuals as they select a future home. As the community continues to grow and diversify, it is critical that the Parks and Recreation Department continue to work with various agencies, organizations and the community to evaluate recreational needs and desires and to partner with others to make sure the quality and variety of Lincoln and Lancaster County’s recreational facilities remains at the high level we currently enjoy.

The following is a summary of public and private recreational facilities in Lincoln and the surrounding area.

**Parks and Recreation Facilities:**

- The Parks and Recreation Department operates five public golf courses, including Ager Junior, Highlands, Holmes, Mahoney and Pioneers. This Plan assumes continued operation of five public golf courses, but no additional courses are proposed.

- Public gardens provide a rich variety of display gardens, landscape styles and plant materials for the enjoyment and education of residents and visitors. They also provide the opportunity to learn about the significant historical, cultural, and ecological roles such landscapes play in the community, i.e. Sunken Gardens.

- The City has been part of an ongoing conversation to explore the potential for establishing an indoor plant conservatory as a year-round attraction for visitors and local residents. A plant conservatory could include a variety of species ranging from local to exotic, and could serve a dual function as research/educational facility.

- The Parks and Recreation Department currently owns and manages four dog run facilities – Rickman’s Run in southeast Lincoln, Roper Dog Run in the northwest, Mahoney Dog Run in the northeast, and Stransky Dog Run in the southwest. The Parks and Recreation Department developed a Dog Use Facilities Master Plan in 2016, which identifies the need to continue planning for dog runs as the City grows.

- The Pioneers Park Nature Center, an interpretive facility for native prairie, plants, animals and landscapes, is owned and operated by the Parks and Recreation Department.
Facilities on Parks and Recreation land owned and/or operated by others:

- The City owns two special purpose facilities, Wood Tennis Center in Woods Park and the Hyde Observatory, that are operated by others.

- The Parks and Recreation Department leases land to several non-profits which operate special facilities on Park property. This includes the Lincoln Children’s Museum in downtown Lincoln, the Lincoln Children’s Zoo in Antelope Park, and a recreational shooting sports complex at Boosalis Park in cooperation with the Nebraska Game and Parks Commission, which operates the facility. The Lincoln Children’s Zoo has recently undergone a major expansion of their zoo facilities and parking. Additional parking expansion is planned in the future. All three of these facilities have both a recreational and educational mission and are open to the public on a fee basis.

- Additional license agreements with private organizations include a shooting range at Boosalis Park, BMX track and radio controlled car facilities at Oak Lake Park, mountain bike trail at Van Dorn Park, Disk Golf courses at Tierra and Roper Parks, Pickleball facility at Petersen Park, and youth football fields at Sawyer Snell park.

Facilities developed as part of a City partnership:

- In collaboration with the University of Nebraska, the City participated in the development of the Breslow Ice Center in the West Haymarket area as part of a concentration of sporting facilities near downtown Lincoln and the University of Nebraska City Campus. The Breslow Ice Center is operated by UNL and includes a single ice surface, with the opportunity to add a second ice surface in the future. The facility should be operated in cooperation and coordination with the Ice Box. The Ice Box is operated by a private organization in a building on Innovation Campus through a long-term lease agreement that expires during the Plan period. Opportunities for the integration of functions associated with the Ice Box should be explored and may include the addition of spectator seating.

- In collaboration with the University of Nebraska and Lincoln Pro Baseball, the City of Lincoln participated in the development of Haymarket Park adjacent to Downtown’s historic Haymarket District. The complex includes a 4,500-seat baseball stadium operated by the Lincoln Saltdogs and a 750 seat softball stadium operated by the University of Nebraska-Lincoln.

- In collaboration with the University of Nebraska, the City of Lincoln participated in the development of the Pinnacle Bank Arena adjacent to Downtown’s historic Haymarket District. The facility includes a 16,000-seat indoor arena and adjacent plaza and public gathering areas.

Other publicly owned facilities:

- Lancaster County accommodates many other outdoor activities including hunting, nature viewing, fishing, boating, swimming, picnicking, camping, and hiking. The Nebraska Game and Parks Commission manages seven State Recreation Area lakes (Bluestem, Branched Oak, Conestoga, Olive Creek, Pawnee, Stagecoach, and Wagon Train) and seven Wildlife Management Areas (Jack Sinn, Little Salt Creek West, Little Salt Creek, Yankee Hill, Killdeer, Teal Lake, and Hedgefield) and one public access area (Helmuth Marsh). In addition, the Lower Platte South Natural Resources District manages five public lakes (Cottontail, Merganser, Tanglewood, Wild Plum, and Wildwood), two wildlife management areas (Little Salt Fork Marsh Preserve and Little Salt Springs) and three community wetlands with public access (Lincoln Saline Wetland Nature Center, Marsh Wren and Whitehead Saline Wetland. Other cities and villages in the county maintain their own public parks, recreation centers, and camping areas.
Lincoln Public Schools, various private and parochial schools, and other school districts in Lancaster County play a key role in the overall system of recreational facilities and services. Schools are focal points for surrounding neighborhoods. School playgrounds and facilities may be the most significant recreation resource at the neighborhood level.

Local colleges and universities also provide a wide range of participant activities and spectator sports available to both students and the community. Major sports, music, and entertainment programs often are held in facilities owned by colleges and universities.

Private sector facilities:
- There is a diverse range of facilities and programs available to community residents from privately operated fitness facilities to community centers offering human service programs operated by non-profit organizations. Programs and activities range from food distribution and adaptive recreation programs for individuals with intellectual disabilities to weight rooms and aerobics classes.
- The YMCA, and other private organizations sponsor programs in swimming, athletics, arts and crafts, camping, and various club activities, and provide facilities for more casual recreational activities.
- Some examples of private sector recreation facilities include bowling alleys, sport courts, soccer complexes, gyms, athletic clubs and fitness facilities and privately owned golf and miniature golf courses.
- It is likely that there will be a generational shift in recreation interests and activities due in part to increasing experience with technology as a recreational activity. It is also likely that as Lincoln continues to diversify new recreational interests will be introduced to the community. The Parks and Recreation Department should monitor and be responsive to emerging interests and seek opportunities for partnerships and collaborations with user groups to support activities and to develop facilities. Current examples of emerging recreation activities include: Skate Parks, BMX Cycling, Cyclo-Cross, Mountain Biking, Geocaching, Adventure Racing, Pickle Ball, Foot Golf, Flying Disk Golf and Bike Parks.

While PlanForward recognizes parks, trails, and recreational areas as a separate, distinctive land use category, they are an important part of the overall county’s natural resource base. They include a diverse collection of sites and facilities owned, managed, and maintained by public entities and accessible to the general community. They accommodate a variety of recreational uses including passive and active

As the community continues to grow and diversify, it is critical that the Parks and Recreation Department continue to work with various agencies, organizations and the community to evaluate recreational needs and desires and to partner with others to make sure the quality and variety of Lincoln and Lancaster County’s recreational facilities remains at the high level we currently enjoy.
recreation, hunting, fishing, and boating. Further discussion of specific greenways and corridors follows in this element.

**Trails**

The community has an existing system of multi-use trails that currently provides a trail within one mile of 95% of dwelling units in the City. The system serves users such as bicyclists, pedestrians, rollerbladers, and parents with strollers and wagons. The present system serves both commuter bicyclists and pedestrians who use the trails daily for work and shopping trips and tend to travel from point to point, and recreational bicyclists and pedestrians who tend to use the trails on a more occasional basis, seeking attractive and safe routes.

Much of the current trail system is built in the right-of-way of abandoned railroad corridors. Others are built along streams in the floodplain, along one side of major arterial streets, or as part of residential development. Maintenance of the system includes litter pick-up, mowing, trail clearing, and signage. The Lincoln Parks and Recreation Department, Lincoln Transportation and Utilities Department, and the Lower Platte South Natural Resource District are primarily responsible for trail development in Lancaster County. Lincoln Parks and Recreation, along with Lincoln Transportation & Utilities, maintain trails in the City and all of Wilderness Park while the Lower Platte South NRD maintains County trails. Volunteer organizations also assist in maintenance as well as donating significant funds for trail development.

Most of the existing trail system has been built over the last 40 years and some of the oldest trails are beginning to require rehabilitation, either because of declining pavement condition or because use has risen to a level that a wider trail is required.

![Salt Valley Greenway](image)

**Salt Valley Greenway**

Since the first City/County Comprehensive Plan in 1961, the Salt Creek watershed has influenced planning for open space, greenways, recreation, and environmental resources in Lincoln and Lancaster County. The Salt Valley Greenway wraps around the City of Lincoln and is fed by tributaries that radiate out into the surrounding rolling hills. The effect is that of a large loop, primarily made of Salt Creek and Stevens Creek, with connecting green corridors linking urban and rural areas. Corridors which generally follow Salt Creek and its tributaries provide multiple benefits; creating connections between urban and rural areas, providing connections to the County's Salt Valley Lakes, creating green partitions which help to prevent a “wall-to-wall” urban feel, connecting habitat for the movement of wildlife, protecting floodplain, and many others. Implementation of the Salt Valley Greenway and connecting corridor concept will provide an environmental framework upon which a thriving economy can be built.
The Salt Valley Greenway includes the previously identified “Crescent Green” linear greenway along Salt Creek beginning on the north and then proceeding along Salt Creek on the west, including Wilderness Park. At 1,472 acres, Wilderness Park, located in southwest Lincoln, is the City’s largest park. As its name implies, the park is a natural area that straddles the Salt Creek floodplain and stretches from Van Dorn Street on the north to Saltillo Road on the South. The Park was established to serve as flood storage for Salt Creek and as a unique park experience for residents and visitors to Lincoln. The Park also serves as a conservation area and is home to many species of plants and animals. The Greenway follows the Salt Creek floodplain south of Wilderness Park, connecting with the community of Roca and continuing south to the city of Hickman. From Hickman, the corridor proceeds east to Wagon Train Lake tributary and follows the linear open space along the planned South Beltway east before turning north along the Stevens Creek floodplain. At the north end, the Greenway connects back in with Salt Creek including saline wetlands, Salt Creek tiger beetle habitat and the Crescent Green Corridor on the north, forming a continuous open space system.

The Salt Valley Greenway is important for recreation, transportation, environmental resource preservation, education, and economic development among other benefits. The opportunity to tie together multiple environmental and recreational resources would create a facility that is unique in the region and could be a platform for multiple community events attracting visitors from all over the region.

The Salt Valley Greenway would provide connectivity with current and future green corridors that extend out from Lincoln such as the MoPac Trail corridor, Murdock Trail corridor, Antelope Valley, Dietrich Bikeway, and Billy Wolff Trail Corridor. It would provide a destination for additional trails as Lincoln continues to grow. The Greenway would also provide access to green corridors that then would extend out into the county to State Recreation Areas (SRA) and natural resource areas and beyond including the following:

- Prairie Corridor on Haines Branch corridor to Conestoga SRA and Spring Creek Prairie
- Cardwell Branch corridor to Yankee Hill SRA
- Middle Creek corridor to Pawnee SRA
- Salt Creek corridor to Killdeer and Bluestem SRA
- Oak Creek corridor to Branched Oak Lake and Nine Mile Prairie
- Salt Creek corridor east and up the Little Salt Creek and Rock Creek corridor

The Salt Valley Greenway would provide connectivity with the Homestead Trail that goes to Beatrice and south to Kansas. It would connect with additional rail lines that are acquired for trails in the future.

**Figure E5.f: Salt Valley Greenway**
Community Forestry Management

Although Lincoln and Lancaster County is a part of the tallgrass prairie ecoregion, European settlement, which included the suppression of historic wildfires, led to the proliferation of trees, particularly along waterways. As Lincoln and surrounding villages began to grow, trees were planted to provide shade, firewood, building material, food, and to beautify neighborhoods and common spaces. This Urban Forest represents a significant community investment, both public and private. Although not technically part of the natural environment, the environmental benefits are far-reaching and highly important to the community.

The Urban Forest is composed of privately owned trees and the Community Forest, made up of trees in public right-of-way and on public land, such as parks and open spaces. Many of the trees have been deliberately planted, but some are volunteer trees from native stock or offspring of planted trees. Care for the Community Forest is a public obligation carried out primarily by the Parks and Recreation Department. Comprehensive and adaptive urban forestry management approaches should be applied to sustain the city’s urban forest; it is essential that adequate human and financial resources be allocated and specifically dedicated to sustaining our community’s expanding public green infrastructure in conjunction with increasing development and population growth.

Partnerships

The Parks and Recreation Department has a long history of partnerships with Lancaster County, the Lower Platte South Natural Resources District, Lincoln Public Schools, and the Nebraska Game and Parks Commission to protect natural resources and provide recreational opportunities. In the past several decades, partnerships with private organizations such as the Lincoln Parks Foundation; and the Audubon Society have developed to great community advantage. Additional partnerships focus on particular activities or events, such as the Lincoln Flying Disk Club, Friends of Wilderness Park, and Great Plains Trails Network.

A new land trust affiliated with Lincoln Parks Foundation is being established to collaborate with the City of Lincoln, the Lower Platte South NRD and other public and private partners to assist with acquisition of land and easements, outreach to landowners, fund development, and the consolidation of funding from grants and donations. The land trust will play a key role in the conservation and enhancement of natural resources and the implementation of the Salt Valley Greenway and connecting green corridors. The Parks and Recreation Department meets regularly with Lincoln Public Schools, Lincoln Libraries, the Lincoln YMCA, Lincoln and Lancaster County Planning Department, and Lincoln Transportation and Utilities to discuss opportunities for cooperative projects and ensure the timing of critical infrastructure projects is coordinated. In 2018, Community Learning Centers (CLCs) were formed through a partnership between the City, Lincoln Public Schools, and other agencies and organizations interested in promoting community-based learning outside the normal school day.

Some of these partnerships are formalized through short- or long-term agreements while others are less formal and more limited in scope. These partnerships broaden the resources available for important public projects and result in a better outcome. Partnerships can also foster a sense of community ownership and assure a more equitable
outcome. Community partnerships are critical to developing a park, recreation, and open space system that fully serve the people of Lincoln and Lancaster County.

**Policies Related to this Element**
P26: Community Forestry Management
P27: Regional Parks and Tournament Facilities
P28: Community Parks
P29: Neighborhood Parks
P30: Recreation Centers / Community Learning Centers
P31: Aquatic Facilities
P32: Other Recreational Facilities and Activities
P33: Parks and Recreation Partnerships

**Goals Related to this Element**
G2: Complete Neighborhoods
G6: Healthy, Active, and Connected People
E6: Placemaking

This element describes principles and strategies intended to preserve and enhance the community’s unique character — its sense of place — through preservation of cultural and historic resources and focused attention to the quality of public and private development.

The people of Lincoln and Lancaster County have transformed a rolling prairie into a fertile agricultural landscape, with significant tracts of native prairie and a dozen villages, towns, and small cities, surrounding a highly livable urban place. The jewel in this fine setting is the Nebraska State Capitol, one of America’s great buildings, which was designed and constructed to be seen and enjoyed from throughout the city and county. Together, the urban and the rural landscapes produce a distinctive place, offering a sense of identity to visitors and especially to residents. It is worthwhile to plan for, protect, and strengthen this character as the community grows and matures. All parts of LPlan 2040 PlanForward contribute to the attainment of this vision, but urban design and one of its components, historic preservation, relate most directly to guarding and enhancing the community’s physical image.

Urban design is the concept and practice of studying people’s experience of their physical environment—both visual and functional—then consciously striving to improve that experience. It is essential both to preserve and enhance key existing elements and to create improvements that mesh with and strengthen a distinctive and enjoyable place. When successful, urban design and historic preservation make a community more enjoyable for residents, more attractive to visitors, and more competitive in drawing new businesses and retaining existing ones. A truly sustainable community recognizes and builds on its heritage by fostering good urban design, creating a sense of place and uniqueness that supports a strong economy, values environmental assets, and promotes social engagement and interaction. Successful urban design requires cooperation of public and private sectors.

The Setting

Enhancing a community’s environment begins with understanding it. Before all else, Lancaster County was and is the land—rolling prairie, crisscrossed by streams, enriched by wetlands, green in the spring and summer, golden, tan, and russet in the fall and winter. We and our ancestors have largely transformed this prairie land through agriculture and city-building, but elements of our prairie heritage remain. These natural features are critical to our sense of place. Past policies and practices discouraging urban sprawl, maintaining a clear edge between urban and rural land uses, and preserving natural features and prime agricultural land have done much to establish the distinctive and attractive natural and built environment of our community.

The City

Upon the prairie, the original designers and developers of Lincoln laid out a grid of streets, alleys, and blocks, from A Street on the south to U Street on the north, and from 1st Street on the west to 17th Street on the east. The gently rolling terrain accommodated this grid, creating a framework for a city which was readily comprehensible and expandable. The suburban towns founded east of the city in the 1880s and ‘90s aligned their grids with Lincoln, facilitating their integration into Lincoln a few decades later. Much of the Original Plat remains evident, giving form to the center of the city through such major features as the Capitol location, the core of University of Nebraska...
Lincoln’s downtown campus, the County/City Building location, three sites used by Lincoln Public Schools, and Cooper Park. Especially wide rights-of-way provide vistas to the Capitol and campus. Throughout Downtown and the Haymarket, the range of possibilities within the ample, “ordinary” 100-foot rights-of-way is demonstrated by the loading docks, sidewalk cafes, public art, landscaping, and Farmers Market, along with vehicular, bicycle, and pedestrian circulation.

Most of Lincoln’s early expansion simply extended the grid. By the early 20th century, the best developments were more varied in their response to the topography, developing curving streets and boulevards while maintaining ample, comprehensible connections to the grid of arterial streets.

The Capitol

A unique urban design asset of Lincoln and Lancaster County, providing orientation and identity throughout the community, is our remarkable State Capitol. The 400-foot tower was planned and built as the key historic, architectural, and geographic landmark of the city and surrounding countryside. From distant vistas along Interstate 80 to intimate glimpses from core neighborhoods, views of the Capitol enrich and unify this place. Many of the best elements of Lincoln’s built environment are based on Capitol views—the Malls, the tree-framed vistas from Pioneers Park, and the homeowners’ park in Woodsshire Historic District. Protecting key vistas that provide important public views to the Capitol, along with identification and enhancement of new view corridors as the community grows, are important urban design strategies of this plan.

The Capitol View Corridors, as illustrated in Figure E6.a, represent key view corridors within Lancaster County where extra attention should be paid during the planning and design process to ensure that views to the Capitol are being preserved and enhanced as development and redevelopment occurs.
Figure E6.a: Capitol View Corridors
**Corridors**

Other important resources for providing community identity and orientation are entryway corridors, parks, trails, and open spaces. Key entryways provide indelible “first impressions” of a community. The community’s strong network of trails offers recreation and transportation alternatives, knitting together established and new neighborhoods. Parks provide neighborhood centers and community gathering places, and along with public street trees are major components of our urban forest, providing shade, beauty, and habitat.

Lincoln and Lancaster County’s Entryway Corridors, as shown in Figure E6.b, have been categorized as primary and secondary entryways. The primary entryways are the corridors identified on this map that are most responsible for managing traffic into Lincoln. As such, their functionality and visual aesthetics go a long way in defining visitors’ impression of the community. The secondary entryways carry less traffic but are still vital to perceptions and should be treated as such. For both the primary and secondary entryway corridors, there are key points along their routes where views toward the Capitol are particularly strong and should be preserved. Those view points are identified on Figure E6.b with a star.
Figure E6.b: Entryway Corridors
Current Practices

The public and private sectors, often working in direct partnership, are both essential to an attractive, livable, competitive built environment. Lincoln’s Original Plat of 1867, designed by state officials, established a framework for a successful city. Attractive public and private buildings, city purchases and private donations of park land and of public art, street trees and private gardens, all contribute to urban character.

Many of the principles of this section already are expressed in the community’s practices. The Historic Preservation Commission and the Nebraska Capitol Environs Commission advocate for and protect key resources of our heritage, in cooperation with property owners, the community’s design professionals, and other interested citizens.

The Historic Preservation Commission works with neighborhood groups, preservation advocates, property owners, and History Nebraska to discover, protect, and share the community’s heritage. The zoning code provides protection for designated historic property and incentives for creative uses that maintain the vitality of historic places. The Commission has a key role in providing on-going guidance in the revitalization of areas such as Haymarket, residential historic districts, and Havelock Avenue.

The Capitol Environs Commission is a unique board combining membership appointed by the City and by the State, empowered to protect and to advocate for improvements to the setting of the beautiful Nebraska State Capitol. All public and private property within the Capitol Environs District receives the Commission’s design oversight, along with key view corridors to the Capitol which enhance the whole community.

The Urban Design Committee (UDC) provides advisory services to city government on the design of city-owned buildings and other public projects, major public/private developments, and any private projects constructed on city right-of-way or other city property. The Committee’s intent is to make sure that new public facilities are exemplary—that they provide functional and aesthetically pleasing facilities for the public, and model good design for the private sector. The benefits of this guidance would be strengthened by including all public projects under UDC review, just as the Environs Commission reviews projects of all local and state governmental units. The Committee also works to publicize and reward good design, private as well as public, through an annual awards program. Certain high-impact projects may involve historic properties and public property or public assistance, and the expertise and advice of more than one design board may be valuable. At the discretion of the City, joint meetings may occasionally be scheduled so that the boards, the project, and ultimately the community may benefit by a thorough yet efficient discussion.
All three of these design boards assist in the process of siting wireless communication antennae and towers within their various jurisdictions. The community values efficient and effective telecommunications while also desiring to minimize adverse impacts of this rapidly evolving infrastructure on our rural and urban environments. Capitol view corridors, historic landmarks and districts, environmentally sensitive areas, and predominantly residential neighborhoods are not preferred locations. Unobtrusive locations on public property; co-locations on existing towers, buildings, and structures; and commercial and industrial areas with minimal impact on residences are preferred.

The City has adopted zoning provisions to state the community’s preferences. Combined with guidance from the design review boards, community residents and the telecommunications industry can be well-served.

The community has also expressed its interest in good urban design through the Neighborhood Design Standards for infill development in older residential neighborhoods and the Lincoln Downtown Design Standards for the community’s center. However, the appearance of other commercial areas and new residential areas is guided by few public design standards, although private design covenants in some areas are far more stringent than any public requirements. Good urban design includes an attractive streetscape, pedestrian access and comfort, and orientation of buildings, yards, and parking to create a pleasant transition between public and private space. Over the planning period, additional design standards should be developed to address the gaps in coverage that exist and to fulfill these principles of good urban design.

When developments ignore these elements, our community is weakened. The Complete Neighborhoods & Housing Element describes the community’s expectations for new residential development. The emphasis in PlanForward on mixed-use redevelopment in established commercial centers and corridors necessitates adoption of clear design standards and a predictable process to protect existing and new investors—commercial and residential—in those areas. The Infill and Redevelopment Element discusses how mixed use redevelopment, including residences, can meet important community needs as Lincoln grows and ages.

**Policies Related to this Element**

P5: Downtown  
P34: Urban Design Standards  
P35: Entry Corridors  
P36: Public Art  
P37: Historic Preservation  
P38: State Capitol  
P39: Community Space

**Goals Related to this Element**

G12: History and Culture  
G13: Community Appearance
E7: Community Facilities

This element reviews the projected status of community facilities during the planning period, including libraries, fire services, law enforcement, health care, schools, and public buildings.

This element reviews the projected status of community facilities during the planning period, including libraries, fire services, law enforcement, health care, schools, and public buildings.

The availability and service levels of community facilities affect the quality of life in the City and County, and as the community grows, community facilities should be prepared to adapt to change. This element and associated policies take into consideration an increasing population, changing demographics, and evolving technology in planning high-quality and efficient delivery of services. The importance of collaboration and sharing resources among agencies to realize the greatest benefit to the community is also emphasized.

Overall, community facilities should:

- Promote a functional balance between community facilities and growth.
- Encourage adequate facilities and services which provide diverse educational, cultural, environmental, and social opportunities.
- Provide adequate facilities and services to assure the health, safety and welfare of all citizens.
- Promote cooperation and coordination among both the public and private sectors in the development and maintenance of community facilities.
- Increase energy efficiency and water conservation as well as promote the use of renewable energy sources.

Libraries

Lincoln City Libraries currently operates nine facilities. Bennett Martin Library downtown serves as the headquarters. Larger quadrant libraries are Victor E. Anderson, Charles H. Gere, Loren Corey Eiseley, and Bess D. Walt. Neighborhood Libraries include Bethany, South, and Dan A Williams. A bookmobile serves outreach sites in Lincoln and county towns. The Library is a City department that provides service to Lancaster County residents outside the City through a contractual arrangement.

Library services, similar to many other public services, must be provided regardless of how the community grows. In 2002, the library completed its “quadrant” plan, with a significant library facility in each of the city’s quadrants. The library is initiating the planning process for additional branches. A placeholder site has been designated in Jensen...
Park near 84th and Yankee Hill Road. The library will be exploring potential sites along its eastern boundaries as the city grows in that direction.

For some time, the library has been planning for a new Central Library downtown. The Downtown Master Plan has identified the importance of maintaining this presence downtown. Downtown is the heart of our community, and multifaceted uses are essential to maintaining its vitality.

As public libraries in Lincoln and nationally update their services, certain trends have emerged. With increased use of downloadable books, libraries designate less space for books and create more space for uses such as Maker Spaces, technology, family library use, and general conference spaces that support everything from quiet study to large training sessions. Most libraries have a variety of collaborative partners, engaging in projects to ensure internet access, encourage people to read aloud to young children, and assist people with technology in its varied uses. Libraries are often described as community centers based on learning, literature, and literacy.

**Fire and Rescue**

*Lincoln Fire and Rescue*

Lincoln Fire and Rescue anticipates the reconstruction (and possible relocation) of fire stations and the need for additional fire stations to serve the City’s projected expansion during the 30-year planning period. Lincoln Fire and Rescue routinely monitors response times, population growth, city growth, and call volumes in evaluating possible relocation and building new fire facilities. Changing development patterns, financial concerns, service expectations, availability of resources, environmental issues, traffic flow, or other conditions will warrant changes to provide effective emergency response. The utmost priority of Lincoln Fire and Rescue is the ability to provide the highest level of emergency service within the shortest period of time.

Lincoln Fire and Rescue currently operates from 16 stations located throughout the City. These stations are geographically located in the community to be able to meet the National Fire Protection Association (NFPA-1770) Standards concerning response times. However, Lincoln Fire and Rescue has repeatedly stated that maintaining desirable response times is becoming increasingly difficult in areas that have experienced urban growth further
and further away from existing fire stations. Lincoln Fire and Rescue routinely reviews the strategic deployment of apparatus from existing stations and potential new station in growth areas of the City. Mutual aid requests for Lincoln Fire and Rescue service occur on occasion for incidents outside Lincoln. Lincoln Fire and Rescue’s equipment is designed for use with a public water supply capable of generating 1,500 gallons of water per minute at a residual pressure of 50 pounds per square inch.

Lincoln Fire and Rescue provides emergency ambulance transport services in the City of Lincoln and most areas of Lancaster County. Most interfacility (hospital-to-hospital) non-emergency services are provided by the private sector.
Figure E7.a: Existing Community Facilities
Rural Fire Districts

The 17 rural volunteer fire departments will continue to see increasing challenges with City growth and diminishing service area. All rural fire district personnel are volunteers. Rural fire districts can provide fire protection, rescue, and emergency ambulance transport. Fire departments are distributed throughout most of the towns and villages, while some are located in the unincorporated areas of the county. Mutual aid requests between fire districts are common for incidents outside Lincoln. Each rural fire district has unique challenges, including response times and water availability.

A growing population in the small towns, villages, and rural areas, as well as increased traffic, will continue to create demands for fire and emergency services. The physical growth of the City of Lincoln will cause changes to the character of some areas and to the tax base of many districts.
Figure E7.b: Existing Fire Districts
Law Enforcement

The Lincoln Police Department and Lancaster County Sheriff’s Office are anticipated to remain as the sole providers of law enforcement services to the City and County during the planning period. The Sheriff’s Office will continue to provide contract law enforcement support to the various incorporated towns of the county. The overall increase in population in the City and County will increase the demand for police and sheriff services in the urban, small town, and rural areas.

The Hall of Justice and Law Enforcement Center accommodates both the operations of the Lincoln Police Department and the Lancaster County Sheriff within a single facility. This facility is an example of the cooperation exhibited by the City and County in furthering the efficient delivery of governmental services to the community. Another example of cooperation includes the recently constructed joint station with Lincoln Fire and Rescue funded through a ¼ cent sales tax. A radio system upgrade was also previously funded with a ¼ cent sales tax. The Lancaster County Department of Corrections opened a new Adult Detention Facility in 2013 near SW 40th and West O Street. The former jail was renovated and is used by various County offices.

In addition to the Lincoln Police Department and Lancaster County Sheriff’s Office, the City of Lincoln also has police presence by the University of Nebraska Police on the UNL campus as well as the State Patrol. The Capitol Security Division of the State Patrol Division monitors 48 buildings and eight parking facilities in the greater Lincoln area.

Health Care Facilities

Hospitals represent one of the highest and most important community service land uses. Lincoln has a growing number of medical campuses such as Bryan Health Systems, CHI St. Elizabeth Regional Medical Center, Madonna Rehabilitation hospital, Veterans Medical Center, Lincoln Surgical Hospital and the CHI Nebraska Heart Institute. Urgent care services are also provided at several private facilities dispersed throughout the community. A number of private non-profit organizations provide targeted health services such as surgical centers, skilled care nursing long-term care, rehabilitation facilities, dental health, and specialized clinics to residents throughout Lincoln and Lancaster County.

Multiple public and private service sites around Lincoln serve mental health needs of persons in Lancaster County. Continued population increases in Lancaster County and southeast Nebraska have meant increased demand for mental health services.

The Lincoln/Lancaster County Health Department also provides public health-related services to the residents of Lincoln and Lancaster County. Services operated by the Health Department include a dental clinic, STD clinic, refugee clinic, and targeted coordinating of back-to-school vaccinations.

New medical facilities have been constructed in many areas of the city. This trend is likely to continue into the immediate future as the demand for health care services increases as a result of the community’s growing and aging population.
Elements

The Federally Qualified Health Center has located services in two Medically Underserved Areas and improved access to primary care, dental health care services and behavioral health care.

Education

Lincoln Public Schools

The Lincoln Public School (LPS) district provides pre-kindergarten through 12th grade education to roughly 40,000 students within the City of Lincoln and surrounding area. By 2023, the district will operate 40 elementary schools, 12 middle schools, eight high schools, and eight other alternative and special focus program sites. In addition to schools, LPS facilities include administrative, special education, food service, operations maintenance, athletic and activities facilities, and transportation centers.

The past twenty years have seen changes in the students enrolled at LPS. In 2000, about 14 percent of students were racially diverse; in 2020 this rose to over 35 percent, with students representing 50 different countries of origin. Economic changes are also affecting the school system. In 2000, 26 percent of students received free or reduced price lunches. That figure has risen to nearly 47 percent over the past twenty years. Over those twenty years LPS has seen an increase from 31,000 to over 41,000 students overall.

Lincoln Public Schools has made a substantial investment in renovating and improving existing schools throughout the Lincoln area. A $290 million school bond issue passed in 2020 allowing construction of two new high schools, a new elementary school, and enhancements to several existing facilities.

Lincoln Public Schools and the City of Lincoln actively coordinate planning activities. Projected growth of residential development is crucial information used to identify future school sites. As PlanForward’s growth framework was developed, LPS was consulted and informed at each step. This relationship is ongoing and expected to continue into the future. The Superintendents Facility Advisory Committee (SFAC) & the LPS 10-Year Facilities & Infrastructure Plan can be viewed on the LPS website at lps.org.

One relationship between city government and LPS that has particular potential for improving future efficiencies is the relationship between LPS and the Lincoln Parks and Recreation Department. In some locations, such as Leffler Middle School and Piedmont Park, Humann Elementary and Cripple Creek Park, Fredstrom Elementary and Highlands Park, and Adams Elementary and Folsom Park, park and school facilities are already located on adjoining properties. Schoo Middle School, which also has an adjoining YMCA, is the site of a planned neighborhood park. Wysong Elementary, located between S. 56th and S. 70th Streets, north of Yankee Hill Road, includes a neighborhood park. Moore Middle School is adjacent to Jensen Park and also includes a YMCA. There are opportunities to reduce costs for both parks, schools and the YMCA by sharing playgrounds, playfields and even using picnic shelters as outdoor classrooms. This relationship has not yet been formalized but shows great potential benefit for all organizations. There are currently over 20 school sites with adjacent parks.
Rural School Districts
There are nine public rural school districts serving residents of Lancaster County. Several school facilities are located outside of Lancaster County. All of the remaining public school facilities are located within incorporated and unincorporated communities, except for the Norris Public School and Raymond Central Public School (Junior and Senior High).

Several school districts, most notably Waverly School district, will be impacted by expansion of the Lincoln city limits. The City, LPS and each school district impacted will need to coordinate efforts in the future.

Rural school districts also need to plan to accommodate areas designated for acreage residential development. Acreage residential areas provide additional tax revenue, but also create the need for more financial resources in order to provide additional transportation services and educational facilities. Grouping acreage residential areas in pre-designated locations allows rural school districts to plan for adequate transportation and educational services in advance of development.

Private and Parochial Schools
There are approximately 26 private and parochial schools in Lincoln, serving over 6,000 students. There are four private and parochial high schools: Lincoln Christian, Lincoln Lutheran, Parkview Christian, and Pius X.

Additional private and parochial schools are anticipated during the planning period. The City should work with private entities to coordinate development and infrastructure plans around new school sites.
**Community Colleges, Trade Schools, and Universities**

Lincoln is home to a community college and several technical and trade schools providing a comprehensive array of higher education and vocational opportunities. These public and private facilities are dispersed throughout the community.

Lincoln has multiple institutions of higher learning, with campuses located throughout the city. These include the University of Nebraska-Lincoln (UNL campuses: Downtown and East), Nebraska Wesleyan University, Union College, Southeast Community College, Purdue University Global, and satellite campuses for Doane College and Bellevue University.

These colleges and universities are actively involved with surrounding neighborhoods and business districts. UNL has been a major partner in the Antelope Valley Project, the West Haymarket Arena development, and the Innovation Campus project on the former State Fair Park site. Wesleyan University was part of the North 48th Street/University Place project approved in 2004. Union College took a lead role in efforts to increase mobility and improve streetscapes in the South 48th Street College View neighborhood in 2007. These institutions and others should be actively engaged in future planning efforts.

**Other Public Buildings and Facilities**

As general purpose governments, the City of Lincoln and Lancaster County own, operate and manage numerous buildings, structures, and facilities.

During the time period covered by this Plan, there will likely be a need to construct, renovate, or abandon certain public buildings and facilities not already discussed in this document. At such time as these events may occur, care should be taken by public officials making decisions that the vision of this Plan is recognized and respected. This may apply to the siting of a new facility, the abandonment of an existing one, the way renovations are undertaken, the manner of financing used to complete the work, the arrangements made for the facility’s operation, the process followed in making the decision, and the timing of the action. When building a new facility or renovating an existing one, energy efficiency measures should be standardized in the decision-making process in order to achieve 100% net renewable/carbon neutral by 2035, as stated in the City of Lincoln Climate Action Plan.

Of particular note to local government operations is the Lincoln-Lancaster County Public Building Commission. The Public Building Commission is responsible for facilities jointly used by City and County agencies, such as the County-City Building. This entity was established in 1991 to oversee any buildings, structures, or facilities used jointly by the City and County for a public purpose.

The new Municipal Service Center is an example of consolidating City services to find efficiencies. The Center houses the Engineering Services and Watershed Management divisions of Lincoln Transportation and Utilities and has potential to accommodate divisions or operations of other departments. Lincoln and Lancaster County is a community made up of public-private partnerships that make our community stronger. Such public-private partnerships include but are not limited to YMCAs, the Lincoln Children’s Museum and the Lincoln Children’s Zoo.
Lancaster Event Center

The Lancaster Event Center is a multi-use community center located in northeast Lincoln. It is perhaps best known for hosting the Lancaster County Super Fair each summer, but it is home to a wide variety of indoor and outdoor events throughout the year. The Event Center attracts roughly 600,000 visitor days each year with over 300 events annually.

The Event Center facility includes several large indoor exhibit spaces along with outdoor arenas and a campground. The next phase of the facility master plan includes construction of a fixed-seat agricultural coliseum to seat approximately 6,000 people, along with a new multi-use pavilion.

It is managed by the Lancaster County Agricultural Society, which is a publicly-elected county-level political subdivision that has been operating in Lancaster County for over 150 years. Their mission under State law to provided agricultural education, engagement, tourism, and business opportunities for the community.

Other Considerations
As general purpose governments, the City of Lincoln and Lancaster County own, operate and manage numerous buildings, structures, and facilities.

Policies Related to this Element
P40: Libraries
P41: Fire and Rescue
P42: Law Enforcement
P43: Health Care Access
P44: Education
P46: Public Buildings

Goals Related to this Element
G10: Effective Government
E8: Energy and Utilities

This Element examines energy and individual utilities including water, wastewater, watershed management, solid waste, electric services, information technology, and natural gas service.

Energy use, supply and conservation are topics of global as well as local concern. This element includes an assessment of energy use, evaluates the utilization of renewable energy sources, and describes efforts to conserve energy in the community. The relationship between land use patterns and energy consumption has been widely researched and is a topic of national conversation. As Lincoln and Lancaster County continue to plan for the future, the need to consider the impacts of energy supply and demand is increasing in importance.

The provision of other basic services (such as water, wastewater, and electricity) is also discussed in this element. The need to plan for the extension of these services to new growth areas is one of the primary reasons for comprehensive planning. Lincoln has a history and policy of providing utilities only to those areas that have been annexed into the City. Lincoln wastewater collection systems operate on a gravity flow principle and so are planned to extend along the natural drainage of the land, or drainage basins. These growth policies have served Lincoln well in that it has retained a clear differentiation between urban and rural areas and has been able to resist sprawl to a greater degree than many other communities. The efficient extension of utilities will continue to be a major factor in land use planning.

Energy

The City of Lincoln Climate Action Plan has come about from an understanding of the need to significantly reduce greenhouse gas (GHG) emissions in order to slow the pace of climate change and protect Lincoln residents’ way of life. It is a vision for what the city of Lincoln could become over the next 30 years. It is a vision of a city that is thriving with local businesses and verdant greenways; a city that uses both ordinary and innovative measures to reduce greenhouse gas emissions in transportation, electricity and buildings; a city that is inclusive, welcoming and fair. The energy element and various policies and action steps within PlanForward have been updated to reflect the recommendations from the City of Lincoln Climate Action Plan.

The Lincoln Climate Action Plan offers a bold and ambitious vision to reduce net greenhouse gas emissions 80% by 2050, and represents the first plan of its kind in the state of Nebraska. A myriad of strategies in the plan speak to achieving this target, from increasing energy efficiency, generating more electricity from renewable energy, switching to electric vehicles and active commuting modes, and employing natural climate solutions. To develop and advance the Plan, the City worked closely with community partners such as the Lincoln Electric System, which set a complementary goal to achieve net zero carbon dioxide production from its power generation portfolio by 2040. Moreover, the Plan sets a course for securing a second source of water supply for Lincoln as well as for mitigating flood impacts in the Salt Creek Watershed Basin to ensure that Lincoln is resilient to climate change. The Lincoln Climate Action Plan required considerable coalition-building and robust
multi-sector partnerships and successfully achieved bipartisan support and adoption by the Lincoln City Council in March 2021.

Additionally, the plan identified eight action areas to focus prioritization and implementation efforts around, including: 1) transition to low-carbon energy; 2) build a decarbonized and efficient transportation system; 3) align economic development goals with climate realities to ensure a thriving economy; 4) improve protections for and with Lincoln residents; 5) build a resilient local food system; 6) maximize natural climate solutions; 7) reduce waste; and 8) engage residents in co-creating a climate smart future. The Lincoln Climate Action Plan is a roadmap for Lincoln to adapt to a changing reality while continuing to thrive as a community.

The City of Lincoln recognizes that the transition to a climate-smart, low-carbon way of life is well underway. Today, solar and wind provide the least expensive sources of new electricity in two-thirds of the world. Natural gas and coal generating plants are being replaced with less expensive electricity from wind and solar farms, which are connected to ever-more affordable and reliable battery storage. The fastest growing occupation in the United States is solar installers, and the second fastest growing job is wind turbine service technicians. It is clear that historic change is occurring, and that the time is ripe for Lincoln to take great strides toward a climate-smart future.

The Lincoln Electric System Administrative Board established a new decarbonization goal of net-zero carbon dioxide production from its generation portfolio by 2040. LES has already reduced carbon dioxide emissions from its generation portfolio by 53% from 2010 – 2020. The Board recognizes the critical role that electricity generation has in achieving the citywide goal of reducing net greenhouse gas emissions 80% by 2050, while also maintaining high levels of electric system reliability and affordable retail electric rates to every customer in the area. Moving forward, LES will continue evaluating technological and financial opportunities that transition power generation to net zero carbon dioxide production by 2040.

To remain competitive as the global economy expands and puts greater strain on traditional fuel supplies, energy costs rise, and supplies remain unpredictable, Lincoln must develop a comprehensive strategy of fuel diversity and encourage conservation, alternative forms of energy, and modern energy technologies.

The City of Lincoln and Lancaster County are making substantial efforts toward sustainable energy reform. The City will soon have an energy strategy for City government and also intends to develop recommendations for residential energy conservation. In addition, the City has funded municipal lighting upgrades, energy saving improvements for residential buildings and non-profit facilities, clean energy production and green building practices. Lincoln Electric System also provides energy rebates for investments in energy-saving devices through their Sustainable Energy Program.

Using energy more effectively through more efficient end-uses or through more productive generation, such as combined heat and power, reduces the amount of fuel required to produce a unit of energy output and reduces the corresponding emissions of pollutants and greenhouse gases. Energy from renewable resources such as solar, geothermal, and wind technologies generally does not contribute to climate change or local air pollution and generally conserves nonrenewable, natural resources.

As an example of a renewable energy project, in 2016 the City of Lincoln was awarded match funding from the Nebraska Environmental Trust (NET) to install 10 dual – point electric vehicle (EV) charging stations to be placed in the City’s public parking garages. The charging stations track usage and calculate dollars saved by the vehicle owner along with greenhouse gas emissions avoided through use of an EV.

Property Assessed Clean Energy (PACE) legislation has been passed by the State of Nebraska and is now available to communities across the state. PACE financing enables businesses and homeowners to fund energy
efficiency upgrades and renewable generation through a property tax assessment, similar to a street repair or other improvement. The City of Lincoln is evaluating how best to implement a PACE program which would be in the best interest of homeowners and businesses.

The City is also using Energy Savings Performance Contractors (ESPCs) to design, procure and construct energy and utility conservation measures for municipal buildings and utility operations. Projects executed under the ESPC model are intended to be financed by the energy and utility savings generated as a result of the facility or operational improvements. ESPC contracting has been successfully utilized across the country by federal, state and municipal operations to pay for critical infrastructure improvements for close to 30 years.

Municipalities across the country are increasingly converting streetlight systems to Light Emitting Diode (LED) technology in efforts to improve energy efficiency and other safety and aesthetic factors. The City’s design standards for municipal lighting were modified in 2016 to require all new and replacement streetlights to meet minimum efficiency ratings of LED technology. A system-wide LED streetlight conversion project was begun and completed in 2018-2019.

Other projects and initiatives with the potential to significantly reduce energy consumption and greenhouse gas (GHG) emissions include:

- Continued conversion of the StarTran Bus Fleet to Compressed Natural Gas (CNG)
- Modifications to the Theresa St. Water Reclamation Facility to capture Renewable Natural Gas (RNG) from the waste digestion process as a source for StarTran and potentially other City vehicles.
- Continued deployment of centralized thermal energy provided by the District Energy Corporation where appropriate and cost effective.
- Continuing to adopt the most current and cost-effective energy codes.
- Continued support for the LES solar energy project.
- Continue to increase LES's renewable generation portfolio with the purchase of renewable power sources.

**Statutory Requirements**

In 2010, the Nebraska Legislature passed legislation requiring cities and counties in Nebraska to assess, evaluate, and promote renewable energy sources and energy conservation measures as part of their Comprehensive Plan updates. Energy affects many aspects of land use, and as the population continues to increase over the next 30 years, so will energy consumption and the need for renewable resources.

**Energy Use**

Like many other communities, it is a challenge for the City of Lincoln and Lancaster County to obtain data that can be put into a meaningful model to use in setting goals and comparing our community with others. During development of PlanForward, the City has assessed energy infrastructure and energy use by sector, including residential, commercial, and industrial sectors at the local level (government is included within the commercial sector). The data does not include lifecycle consumption, or energy that is used to generate the end use energy product. Thus, the following data provides a snapshot of energy being consumed at the point of use and does not factor in energy such as coal that is used to produce the electricity that powers our homes and businesses.
State level data is published in an *Annual State Energy Report* by the State of Nebraska Department of Environment and Energy that identifies energy trends and needs by sector. The 2020 report notes that Nebraska's total energy consumption in 2018 was 915 trillion British thermal units (Btu), an increase of 38.5 trillion Btu – or 4.4% - from 2017 to 2018. For reference, Nebraska's total energy consumption in 2013 was 872 trillion British thermal units (Btus), an increase of 21 trillion Btus - or 1.5% increase from 2012 to 2013. Five types of energy sources comprised the energy that Nebraska consumed in 2018, and Nebraska's energy use by sector in 2018 are shown in the graphs below.
The statewide data for the Industrial sector includes Agriculture, which is Nebraska’s number one industry. By comparison with Lincoln, the statewide industrial sector consumes a much larger percentage of energy because of this.

The energy use totals that follow reflect a combination of Black Hills Energy gas use and LES electrical use (converted from kWh to MMBtu) for the City of Lincoln only. Energy use fluctuates year over year based on heating and cooling needs, community growth, and more efficient systems.

As shown in the chart, the Residential sector had the largest energy use in 2020 at 51%, followed by the Commercial sector at 43% and the Industrial sector at 6%. Year over year trends have gone up and down, and overall energy use in 2020 is roughly the same as was in 2015 and 2016.

**Water Services**

*Lincoln Water System and County Water Resources*

Potable water is provided to Lincoln residents and businesses by the Lincoln Water System (LWS). The System is owned by the City of Lincoln and managed by the City’s Transportation and Utilities Department under the direction of the Mayor and City Council. It is a revenue producing and self-supporting enterprise fund system (i.e., no tax funds are used by the system).

Lincoln’s source of water is groundwater recharged from the Platte River northeast of Lincoln. Lincoln has 44 wells that pump this groundwater to two water treatment plants. Lincoln Water System processes the groundwater prior to its transmission to Lincoln for distribution.

The distribution system is divided into six pressure zones. Each zone has a system of storage facilities and pumping stations that keep operating pressures in the 35-100 pounds per square inch (PSI) range. Because pressure for the system relies upon elevation, reservoirs and pump stations are often located outside the respective service area, and in some cases outside of the City.
The existing water system is made up of more than 1,245 miles of water distribution mains. Pipes providing service to customers range in size from 4” to 16” in diameter and total 1,100 miles. There are also 145 miles of transmission and transfer mains which range from 24” to 60” in diameter.

The water distribution system contains approximately 27,500 valves for the isolation of water main breaks to minimize the number of customers out of service. Approximately 12,000 public hydrants in the distribution system provide for the fire protection needs of the City.

Lincoln Transportation and Utilities Department completed the Lincoln Water System Facilities Master Plan in 2013 and completed an update in 2020. The plans are guides for short term and long term improvements to the infrastructure of the Lincoln Water System during the planning period.

The Lincoln Water System Facilities Master Plan was adopted as a subarea plan in 2014. The projected maximum day water demand for year 2040 is 115 million gallons per day (MGD), and for 2060 is 143 MGD based on the assumed population growth rate. Maximum day water demands include adjustments for increased industrial water use. The 2020 Facilities Master Plan update also adjusted future seasonal peak water demands to account for predicted climate changes that are expected to increase summer water use through the planning period. Additional supply, treatment, and transmission improvements will be necessary to meet these growing demands.

The well fields currently owned by the Lincoln Water System have a projected maximum capacity approximately equal to the projected need by 2040 to 2050. An additional source of water that could include an interconnection with Metropolitan Utility District of Omaha or developing an new source of supply will need to be acquired in the planning period to meet these demands and a financial plan adopted to fund such a project. These options are outlined in the 2014 Water Facilities Master Plan. Developing a strategy for securing a second source of water supply is also part of Lincoln’s Climate Action Plan. As with demand projections, the 2020 Facilities Master Plan update also adjusted available water supply to account for climate change by using reduced summer streamflows in the later years of the planning period.

Lincoln’s drinking water currently meets all of the State and Federal regulations regarding water quality. As new drinking water regulations are implemented, additional treatment may be required. LWS strives for environmental stewardship in all aspects of its operations.

LWS actively promotes water conservation to customers and works to conserve energy in system operations. Operators continually work toward the best balance between system energy needs and the variable rate schedules provided by both Lincoln Electric System and Omaha Public Power District.

Residential water bills are determined by an increasing block structure. The more water the resident uses, the higher the price per unit of water. Traditionally, residential water use has been a major cause of fluctuations between low winter and high summer use. The price structure’s intent is to encourage water conservation and the water rates are competitive with local and regional cities. In the event that water restrictions are necessary whether from drought or natural disasters, the Water Management Plan is used to guide and govern restrictions that include implementing Water Shortage Rates.
Figure E8.d: Existing and Future City of Lincoln Water Pressure Zones

Note: Water pressure zone boundary updates to align with the 2050 Future Service Limit will be updated with the next Water Facilities Master Plan.
**Rural and Town Water Services**

Water service to rural Lancaster County residents is obtained through private water systems (i.e., private wells), rural water districts, or Sanitary Improvement Districts (SIDs). The Lincoln-Lancaster County Health Department enforces standards on wells within the city limits and three-mile extraterritorial jurisdiction. In addition, the Property Transfer Code enforces standards on wells throughout the county which serve private residences. These standards are applied when ownership changes through the sale of property. The Lower Platte South Natural Resources District is maintaining a Groundwater Management Plan for the County to ensure the protection of this resource.

Two rural water districts supply potable water to Lancaster County residents; Lancaster Rural Water District No. 1 and Cass County Rural Water District No. 2. These rural associations include property owners adjacent to the City limits. There are three SID’s providing water services to area residents: Emerald, Holland, and Walton.

Cities and villages in Lancaster County collect water from municipally owned wells. Some communities are provided water via contract from rural water districts. Limited well source and poor water quality in some areas contribute to reliance on rural water districts.

**Groundwater Management Plan**

In April 1995, the Lower Platte South Natural Resources District (LPSNRD) adopted a Groundwater Management Plan. This Plan describes steps for managing the area’s groundwater to protect its future quality and quantity and has led to the designation by the LPSNRD of a Groundwater Management Area. This designation provides the District with the authority to regulate nonpoint sources in the urban and rural areas that might affect groundwater quality and quantity. The LPSNRD conducts an annual review assessing the District’s actions, activities, and effectiveness under the Rules and Regulations for implementation of the Ground Water Management Plan.

**Wastewater Services**

The City of Lincoln Wastewater System is a publicly owned and operated system. The system is a revenue producing and self-supporting, enterprise fund system (i.e., no tax funds are used). The Department of Transportation and Utilities Wastewater Division manages the operation of the system.

**Collection System**

In general, the wastewater collection system is a gravity flow system that is designed to accommodate urbanization of drainage basins. The existing system includes 16 lift stations to assist in pumping and conveying the wastewater in the collection system. The collection system currently serves 11 major drainage basins, with more than 1,128 miles of sanitary sewer pipes ranging in size from 8" to 90" in diameter. This system encourages orderly growth within the natural drainage basin boundaries.
Figure E8.e: Existing and Future City of Lincoln Wastewater Improvements

Note: Wastewater improvements to align with the 2050 Future Service Limit will be updated with the next Wastewater Master Plan.
**Water Resource Recovery Facilities**

There are two water resource recovery facilities (WRRF) in operation: The Theresa Street and Northeast Wastewater Facilities serve different areas of the City.

The Theresa Street facility is located at 2400 Theresa St., near N. 27th Street and Cornhusker Highway, and currently serves approximately 70% of the City. The Northeast facility is located at 7000 N. 70th Street, near N. 70th and Salt Creek and serves the remaining 30% of the City. By the year 2040, because of strong growth projected to the south and east, the Northeast Facility will have increased to about 40-45% of the service and the Theresa Street Facility will serve the remaining 55-60% of the City. The Theresa St. facility also receives liquid wastes from liquid waste haulers providing services to Lincoln and Lancaster County businesses and residents. Treated effluent from both facilities is discharged into Salt Creek. Prior to being discharged into Salt Creek, the effluent from the Theresa Street Facility is used in an innovative process to heat and cool buildings located at the Nebraska Innovation Campus (NIC). The thermal property is transferred between the two systems and CRES water is pumped to each tenant building on the NIC. The two systems do not mix, and the effluent is then returned to the treatment facility discharge point into Salt Creek.

Wastewater solids that have been biologically treated and stabilized are called biosolids. Following treatment and processing, biosolids become a nutrient rich organic material that can be recycled and applied as a fertilizer to improve and maintain productive solids and stimulate plant growth. All biosolids produced from the two water resource recovery facilities meet Federal and State regulatory standards and are beneficially applied on cropland through a farm cooperator program operated by the City's Wastewater System Biosolids Coordinator.

Biogas, consisting of methane and carbon dioxide, is a byproduct of the wastewater solids stabilization or anaerobic digestion process. At the Theresa Street Facility, biogas is recovered and processed as renewable natural gas (RNG). Once processed, the RNG is marketed and distributed as a transportation fuel qualifying as an advanced biofuel under the EPA Federal Renewable Fuels (RFS) and California’s Low Carbon Fuel Standard (LCFS) programs. Revenue is generated from the sale of environmental and monetary attributes through both programs.

Lincoln Transportation and Utilities completed the Lincoln Wastewater Facilities Master Plan in 2015. The plan is a guide for short-term and long-term improvements to the infrastructure of the Lincoln Wastewater System during the planning period, as well as potential service extensions beyond Lincoln’s anticipated future service limits.

**Rural and Town Wastewater Services**

Residents in unincorporated areas employ on-site septic and/or lagoon treatment systems. Lancaster County has adopted standards for on-site wastewater treatment systems that are enforced by the Lincoln – Lancaster County Health Department.

Each incorporated city and village in the county operates a municipally-owned wastewater collection and treatment facility. In addition, on-site septic treatment systems are permitted within their planning and zoning jurisdictions.
There are a number of subdivision developments in Lancaster County that utilize shared infrastructure systems. These systems are typically for sewer collection and treatment within the development and provide no connections or services to outside development or communities.

Three Sanitary Improvement Districts provide sanitary sewer to local residents: Cheney (lagoon), Holland (lagoon), Emerald (lagoon).

These larger point-source and community systems (towns, subdivision systems and SIDs) are reviewed and approved by the Nebraska Department of Environmental Quality.

**Watershed Management**

As discussed in the Environmental Resources Element, Lancaster County is primarily within the Salt Creek watershed. When it rains in Lincoln, stormwater flows into drainage inlets, gutters, and underground pipes before reaching Salt Creek, which drains into the Platte River. Rain that falls on hard surfaces like rooftops, parking lots and other surfaces can carry pollutants into our streams and lakes. Lincoln occasionally gets more rain than the storm drain system or streams can adequately convey, which can lead to flooding.

**Floodplain and Stormwater Management**

Local floodplain and stormwater management responsibility is shared by the City of Lincoln, which assumes care of the tributaries and storm drain system, and the Lower Platte South Natural Resources District (LPSNRD), which maintains the main stream channels. Both the City of Lincoln and Lancaster County participate in the National Flood Insurance Program administered by the Federal Emergency Management Agency (FEMA).

Water quality from stormwater is managed under the Federal Clean Water Act. The National Pollutant Discharge Elimination System (NPDES) program addresses non-agricultural sources of stormwater discharge. This program is administered in the State by the Nebraska Department of Environment and Energy (NDEE). The City of Lincoln in coordination with the LPSNRD developed a Clean Water Program to identify the actions needed to improve the quality of stormwater runoff from developed (post-construction) areas to meet, at minimum, state standards.

**Comprehensive Watershed Management**

The City of Lincoln Watershed Management program combines previously separate floodplain and stormwater management initiatives. This approach recognizes that floodplains, tributaries, and upland areas are all part of a comprehensive, integrated watershed system. A comprehensive approach to watershed planning is crucial as development expands into new basins around the Lincoln city limits and as redevelopment occurs within the existing urban area. A comprehensive watershed management program needs to incorporate a range of strategies including land use planning, conservation design for new subdivisions, conservation efforts, appropriate standards for floodplains and stormwater, flood warning system development/expansion, stream stabilization, stormwater storage basins, and other structural flood control efforts.

As part of the overall watershed management program, the City, in cooperation with the LPSNRD, is developing a unified master watershed management plan. This plan will be a compendium of previously approved Watershed Master Plan Studies and is to be used as a planning tool to be referenced in conjunction with proposed developments and as a guide in the preparation of future capital improvement projects. Individual Watershed Plans for several watersheds in Lincoln and the surrounding area have already been completed and are adopted as subarea plans in this document (see Implementation section). These plans evaluate and propose projects to address a wide range of water resources, and they are formulated in cooperation with other local, state and federal agencies. Ideally, additional watershed plans are completed and adopted prior to urban development occurring within a new basin.
This allows projects and recommendations in the plan to be considered during the review of specific development proposals.

Watershed planning and the performance and adequacy of stormwater storage basins and other measures to prevent increases in peak flows will require continued assessment with the growth of the City. Upstream detention facilities are critical to preventing localized downstream flooding, further increases to the floodplain, and if properly designed also help to reduce pollutant loads to downstream waterbodies. Development and significant redevelopment projects need to meet stormwater quality requirements through the use of Stormwater Quality Best Management Practices facilities. Requirements can be accomplished through the use of detention facilities that are developed in a manner that incorporates water quality best management practices and causes minimal adverse impact to existing residential, agricultural and other land uses.

Basin management plans are a more recent watershed planning initiative that is part of the ongoing effort to proactively forecast, evaluate and manage stormwater quality impacts associated with existing and future development and redevelopment of the City. These plans provide available information on the source of contaminants and how such contaminants can be reduced through projects and programs. They also include information for the education of the public on water quality and include projects to protect and restore stream channels. The first of these basin management plans (Antelope Creek from Holmes Lake to Salt Creek) provides a framework upon which future plans may be built.

**Floodplain Management**

The overriding policy for the floodplain is a “No Adverse Impact” policy for the City and County, which means that the community has a goal of insuring that the action of one property owner does not adversely impact the flooding risk for other properties. The majority of the strategies below relate back to and support this umbrella concept.

The No Adverse Impact concept is supported by the Map 1.3: Growth Tiers with Priority Areas which designates the majority of floodplain areas outside of the existing urban area as Green Space, Environmental Resources, and Agricultural Stream Corridors. This supports the opportunity to reduce the risk of flood damage to life and property and to preserve the important functions of floodplains. This concept is more explicitly supported by the Salt Creek Flood Storage Area Standards and the Flood Regulations for New Growth Areas which protect flood storage in the areas with greatest risk for impacts. While regulations to support the No Adverse Impact concept have not been fully adopted throughout the Existing Urban Area or in the County’s jurisdiction, goals and strategies in this plan support minimizing impacts to the floodplain in all circumstances.
Solid Waste (Sustainable Materials Management)

The City of Lincoln has entered into interlocal agreements with Lancaster County and all the villages and cities in Lancaster County, with the exception of Hallam, to serve as the lead agency for solid waste management in the County. The Lincoln Transportation and Utilities Department, Solid Waste Operations in conjunction with the Lincoln-Lancaster County Health Department Environmental Division oversees the City and County's solid waste management programs. In 2013, the City completed the Solid Waste Plan 2040, which shall serve as a guidance document, communication tool, and a resource for policy decisions. This Plan was updated in 2021 and the recommendations shall be incorporated into that guidance document.

Collection

Lincoln Municipal Code requires collection and removal of solid waste by a licensed waste hauler from single family residences at least once a week and at least twice a week for all other residential properties. However, homeowners are allowed by ordinance to self-haul waste from their own residence to the City operated small vehicle transfer station located at 5101 North 48th Street. All licensed waste haulers are also required to offer recycling services to all residential and commercial customers.

Three villages in the county — Bennet, Davey and Panama – operate solid waste transfer stations. Residents transport their waste to these facilities. All other communities in the county offer residential waste collection.

Disposal

The City of Lincoln’s primary solid waste sanitary landfill, Bluff Road Landfill, is located at Nebraska Highway 77 (N. 56th St.) and Bluff Road, just north of I-80. This facility began operating in the late 1980’s. It accepts approximately 800 tons of waste each day. The facility is projected to be at capacity near the year 2035 based on current generation rates and the projected population growth rate of 1.2 percent per year. Planning for expansion of the Bluff Road Landfill on City owned property just east of the existing site is underway and formal site approval by Council has been completed via resolution. The City policy of public ownership, operation and financing of integrated solid waste management services is anticipated to continue during the planning period. The expansion into this additional landfill area has not been permitted by the State of Nebraska Department of Environment and Energy. A portion of Lincoln’s and Lancaster County’s waste is also being exported outside Lancaster County. Some waste haulers choose to utilize landfills in other nearby counties.

The City also operates a landfill for construction and demolition debris at 5101 North 48th Street. This facility is located on the site of the County’s previous solid waste landfill, and it also hosts the small vehicle transfer station for the general public to bring waste to the landfill. The construction and demolition debris landfill is projected to have capacity through the year 2029. While this landfill should be completed and closed, the N. 48th Street transfer station and recycling areas are scheduled to remain.

Environmental Services

Lincoln’s Solid Waste Operations and the Lincoln-Lancaster Health Department (Environmental Health Division) provide a wide assortment of integrated solid waste management services. These range from source reduction and pollution prevention to recycling and disposal. Many of these services are voluntary — that is, they are not specifically required by any federal or state regulations.

The City considers these services to be like any other utility, and recycling services should be accessible to every resident in the community. Diversion of waste from landfill disposal extends the life of the landfill, conserves natural resources, contributes to the local economy by creating jobs to collect and sort recyclables and reduces greenhouse gas emissions by producing products with recycled content versus raw material. Recycling collection site were
Elements

consolidated in 2020-2021 to optimize the system for collection, provide surveillance to prevent illegal dumping and efficiently utilize rate revenues.

Development, maintenance and ultimate closure of the Bluff Road Landfill, as well as daily operations, are funded by a fee collected for disposal of wastes in the landfill. Other solid waste management programs are funded by a combination of user fees, revenue bonds and an occupation tax assessed to refuse haulers collecting refuse in the city or in the county and utilizing the Bluff Road Landfill for disposal. These forms of financing for solid waste management are anticipated to continue during the planning period.

In 2018, the City of Lincoln passed a resolution banning corrugated cardboard from the City’s Landfills. This resulted in diversion of over 14,000 tons annually of this material. This resolution also required every waste collection company to offer curb-side recycling to all of its customers.

Recycling helps to save landfill space, conserves resources, and reduces greenhouse gas emissions. For those reasons, the City has established a goal of increasing waste reduction and recycling and reducing the per capita rate. This goal in accordance with the Solid Waste Plan 2040 and the 2021 Update reduces the per capita disposal rate of 1,970 pounds per person in 2014 to 1,510 pounds per capita per year by 2050. The City manages multiple recyclable collection sites in the city. Multi-material sites are located in the City of Lincoln, accepting newspapers, cardboard, mixed paper (junk mail, magazines), glass bottles, plastic bottles, tin cans and aluminum cans.

Residents and businesses also have the option to subscribe to single stream recycling collection services through private haulers for a nominal fee. Commercial waste generators that generate sufficient amounts of cardboard, office paper, or other recyclables can also obtain collection services for specific recyclable commodities.

Landfill Gas Collection and Control

Landfill Gas consists of about 50% methane and 45% carbon dioxide, with other trace gases resulting from biological decomposition of solid waste. Methane is of particular concern as a greenhouse gas since each unit of methane has an effect equivalent to 21 units of carbon dioxide. An active landfill gas collection system is in place at the Bluff Road Landfill and in cooperation with the Lincoln Electric System’s Terry Bundy Generating Station is producing approximately 4 MW of electricity. Future collection phases will be constructed as landfilling of waste continues until the landfill reaches capacity. As additional methane is produced from the landfill the city plans to evaluate and implement a best use of this resource, including expanding electrical production, injection to a gas pipeline for use as vehicle fuel or other uses for this non-fossil, low carbon energy source.

Strategies for Solid Waste Management

The guiding principle of privately-owned and operated refuse and recyclables collection services with public ownership, operation and financing of other solid waste management services related to disposal, transfer, processing and environmental protection will continue during the planning period. Other services related to managing solid wastes are currently offered by privately-owned business and include material processing and organic waste composting facilities. The private sector also operates material reuse services as a component of a comprehensive integrated waste management system.
The management of solid waste is beginning yet another paradigm shift; one that recognizes the resource value of the materials currently being put into landfills. The decades long concept of the linear economy (often referred to as “take, make, waste (or dispose)”) is shifting to the circular economy, which employs strategies that use the Earth’s finite natural resources and thru improved product design and manufacturing processes consciously minimize the environmental impacts from production and consumption. The concept of a circular economy is much more than recycling; much more than zero waste concepts. It is considered and promoted as a viable solution to challenges like climate change. In contrast to the linear economy, the circular economy concludes nothing is waste and promotes thinking and behavior to that end; but, it will take decades to transition.

At the local government operational level, the concept of the circular economy can be thought of as sustainable materials management (SMM). Again, a rather recent paradigm shift from terminology such as solid waste management. Information suggests the EPA began this transition in 2010 when the Office of Resource Conservation and Recovery shifted program emphasis from a broad array of resource recovery initiatives to sustainable materials management.

**Electric Service**

The Lincoln Electric System (LES) is owned by the City of Lincoln. It is operated under the direction of an administrative board appointed by the Mayor and ratified by City Council. LES is revenue producing and self-supporting (i.e., no tax funds are used by the system).

LES provides electric service to the City of Lincoln and much of the surrounding area within Lincoln’s three-mile planning jurisdiction. The LES service area includes the City of Waverly and the unincorporated villages of Cheney, Walton, Prairie Home, and Emerald.

The balance of Lancaster County, including cities and villages, is served by the Norris Public Power District.

Norris Public Power District (Norris) and Lincoln Electric System (LES) have a formal Joint Planning and Service Area Adjustment Agreement. This agreement establishes a “Joint Use Area” which is primarily east and southeast of Lincoln. LES provides all electrical generating capacity and energy, but both LES and Norris, own distribution facilities in the area. LES and Norris may amend this joint area in the future.
The customer-owned utility should continue to maintain a diverse generation portfolio with a balanced mix of resources. By the year 2050, the LES peak load is projected to increase by about 121 megawatts (MW) to a peak load of 888 MW. This forecast includes load reductions through the LES Sustainable Energy Program and the Air Conditioning Load Control programs. LES will need to continue to build new 115 kilovolt (kV) lines in growth areas in order to serve the new development. In addition, LES will need to add new substation sites to serve these new growth areas.

Lincoln Electric System is actively involved in efforts to educate homeowners, builders, and businesses about energy conservation including publications, presentations and individual on-site assessments.
Figure E8.g: LES Service Area and LES/Norris Joint Planning Area
**Wind Energy**

Lincoln Electric System currently operates multiple renewable resources within the county, including two wind turbines, a community solar project, and a landfill-gas-to-energy plant. In addition, LES currently has contracts for energy from regional hydroelectric generation and seven other wind projects. LES will continue to pursue the development of wind and other renewable generation technologies to the extent they are feasible, economical, and consistent with LES power supply needs.

**Technology**

Lincoln has developed a well-designed fiber optic network to serve residential, business, education, and public facilities. This network ensures a high quality of life, serve as an economic development tool, and provide efficient public services. In 2015, the City of Lincoln partnered with Allo Communications to complete a fiber optic network, providing faster broadband speeds, including 1-gigabit service available to every home and business in Lincoln. The project was completed in 2018.

Technological innovation also includes the concept of creating a “Smart City”. Smart City technology includes a myriad of devices that communicate with each other to deliver a variety of different benefits – the range of scale and connectivity and complexity can vary greatly and lead to a variety of different outcomes. Smart City technology is not only what we see in the streets and buildings, but it is the invisible infrastructure that we do not see that is the glue that binds all this together. In some ways the quality and performance of this infrastructure is more important than the individual buildings it serves. In addition, the development of a Smart City is more than just incorporating technology into the physical landscape – the data collected is only useful if it’s organized, analyzed and used in daily operations to make the City more resilient, sustainable and efficient.

**Natural Gas Service**

Blacks Hills Energy owns and operates natural gas and distribution systems in Lincoln and eight other incorporated and unincorporated communities in Lancaster County. The company serves about 100,400 residential, commercial and industrial customers in Lincoln and another nearly 3,000 in Waverly, Walton, Cheney, Bennet, Firth, Panama, Hickman, and Holland.

Two major interstate natural gas pipelines traverse the county. They are owned and operated by Northern Natural Gas and Natural Gas Pipelines of America. The interstate pipelines supply Black Hills Energy with natural gas at our town border station. Black Hills Energy is the only local natural gas distribution company in the county.

Liquefied propane is the other major fuel used in Lancaster County. Several propane distributors serve urban and rural customers throughout the county.

As the community and the nation grows, energy needs increase and additional pipeline facilities will be required. Key energy infrastructure is traditionally placed outside of city limits. As the community grows, it encroaches on these areas requiring additional safety investments and security enhancements as required by the Department of Transportation’s Pipeline and Hazardous Materials Safety Administration’s 49 Code of Federal Regulations Part 192.

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**PlanForward recognizes the need for pipelines in the community but also notes that certain land uses should not be located near pipelines. This new policy reinforces the need to separate residential uses and buildings with vulnerable populations from pipelines.**

**P61. Industrial Zoning and Pipelines:**

*Discourage residential land uses and buildings with vulnerable populations from locating near high-pressure pipelines and industrial zoning districts. Provide adequate separation between vulnerable populations and hazardous materials to protect and promote the public’s health.*
Elements

Policies Related to this Element

P48: Renewable Energy
P49: Conservation of Energy
P50: Water Quantity and Quality
P51: Groundwater
P52: Wastewater System
P53: Gravity Flow Collection System
P54: Wastewater Resource Recovery Facilities
P56: Landfill
P57: Landfill Gas
P58: Waste Reduction
P59: Electric Utility
P60: Technology
P61: Industrial Zoning and Pipelines

Goals Related to this Element

G8: Community Resiliency
G10: Effective Government
G14: Technology
E9: Transportation

This element discusses the multimodal transportation network with regards to the elements of the Long Range Transportation Plan which include transportation goals, outreach and public participation, needs assessment, needs based plan, funding outlook, and fiscally constrained plan. It describes a balanced local transportation system built upon PlanForward’s vision.

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. The transportation planning process is 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 addresses the goals, objectives, and action steps to meet the community's vision for the future.

The City of Lincoln is the federally recognized MPO for the Lincoln Metropolitan Area serving Lincoln and Lancaster County to carry out transportation planning and decision-making. The MPO coordinates the planning activities of all transportation-related agencies and adopts long range plans to guide transportation investment decisions. The Lincoln MPO 2050 LRTP anticipates many changes will influence the transportation network. Changing demographics, employment patterns, and technologies will create challenges for provision of transportation services and facilities. These challenges are best addressed when the five themes of PlanForward are integrated with the eight goals of the LRTP as described and illustrated below.
Elements

- A well-maintained transportation system.
- An efficient, reliable, and well-connected transportation system that leverages innovation and technology for moving people and freight.
- A multi-modal system that provides travel options to support a more compact, livable urban environment.
- A safe and secure transportation system.
- A transportation system that supports economic vitality for residents and businesses.
- A transportation system that enhances the natural, cultural, and built environment.
- Collaboration in funding transportation projects that maximizes user benefits.
- Transportation investments developed through an inclusive process that promotes equitable outcomes.
The coordinated planning effort between the LRTP and PlanForward strengthens the connection between land use and transportation decisions. The Transportation Vision and Goals are described in Chapter 2 of the LRTP. 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 concentrated along major transportation and utility corridors. While the density assumptions proposed in PlanForward are relatively modest, they are significant to the process of planning transportation infrastructure. PlanForward and the LRTP anticipate 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 demands of the network.

The LRTP continues to address funding issues by evaluating options to gain efficiencies in the existing system, strategic investment in the growth of the transportation network, and providing a transportation network that encourages active transportation like bicycling and walking as reliable and equitable forms of commuting. Continued discussion about the need for, and approach to, increasing transportation funding remains a community priority.

**Existing Conditions and Issues**

An inventory of the existing transportation system offers a snapshot of how transportation supports Lincoln and Lancaster County today. The details of the assessment completed for the LRTP are described in Chapter 4 of the LRTP.
**Community Growth and Travel Patterns**

PlanForward will accommodate population growth including associated commercial space and industrial areas through 2050. Increasing employment and economic growth will change travel patterns and demand. The transportation network currently supports almost 47,000 people traveling to work from outside Lancaster County and more than 127,000 people traveling to work from within the County. Transportation costs for area residents make up an average of 23% of total household costs. This factor can vary greatly based on household income and personal vehicle use. More than 81% of residents in Lincoln and Lancaster County commute to work by driving a single occupant vehicle. Approximately 6% use public transportation, walk, or bike to work. Providing infrastructure for all modes of transportation is necessary to support future anticipated growth envisioned by PlanForward.

**Active Transportation and Multi-Use Trails**

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. Today, Lincoln’s biking and walking network includes 255 miles of trails, 145 miles of on-street bike routes, and 1,500 miles of sidewalk. The Lincoln Bike Plan (2019), Complete Streets Policy, expanded bike share infrastructure, and Shared Micromobility ordinance have increased the use of active transportation modes in recent years. The Lincoln Bike Plan identified approximately 56% of streets that are considered low stress for bicyclists, meaning bicyclists have minimal interaction with motor vehicles. Adding dedicated bike lanes and advancing Complete Streets program recommendations for new projects will support a growing network that accommodates more bicycles, scooters, and pedestrians in Lincoln and connect to the expanding trail network throughout the County.

Vulnerable road users (i.e., motorcyclists, pedestrians, bicyclists and persons with disabilities or reduced mobility) present additional safety considerations for the transportation network. The previous 10 years of data for the City of Lincoln indicates that the reported rate of bicyclists and pedestrians involved in a crash with a vehicle is slightly improved today, although bike crash rates have steadily increased since lows accomplished in 2015. 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. 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 to the number of people bicycling and walking. Pedestrian and Bike Crash frequency is one of five intersection criteria the City of Lincoln uses to prioritize safety countermeasures.

The Lincoln City Council approved a shared micromobility scooter pilot program which launched September 1, 2020. Scooter vendors provided up to 250 electric scooters for public use within downtown Lincoln. With more than 66,000 trips made in Lincoln during the first year, the pilot program expanded the use e-scooter on public roadways, sidewalks and bike lanes. Use was prohibited on hiker-biker or multi-use trails and within restricted areas such as the University of Nebraska- Lincoln campus, Centennial Mall, and the Nebraska State Capitol grounds.
**Existing Transit System**

StarTran, the division of the City of Lincoln responsible for public transit, operates 14 fixed bus routes within city limits. Service routes and operations are directed by the Transit Development Plan which works to optimize transit investments to meet the needs of both transit-dependent and mode-choice riders. In 2020, StarTran began operating VanLNK, the city-run, on-demand transit service that allows riders to hail a van by smartphone app and designate their pickup location and destination for a trip fee. The StarTran paratransit program serves 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. Transit ridership served by StarTran reached approximately 2.4 million trips in 2019, which is an increase of more than eight percent from 2016. Limitations of the current transit system include the lack of a multimodal transit transfer center and an aging bus storage and maintenance facility.

**Existing Roadway System**

The Lincoln MPO is served today by an extensive system of streets and highways. 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 the agricultural community to key transportation centers, allowing their commodities to be shipped around the world.

**Surface Condition**: 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. With approximately 45 percent of the roadway surface areas of the City rated as Good or Very Good in 2017, the City can prioritize funding to keep these roadway surfaces in this condition for as long as possible. Preventing roadway surfaces from degrading to Poor conditions is more cost effective than reconstructing them. The County prioritizes street resurfacing work to maintain more heavily traveled roads to receive State funding for street resurfacing.
State highways are maintained by NDOT. Approximately 88% of interstate segments and 34% of National Highway System non-interstate segments were rated as Good pavement condition in 2019. The City, County, and State also track condition of more than 600 bridges to prioritize the maintenance and possible replacements that may be necessary. Approximately 69%, 39% and 73% respectively were rated to be in Good condition as of 2020.

**Congestion:** Roadway use is measured by traffic volume data that is available from more than 1,350 intersections within Lincoln. The Lincoln MPO regional travel demand model is used to compare current traffic volumes with future traffic forecasts based on land use growth and planned network improvements. Vehicle miles traveled on the network are projected to increase approximately 35 percent during the planning period. Without making new investments into the transportation network beyond the existing system and projects committed within the next five years, the percent of congested roadways is projected to increase by 2050 from 4.8 miles to 51.1 miles or approximately 6.5% of the overall network.

**Safety:** Safety is a top priority not only for Lincoln and Lancaster County but also at state and federal levels. 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. Between 2014 and 2018, there were 9,947 crashes resulting in injury or fatality – approximately 22 percent – and the remaining crashes involved property damage only. The City of Lincoln performed a crash data analysis in 2019 to measure how well each intersection performed from a safety context with reference to other similar intersections. Findings of the analysis help prioritize intersection improvement projects.

**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 business operations. 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.

Coordination efforts with the freight community to further integrate freight interests into the transportation planning process supports transportation decision making. Specific activities that are beneficial to the freight industry include ongoing information dissemination and dialogue 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, such as Highway 2.
Freight movement by trucks represents approximately 86% of all freight value and approximately 81% of the total weight of freight moved through the area. This movement places a local as well as regional prioritization on maintaining major highways of the transportation network. Although proportional values may change during the planning period, truck freight will continue to represent the greatest demand for freight movement compared to rail, pipeline, and air freight during the planning period. The South Beltway project will redirect existing freight movements from the current Highway 2 alignment and increase the system efficiency and reliability for future freight haulers.

**Existing Rail System**

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 the OPPD plant. 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.

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. The Lincoln/Lancaster County Railroad Transportation Safety District (RTSD) was formed in 1971 and 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.

**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. Smaller private airports and airfields are also located throughout the County. The current Airport Master Plan and future updates can prompt landside transportation infrastructure projects that support intermodal connectivity and expansion of complementary land uses adjacent to the airport.
Community Input on Transportation

Major Public Outreach Efforts

Broad based, inclusive community outreach efforts for the LRTP encouraged active participation in identifying the vision, goals, and needs of the region. In response to practical challenges COVID-19 Directed Health Measures presented, public outreach methods successfully utilized digital resources and tools that could bring the public into the participation process. The Lincoln MPO reached out to stakeholders across the region through online engagement opportunities, virtual public meetings, in-person public meetings, and focus groups representing the diverse interests of Lincoln and Lancaster County. Community input processes and outcomes are described in the Chapter 3 of the LRTP.

Information gathered throughout the LRTP community engagement 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 accessible transportation options like biking, walking, and riding transit.

- Ongoing maintenance remains a 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 a 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 bicycle network and trail system.

- Travel Patterns experienced a significant change during the COVID-19 pandemic. Directed Health Measures requiring work and education to occur remotely created once in a lifetime changes to trips for work, shopping, and services. Significant growth of 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 shifting travel behaviors.
Planning for the Transportation Needs of 2050

The 2050 Needs Based Plan

The LRTP 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. The details of the Needs Based Plan are described in the Chapter 5 of the LRTP. Current and future needs and candidate projects for the transportation system were compiled from various sources that include:

- Current planning studies
- MPO planning committees
- MPO technical tools (e.g., the 2050 Travel Demand Model, Growth Projections, 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). Satisfying these needs would 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. Projects built in future years will be more expensive than 2021 estimates. Increasing project costs and ongoing transportation needs will exceed the ability to fund all projects and programs identified in the Needs Based Pan.

Fiscally Constrained Transportation Plan

Revenue Forecasts

Between 2022 and 2050, an estimated $4.74 billion in transportation revenues can be reasonably expected for the Lincoln MPO. A combination of Federal, State, local, private and donated funding serve to provide programmatic funding needed to complete multimodal transportation projects. The available revenue sources and revenue forecasts are described in the Chapter 6 of the LRTP.

Approximately $3.21 billion of the transportation revenue is either restricted to specific types of projects (e.g., Federal Transit Administration funds must be used for transit capital and operations) or committed to specific projects or categories (e.g., 25% of Lincoln on the Move sales tax funds are committed to specific growth projects). The remaining $1.53 billion of transportation revenue is flexible and could be used in a variety of ways to achieve the Lincoln MPO goals.

The Surface Transportation Block Grant Program (STBG) funds, a portion of the flexible funds (approximately $239 million), can be used in Lincoln or Lancaster County. The LRTP recommends a 70% (Lincoln)/30% (Lancaster County) split for these funds. This split will provide federal funding for construction of priority projects in the urban and urbanizing areas (that will likely be annexed into the City of Lincoln), as well as some critical rural projects.

Revenue forecasts are not adequate to achieve the goals of LRTP and meet all of 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 LRTP funding strategy recognizes the limited funding availability and strives to optimize the use of the reasonably expected funds based in input from the LRTP Committees and the community in combination with technical analysis.

The LRTP funding strategy for the urban area focuses on applying available revenue to take care of the existing system – fully funding operations and maintenance, and prioritizing rehabilitation of critical roads and bridges.
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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 right-of-way 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 continuation of funding for transit service and bicycle and pedestrian infrastructure

**Fiscally Constrained Transportation Plan**

The process of developing the LRTP ensures that the available funds 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 Plan, the funding strategy and recommended resource allocation will optimize available funds and enable a functional transportation system. Figure E9.a illustrates the distribution of program funding and the portion of funding for each type of need of the recommended resource allocation described by the Plan. The resource allocation is detailed in the Fiscally Constrained Plan, as documented in Chapter 7 of the LRTP.

**NDOT Highways Program**

NDOT has identified 10 projects within the Lincoln MPO, totaling over $648 million in needs (2021 dollars). The $548 million in state and federal revenues dedicated to the NDOT Highways Program will primarily address asset preservation needs, completion of the South Beltway project scheduled to be completed by spring of 2024 (project shown on Figure E9.b-2), the West Beltway project (project shown on Figure E9.b-2), and the I-80 - Pleasant Dale to NW 56th Street project (project shown on Figure E9.b-2). 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.

**Lancaster County Rural Roads Program**

Lancaster County’s roads and bridges form the backbone of the local economy. 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.

Lancaster County annually updates its One and Six-Year (1 & 6) Road and Bridge Construction Program, and the Planning Commission reviews this program with regards to conformity with the Comprehensive Plan. The LRTP supports the Transportation goal, element, and policies of the Comprehensive Plan. 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, crack and chip seal, etc.)
  - Pavement overlays
  - Pavement overlays and widening

- **Road & Bridge Capital Projects**
  - Bridge sized structures
  - Grading in preparation for pavement
  - New pavement
  - Intersection improvements
Figure E9.b-1: Fiscally Constrained Rural Road and Bridge Capital Projects
The rural roads program funds three program areas: Capital Projects, Pavement Maintenance & Pipes, and Operations & Maintenance. 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. The LRTP identifies 95 capital projects in the County, with project costs totaling over $171 million (2021 dollars). With approximately $188 million of available revenue allocated to rural road capital projects over the next 29 years, 26 of these projects listed on Table 7.5 in Chapter 7 of the LRTP could be constructed when accounting for construction cost inflation over time (projects shown on Figure E.9.b-1). Sixty-nine capital projects would remain unfunded.
**City of Lincoln Urban Roads Program**
Without additional revenue sources, several important transportation urban area project and program categories will not have adequate funding. Additional revenue sources, including continuation of the Lincoln on the Move sales tax, would significantly help to meet the community’s transportation needs. The Lincoln on the Move 1/4 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 1/4 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 completed annually in the final 25 years of the plan.

**System Operations & Maintenance, Minor Intersection**: The Operations and Maintenance 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 ditch and drainage maintenance, culvert maintenance, minor intersection improvements, mowing, crack sealing, pothole repair, signing, and pavement markings, among other tasks. The cost to maintain and operate the transportation system is increasing.

Lincoln Transportation and Utilities (LTU) employs 125 people to maintain and operate the transportation system. As the cost of materials, wages and healthcare for employees increases, the cost to complete the essential functions of operations and maintenance (O&M) increases. An estimated $1.08 billion is needed for Lincoln’s O&M program through 2050, which represents a higher proportion of the projected revenues than anticipated in the previous LRTP. The LRTP fully funds Lincoln’s O&M program.

**Road & Bridge Rehabilitation**: The Rehabilitation program includes the repair of arterial and residential roads when the pavement conditions deteriorate to an unacceptable level as well as bridge rehabilitation and signal replacements. 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.
The LRTP funds the Rehabilitation program at a level commensurate with the 2040 LRTP. This includes $518 million of committed and flexible funds, which equates to approximately 350 lane miles when accounting for construction cost inflation. This amount will not fully address Lincoln’s road and bridge rehabilitation needs.

**Rail Crossing Program:** Rail crossing projects serve the needs of freight and passenger movements as well as present challenges for vehicles and passenger safety. The LRTP maintains a list of candidate railroad grade separated crossing projects that could be completed over time. The Needs Based Plan for railroad crossings include safety improvements at crossing locations and grade separation projects at 12 crossings.

The Railroad Transportation Safety District (RTSD) and State Train Mile Tax revenue 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.

**Studies, Preliminary Engineering, ROW & Statutorily Required Records:** Roadway Capital Projects: 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. The LRTP includes 105 urban street capital projects estimated to cost at least $1.04 billion (in 2021 dollars). Identified projects would support the effort to address future congestion anticipated with new growth.

**Roadway Capital Projects:** 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. The LRTP includes 105 urban street capital projects estimated to cost at least $1.07 billion (in 2021 dollars). Identified projects would support the effort to address future congestion anticipated with new growth.

Eight projects with committed funding are anticipated to be constructed within the next four years, and 13 public-private partnership (PPP) projects are expected to be constructed during the LRTP planning horizon. The plan allocates $500 million to roadway capital projects consists solely of committed funds; that is, no flexible funds are included due to the funding shortfall. The amount of funding is anticipated to fund 40 projects listed on Table 7.6 in Chapter 7 of the LRTP (including the 21 committed and public-private partnership projects) when accounting for construction cost inflation. Sixty-four projects remain unfunded.

**Two Plus Center Turn Lane Projects:** The City of Lincoln has routinely added a center left turn lane as part of programmed street rehabilitation along two-lane minor arterials and some collector roads. Approximately $51 million (in 2021 dollars) would be required to complete the 14 miles of two plus center turn lane projects.
The LRTP allocates 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 is anticipated to fund an approximately 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.

**ITS and Technology:** The urban street network also relies on Intelligent Transportation System (ITS) and technology investments to increase highway safety, mobility, security, economic health and community development while preserving the environment. Programmatic costs for wide-spread investments are not fully developed, but continuing to deploy ITS solutions to address congestion in the region is identified as a need.

Approximately $59 million is allocated to ITS and Technology to allow the continuation of existing programs, including Green Light Lincoln, annual signal equipment upgrades, as well as some planned technology improvements such as automated traffic signal performance measures. The revenue will 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 does this level of funding enable LTU to have a pool of funds to opportunistically invest in emerging technologies in transportation.

**East Beltway Preservation:** Approximately $23 million is allocated for East Beltway preservation which includes contributions from both Lancaster County and the City of Lincoln. This funding will 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. No state or federal funding has been identified for completing the East Beltway project. The estimated cost of the project exceeds $315 million (in 2021 dollars).

**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 Lincoln Transportation and Utilities – 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 planned in 2022.
Public input provided for the transit system during development to the LRTP encouraged adding similar levels of service during evening and weekend hours and continuing to improve support for intermodal connections for bikers and pedestrians. Transit users also recommend use of ITS and other emerging technologies that provide a reliable transit experience. Continued improvement of route information, streamlined fare payment systems, travel data, real-time bus location information and potentially driverless vehicle service were suggested as ways to support greater numbers of passenger who ride by choice as well as those that depend on transit services. The TDP update will provide recommendations for these ideas.

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 potential BRT 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 use of demand-responsive public transportation. 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 requires additional data to be collected and analyzed to monitor travel patterns in the hopes of identifying opportunities for regional transit. NDOT completed a Lincoln and Omaha intercity feasibility study in 2020. The Lincoln MPO should continue to be involved in these conversations.

Operation of StarTran’s bus service is funded through a combination of Federal Transit Administration funds, state transit funds, bus fares, advertising, the University of Nebraska – Lincoln, 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 for 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.

*Table 7.7 in Chapter 7* of the LRTP identifies the StarTran funded and priority transit projects. These projects are expected to be funded within the Fiscally Constrained 2050 Plan. The TDP update 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.

**Active Transportation**

Walking, biking and other forms of non-motorized travel will support the growth scenario and other goals in PlanForward and will meet the demands for safe, connected, and equitable forms of transportation. The transportation network will require a network of connected infrastructure that not only supports, but encourages use non-motorized transportation modes for transportation as well as recreation. Public input received during the LRTP process indicated that active transportation infrastructure investments will help the region achieve many of the transportation goals including Livability & Travel Choice, Mobility & System Reliability, Environmental Sustainability, and Transportation Equity.
**Elements**

**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.

The LRTP allocates $14 million for trail rehabilitation, to 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 will 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.

**On-Street Bike Projects**: The City of Lincoln has a strong tradition of supporting bicycle travel, not only for recreation but as a means of transportation. The Lincoln Bike Plan depicts a comprehensive system of off-street and on-street facilities to safely connect neighborhoods and destinations and encourage bicycle travel. 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 plan identified 88 intersection enhancements, 58 miles of new sidepaths, 47 miles of posted bike routes, 11 miles of bicycle boulevards, and other projects to expand the bicycle network.

There is currently no committed funding source 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 will 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 over 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 LRTP **Table 7.9 in Chapter 7** of the LRTP identifies 11 roadway projects recommended to include the on-street bike project recommended in the Lincoln Bike Plan when constructed.

**Pedestrian, Bike Share and Travel Demand Management**: 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

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*The Lincoln Bike Plan describes a sidepath as a separated path along a roadway that serves people bicycling and walking within the street right-of-way and are generally desirable along high-volume or high-speed roadways, where accommodating active transportation within the roadway is impractical.*
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.

The resource allocation includes a minimum $1 million annual general fund transfer to the sidewalk rehabilitation
program. With the $37 million allocation to this program through 2050, an estimated 46 miles of sidewalk could be
replaced, accounting for construction cost inflation.

The Transportation Demand Management (TDM) portion of this program may include partnerships with employers
to support biking, walking, and transit commuting; flexible work hours; and remote work options. The 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.

**Trail Projects**: The current trail network includes nearly 250 miles of trails and utilizes strong support from the
community and groups such as the Great Plains Trails Network along with various public funds to continue expanding
the network. The LRTP development process identified 64 candidate trail projects totaling nearly $60 million (in 2021
dollars).

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. This amount would fund 31 projects listed
on *Table 7.8 in Chapter 7* of the LRTP (including 10 trail projects with committed funding in the Transportation
Improvement Program, Capital Improvement Program or other agreements) when accounting for construction cost
inflation (projects shown on Figure E9.c).
Figure E9.c: Priority Trail Projects
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.

The Airport Authority initiated a $54.8 million terminal expansion and modernization project which is estimated to increase passenger counts by 27% to 220,000 annually. 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.

Illustrative Plan

Transportation projects and programs that do not have LRTP identified funding revenue are retained in the Illustrative Plan. This unfunded portion of the LRTP is substantial, but it is important to maintain as available funding and project priorities can change during the planning period. Illustrative Plan projects for NDOT Highway (Table 7.13 in LRTP - Chapter 7), Rural Road & Bridge (Table 7.14 in LRTP - Chapter 7), Urban Roadway (Table 7.15 in LRTP - Chapter 7), and Trails (Table 7.16 in LRTP - Chapter 7) are presented in the priority order as they were determined by the LRTP goals, public input and technical analysis. New and innovative funding sources must be identified to enable more roadway and trail projects from the Illustrative Plan to be completed. Three funding considerations could make a significant impact on the available revenue available for projects on the Illustrative Plan list. They include:

- **Continuation of Sales Tax:** The LRTP revenue forecasts do not account for the continuation of the ¼ cent Lincoln on the Move sales tax beyond 2025. A continuation of the ¼ cent sales tax throughout the planning period 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. If the sales tax were increased to a ½ cent, twice the level of funding and associated improvements could be completed!

- **Grant Opportunities:** In addition to the ongoing funding sources, the Lincoln MPO and its member agencies can 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 could supplement transportation funding available to the Lincoln MPO.
· **Highway Allocation Funds:** The current allocation of highway funding is based on federal revenues generated by gas taxes. These revenues have remained stagnant, and no significant change has been made to state sales 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 and require different funding sources over time as vehicles become more fuel efficient and more vehicles are converted to electric power.

**Policies Related to this Element**

P15: Infrastructure and Economic Development

P62: Transportation Equity

P63: Transportation and the Environment

P64: Complete Streets

P65: Transportation and Managing Growth

P66: Congestion Management

P67: Transportation and Economic Health

P68: Pedestrians

P69: Bicycles

P70: Transit

P71: Public ROW and Access

P72: Freight

P73: Shared Mobility

P74: Advanced Mobility

P75: Transportation Partnerships

P76: Transportation Safety

P77: Transportation Maintenance

P78: Transportation Funding

P79: Airport

**Goals Related to this Element**

G1: Safe, Affordable, and Accessible Housing

G2: Complete Neighborhoods

G4: Economic Opportunity

G5: Equity and Inclusion
Elements

G6: Healthy, Active, and Connected People
G7: Environmental Stewardship and Sustainability
G14: Technology
G15: Transportation