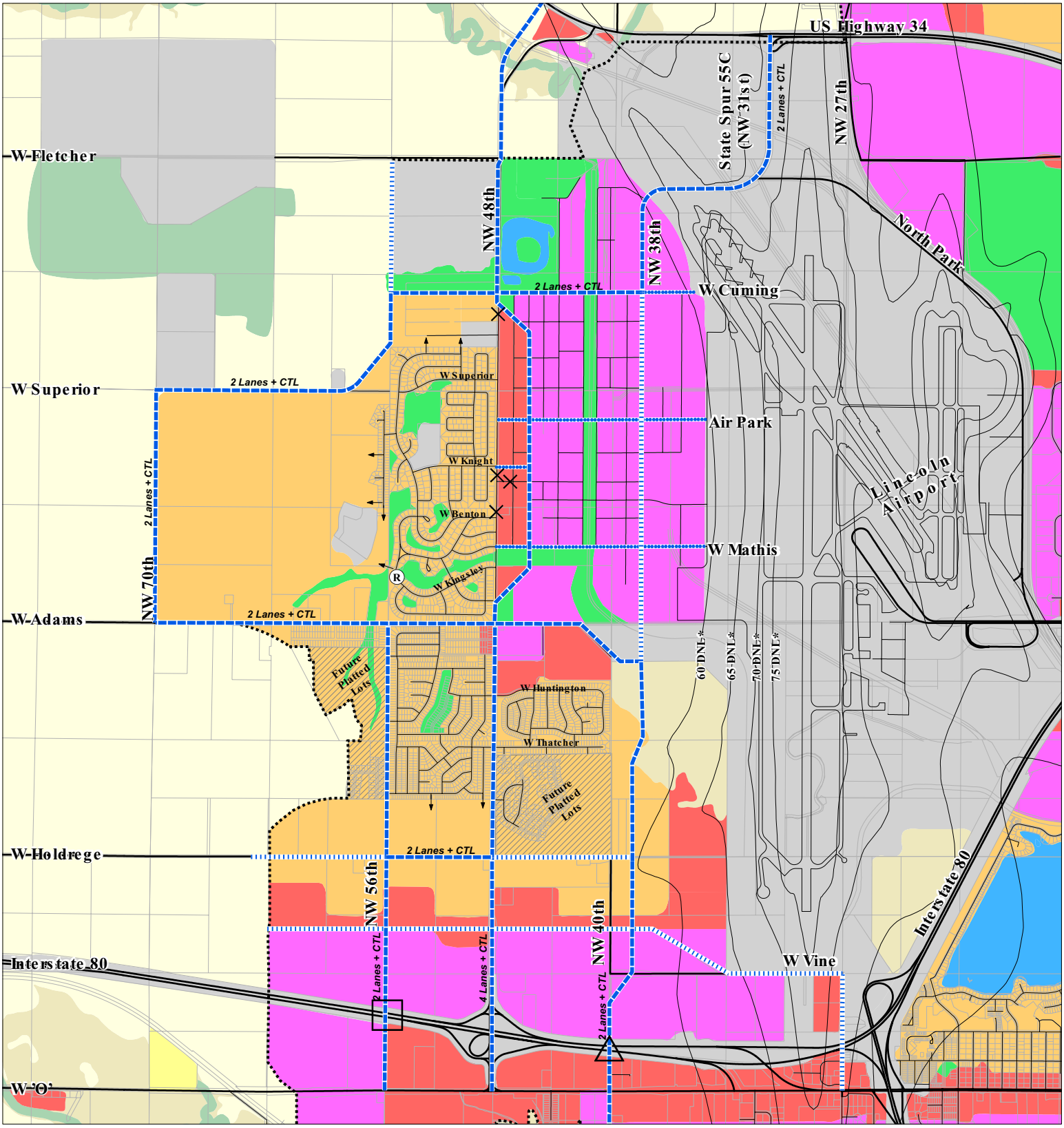

Figure 2:
Airport West Subarea Plan

Approved: 1/31/2005 & 2/1/2005

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Future Street Extention[1]
Future Road Connection to be Completed[1]
Future Road Closing[1]
Potential Grade Separation[1]
Potential Overpass Improvement[1]
Arterial Street[1]
Collector Street[1]
New/Improved Local Road[1]
Future Service Limit
[1] See Subarea Plan Text

Public & Semi-Public
Lakes & Streams
Environmental Resources
Green Space
Agricultural
Residential, Low Density
Residential, Urban
Agricultural Stream Corridor
Commercial
Industrial

* DNL - Day Night Average Sound Level

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- ***Inter Modal Freight Center***: this area is located within the Air Park West Industrial Park. The Industrial Park is owned and maintained by the Lincoln Airport Authority. Industries requiring rail access for goods shipment, or transfer of goods from truck-to-rail or vice versa would be served by this type of facility. At this time, an area for an Inter Modal Freight Center has been defined and will be further evaluated as the development of the Industrial Park continues. The Airport Authority is developing sites for rail accessible warehousing on a demand driven basis. Coordination and discussion with railroad service providers will continue during the planning period.

- ***Green Space***: several locations within the subarea should be identified as green space over the planning period as new land is developed. These areas are predominantly used for active recreational uses, such as parks, golf courses, practice or ball fields, and trails. Some isolated environmentally sensitive features may be within these areas, with some passive recreation uses also possible.

  The following specific changes are included with the approval of this Subarea Plan:

  1.) **Deleting Green Space** designation, west of the Carol M. Yoakum Family Resource Center to Public/ Semi-Public and Urban Residential. There are no existing or planned park facilities located in this area. The Lincoln Housing Authority has discussed a need to evaluate expansion of the Center in the future, and this would logically occur to the west of the current building. At this time, there is no timeline for the expansion of the Center;

  2.) **Adding Green Space** designation, in the vicinity of NW 48th Street, generally west and north of Bowling Lake from Urban Residential, Industrial and Agricultural. Most of this area has been identified as floodplain or sensitive environmental areas and should not be developed in the future. The Parks and Recreation Department will maintain portions of this Green Space as part of the community's system of open spaces; and,

  3.) **Adding Green Space** designation, along Oak Creek, from West Fletcher to West Adams Street, within the Air Park West Industrial Park to reflect plans regarding the future floodplain designation along this creek.

- ***Other Specific Land Use Plan Modifications***: The following specific changes are included with the approval of this Subarea Plan:

  1.) **Adding Urban Residential** designation, west of an extended NW 51st Street from Public/ Semi-Public (Huskerville Tract). The Lincoln Housing Authority are considering plans to provide for the west two-thirds of their 20-acre parcel as affordable housing in the future, either as the developer or via a land exchange to another party. At this time, there is no timeline for the development of housing;

  2.) **Adding Public/Semi-Public** designation, to the southwest section of land located at NW 48th and W. Fletcher from Agricultural. This parcel is under the custody of the Lincoln Airport Authority and is included within the City's Future Service Limit, and may be served with urban infrastructure in the near-term. The land use designation modification would ensure that this parcel is included in the City's plans for the provision of urban services; and

3.) **Adding Urban Residential** designation, to the northwest corner of land located at NW 56th and W. Superior Streets from Agricultural. This portion of land is identified to accommodate a future minor arterial roadway, and is added to the City's Future Service Limit.

- ***Land Exchanges:*** The Airport Authority has plans to surplus a portion of the Huskerville Tract. This Subarea Plan recommends that to accommodate near-term development, a land exchange and modification of the land use designations (see above) should be reviewed. The land exchange and land use modification would provide for contiguous residential growth and accommodate the logical provision of infrastructure for future development of the Huskerville Tract. The City of Lincoln, Lincoln Housing Authority and the Lincoln Airport Authority will participate in evaluating the specific details regarding the exchange of parcels.

D. Entryway Corridors

- The entryway corridor into and through Lincoln along Interstate 80, US Highway 34 and US Highway 6 (West 'O' Street) is a good example of the positive and negative images an entryway can establish. Parts of the undeveloped areas adjacent Interstate 80 provide an attractive entry into Lincoln. As future development of these areas occur, these corridors should be evaluated for further protection.

- West 'O' Street is within a designated Capitol View Corridor in the Comprehensive Plan and is regulated by Title 27 of the Lincoln Municipal Code, known as the Zoning Ordinance. The purpose of the Capitol View Corridors Ordinance are to protect and maximize views of the Nebraska State Capitol Building.

- Discussions are underway on potential landscaping and architecture standards to promote desirable entryways into Lincoln. However, standards alone may have little impact if incremental land use decisions strip the corridor with commercial uses and signs. Thus, in order to preserve entryway corridors, the land use and transportation decisions are equally important as landscaping or architectural standards.

E. Historic Places

Within the subarea, there are historic places and structures that require special efforts through planning to ensure their continued preservation. The Army Air Field Regimental Chapel, Nine Mile Prairie, and the former Lincoln Air Army Air Field/ Lincoln Air Force Base are listed places of historical significance in the subarea.

- The Arnold Heights Neighborhood west of NW 48th Street and north of W. Adams Street largely reflects the government-sponsored housing developed during the period of operation of the Lincoln Air Force Base (LAFB), 1954 to 1966. The National Register of Historic Places ordinarily includes properties 50 years of age or older, hence the LAFB housing area is just beginning to reach eligibility in terms of age. The patterns of land use and architecture in the area appear to be distinctive and characteristic of their period and purpose, and while many of the houses have some modifications the overall

appearance of the area retains sufficient integrity for National Register consideration. Whether the area has sufficient significance for historic designation, at least at the local and perhaps at the state level, for its reflection of the housing associated with a military installation of considerable local significance, and for the distinctive land use patterns and period architecture.

- The future improvement of NW 48th Street, must include an evaluation of the historic status of the Arnold Heights subdivision. The City must coordinate with local and state historic preservation officials, and property owners when this new roadway facility is designed.

F. Issues Yet to Address

- The expansion of the **Future Service Limit** in the Oak and Middle Creeks (West 'O' Street) basins will require more discussion in the future. Several property owners have requested inclusion within the City's urban growth area. While these areas are contiguous, they are designated as Tier III growth areas in the Comprehensive Plan. Tier III is designated to provide for Lincoln's future urban growth needs approximately 50 years and beyond. The Comprehensive Plan identifies the **Northwest Tier Study** to evaluate these Tier III areas. At the current time, no timeline has been determined for completion of this study.

- Currently, within the **Future Service Limit** there are areas that could be provided with urban services during the planning period. However, the development status of some of these tracts are unknown, and this may inhibit the logical expansion of urban services into parts of the subarea. The City should consider implementing practical solutions that ensure land is developed in an efficient, timely and logical manner.

- The subarea is located within the **Airport Environs Noise District**. The District is a special purpose regulation, identified in the Zoning Ordinance as an overlay zoning district which is used to establish land use controls whose purpose is to protect the public's health, safety, and welfare from conflicts that may arise between aviation and urban development. The underlying zoning (i.e., residential, commercial, industrial, etc.) remains in place and is supplemented by the overlay zone (i.e., in this case the District and noise contours). The land within the overlay zone is subject to the requirements of the two zoning districts -- the underlying zone and the overlay zone. The strictest requirements of both zones apply to the affected property. As land is developed in the subarea, the types of land uses should remain consistent and compatible with the Airport Environs Noise District regulations, and the Lincoln Airport Noise Compatibility Study.

- **Publicly-Owned property**: there are several city- and publicly-owned properties within the subarea. Consideration should be given to the community's needs when publically-owned land is identified as **surplus property**. Development of formerly publically-owned property should remain consistent with the intent of the Subarea Plan and Comprehensive Plan.

III. Public Utilities

A. Water Service

The subarea included within the City limits are served by existing water mains operated by the Lincoln Water System. Most of the Airport West Subarea is located within the Belmont Pressure Zone District. A portion of the subarea, west of NW 56th Street, between West Adams and West Superior Streets is not located within the Belmont Pressure District. Much of topography in the undeveloped parts of the subarea are at elevations that will present challenges for adequate water service in the future.

- Additional mains are shown in the City's Capital Improvement Program for existing arterial streets, including West Adams and West Holdrege Streets. These water mains would be constructed at the time of the roadway improvement. The coordination between roadway improvements and water main extensions are critical. Water mains typically follow public street rights-of-way, and more detailed planning of the water distribution system cannot happen until the future roadway alignments and ROW have been established.

- Lincoln Water System also needs to build a second water main parallel to NW 48th Street, however, a NW 40th roadway or NW 56th Street would be acceptable. Again the timing for determining roadway alignments and grades are critical in moving forward with infrastructure planning and construction.

- Lincoln Water System will have difficulty serving property above 1,280 feet in elevation within the subarea. The Belmont Pressure District cannot serve the entire subarea adequately, and property lying above 1,280 feet of elevation will have marginal water pressure. Without a new pressure district, property lying above 1,260 feet of elevation will experience low water pressure. Low water pressure affects fire protection capabilities and limits many households uses. In order to serve land above 1,280 feet, a booster district would need to be created to provide adequate water pressure. Due to the relatively small service area to be served, Lincoln Water System believes it is not cost effective to create a new booster pressure district for the subarea. At this time, a booster pressure district is not identified in the Lincoln Water System Master Plan, or Capital Improvement Program for this subarea.

- Several existing water mains within the Air Park West Industrial Park have been identified for abandonment or reconstruction. Lack of flow and poor conditions of the water mains in Air Park West has created operational issues for the water distribution system. The location of the reconstructed mains will be determined by Lincoln Water System, in conjunction with the roadway alignments identified in the Subarea Plan, and in coordination with the Airport Authority's Air Park West development.

- In addition, the Airport Authority is considering a new internal roadway system for the development of the Air Park West Industrial Park. Minor variations in the water distribution system and roadway alignments may occur to address any site conditions not yet identified. Lincoln Water System will coordinate with the Lincoln Airport Authority's Air Park West development.

- A water tower is located outside the subarea to serve the Water District. While this water tower is situated adjacent to the subarea, above the surrounding land, it is not possible to provide adequate water service the entire subarea, without additional facilities added to the Water District.

B. Wastewater Service

The Airport West Subarea spans two different drainage basins. The Oak Creek drainage basin serves the developed parts of the subarea, west of the Airport and generally north of West Holdrege Street, where a ridge line exists and separates the two basins. The undeveloped part of the subarea, south of West Holdrege Street is located in the Middle Creek (West 'O' Street) drainage basin. Wastewater service for the Middle Creek drainage basin is currently identified in the City's Capital Improvement Program, and initial design work for portions of the West 'O' Street wastewater trunk line have been started.

- Several existing wastewater lines within the Air Park West Industrial Park have been identified for capacity, repair and replacement in the Capital Improvement Program. The location of new wastewater trunk lines will be determined by Lincoln Wastewater, in conjunction with the roadway alignments identified in the Subarea Plan, and in coordination with the Airport Authority's Air Park West development.

- In addition, the Lincoln Airport Authority is considering a new internal roadway system for the development of the Industrial Park. Minor variations in the wastewater collection system and roadway alignments may occur to address any site conditions not yet identified. Lincoln Wastewater System will continue to coordinate with the Airport Authority to finalize these plans.

- There are wastewater trunk collector line improvements that will need to be built in order to serve the subarea during the planning period. Some of these infrastructure improvement projects have been identified in the City's Capital Improvement Program and are shown below. Project schedules are not final and may change. This Subarea Plan acknowledges that a separate community-wide process exists to determine and approve capital improvements.

  Oak Creek Basin - Capacity, Repair & Replacement
  1.) NW 44th Street, West Mathis to West Superior - Construction 2004/05
  2.) South Runway to NW 44th and West Mathis - Construction 2006/07
  3.) NW 27th Street, Fletcher to Highway 34 and Air Park Road - Construction not determined
  4.) NW 40th Street to Hwy 34 - Construction not identified

  West "O" Street Basin - Extension of Trunk Sewer Lines
  5.) From NW 40th to vicinity of NW 48th & Interstate 80 - Construction 2004/05
  6.) From NW 48th & I-80 north of I-80 - Construction not identified

- An area located within the City's Future Service Limit, generally located south of W. Vine Street, north of Interstate 80, and between NW 40th and NW 27th Street, currently has no

wastewater service, and there are no improvements identified to serve this area in the future. The **Oak Creek Drainage Basin Wastewater Study** will be initiated in the near-term and will address the provision of wastewater services for this area.

- The **Teresa Street Wastewater Treatment Plant** is the terminating point for wastewater from the Oak Creek and West "O" drainage basins. Further development of the subarea needs to be coordinated with capacity improvements, both with the trunk lines downstream and at the Treatment Plant.

- There is an existing lift station adjacent Bowling Lake, and several collector lines that Lincoln Wastewater System have identified to remove or abandon in the planning period. However, these decisions on the removal or abandonment of existing facilities cannot happen until the roadway alignments, provision of service to existing customers, and ROW have been determined.

- Once the Subarea Plan is complete, Lincoln Wastewater System may need to make adjustments in their planning and construction plan for future infrastructure improvements.

C. Electric Service

The Lincoln Electric System (LES) serves the Airport West Subarea. LES facilities within the subarea include:

1.) Substation at NW 48th and West Adams Streets that provides electric service to the subarea;
2.) Substation at NW 38th and West Cuming Streets that provides electric service to the subarea;
3.) Substation at NW 68th and West Holdrege Streets (outside of subarea) that provides electric service to LES service area;
4.) Transmission 115 kV Line Corridor - generally east to west an 1/8 mile south of West Holdrege within the subarea; and,
5.) Numerous 12 kV and 35 kV distribution lines within the subarea that provide service to customers.

- LES has identified in the Capital Improvement Program the following electrical service improvements for new and existing facilities which are located outside of the subarea to serve customers in the LES service area:

  1.) Substation Improvement - NW 68th and West Holdrege
  2.) Substation (Proposed) - NW 40th and Alvo Road
  3.) Transmission Line Corridor, NW 68th/W. Holdrege to NW 12th/ Alvo

- Once the Subarea Plan is complete, Lincoln Electric System may need to make adjustments in their planning and construction plans for future infrastructure improvements.

- LES will continue to coordinate and be involved with the City and County regarding

water, wastewater and street infrastructure improvements that are identified for the subarea during the planning period.

D. Issues Yet to Address

- Additional water mains and wastewater trunk lines are needed to serve the subarea. In addition, water source availability and treatment capacity must keep pace with continued growth of the community. These projects are not yet in the City's Capital Improvement Program. As infrastructure and services are extended to this subarea, the impact on the CIP will need to be addressed. The timing of water and wastewater improvements needs to be coordinated with planned street improvements.

- Infrastructure that is planned to serve Tier I urban growth areas should be appropriately sized to serve areas in Tier II urban growth area and beyond.

- The Public Works and Utilities Department and LES may have additional comments as specific annexation and development proposals are reviewed in greater detail.

- The Comprehensive Plan identifies the **Northwest Tier Study** to evaluate the Tier III urban growth areas located adjacent, but outside the subarea. The Northwest Tier Study should evaluate these future urban growth areas as designations for Tier II. However, the study should also evaluate these Tier III growth areas for possible Tier I designation within the planning period, if these areas meet the criteria identified in the Comprehensive Plan. The study should include evaluating the provision of all urban services, water, wastewater, parks and trails, and roads. The study will need to be closely coordinated with ongoing infrastructure discussions, and the capital improvement program. At the current time, no timeline has been determined for completion of this study.

- The Lincoln Water System will need to further evaluate the cost and timing of providing water service to property above 1,280 feet in elevation. However, for the amount of land identified within the City's future service limit, a booster district does not appear warranted during the 25 year planning period.

IV. Transportation

The Lincoln Lancaster County Comprehensive Plan states that the transportation system both serves and shapes development, helping to mold the City's future growth directions. Just as the transportation system is primarily influenced by land use, land use is also influenced by transportation. As such, the land use plan proposed in this subarea plan directly impacts the proposed transportation network, and the decisions on how and when to implement aspects of the plan will be impacted by the decisions made on the transportation projects proposed in this plan.

This Subarea Plan considers a range of modes of transportation to meet the long-range needs of this area. The current land use and transportation network contained in the Comprehensive Plan was reviewed as a starting point for discussion for this study. Three scenarios were then developed to provide a range of land use and transportation concepts. From these three scenarios, two more refined options were further developed and evaluated. A preferred alternative of land use and transportation network was then developed based on input from citizens, stakeholders, traffic modeling analysis, and an estimation of financial implications of these new facilities.

A. Pedestrians

Walking is a core activity in our daily lives whether we walk to work, school, shop, or play. Pedestrian facilities should not be overlooked in the transportation planning process. This subarea plan identifies the need for good pedestrian facilities that improve the walking environment.

Currently 5 foot sidewalks are installed on both sides of major streets and these facilities are installed when roadways are constructed or reconstructed. Also, 4 foot sidewalks are required on both sides of public local streets.

The Comprehensive Plan identifies the area of NW 48th Street at approximately West Huntington Avenue as an "Unbuilt Approved Pedestrian Activity Center." This designation means directness and safety for pedestrians going to, from, and within this center should be stressed. Access into developments from the street sidewalk system is needed and a pedestrian system within developments should be provided.

There are also pedestrian needs at Arnold Elementary School, located within the Arnold Heights Subdivision. In addition, there have been discussions with Lincoln Public Schools for a new school facility to serve this subarea. LPS has begun evaluating sites within this area.

- A potential school site/ joint use facility will need to incorporate pedestrian facilities to connect this facility with surrounding neighborhoods.

B. Bike and Trail Facilities

Many miles of multi-use paths are planned as part of the City's trail system but are yet to be built in this subarea. Trail facilities are often built as part of roadway projects if their alignments

run along major roadways, or as new developments are platted, while other trail segments are built as part of the Parks and Recreation Capital Improvements Program. It is important that trail facilities be located where they are accessible to public facilities. The Comprehensive Plan indicates planned bicycle facilities in the following corridors and are shown on the transportation plan (**Figure 3**).

- A north/south "trail location to be determined" route crossing Interstate 80 between NW 40th Street and NW 56th Street and continuing north along one of these roadways to West Holdrege Street. The exact location of this crossing has not been identified, but it is desired as part of this plan to have such a crossing at both NW 56th Street, most likely when the existing Interstate bridge is improved as part of the widening of I-80, and at NW 40th Street when a new crossing of the Interstate is constructed. The Nebraska Department of Roads is designing the bridge structure at the NW 56th Street crossing to accommodate a bicycle facility. A bicycle facility at a NW 40th Street crossing would tie into a bicycle trail facility being designed and planned along SW 40th Street south of West "O" Street.

- An east/west facility along West Holdrege from NW 40th Street to NW 56th Street.

- A north/south facility along NW 56th Street from West Holdrege to West Adams. A grade separated crossing of West Adams is planned at NW 56th to provide safe and continuous travel for users of the trail system.

- A trail facility along West Adams is planned beginning at NW 56th Street and running westward.

- An off-street facility running generally north/south from West Adams north through the Arnold Heights neighborhood, connecting with Arnold Elementary School, and then over to NW 48th Street and connecting to Bowling Lake. It is proposed that the "Huskerville" roadway alignment proposed in this plan be used to bring this trail from West Superior and NW 56th to West Cuming and NW 48th Street. It is important to make a connection between Bowling Lake and the Arnold Heights neighborhood with this trail facility.

- A trail facility is planned to run east/west generally along the West Fletcher section-line north and east of Bowling Lake that connects to the wider trail system to the east of the subarea.

- A trail facility, connecting to the community trail system to the east beyond the limits of this subarea, is planned to curve south around the Airport Authority property and then connect to the planned east/west trail along West Holdrege. Further discussion and coordination with the Airport Authority on the location of this trail along the southern portions of the airport property is needed. It will also be important that any impact on wetlands in the vicinity of this planned trail is minimized as much as possible.

The Comprehensive Plan also identifies existing on-street bike routes in this subarea. These identified routes include West Mathis, West Knight, West Cuming, NW 44th Street through the Airport Authority property, and NW 38th Street/NW 31st Street from West Cuming to US 34. Further discussion and coordination with the Airport Authority regarding these facilities is needed.

Much like pedestrian friendly provisions, bicycle friendly developments and neighborhoods are needed within this subarea. Bicycle amenities such as bicycle racks within commercial/industrial developments should be provided, as should adequate pedestrian and bicycle connections from the trail system into neighborhood and business centers.

C. Public Transportation

The Airport West subarea is served by public transportation via the #12 Arnold Heights StarTran bus route. This route carried a total of 64,840 passengers in FY 2003-2004 with an average of 12.7 passengers per hour. Bus service runs from 5:40 am until 7:00 pm during the week (Monday through Friday) with 60 minute headways. Saturday service is provided on this route from 7:40 am until 7:05 pm with 90 minute headways.

A booster service to North Star High School is also provided during the week with regularly scheduled service that is open to the public but is primarily designed to accommodate the needs of school students. The school booster buses are clearly marked as open to the public and stop at regular bus stops. These boosters operate only when school is open and in session and typically provide two trips in the morning and two trips in the afternoon after school is dismissed.
All buses that run on the #12 Arnold Heights bus route are handicapped accessible, and the HandiVan disabled van service operated by StarTran serves the entire study area.

- Future developments in the subarea should be designed to accommodate bus stops and bus turnouts at appropriate locations so that the area can become more transit friendly to users of public transportation. Other services such as express buses and park and ride lots should be considered for this subarea. These efforts need to be coordinated with ongoing bicycle and pedestrian improvement plans in the subarea.

D. City Streets

Access into and out of the subarea is provided by Interstate 80, US Highway 34, US Highway 6, and Nebraska Highway 79. Traffic movement between this subarea and the Lincoln community is primarily accomplished through these major roadway facilities. Internal traffic movement within the subarea is mainly focused on NW 48th Street as the main arterial route. East/west traffic movement into Lincoln is possible via the Airport maintained North Park Road.

This section identifies the roadways needed to implement the Subarea Plan. Facility types and costs were developed using results from traffic modeling, financial cost analysis, established Comprehensive Plan guidelines, engineering standards and public input. **Figure 3** and **Figure 4** shows the transportation plan for the subarea. Each roadway improvement identified in this Subarea Plan will undergo a community participation process during the design phase of the project.

The following transportation projects, studies and policies are included with the approval of this Subarea Plan:

- A study that encompasses the general area bounded by NW 48th Street and NW 27th Street, West Webster to US Highway 34. The study is to include north/south and east/west roadway needs including the West Fletcher corridor and US Highway 34 access considerations.

- Roadway classifications and right-of-way requirements will need to be modified in existing planning documents, and be addressed in the Long Range Transportation Plan/ Comprehensive Plan.

- The roadway improvements identified in the Subarea Plan over the 25-year planning period are identified to include right-of-way requirements of 120 feet to accommodate principal and minor arterial roadways. This width will accommodate the road facilities identified for the 25 year planning period and beyond.

- Right-of-way requirements on all mile line section lines should be evaluated as accommodating at least a Minor Arterial roadway and 120 feet of ROW.

- West Adams, from NW 70th to NW 48th should be amended in the 2025 Comprehensive Plan to show this facility as 2 lanes plus turn lanes during the 25-year planning period. The traffic modeling analysis indicated that a 4 lane facility is not required over the period.

- Ensure that commercial and industrial centers are designed to guide commercial truck and vehicle traffic to the nearest arterial roadways.

New Major Roadways

- **Realignment of NW 48th Street:** Principal arterial with 4 lanes plus turn lanes, from West Adams to West Cuming to the east along approximately NW 46th Street is proposed as part of this Subarea Plan. Also, a minor realignment of NW 48th Street adjacent Bowling Lake will be required to avoid impacting Bowling Lake. This realignment will provide an improved transition between residential uses in the Arnold Heights subdivision, with planned commercial and industrial uses for the Air Park West Industrial Park. This new alignment will allow for improved access and visibility for Air Park West developments, and allow for safer access points with the neighborhood. The new corridor will also accommodate widening to 4 lanes in the future, without impacting the Arnold Heights neighborhood. The realignment concept does not impact the Air Park Recreation Center and Arnold Heights Swimming Pool. **Figure 4** shows a possible example of concepts that reflect a realignment of NW 48th Street. This example is not an approved alignment or study.

  Upgrading and converting the existing NW 48th Street to local street standards between West Adams and West Cuming would be evaluated as part of a further detailed realignment study. Prior to the determination of a final alignment, the detailed design study will evaluate costs, access control, pedestrian and bicycle facilities, traffic

capacity, circulation and other items related to the proposed new NW 46th Street arterial alignment. If, at the conclusion of this detailed study, the outcome is not to move forward with the realignment of NW 48th Street, the decision will be to improve NW 48th Street to 4 lanes plus turn lanes along the existing alignment.

- **NW 40th/ 38th Street:** Minor arterial and industrial/commercial collector with 2-lanes plus turn-lanes. The new roadway will run from West "O" Street to US 34. This new facility will provide a parallel north/south arterial with NW 48th Street, that will help circulate and move traffic, and provide access to newly developable areas during the planning period. Between West Adams and West Cuming, the roadway is designated as a collector street. Traffic benefits were apparent in the modeling of this facility, and it is possible that once constructed this facility should be identified as a truck route. This roadway will provide continuous movement from SW 40th Street, south of West "O" Street. This roadway will require a new grade separated crossing of Interstate 80, and this facility should be considered for a bike trail facility to help develop the trail system. This new roadway will require further coordination with the Nebraska Department of Roads. The alignment of NW 40th/38th Street, between West Vine Street and West Adams Street is generally east of NW 40th Street. This alignment will be reviewed as part of the design and evaluation of this roadway. A connection with US Highway 34 may or may not remain at the existing NW 31st Street access point. This proposed roadway, Interstate crossing, and connection with US Highway 34 will need further study.

- **West Holdrege Street:** Minor arterial with 2-lanes plus turn-lanes, from NW 56th Street to NW 48th Street. As an east/west section-line road that extends into the County road system, traffic levels will need to be monitored as the subarea develops throughout the planning period.

- **Huskerville Link:** Minor arterial with 2-lanes plus turn-lanes, from West Superior at NW 70th Street to approximately NW 59th Street, NW 59th Street to a proposed West Cuming Street to along the NW 56th Street section-line, including **West Cuming** from NW 56th Street to NW 48th Street. This roadway intends to provide a required east/west connection that will facilitate development of the Huskerville tract in the near-term. Coordination will be needed with the Lincoln Water System to design this roadway to minimize infrastructure disruption of facilities in place that serve the water tower.

- **West Cuming Street:** Minor arterial with 2-lanes plus turn-lanes that serves through traffic, from NW 48th to NW 38th Street. West Cuming Street to the west of NW 48th is part of the "Huskerville Link" alignment.

- **West Adams Street:** Minor arterial with 2-lanes plus turn-lanes, from NW 48th Street to a connection with the new NW 40th/38th Street roadway. This connection may not follow the section-line in order to align with the north/south roadway intersection.

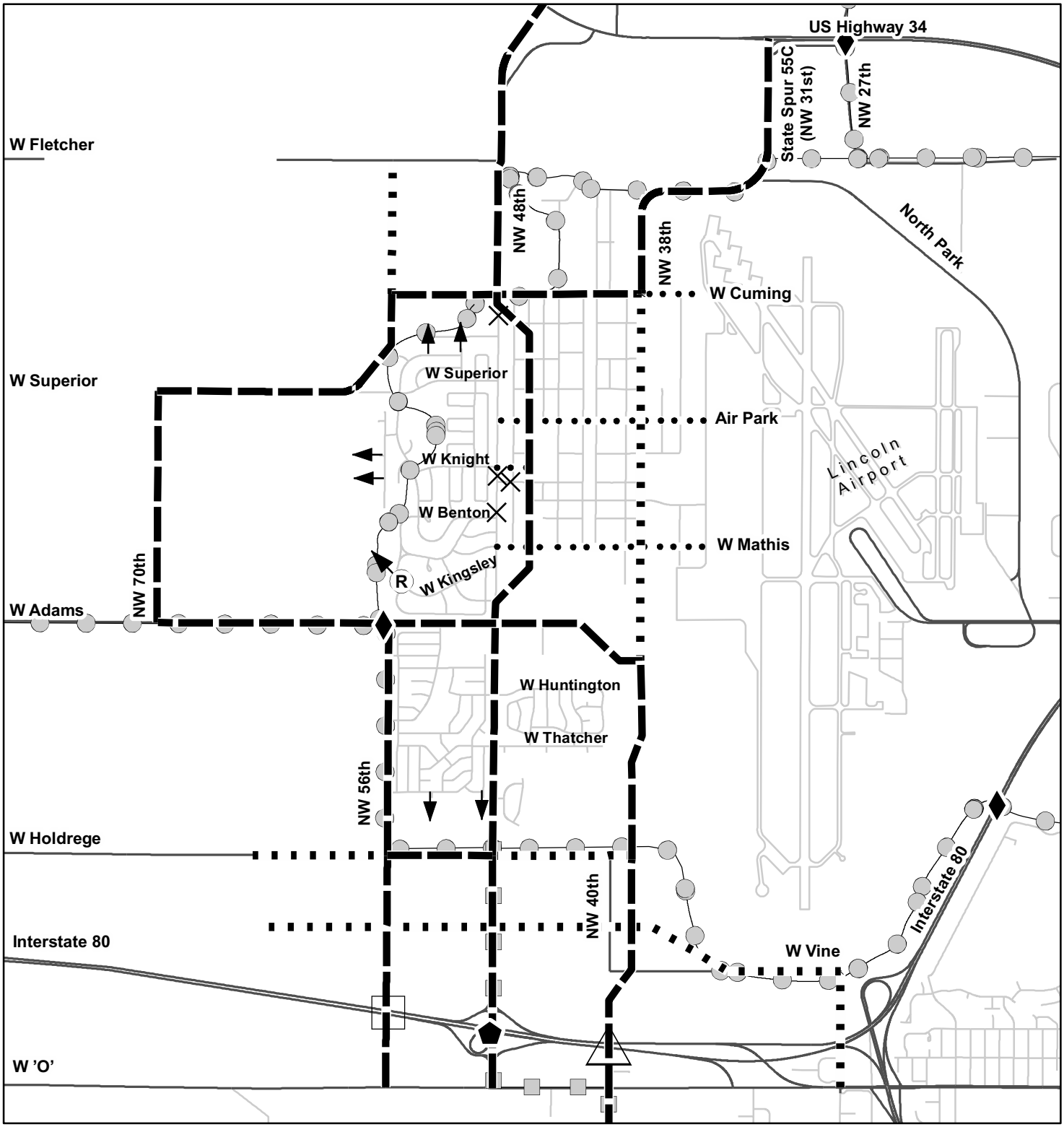

Figure 3: Airport West Subarea Transportation Plan

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R Future Road Connection to be Completed

Future Road Closing

Potential Grade Separation

Potential Overpass Improvement

Proposed Bike Grade Separation

Potential Bike Grade Separation to be Determined

Future Street Extention

Arterial Street (Proposed)

Collector Street (Proposed)

New/Improved Local Road

Bike Trails (Planned)

Trail Location or Bike Route to be Determined

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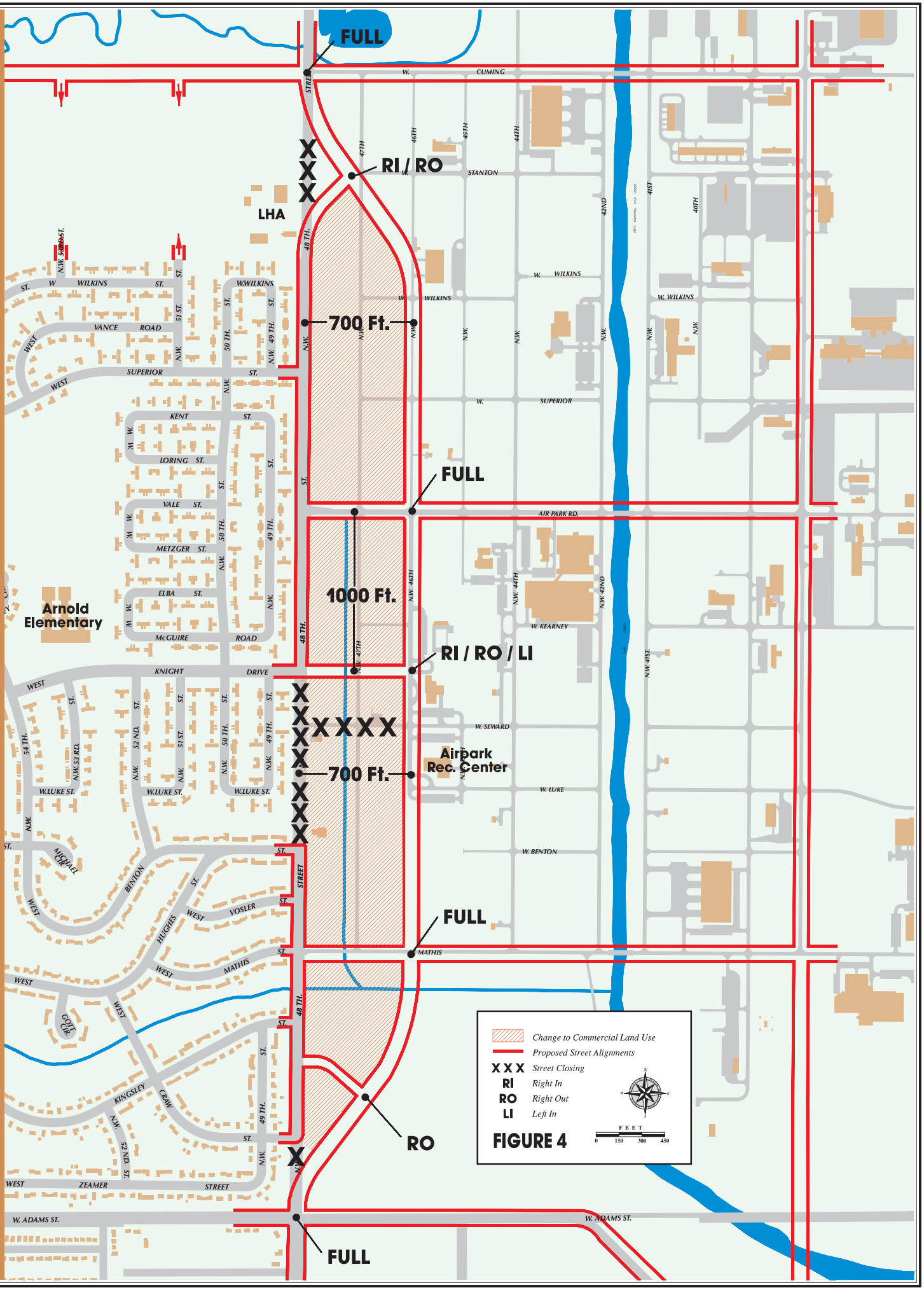
January 31/February 1, 2005

NW 48TH STREET REALIGNMENT CONCEPT



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November 22, 2004

Approved Major Roadways

The following projects are already approved in the Comprehensive Plan and Long Range Transportation Plan for the subarea.

NW 48th Street
Principal arterial planned for 4-lanes plus turn-lanes. This is the only city street identified as a principal arterial in this plan. This roadway currently is the main north/south traffic facility and is planned to be such in the future. NW 48th Street is the designated truck route in the subarea. It also provides the only full interchange with Interstate 80. The intersection of NW 48th with US 34 to the north of the subarea is slated for improvement by NDOR and will include design for a 4-lane cross-section. Also, the Lancaster County Engineer identifies a project to replace the NW 48th Street bridge over Elk Creek in the out-year portion of the County's Road and Bridge Construction Program. This project will also be designed to facilitate a 4-lane cross-section in the future. NW 48th Street does not continue south of "O" Street

NW 56th Street
Minor arterial with 2-lanes plus turn-lanes from West "O" Street to West Adams. This facility is not a continuous route through the study area, but it does provide additional grade separated crossing of Interstate 80. The grade separation also provides an opportunity to install a bike/pedestrian facility at this location. NDOR is designing the NW 56th Street bridge as part of its I-80 widening project with accommodations for a future bike/pedestrian facility. A bike/pedestrian trail is planned along NW 56th Street from West Holdrege to West Adams. To the north, NW 56th from West Superior to West Fletcher is proposed to be part of the "Huskerville Link" facility (see below).

NW 70th Street
Minor arterial with 2-lanes plus turn-lanes from West Adams to West Superior, which is the edge of the future service limit. This section-line road does extend into the County road system and traffic levels will need to be monitored as the subarea develops throughout the planning period.

West Adams Street
Minor arterial with 2-lanes plus turn-lanes from NW 48th Street to NW 70th Street. This is a change from the current Comprehensive Plan that calls for this facility to be 4-lanes plus turn lanes. Traffic modeling indicates that a 4-lane facility will not be needed here during the planning period of this plan. As an east/west section-line road that extends into the County road system, traffic levels will need to be monitored as the subarea develops throughout the planning period.

Local Streets

Local streets will be constructed by abutting property owners at the time of development. The following local street projects are specifically identified in this Subarea Plan:

West Mathis Street and Air Park Road
Both of these roadways are proposed as local streets serving adjacent land uses from NW 48th Street to the eastern edge of the Airport Authority property. At this time these streets are private and dedicating public right-of-way and upgrading the streets to city standards needs to be further evaluated.

- The "Arrows" used in **Figure 3** indicate future local street extensions that will be needed as development occurs. It is important to provide multiple access points for neighborhoods to ensure adequate distribution of local traffic as it travels to and from the arterial road network. This is especially important if one access point is blocked due to construction or an accident.

- The "Circled R" used in **Figure 3** indicates a platted street that was never constructed. This street segment should be constructed prior to the development of the land located west of Arnold Heights. The construction of this local street segment will provide necessary circulation for residents as the subarea develops to the west. At the time of platting land west of Arnold Heights, generally northwest of NW 56th Street and West Adams, ensure that a connection south to West Adams Street is provided with the subdivision and Arnold Heights.

Collector Streets

The following collector streets are proposed to serve adjacent land use, provide connections with arterial streets, and offer internal traffic circulation to the development. The cost of these collector streets will be the responsibility of the abutting property owners.

Between West Vine to West Holdrege/ NW 40th to NW 63rd Street
Industrial/commercial collector street that serves traffic between NW 40th Street and NW 63rd Street within the commercial and industrial development between Interstate 80 and West Holdrege. The roadway is meant to be flexible in its alignment, and its ultimate location and will be decided as the subarea is developed.

NW 38th Street, West Adams to West Cuming
Industrial/Commercial Collector road facility from West Adams to West Cuming. Provides continuous north/south movement with a grade separation at Interstate-80. Planned to serve future land uses and related traffic.

NW 27th Street
Collector road facility from West "O" Street to West Vine. Provides north/south connection with a grade separation at Interstate-80. Planned to serve land uses and related traffic. The Interstate 80 bridge crossing is planned to be improved with the widening of I-80.

West Vine Street
Collector road facility from NW 27th Street to NW 40th Street. Provides an east/west facility to serve land uses and related traffic.

E. County and State Road Facilities

The Lancaster County Engineering Department identifies a project to replace the NW 48th Street bridge over Elk Creek in the out-year portion of the County's Road and Bridge Construction Program. This project will be constructed to facilitate a future 4-lane cross-section for both the roadway and the bridge structure. Also, all section line roadways that are currently under the jurisdiction of the County in areas outside of the City's future service limit will need to be considered for improvements as development occurs and as traffic levels increase throughout

the planning period.

Related to this County bridge project on NW 48th Street is the planned improvements to the NW 48th Street and US 34 intersection by the Nebraska Department of Roads. This improvement will realign NW 48th Street to the south and NW 40th Street to the north at US 34. Also included in this project will be improvements to the US 34 and N-79 intersection, as well as improvements to US 34 from one-half mile west of the existing US-34/N-79 intersection on the west to Fletcher Avenue on the east located outside of this subarea. A major portion of this project will be to establish the locations and types of access breaks along this state facility. Construction is identified for 2005-2006.

- Interstate 80 is planned to be widened to 6-lanes from Omaha through Lincoln. There are several projects that impact the subarea. The Interstate 80 bridges over NW 48th Street is scheduled for widening and overlay in 2005-2006. The NW 56th bridge over Interstate 80 is scheduled for replacement in 2006-2007. Interstate widening to 6-lanes from the Pleasant Dale interchange to NW 56th Street is scheduled for 2008-2009. Interstate widening to 6-lanes from NW 56th Street to the US Highway 77 interchange is scheduled for 2007-2008. The timing of these projects are subject to change.

- There is a need to evaluate and identify right-of-way for the incomplete segments of the County section-line road network. These segments include: West Fletcher, from NW 56th Street to NW 84th Street; and, West Superior, from NW 70th Street to NW 84th Street.

F. Goods and Freight Transportation

The Airport West subarea contains air, rail, and trucking facilities that impact the land use and transportation system both locally and regionally. It is stated in the Comprehensive Plan that future transportation planning efforts should decrease the barriers that prevent the integration of freight interests into the transportation planning process. Therefore goods and freight movement, and related air and rail facilities, are addressed in the transportation section of this study.

NW 48th Street is a designated truck route and provides continuous north/south access between US 34 and West “O” Street (two east/west truck routes). NW 48th Street also provides a full interchange with Interstate 80, a major interstate goods and freight facility. The subarea plan proposes a parallel north/south street on the NW 40th/NW 38th Street alignment between US 34 and West “O” Street. This includes a proposed grade separation at Interstate 80. Such a parallel route will provide additional truck traffic access to the planned commercial/industrial development north and south of the Interstate and in the Air Park West Industrial Park, and it will provide additional access to the residential neighborhood.

The location of the Lincoln Airport provides future development the convenient opportunity of air-freight and rail shipment. Also, the airport provides essential passenger travel for region. With such an air facility comes the Airport Environs Noise District and Airport Zoning Regulations that protect surrounding land uses.

Rail facilities in the subarea include spurs that serve the industrial uses on the northen portion of the Air Park West Industrial Park. An intermodal freight center within the Air Park West

Industrial Park is being considered. The Airport Authority is developing sites for rail accessible warehousing. Coordination and discussion with railroad service providers should continue during the planning period to ensure these facilities are developed, and to coordinate with future road projects.

G. Issues Yet to Address

Various transportation related issues were not part of the scope of this particular study or were identified during the development of the Subarea Plan and require further study. Connections into and out of the subarea via major highway facilities were not specifically addressed and may need to be further studied as this area develops. Some specific issues are listed here for further evaluation in the future.

- The exact locations, alignments, and design of proposed street improvements in this subarea plan have not been approved;
- Exact locations, alignments, and designs of future trails and grade separations have not been determined;
- Roadway right-of-way standards for roadways in Tier II and Tier III growth areas are yet to be determined;
- Timing, coordination, financial participation, maintenance, and right-of-way are yet to be addressed regarding the Airport Authority's roadways that are shown as part of the transportation network over the 25-year planning period. Prior to the implementation of roadway improvement on these alignments, these issues must be resolved. Conversion of these roadways to public rights-of-way and upgrading existing segments to current city public street standards are critical in implementing the roadway plan; and,
- A study to evaluate a future interchange along Interstate 80 at NW 84th Street.

V. Community Services

The subarea has continued to steadily develop over the last five years. Its location from the remainder of Lincoln creates a number of challenges for the provision of adequate and convenient public and private community services. A goal of this Subarea Plan is to coordinate the location of future public and private community services. These services should provide convenient access for the entire subarea. The neighborhood currently lacks a centrally-located neighborhood center. A destination for residents of the area would further strengthen the neighborhood character of the subarea.

A major recommendation of this Subarea Plan, is guidance on a general location of a future joint-use facility west of NW 56th Street, and south of West Adams Street. A joint-use facility in this vicinity would generally serve the entire subarea during the 25-year planning period. A joint-use, shared-use or co-located facility has multiple benefits including site costs, building and construction costs, utilities, maintenance, coordinated programming, and the provision of services. The public entities likely to participate in a joint-use facility are yet to be determined.

A. Schools

The Lincoln Public School District (LPS) serves the area within the city limits. The District operates Arnold Elementary School, located within the Arnold Heights Subdivision. Students at the middle and high grade attend schools outside the subarea.

- There have been discussions by LPS for a new school facility to serve the subarea. LPS has begun evaluating sites within the subarea, however, is waiting until the conclusion of this subarea plan to determine long-term growth projections for additional residents.

- LPS have initiated discussions with other public agencies on determining needs and issues relating to a new joint-use, shared-use or co-located facility within the subarea. LPS are evaluating partnerships with Lincoln Libraries and Lincoln Parks and Recreation to determine costs, programming options for a multi-use facility. No decisions have yet been determined.

- The type of school-model discussed for the subarea may comprise a Kindergarten to 8th Grade facility. This education/facility model is a new concept for LPS, and helps address several important service needs for the subarea and community. Other education and facility models may also be considered.

- The outcome of LPS's evaluation of a new school facility should include long-term plans for the Arnold Elementary School facility. Its location within the neighborhood represents an opportunity to continue its use as a public facility, either as a school or for education programs, recreation, community or service functions. The Arnold Elementary site may also provide LPS education needs beyond the planning period.

- In 2003, a community wide effort was completed by LPS, which resulted in the adoption of a **Comprehensive District Master Plan**. This Plan is an approved subarea plan of the Comprehensive Plan.

B. Park and Recreation Facilities

The Lincoln Parks and Recreation Department operates and maintains several facilities within the subarea. These facilities include Bowling Lake Park, Arnold Heights Park, Olympic Heights Park, Eagles View Park (across from Elementary School), Air Park Recreation Center, and Arnold Heights Pool. The Air Park Recreation Center and Bowling Lake Park were developed when the Lincoln Air Base occupied the subarea, and are now leased by the Airport Authority to the Parks and Recreation Department. Practice and ballfields are also located within the Air Park West Industrial Park, which are available to the public and maintained by Lincoln Parks and Recreation Department.

- There have been discussions regarding the long-term plans for the **Air Park Recreation Center**. Lincoln Parks and Recreation Department have begun evaluating recreation needs and partnering options for a joint-use or co-located facility in the subarea with LPS and Lincoln Libraries. The Lincoln Airport Authority's long term plans anticipate that these Parks's facilities in the Air Park West Industrial Park will be located elsewhere. The new Center would also include practice and ballfields. At this stage, a replacement facility for the swimming pool has not been discussed.

- The current Air Park Recreation Center is not well situated within the subarea, and the facility has exceeded its useful life expectancy. Due to its location, east of NW 48th Street, the Air Park Recreation Center does not provide safe pedestrian and bicycling access to residents in subarea. A new Recreation Center located on the west side of NW 48th Street should be accessible by the commuter/recreation trails system.

- **Neighborhood Parks**: Arnold Heights Park is located central to the Arnold Heights Subdivision at 5323 West Superior. It is adjacent the Arnold Elementary School. Eagles View Park is located across the street from the main Arnold Elementary School entrance, along West Knight Drive. Olympic Heights Park is located at NW 52nd and West Huntington.

- Several new neighborhood parks are identified in the Comprehensive Plan for the subarea. The specific location of these facilities will be determined during the development review and platting of these areas, in coordination with the Lincoln Parks and Recreation Department. These facilities may be located within a ½ mile radius of the location shown in the Plan. These future parks are shown at the following locations:

    1.) Future urban neighborhood, generally located south of West Holdrege Street, east side of NW 48th and would serve future residential subdivisions.

    2.) Future urban neighborhood, generally located south of West Holdrege Street, west side of NW 48th and would serve future residential subdivisions.

- A new future neighborhood park will be added to the Comprehensive Plan with the approval this Subarea Plan:

  1.) Add a neighborhood park designation between NW 56th to NW 70th Streets, and West Adams to West Superior Streets. This area represents a complete square mile that is designated for urban residential development during the planning period.

- Parks and Recreation should consider a long-term lease of the Bowling Lake facility to ensure its special recreational opportunities can be provided to the subarea in the future. Improvements to Bowling Lake Park have been discussed by the Lincoln Parks and Recreation Department during the planning period.

- Golf Courses: The Highlands Golf Course is located outside the subarea, on the east side of the Airport.

- The Parks and Recreation Department may have additional comments as specific annexation and zoning proposals are reviewed in greater detail.

C. Fire Protection Services

The Lincoln Fire and Rescue Department, Southwest, Malcolm and Raymond Rural Fire Districts serve the subarea. The Lincoln Fire and Rescue Department currently has a station at 3401 W. Luke Street (**Station No. 11**), which is located in the subarea, within the Air Park West Industrial Park. The Rural Fire District stations are located outside the subarea. Through mutual aid agreements and availability, the Lincoln Fire and Rescue Department responds to emergency calls for service outside the City limits, both inside and outside of the subarea.

- Upon annexation, the City of Lincoln is responsible for serving this area and for the potential reimbursement of the rural fire districts for the loss of revenue, particular for districts with bonds issues.

- The Lincoln Fire and Rescue Department has identified in the Comprehensive Plan a need to relocate **Station No. 11**, located in Air Park West Industrial Park, to a site closer to the residential neighborhood to enhance response times in the area. The Lincoln Fire and Rescue Department uses the building at no charge from the Lincoln Airport Authority. It will be important for the fire station, when relocated, to be properly sited so that it can maintain a three-minute response time for any development located within the municipal city limits.

- The Fire and Rescue Department should coordinate with other public service providers when evaluating fire protection needs for the subarea. Coordination may include evaluating a shared-use, joint-use, or co-located facility. It will be important for the Fire Station to be sited in a location that serves the entire subarea.

- The Lincoln Fire and Rescue Department may have comments regarding the annexation proposals as they are forwarded for review.

D. Law Enforcement

Currently the portion of the subarea located within the City limits is served by the Lincoln Police Department. The Lincoln Police Department operates a substation within the **Carol M. Yoakum Family Resource Center** located at 4621 NW 48th Street. The Police Department also uses several facilities within the Air Park West Industrial Park for law enforcement training purposes. The Lancaster County Sheriff's Department serves that portion of the subarea located outside the City limits.

- Continued redevelopment within the subarea may lead to a review of law enforcement protection needs.

- The Police Department has identified a need to consolidate their training facilities in the Air Park West Industrial Park.

- The Police Department should coordinate with other public service providers when evaluating law enforcement needs for the subarea. Coordination may include evaluating a shared-use, joint-use, or co-located facility. It will be important for the Police Substation to be sited in a location that serves the entire subarea.

- Upon annexation, the Lincoln Police Department is responsible for serving these areas. The Lincoln Police Department may have comments regarding annexation proposals as they are forwarded for review.

E. Lincoln City Libraries

The Lincoln City Libraries operates the Arnold Heights Branch at 3815 NW 54th Street within the subarea.

- There have been discussions regarding a new library facility to serve the subarea. Lincoln Libraries have had discussions with other public agencies on determining needs and issues relating to a joint-use, shared-use or co-located facility within the subarea. However, Lincoln Libraries is waiting until the conclusion of this subarea plan to determine long-term service plans.

- A new Library Branch should be sited to adequately serve the entire subarea. Such a facility should be accessible by the commuter/recreation trails system. The Library should be located adjacent or close to a major street for greater accessibility and visibility.

F. Other Community Services

The **Carol M. Yoakum Family Resource Center**, located at 4621 NW 48th Street, provides support services for families and residents in the subarea. The facility is owned and operated by the Lincoln Housing Authority; it houses a childcare facility, offices of the Housing Authority, and meeting space for community groups to use. The Lincoln Police Department has established a substation at the Center. The Family Resource Center offers an array of direct

and indirect programs and through affiliated agencies. The Lincoln Army Airfield Regimental Chapel and Lincoln Housing Authority Maintenance Facility are also located adjacent the Center on Housing Authority property.

- The Lincoln Housing Authority has participated in discussions regarding a new co-located or joint-use school, recreation center or community learning center. The Housing Authority has identified a need to expand the size of their current Center, or relocate to a joint-use facility with other entities, or to a larger site. The Housing Authority will continue to coordinate with other public entities in determining how to serve families and residents in he subarea and the entire community.

- The Lincoln Housing Authority has identified a need to improve loading/unloading space, accessibility, and storage at their Maintenance Facility. There options include, but not limited too relocating the facility to a new site or expanding at the current location. The Housing Authority will continue to coordinate their plans with the City of Lincoln and Lincoln Airport Authority.

G. Issues Yet to Address

- Several public agencies have began discussions for new jointly operated facilities in the subarea. These agencies include the Lincoln Public Schools, Lincoln Parks and Recreation, Lincoln Fire and Rescue, Lincoln Police, Lincoln Libraries, and Lincoln Housing Authority. The Lincoln Airport Authority should also be included in these discussions. A number of public agencies are currently located in facilities that no longer adequately serve the needs of the agency or subarea.

- This Subarea Plan encourages cooperative planning and site development between public and private entities. Prior to the initiation of detailed planning efforts by any public service provider, an evaluation should be undertaken whether other public entities would be interested in participating in the development of a new facility. A new facility may include a shared-use, joint-use or co-located facility for two- or multiple service providers.

- Another option would be to evaluate a future public service campus, comprising multiple agencies and facilities at a single location.

- This Subarea Plan recommends that coordination should occur at the earliest possible phase of the evaluation process, but the decision to move ahead with a new facility, remains at the discretion and interest of the public entity.

VI. Environmental Resources

One of the goals of the 2025 Lincoln City-Lancaster County Comprehensive Plan is to make the preservation, protection and enhancement of our natural resources and open space an integral part of the current and long range planning process. The Community Vision states, *"preserve unique and sensitive habitats and endorses creative integration of natural systems into developments."*

The subarea planning phase is one of many levels at which to accomplish the above vision. Environmental issues and natural resources are addressed in this section of the Subarea Plan, just as infrastructure, community facilities, and public utilities are examined in other sections to identify opportunities and constraints, and to establish a unified vision of the subarea's future. Environmental issues may take on a special degree of sensitivity in this subarea because of the presence of many drainage ways with mature vegetation.

Other important goals of the 2025 Lincoln-Lancaster County Comprehensive Plan related to natural resources and the environment:

- Make"green space" an integral part of all environments - "**Green space**" can come in a wide variety of forms.

- Integrate the "**Core Resource Imperatives**" and natural resource feature concepts into future city and county studies that implement the Comprehensive Plan.

A. Core Resource Imperatives

The Comprehensive Plan recognizes thirteen separate environmental resource features. They can be viewed individually in order to understand their importance and function in the natural environment, and to determine how actions taken as part of the planning and development process may impact or influence their future viability. Conversely, each resource feature can be viewed as joined together with others to form a comprehensive, interconnected system. Decisions, plans, and policies that are made regarding one resource feature will undoubtedly impact others – and it can often be hard to distinguish or understand these connections.

The thirteen environmental resources are listed below:

- Native Prairie
- Saline Wetlands
- Parks, Trail Corridors & Other Rec Areas
- Floodplains
- Agricultural Lands
- Cultural and Historic Landscapes
- Freshwater Wetlands
- Riparian Areas
- Basins and Streams
- Urban Forest
- Threatened & Endangered Species
- Views and Vistas
- Woodlands

Based upon further assessment and review of these features, three "Core Resource Imperatives" were identified. These imperatives were selected as those that should receive the greatest consideration in the long range planning. Their selection does not mean that the other features are unimportant, inconsequential, or expendable. The "Core Resource Imperatives" uniquely contribute to the natural resource heritage of the region and whose safeguarding for future generations is indispensable.

The three "Core Resource Imperatives" identified in the Comprehensive Plan are:

★ *Saline and Freshwater Wetlands*

★ *Native Prairie*

★ *Riparian areas, Floodplains, and Stream Corridors*

A core resource identified within the subarea are **"Riparian areas, Floodplain, and Stream Corridors**". These areas exist along Oak and Middle Creeks, and within their upstream tributaries. Many of these corridors have already been impacted by human-development, such as farming and agricultural practices, and the channelization of Oak Creek through the former Air Base, known as the Air Park West Industrial Park.

Native Prairie and Wetlands exist outside of the subarea. **Nine-Mile Prairie** is located northwest of the subarea at approximately NW 70th and West Fletcher Street. The prairie is privately-owned by the Nebraska Foundation. Nine Mile Prairie is one of three of the larger massings of native grasslands in the county. Nine Mile Prairie is located within two tributaries of the Oak Creek drainage basin. The native hay provides habitat for numerous upland wildlife including the State and Federal Threatened plant species - - the Western Prairie Fringed Orchid.

Outside the subarea are many water bodies which appear on the National Wetlands Inventory ("NWI"). Some of these may be farm ponds, while other include natural freshwater and saline wetlands. The NWI is not a complete site-specific inventory. There may be wetlands within the subarea that are not yet identified. There are numerous wetland areas downstream of the subarea, along both Oak and Middle Creeks. In particular, there is a large **Category I Saline Wetland** located between the north-south runway and Interstate 80, outside the subarea. Development within the subarea should strive to protect downstream natural resources.

- Waterways and wetlands within the subarea are an important water resource asset that needs to be protected during development. As this area develops, it will be important to complete a site specific analysis to delineate these resources and assess any impacts through development.

- Future development should strive to protect wetlands and water bodies in the subarea. Restoration or creation of wetlands in the subarea is encouraged to maintain and enhance the quality of stormwater runoff and prevent degradation of streams as the subarea develops. However, the location of the Airport requires that careful planning and consideration be afforded for facilities that will permanently store open water. Due to the possible safety hazard between aircraft and wildlife, especially birds, the Airport

Authority should evaluate the location of the proposed facilities within the subarea, and it is recommended that detention is the preferred type of facility.

B. Floodplain Management

New policies and standards concerning the development of floodplain land, in "New Growth Areas" were approved in May 2004. Floodplains are identified as a Core Resource Imperative in the Comprehensive Plan, and the most critical near-term resource to protect and preserve within the subarea. These new policies and regulations effect parts of the subarea, as shown on **Figure 5. Figure 5** also identifies the existing urban area that are not subject to the new floodplain standards.

The Comprehensive Plan designates most floodplain land as **Green Space**, **Environmental Resources**, or **Agricultural Stream Corridors**. These land use designations identify that future urban development will be outside of the floodplain. These designations also identify areas that, if preserved or enhanced, will be beneficial to the natural functions of the floodplain and could reduce peak flows in Oak Creek downstream. The overriding floodplain policy for the City and County in "New Growth Areas" is **No Adverse Impact**, which means that the community has a goal of insuring that the development of one property does not adversely impact the flooding risk for other properties.

- In areas where there is not a designated floodplain and floodway, along Oak and Middle Creeks and their tributaries, most grading or construction will require a hydrologic study to identify and protect the storm water routes in the event of a 100-year storm.

- The Airport Authority has plans to reduce the designated floodplain along Oak Creek within the **Air Park West Industrial Park**. These plans include channel improvements for conveyancing of floodwaters. Removing the floodplain designation has many benefits for the development of industrial and commercial sites within the Industrial Park.

- A regional **Detention Storage Site (OC2)** is identified in the Salt Creek Feasibility Study and is located within the subarea, south of West Adams and east of NW 40th Street. Two other detention storage sites are identified outside of the subarea. The **Lower Platte South NRD** is working on a small flood control structure west of NW 70th street, between West Adams and West Superior. This joint project will reduce peak flows downstream. Watershed Management should continue to evaluate floodplain management issues within the subarea, and coordinate projects between County and other public entities.

- Additional floodplain information should be utilitized in planning and designing future developments and public infrastructure.

- 100 year flow routes through subdivisions and **Minimum Flood Corridors** along drainageways should be preserved where required. Future developments should strive to exceed these minimum standards by exploring opportunities to preserve the natural floodplain, 100 year storm limits or floodprone soils along drainageways where a minimum corridor is not required.

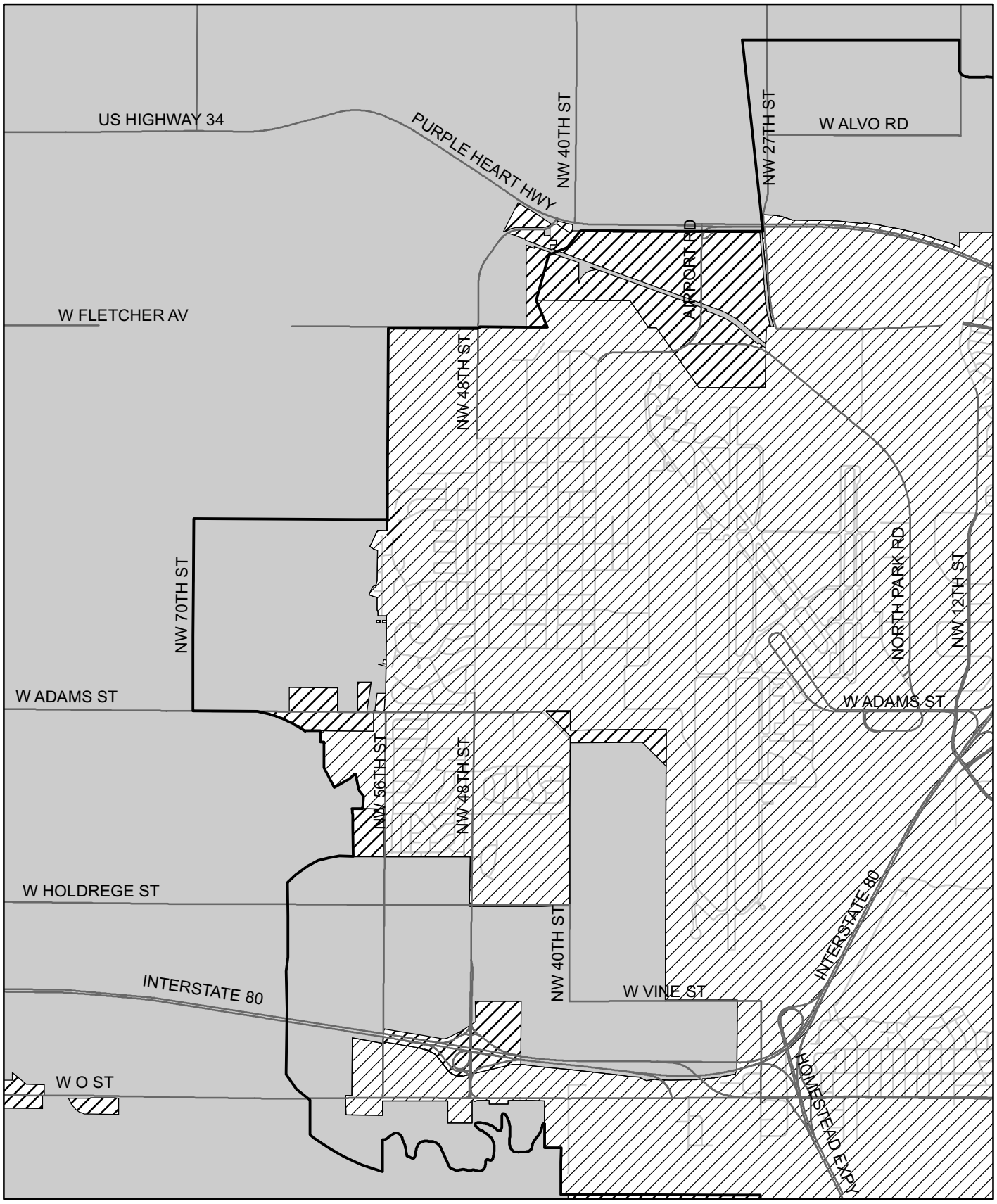

Figure 5: New & Existing Urban Areas:
For Floodplain Regulation Purposes

Existing Urban Area/Area Zoned Outside City Limits on May 25, 2004

New Growth Area

Future Service Limit

0 2,500 5,000
Feet

N
W E
S

m:\plan\airnoise\study_area_fld_pol.mxd
November 17, 2004

- Specific details related to floodplain and stormwater issues will be addressed in detail at the time of subdivision and development plans, but the issues should be given attention from the outset so that they may be taken into consideration throughout the process of development.

E. Drainageway Buffers

Many of the drainageways in the subarea have associated natural vegetation or "buffers" such as tree masses, grassy open space, and /or understory plant materials. Several developments in the subarea already preserve drainageways within subdivisions, these include: Arnold Heights, Hub Hall Heights, and Olympic Heights. Drainageway buffers are a critical component of "floodplains" which are identified as a **Core Resource Imperative** in the Comprehensive Plan. Vegetated buffers along drainageways can act as "greenways," important habitat and movement corridors for wildlife, and serve as natural links to larger natural area or parks. Drainageway buffers are also instrumental in removing pollution from stormwater runoff, and provides open space neighborhoods.

Understory vegetation associated with drainageways is beneficial because it acts as a natural filtration system for pollutants and improves water quality. The meanders, leaf litter and ground cover associated with natural wooded streams can also slow stormwater runoff and reduce soil erosion and stream sedimentation.

- There is a great opportunity in the subarea for innovative conservation design concepts which protect and enhance drainage corridors and still accommodate changes in land use patterns. Developments in this subarea should make every reasonable effort to protect natural drainage ways and to protect and enhance natural vegetative buffers along them.
- "**Greenway**" corridors associated with the drainageways in this subarea could accommodate trail and pedestrian systems and serve as natural links for both people and wildlife.

- As the area develops, protecting and enhancing understory vegetation will be an important component of vegetated buffers along drainage ways to trap pollutants, sediment, or excessive nutrients dissolved or suspended in stormwater runoff and to keep them from flowing downstream into Oak Creek, Middle Creek and then Salt Creek.

- The effective drainageway buffer width depends on a number of factors such as size of the drainage area, permeability of soils, steepness of slopes, and the amount and type of plant material.

- The City has adopted specific regulations regarding the width of **Minimum Flood Corridors** and preservation of existing vegetation within them. Any new development should meet or exceed these requirements using additional best management practices.

D. Tree Masses

Generally, mixes of hardwood trees are found in masses along some of the drainage ways and in some field rows. A few evergreen trees have been planted as windbreaks around farm residences. As the subarea develops, protecting and enhancing tree masses will need to meet the intent of the Comprehensive Plan's protection for environmental resource features -- **Woodlands** and **Urban Forests**.

Tree masses are valuable natural resources in that they provide shade and reduce reflective heat gain, help to prevent soil erosion, slow stormwater through interception, provide habitat for wildlife and contribute to the aesthetic quality of an area.

- Wherever possible, future development should utilize and enhance existing tree masses, with particular attention to the protection of mixed hardwood stands associated with the natural drainage ways. Efforts should be made to preserve existing tree masses and to incorporate them as buffers between residential and commercial areas.

- New buffer and open space areas should be planted with mixed hardwood stands.

E. Best Management Practices (BMP's)

Existing land uses in the subarea include an extensive amount of agricultural land. Current best management practices for this land use include:

- Terraces along contours of the landscape to slow stormwater runoff, reduce erosion, and retain runoff for groundwater recharge.

- Farm ponds to help reduce flooding by holding back peak flows of stormwater runoff, as well as downstream sedimentation by trapping sediment runoff.

- Preserving natural drainage ways and tree masses.

- Contouring buffer strips and filter strips along waterways to slow runoff and to trap sediment and other pollutants.

- Development of this area will alter the landscape by adding rooftops, buildings, parking lots, roads, etc., all of which will expand the total amount of impervious surface area and increase stormwater runoff. Preserving natural meandering drainageways, tree masses, wetlands and water bodies, and the use of vegetative buffers and porous paving material wherever reasonable will be important elements to effectively manage runoff as the area grows.

- The use of buffer strips and the preservation of natural drainage ways and tree masses to the extent reasonably possible will help address water quality concerns related to pollutants and sedimentation as the area urbanizes, such as the potential for herbicides and excessive nutrients from residential lawns, and oils and sediments from roadways and parking lots.

- The practice of specific BMP's during grading and construction is critical. Use of silt fences to trap sediment, proper location and protection of soil stockpiles, early seeding and mulching of soil, sensitivity to drainageways, and the preservation of existing vegetation should be implemented to the maximum extent possible.

F. Issues Yet to Address

- Continue to evaluate floodplain management issues and develop new information for use in planning and designing future developments and public infrastructure.

VII. Acknowledgments

The development of this Subarea Plan is the result of extensive input from a number of individuals, City, County, and pubic agencies staff. Several community events were held during the development of this Subarea Plan. The individuals and entities that participated in the development of this Subarea Plan is recognized, but does not indicate their approval of all or parts of this Plan. The following agencies were involved in the development of this Subarea Plan (in alphabetical order):

- Lancaster County Engineers Office
- Lincoln Airport Authority
- Lincoln Electric System
- Lincoln Fire and Rescue Department
- Lincoln Housing Authority
- Lincoln Libraries
- Lincoln Parks and Recreation Department
- Lincoln Police Department
- Lincoln Public Schools
- Lincoln Public Works & Utilities
- Lincoln-Lancaster County Health Department
- Lincoln-Lancaster County Metropolitan Planning Organization
- Lincoln Wastewater System
- Lincoln Water System
- Lower Platte River Natural Resources District
- Nebraska Department of Roads
- StarTran
- Urban Development Department

The Airport West Subarea Plan was prepared by the Lincoln-Lancaster County Planning Department.

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