

## ***Southeast Lincoln / Highway 2 Subarea Plan***



**Proposed Amendment to the  
1994 Lincoln / Lancaster County  
Comprehensive Plan**

***Revised June 15, 2004***

**AS ADOPTED BY THE CITY COUNCIL ON MARCH 26, 2001  
AND COUNTY BOARD ON APRIL 24, 2001**

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## Executive Summary

This subarea plan is crucial to the future of this area and to the community as a whole. The land use and transportation decisions made here will impact the transportation network throughout the community. The subarea plan includes potentially Lincoln's largest regional commercial center and a major entryway into Lincoln. And most importantly, this subarea is home to thousands of persons who will have to live daily with the impact of these decisions.

The community has an opportunity to provide a distinct impression of its desired future for this subarea. The vision of this subarea plan is one that retains residential character of the subarea, while providing for well planned commercial centers to serve the residents.

There has been significant effort spent over the past several years to study the transportation impact of commercial development in this area. This subarea plan provides for approximately 2.3 million square feet of additional space. That is more than double the amount of space in Gateway Mall and is in addition to the existing 1.4 million SF in the vicinity of Edgewood. Proposals to substantially increase this amount of commercial space may argue that more commercial sites can be done without any traffic impact on transportation network. While the transportation impact will continue to be reviewed, it is well established that as commercial space increases there will be an impact on the road network. One of the most important actions a community can take to address concerns about traffic congestion is to make wise land use decisions in advance of development.

The impact on the transportation network, though, is neither the sole nor most important reason for proposing residential uses along the Highway 2 corridor. Additional commercial development will also impact the existing residential character of this area, the character of the entryway into Lincoln and, potentially, the existing residences.

Currently, the route along Highway 2 in this subarea, with the native landscape and residential character, is one of the most beautiful entrances into Lincoln. The community now has the opportunity to plan in advance what type of character is desired in this corridor and the surrounding subarea in the future. This area will change -- and as a community we can provide the direction.

### Major Elements of The Subarea Plan

- C Establish a land use pattern that takes into account impacts on the transportation network,
- C Provide for a regional commercial center of approximately 1.9 million square feet, in addition to the over 200,000 SF at 70<sup>th</sup> and Highway 2, and 200,000 SF at 84<sup>th</sup> and Pine Lake,
- C Relocate 84<sup>th</sup> Street and Pine Lake Road to improve traffic flow and reduce the impact on adjacent residences of the future regional commercial center,
- C Identify appropriate transitional uses between commercial and residential uses,
- C Provide a transportation network and land uses which could aid in maintaining an attractive entryway corridor into the community,
- C Provide for new residential streets connections between neighborhoods, and
- C Recommend the potential inclusion of the village of Cheney and SID in the city limits, if issues regarding sewer capacity, and impact on Cheney School District can be addressed.

## **I. Introduction**

### **A. Background**

The community now faces several important decisions regarding development in southeast Lincoln in the Highway 2 corridor from 56<sup>th</sup> to 98<sup>th</sup> Street. As a community there is the opportunity to review the area as whole and determine now what our goal is for the future of this area. The purpose of this subarea plan is to provide a vision for the desired future for this region and to serve as a guide for review of future development proposals.

The need for the subarea plan is stated in Exhibit "E" of a conceptual subarea plan that was included in the Appendix A of the 1994 Lincoln City-Lancaster County Comprehensive Plan. The regional commercial center at 84<sup>th</sup> and Highway 2 was first proposed in a June 1993 draft of the Comprehensive Plan. The conceptual subarea plan and Exhibits were added in September 1994 prior to the Comprehensive Plan's approval on November 14<sup>th</sup>, 1994. A brief history of actions in the subarea is summarized in the next section.

### **B. Brief History of Subarea**

- |            |  |
|------------|--|
| 1977       | The 1977 Comprehensive Plan designated most of the Southeast Lincoln/ Highway 2 Subarea as "Rural Use Areas" for low density residential use in the Land Use Plan.   |
| May 1977   | City Council approved a change of zone for a 57 acre Edgewood Planned Regional shopping center. Significant amendments and increases in the commercial use were subsequently approved in 1983, 1985, 1989, 1993 and 1996.  |
| 1985       | In the 1985 Comprehensive Plan, the Subarea continued to be shown generally as Rural Use Areas and Agricultural.   |
| May 1994   | City Council denied a change of zone at approximately 60 <sup>th</sup> & Highway 2 for a discount store and home improvement store requested by Shopko.  |
| Sept. 1994 | Motion to include 70 <sup>th</sup> & Highway 2 as a commercial center in the new Comprehensive Plan fails 7-2 at Planning Commission.  |
| Nov. 1994  | The 1994 Lincoln/ Lancaster County Comprehensive Plan is adopted including a potential regional commercial center at 84 <sup>th</sup> and Highway 2. The Plan included a "conceptual" subarea plan for the 84 <sup>th</sup> & Highway 2 area labeled as Exhibits 'A' to 'E.' The Exhibit E stated that "zoning of land in the subarea plan will not occur until after the completion" of various studies and a new subarea plan. |
| Feb. 1997  | The Second Annual Review of the Comprehensive Plan approved the designation of an approximately 20 acre site on the southeast corner of S. 84th and Old Cheney Road for commercial use in the Land Use Plan for a neighborhood center.   |
| Nov. 1997  | A draft 84 <sup>th</sup> & Highway 2 Subarea Plan was submitted with incomplete traffic, environmental and other studies. This draft subarea plan was deferred until the   |

studies were completed.

- March 1998 City Council amended Comprehensive Plan to designate one additional smaller commercial center along Highway 2 at 70<sup>th</sup> Street requested by Livingston Investments.
- April 1999 The Fourth Annual Review of the Comprehensive Plan changed the area between S. 56<sup>th</sup> and 70<sup>th</sup> Street, from Pine Lake Road to Yankee Hill Road from “Low Density Residential” to “Urban Residential” in the Land Use Plan.
- March 2000 City Council denied a Comprehensive Plan amendment to change the designation of 70<sup>th</sup> and Highway 2 from commercial back to residential.
- May 2000 Hampton Development Services requested a Comprehensive Plan amendment to commercially designate an approximate 44-acre triangle area bounded by Pine Lake Road on the north, S. 84<sup>th</sup> Street on the east and Highway 2 on the south. This request is within the boundary of this subarea plan and will not be processed as a separate amendment.
- Sept. 2000 Kent Seacrest, on behalf of Andermatt LLC, submitted a draft subarea plan, change of zone and associated studies related to the request for a regional commercial center at 84<sup>th</sup> & Highway 2 that was deferred in 1997.
- Oct. 2000 Planning Commission recommended approval of request by Livingston Investments for a change of zone from AGR to B-2 Business and use permit for 267,812 SF of commercial space at 70<sup>th</sup> and Highway 2. (City Council action pending)

### **C. Subarea Planning Process**

#### **Purpose**

One important tool that in the Lincoln/ Lancaster County Comprehensive Plan is the subarea planning process. The Comprehensive Plan states that the purpose of subarea planning is to **identify and address issues at a scale that is much more refined and responsive to local needs than can be attained under the broader scope of the Comprehensive Plan.** Still, some issues are better resolved at the time of submittal of a specific annexation, zoning, subdivision or use/special permit. Strategies include the use of subarea plans to “identify opportunities and constraints within developing areas of the community and to establish a unified vision of the area’s future including needs for infrastructure, community facilities and public services.”

#### ***Issues Yet to Address Section***

The Subarea Plan outlines and answers the most relevant issues but does not address all of the issues. Many issues are better addressed at the time of more specific development proposals such as a preliminary plat or use permit, while other issues may never be addressed based upon relevancy. Nevertheless, these unanswered issues are identified under the heading “*Issues Yet to Address.*” The timely adoption of a Southeast Lincoln/ Highway 2 Subarea Plan is critical to guide the rapid development of this area.

#### **D. Use of the Subarea Plan**

The Subarea Plan is proposed for inclusion in the Lincoln City-Lancaster County Comprehensive Plan as an “Approved Subarea Plan.” The Comprehensive Plan includes the following definition of a subarea plan:

- ! *“Subarea plans are officially approved documents intended to add detail to this Comprehensive Plan and to guide public and private programs and actions in specific geographic regions.”*

The Subarea Plan identifies issues and details for future decisions. The Plan also offers specific guidance as to how development and services should be accomplished within the area. A subarea plan should be used in the following circumstances:

- ! To assist in the review of annexations, preliminary plats, changes of zone, special permits or other development proposals in the area, even though all of the issues may not have been fully addressed and answered. The subarea plan will serve as a guide to private individuals who prepare development proposals and to public officials in the review of those propositions. The subarea plan is a tool intended to be used in concert with the regulations of the zoning and subdivision ordinances to guide development. While the subarea plan serves as an official guide for growth in an area, it does not have the same standing as adopted ordinances.
- ! To assist city and county agencies as they prepare infrastructure and service plans for the subarea.
- ! To assist in future subarea and land use planning.

#### **E. Background on Exhibit “E” of the previous conceptual subarea plan of the 1994 Lincoln City-Lancaster County Comprehensive Plan**

Exhibit “E” of the conceptual subarea plan found in the 1994 Comprehensive Plan outlines the need for a subarea plan for the S. 84th & Highway 2 Subarea. Exhibit “E” identifies seven issues for the Subarea Plan to address:

- ! Protection of established residential land use from commercial development.
- ! Lack of infrastructure and community facilities currently in place to service this area.
- ! Proper treatment of this important entryway to Lincoln. This area includes several dramatic view corridors to the Capitol.
- ! Relationship of the commercial area to a South and East Beltway.
- ! Traffic patterns in and around commercial areas to insulate existing residential areas from high-volume traffic.

- ! Odor, light and noise pollution from commercial areas.
- ! Environmental impact on the current environment, including the prospects of pollution and silting of Pine Lake.

To help address these issues, Exhibit "E" called for the following studies:

- ! *Traffic Study*: trip generation analysis based upon proposed land uses to help determine the location and sizing of the area street network and defining a transportation improvement program that will serve the new commercial uses while minimizing the potential adverse neighborhood impacts and preservation of a quality urban environment. In particular, the traffic study is to examine turning Pine Lake Road from Highway 2 to S. 84th Street into a local road as well as impacts associated with building or not building the South and East Beltways.
- ! *Environmental Study*: to evaluate impacts on current land uses and to identify environmental use of buffers around the commercial area to help minimize the light, noise, and odor pollution. Water quality impact issues for the Pine Lake drainage basin are to be evaluated.
- ! *Infrastructure and Community Facilities Study*: examine availability and capacity of water and sewer systems, parks, schools, libraries, fire protection service and law enforcement,
- ! *Staging/Phasing*: the various land uses and their phasing need to be correlated with the above Traffic Study, Environmental Study and Infrastructure and Community Facilities Study.

The developer of the 84<sup>th</sup> & Highway 2 commercial site, Andermatt LLC submitted the required studies to the City for review. Two traffic studies were submitted and an analysis was done for the environmental, infrastructure, community facilities and staging/phasing study. A separate sanitary sewer capacity study was also prepared for review. All of this information was used in the preparation of this subarea plan.

#### **F. Subarea Planning Challenges**

The challenges posed by this Subarea Plan envelope issues of both **process** and **substance**. Several related planning processes are ongoing and will eventually need to be incorporated into and possibly amend the substantive elements of the existing Comprehensive Plan or this Subarea Plan. The specific challenges are:

- ! Recognize the existence of a community-wide planning effort whose task is to explore development of a new Comprehensive Plan that is not expected to be completed for public review until the end of 2001.
- ! Recognize the existence of a community-wide planning effort whose task is to explore the future of the Stevens Creek watershed area. This subarea plan includes a portion of the Stevens Creek watershed. The Stevens Creek Study is not expected to be ready for public review until January 2001.

- ! Recognize the existence of a community-wide planning effort whose task is to explore new or improved ways to fund and finance infrastructure (i.e., roads, water lines, sewer lines, etc.) associated with potential development. The Infrastructure Financing Study is nearing completion.
  
- ! Recognize the existence of a community-wide planning effort whose task is to explore the protection and enhancement of the City's entryways. The entryway study is still underway.

## II. Land Use

### A. Comprehensive Plan Goals

The current Comprehensive Plan already provides significant guidance as to the community's values on future development. The goals and strategies of the Plan encourage

- *“Concentrate new growth in the Lincoln urban area and in the villages throughout Lancaster County. Protect existing rural areas from urban sprawl through planned development.*
- *Encourage the coordination of the siting of regional retail centers and the transportation plan.*
- *Provide geographically convenient and accessible retail areas throughout the City and County so as to provide the widest possible variety of goods and services.*
- *Discourage strip development and spot zoning and encourage more compact and higher quality retail and commercial development.*
- *Protect and improve important vistas and entryways to the city.*
- *Consider the development of new, major corridors such as the Beltways as linear open spaces as well as major highways, integrated into development and open space patterns in developing parts of Lincoln.”*

The current Comprehensive Plan's Future Land Use Plan is shown in the Figure 1. It provides a general guide for development with the understanding that a more detailed subarea plan would be developed for this area. The proposed subarea plan (see Figure 2) is intended to provide an broad vision for the Southeast Lincoln/ Highway 2 area.

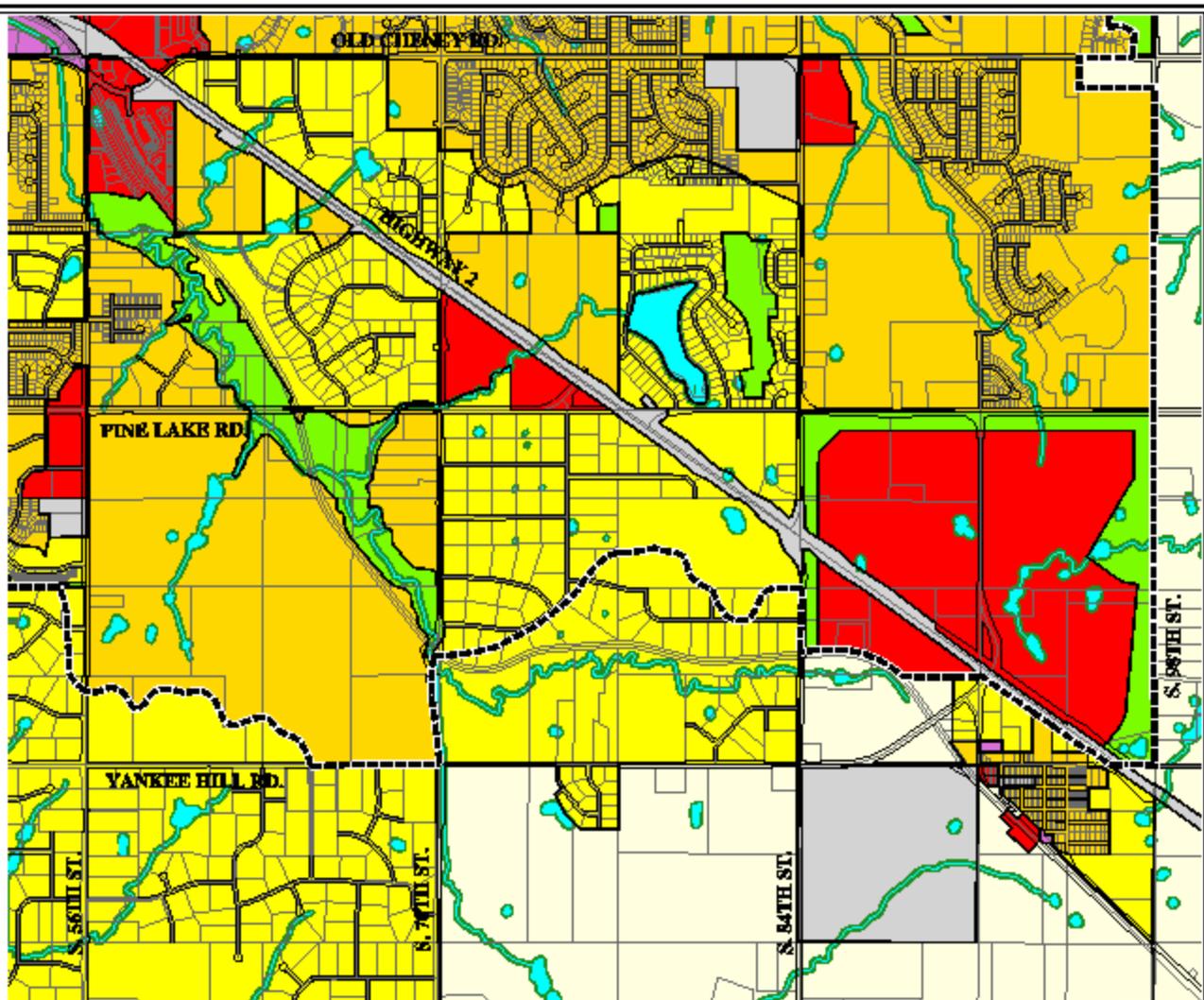
### B. Vision for the Southeast Lincoln/ Highway 2 Subarea

The vision of the subarea plan is to:

- ! **Provide for Future Commercial Centers;** clarify appropriate areas for commercial use following the current traffic models which assumes an additional 2.12 million square feet (SF) of commercial space.
- ! **Provide Effective Land Use Transitions;** provide appropriate transitions from commercial to residential land uses. Within commercial areas, office and lower intensity commercial uses along with appropriate buffer areas should be developed as a transition to adjacent residential areas. In some areas, special residential” uses should be provided to adjacent lower density residential uses. Special residential uses could include churches, domiciliary care facilities, retirement apartments, child care facilities or townhomes. In more urban settings, which are further from existing single family residences, apartments may also be appropriate as a special residential uses.

**FIGURE 1 - EXISTING  
SOUTHEAST LINCOLN / HIGHWAY 2  
LAND USE PLAN**

-  Urban Residential
-  Low Density Residential
-  Commercial
-  Industrial
-  Parks and Open Space
-  Public and Semi-Public
-  Wetland and Water Bodies
-  Natural / Environmentally Sensitive
-  Agricultural
-  Future Service Limit
-  Urban Village



2007  
1 1/2 1 1/4 1 1/2 1 3/4 2



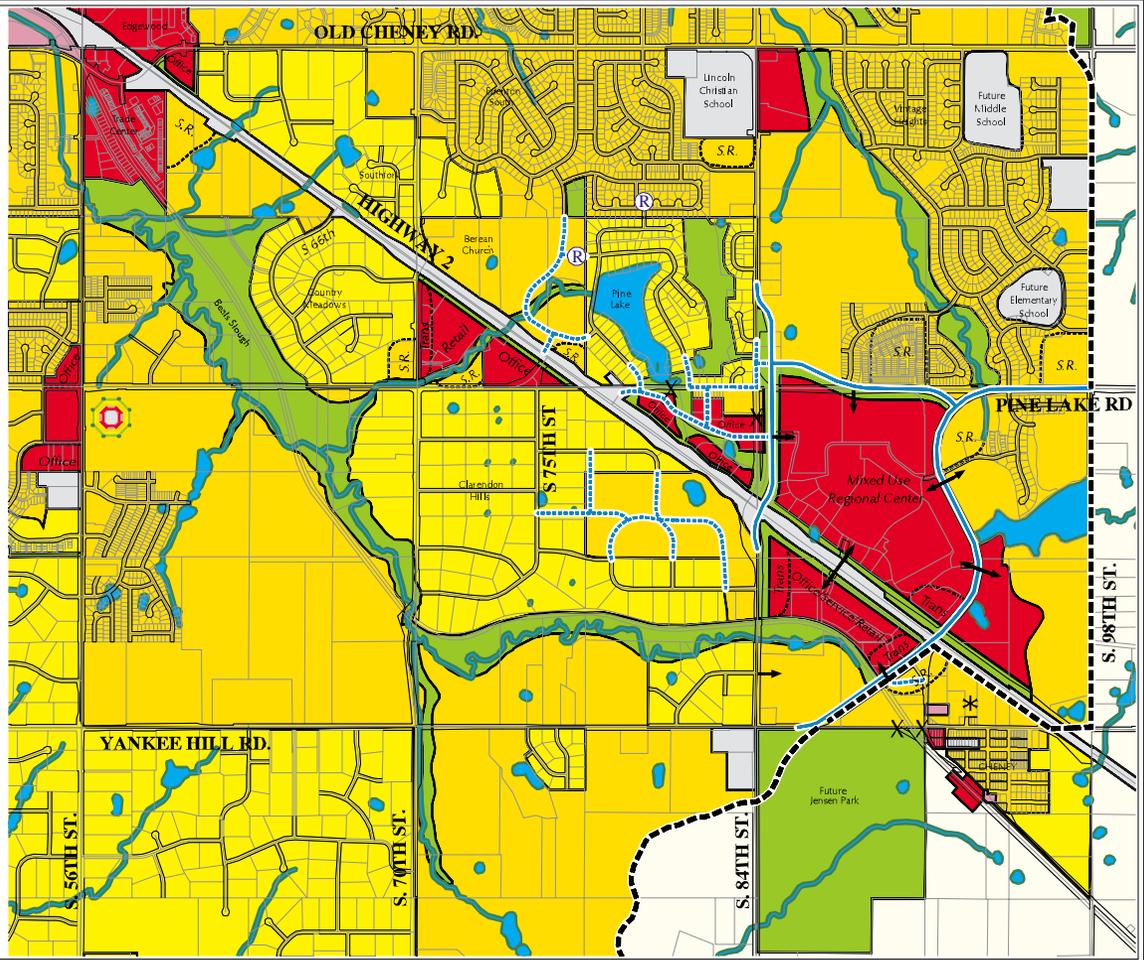
**FIGURE 2**

**SOUTHEAST LINCOLN / HIGHWAY 2  
SUBAREA PLAN**

-  Urban Residential
-  Special Residential Use (S.R.)
-  Low Density Residential
-  Commercial
-  Commercial Transition
-  Industrial
-  Parks and Open Space
-  Public and Semi-Public
-  Wetland and Water Bodies
-  Natural / Environmentally Sensitive
-  Agricultural
-  Urban Village
-  Future Service Limit
-  Future Road Closing
-  New Arterial Street
-  New Residential Street

**NOTES:**

- New arterial and residential streets: generalized location subject to future study.*
- \* - See discussion in subarea plan text about future services in Cheney area.*
-  Residential street connections per approved plans and conditions.



- **Efficient Use of Transportation Network;** land use decisions must consider the impacts on the transportation network. The proposed land uses are scaled to the capacity of Highway 2 and 84<sup>th</sup> Street and to retain the community's desire Level of Service C on the roads. Highway 2 is not just a roadway used by local residents, it is a highway that serves the whole community and region. The traffic flow capacity of this corridor should not be overloaded. It is also important to emphasize that the analytical model's future traffic capacity assumes the construction of the beltway and also assumes limited access and traffic signals along Highway 2.
- **Promote a Desirable Entryway;** standards for landscaping and architecture should be developed to promote a desirable entryway into Lincoln along Highway 2 — however, standards alone will have little impact if land use decisions strip the area with commercial uses, signs and cause the widening of Highway 2 to six lanes. It will be difficult to have enough landscaping to reduce the visual impact of potentially 9 or 10 traffic lanes (6 through, dual left and right turn lanes.) An open space corridor (approximately 200 feet from centerline) is shown along Highway 2, adjacent to the new commercial uses, as one part of having a desirable entryway with commercial development.

The subarea plan includes significant important land use decisions. In summary they include:

- **Clarify the appropriate size and type of uses in the Center at 84<sup>th</sup> & Highway 2:** this subarea plan designates the area from approximately 91<sup>st</sup> to 98<sup>th</sup> for predominately residential use, while including a 44 acre tract for a mix of commercial uses at the northeast corner of 91<sup>st</sup> and Highway 2. The overall site includes a regional center with approximately 1.9 million SF of commercial space -- larger than the present Westfield shopping center. The plan encourages the planned center at 84<sup>th</sup> and Highway 2 to develop with a mix of uses, including residential and appropriate transitions to existing residential areas.
- **Retention of Low Density Residential Character:** the character of this area today is predominately low density residential. The Comprehensive Plan encourages preserving and respecting the character of the existing neighborhoods. The impact on existing areas should be a priority in all land use and transportation decisions in this area. The low density residential designation is kept on existing neighborhoods. In addition, the property on the southwest corner of 84<sup>th</sup> & Highway 2 should remain low density residential. It does not have a safe access point to either Highway 2 or 84<sup>th</sup> Street. This site is fully integrated into the land use and road pattern of the surrounding neighborhoods and due to the features of the site can be developed residentially.
- **Changes from Low Density to Urban Residential:** several vacant properties along Highway 2 are appropriate for urban residential. Development of residential is possible along Highway 2 and will retain the residential character of the area. Several of these properties have existing topography and trees which help screen the property from the highway while others may require additional screening.

These properties are key to the overall vision for the area. Commercial development on these properties could have significant transportation impacts, such as necessitating six lanes on both Highway 2 and 84<sup>th</sup> Street, and could impact existing residential uses. The impact on the traffic network of strip commercial may also impact the mobility of existing residents and a visual impact on the entryway into the community.

*As amended July 14/15, 2003*

### C. Specific Elements of Subarea Plan

The existing residential character of this subarea should be respected. As undeveloped properties are developed as urban residential or commercial uses, it is imperative to provide for appropriate transitions from commercial to residential land uses.

The proposed subarea plan map in this report provides two types of transition areas:

- ! **Commercial Transition:** Within commercial areas office and lower intensity commercial uses along with appropriate buffer areas should be developed as a transition to adjacent residential areas. In some residential areas, "special residential" uses should be provided to adjacent lower density residential uses.
  
- ! **Special Residential:** could include churches, domiciliary care facilities, retirement apartments, child care facilities, townhomes or other uses permitted by special permit in residential districts. In more urban settings, which are further from existing single family residences, apartments may also be appropriate. There may be additional areas which are appropriate for these types of uses. They may be identified through future special permit applications, such as the various types of housing discussed in the plans for Campbell's Nursery at 56<sup>th</sup> and Pine Lake Road.

Other aspects of the subarea plan include:

- ! **Roadway Relocation:** Pine Lake Neighborhood residents will be further removed physically from the commercial development as well as being further away from S. 84th Street upon completion of the roadway relocation. These road changes will reduce traffic, light, noise and visual impacts. The relocation of Pine Lake Road traffic and proposed street vacation of certain portions of Pine Lake Road between S. 84th Street and Highway 2 will reduce traffic that abuts the Pine Lake Neighborhood residents and will introduce new street calming techniques.
  
- ! **Expand Future Service Limits.** Reclassify the area bounded by S. 84th Street, existing Yankee Hill Road and the railroad tract owned by Omaha Public Power District (formerly the Burlington Northern Santa Fe) as part of the Future Service Limits. The Infrastructure and Community Facilities Study shows that this area can be served properly with sanitary sewer and other infrastructure and utilities.
  
- ! **Future of Cheney:** Residents of Cheney have expressed concern about the future of their community as development progresses in the subarea. The following main issues in Cheney have been identified:
  - 1) Land Use -- On February 20, 2001 a petition signed by 109 residents of the Cheney area was received requesting that land south of Highway 2, east of the new 91<sup>st</sup> Street and north of First Street (Yankee Hill Road) in Cheney be designated for future urban residential use. In several public meetings, residents have stated their opposition to commercial development in this area. This area has a few non-conforming uses in residential or agricultural zoning that should be redeveloped into residential uses that will enhance the residential environment of

Cheney.

- 2) Transportation – Residents have also expressed their concern about maintaining adequate access into Cheney when Yankee Hill Road and 91<sup>st</sup> Street are relocated. Prior to any commercial zoning south of Highway 2, the road should be designed to provide full access into Cheney.
- 3) Annexation – Residents of Cheney have expressed support for annexation. However, prior to annexation issues regarding sewer service, the impact on the Rural Water District and Cheney School district will need to be resolved.

C *Additional Requests for Commercial Use:* There are several proposals for additional commercial space. These proposals range from small sites to major expansions that could significantly impact adjacent residential properties, intersections and have the overall transportation network. The following is the subarea plan's designation of properties that were proposed for commercial use:

- 1) Proposals by Shopko and UNO Properties at 66<sup>th</sup> and Highway 2 could significantly impact Highway 2, the overall road network and adjacent residential properties. These two sites are shown as urban residential with a small portion as special residential, potentially for apartments.
- 2) A proposal by Jeanette Stoll for a small area of transitional office use on the southeast corner of Highway 2 and Old Cheney Road is appropriate since the impacts on the network and local intersections have been addressed. The approved alternative plan provides for open space, residential buffer and entryway landscaping. This land is now designated for transitional office and open space uses in the subarea plan. Future specific site plans will preserve open space, trees, provide landscaped buffer to the adjacent neighbors, enhance the Highway 2 entryway, and provide for transportation improvements required by the office use.
- 3) A proposed change of zone for B-1 commercial use on the southwest corner of 70<sup>th</sup> & Pine Lake Road has inappropriate access and could significantly impact existing and future residential uses. This property is designated as urban residential.
- 4) The northwest corner of 70<sup>th</sup> and Pine Lake Road has been proposed for office use. There are issues to be resolved in regards to access, impact on the road network and impact on adjacent existing and future residential properties. It is designated as urban residential for special residential uses.
- 5) On the southwest corner of 84<sup>th</sup> and Highway 2, property owned by St. Elizabeth's has been designated as urban residential on the eastern portion. The western portion is designated as low density residential, which could be appropriate for development at a density of two dwelling units per acre if the adjacent road network were paved and urban utilities in place.

- 6) An alternative land use plan for the northwest corner of 84<sup>th</sup> and Highway 2 was developed between property owners and the Pine Lake Association. The approved alternative plan provides for approximately 11 acres of open space, wetlands, buffer and entryway landscaping, residential uses and approximately 200,000 square feet of office space. This land north of Highway 2, south of Pine lake Road and west of 84<sup>th</sup> Street is now designated for a mix of commercial (office), residential and open space uses in the subarea plan.

Future specific site plans will preserve open space, trees, and wetlands, provide landscaped and other buffers to the Pine Lake neighborhood, enhance the Highway 2 entryway, provide a local road network to address the potential impact on the Pine Lake neighborhood, limit access at Pine Lake road and Highway 2, and mitigate the traffic impact of the potential office use on a portion of the property. While it appears that the alternative plan will not significantly impact road improvement plans for this area, a traffic study will be required with future development proposals to verify the impact of the office use.

- 7) Property south of Highway and east of 91<sup>st</sup> Street, next to Cheney, is designated as urban residential. Commercial development could impact adjacent residents and the village of Cheney as well as impacting turning movements into Cheney.

### **Issues Yet to Address**

- ! The expansion of the **Future Service Limit** in the Cheney area will require further discussion in the future. It is possible that Cheney may be able to be served by the city's sanitary sewer line once that line is extended into this area. There are numerous issues regarding the Cheney Sanitary Improvement District (SID) and Cheney School District to resolve before this area should be included in the future service limit for potential annexation into the City of Lincoln. The proposed urban residential area north of Cheney, south of Highway 2, should not be developed until these issues are resolved.
- ! The subarea plan also continues the inclusion of the Pine Lake SID into the city limits. The city limits is rapidly approaching the Pine Lake SID and in the near future may completely surround Pine Lake. Once city surrounds Pine Lake, the area shall be annexed in accordance with the annexation policy of the Comprehensive Plan. However, it is the intent of the City to work toward an agreement with the Pine Lake SID and the residents on the details of annexation. To date, limited progress has been made on this agreement.
- ! In addition, the subarea plan designates the area on both sides of Yankee Hill Road from 70<sup>th</sup> to 84<sup>th</sup> Street as areas for potential expansion of the future service limit. In the Beal Slough drainage basin this could be served by city services and utilities. This will be reviewed further in the development of the new Comprehensive Plan next year.

### **D. Entryway Corridor**

#### **Existing Conditions**

- C The entryway corridor into Lincoln along Highway 2 is a good example of the positive and

negative images an entryway can establish. In the past the community went to significant expense and effort to present the greenway, bike trail and open space character of the Highway 2 corridor from generally 27<sup>th</sup> to 48<sup>th</sup> Streets. That character contrasts with the commercial and automobile orientation associated with the commercial and industrial uses along Highway 2 at 56<sup>th</sup> Street.

C In other entryways to Lincoln, discussions are underway on potential landscaping and architecture standards to promote a desirable entryway into Lincoln. However, standards alone may have little impact if incremental land use decisions strip the corridor with commercial uses and signs, and ultimately cause the widening of Highway 2 to six lanes. It will be difficult to have enough landscaping to reduce the visual impact of potentially 9 or 10 traffic lanes. Thus in order to preserve the entryway corridor, the land use and transportation decisions are equally important as landscaping or architectural standards.

! As one of the highest elevation areas in the County, this area includes several dramatic-view corridors to the Capitol. In addition, Highway 2 is a major entryway to Lincoln and to date is one of Lincoln's most attractive entryway corridors as it follows the Beals Slough waterway.

### **Future Needs**

! Proper treatment of this important entryway to Lincoln must be achieved. Detailed infrastructure and development plans of the commercial and residential areas should protect and maximize these Capitol view corridors.

! When the entryway study is completed, its findings should be followed closely in the development of the detailed development plans. Andermatt LLC has proposed that along the Highway 2 corridor adjacent to the commercial center, a 100 feet landscaped setback (200 feet from the Highway 2 centerline) to help insure an attractive entryway to our community.

! All development along Highway 2 should retain existing natural features such as hills, trees, vegetation, wetlands, ponds and drainage ways which are part of the character of the entryway corridor. These existing natural features add to the character of the entryway.

### **Issues Yet To Address**

! The entryway corridor plan should be developed and approved prior to or concurrently with the approval of any development proposals for the regional center at 84<sup>th</sup> and Highway 2. A general concept for the landscape should focus on using native Nebraska plants and to reflect and retain the existing topography. This would include using native plants such as Sumac, American Plum, and Dogwood with earth berms to reflect the character of the landscape along Highway 2. Further details are needed on potential landscape theme and standards for the Highway 2 corridor.

### **III. Environmental/Natural Resources**

#### **A. Introduction**

One of the goals of the 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, “as Lincoln and community grows, it will respect its important environmental resources and use them to enhance the quality of urban and rural development. Land use policies will encourage development which conserves resources for future generations.”

The subarea planning phase is one of many levels at which to accomplish the above goal. Environmental issues and natural resources are addressed in this section of the Subarea Plan, just as infrastructure, community facilities, and public services 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, which are identified as “Natural/Environmentally Sensitive” areas. To many, Pine Lake, which is in close proximity to the S. 84th & Highway 2 Commercial Area, is also an important environmental resource.

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

- ! *Assure that economic development is accomplished with respect for environmental quality.*
- ! *Ensure the preservation and proper utilization of environmental resources (e.g., prime agricultural land, soils, water, clean air, absence of noise, native prairie and woods).*
- ! *Respect the natural character of areas by incorporating natural features into new developments and adjacent existing projects.*

#### **B. Topography**

##### **Existing Conditions**

- ! The 84th & Highway 2 Subarea includes headwater portions of four drainage basins (Antelope Creek, Stevens Creek, Beals Slough and Hickman Branch) which are all major tributaries of Salt Creek. Several tributaries further dissect each of these four drainage basins.

##### **Future Needs**

- ! Development in this area should respect, as much as possible, the natural contours of the landscape and still provide for orderly infrastructure and development. Grading should be kept to a minimum to reduce erosion, respect the natural drainage system and vegetation, and to keep disturbance of the natural soil layers to a minimum.

#### **C. Soils**

### **Existing Conditions**

- ! There are flood prone soils and soils having a seasonal high water table associated with the drainage basins in this subarea. In addition, many soil associations in this subarea are susceptible to high rates of erosion.
- ! Overall, the soils in the area vary in potentials for building sites and other infrastructure development, wildlife habitat, recreational development, agricultural productivity, and use as construction materials.

### **Future Needs**

- ! The Soil Survey of Lancaster County, Nebraska, published by the USDA Natural Resources Conservation Service should be carefully reviewed prior to development in this area to address issues regarding soil characteristics.
- ! Future development in this area should show great sensitivity to flood prone and erodible soils. Development should strive to conserve portions of these areas within an un-built, vegetated buffer along the drainage ways.
- ! Other soil characteristics should be considered carefully during the platting and design phase, such as erodibility, suitability for building, and suitability for wetlands and pond development.
- ! Topsoil from construction sites should be preserved as much as practicable to be re-used for future sensitive areas such as wetlands, buffer zones, and landscaped areas.

## **D. Floodplain and Stormwater**

### **Existing Conditions**

- ! Along Beal Slough there is a significant area of FEMA-mapped 100-year floodplain. This area was extensively studied as part of the Beal Slough Stormwater Master Plan which was adopted by the City Council and County Board in June 2000.

### **Future Needs**

- ! In areas where there is not a designated floodplain and floodway, particularly along Antelope Creek, most grading or construction will require a hydrological study to identify and protect the storm water routes in the event of a 100-year storm.
- ! Additional floodplain information provided in the Beal Slough Master Plan should be utilized in planning and designing future developments. The Beal Slough Stormwater Master Plan should be utilized and implemented through future development proposals in the Beal Slough basin.
- ! All reasonable measures should be examined and implemented where possible to strive

to compensate for any fill in the 100-year floodplain or within the 100 year storm limits along unmapped tributaries -- ideally to achieve "No Net Rise."

- ! Future development in this area must follow provisions of the City of Lincoln and Lower Platte South Natural Resources District's Drainage Criteria Manual ("DCM"). For example, post-development runoff associated with the 2-, 10-, and 100-year storm events must be equal to or less than the existing (pre-development) conditions.
- ! Detention/retention basins will be constructed at strategic locations to accommodate provisions of the DCM, as well as to serve as aesthetic amenities to the area.
- ! 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.
- ! The Beal Slough Master Plan identifies seven stormwater subareas (Subareas A-G) in the upper portion of the Beal Slough Basin, nearly all of which are included within the this subarea. The Master Plan recommends the implementation of regional stormwater storage facilities within subareas A, D, E, and G (Figure ES-4 of the Master Plan) in order to reduce flood flows to the "Target Peak Flow Rates" identified for these areas. It will be important to explore opportunities for stormwater storage facilities with future development in this area in order to reduce the potential for flooding along Beal Slough.
- ! The approved Stevens Creek Watershed Study which was prepared for the Lower Platte South Natural Resources District (NRD) and is an adopted component of the Comprehensive Plan, indicates a potential regional stormwater retention facility to the east of 98<sup>th</sup> Street between Pine Lake Road and Yankee Hill Road, just outside the subarea. This regional stormwater retention facility would be located on a tributary of Stevens Creek and would help reduce downstream flooding along Stevens Creek.
- ! Specific details related to floodplain and stormwater issues will be addressed in greatest detail at the time of subdivision and detail 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. Drainageways Buffers**

### **Existing Conditions**

- ! Many of the drainage ways in the subarea have associated natural vegetation or "buffers" such as tree masses and understory plant materials.
- ! Vegetated buffers along drainage ways can act as "greenways," important terrestrial habitat and movement corridors for wildlife, and serve as natural links to larger natural areas or parks. They are also instrumental in removing runoff pollution.

- ! 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.

### **Future Needs**

- ! Comprehensive Plan specifications include the following:
- ! Text: *“The preservation and improvement of natural landscapes maintains or increases the useful attenuation characteristics of the drainage regime. Natural drainage ways also provide an excellent opportunity for the development of trails, and floodplains may be beneficially used for open space, parks and recreation or parking.”*
- ! Strategy: *“Develop project approaches which view stormwater as an asset, utilizing natural drainage patterns, retention and detention facilities, wetlands, and drainage corridors as natural ways to manage run-off.”*
- ! Goal: *“Protect natural stream corridors and enhance man-made open channels for the purpose of improving water quality and reducing flood damage and erosion while retaining open space.”*
- ! 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 area 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 Beal Slough, Antelope Creek, Stevens Creek and Salt Creek. The LPSNRD recommends enhancing natural drainage ways with additional buffers planted with native grasses and trees.
- ! Pine Lake is an important water resource asset that needs to be protected during construction and operation of the proposed development. Environmental studies submitted as part of the detailed development proposals will need to address the specific proposed measures to protect Pine Lake and its drainageways against sedimentation and pollution. A rigorous maintenance program will be included to ensure the effectiveness of erosion and sediment control measures at construction sites.
- ! Development upstream from Pine Lake will need to take significant measures to protect Pine Lake during development and operations.
- ! The effective drainageway buffer width depends on a number of factors such as size of

the drainage, 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.

## **F. Wetlands and Water Bodies**

### **Existing Conditions**

- ! The subarea plan land use map depicts 'Wetlands and Water Bodies' which appear on the National Wetlands Inventory ("NWI"). Some of these may be farm ponds, while others include Pine Lake and drainage wetlands. The NWI is not a complete site-specific inventory.
- ! Andermatt LLC submitted a wetland delineation on the regional commercial center (see Figure 3) which identifies 38.01 acres of wetlands and approximately 725 feet of waters of the U.S.
- ! Comprehensive Plan specifications include:

*Goal: "Maintain, preserve, and enhance existing wetlands and restore degraded wetlands."*

*Text: "Wetlands and water bodies provide a number of functions which are important to the health and welfare of the community: they provide storage for stormwater and help to control flooding, they provide habitat for threatened and endangered species, they improve water quality, they provide fish and wildlife habitat, they provide recreational opportunities and they are aesthetically pleasing."*

### **Future Needs**

- ! Waterways and wetlands within the Subarea, including Pine Lake, are an important water resource asset that needs to be protected during development. As this area develops, it will be important to complete site specific analysis to delineate these resources and assesses any impacts through development. The analysis would include a functionality assessment to identify the role of the wetlands in water quality and wildlife habitat.
- ! Future development should strive to protect wetlands and water bodies in the Subarea. Restoration or creation of wetlands in the Subarea is also encouraged to maintain and enhance the quality of stormwater runoff as the Subarea develops.



- ! The wetlands identified within residential areas (to be impacted by a future small lake) should be mitigated by creation of new wetlands within the subarea. Some wetlands mitigation in commercial areas may also be needed. Efforts should be made to preserve the wetlands if at all possible.

## **G. Tree Masses**

### **Existing Conditions**

- ! 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.
- ! 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 aesthetic quality to an area.

### **Future Needs**

- ! 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. For example, the area of wetlands and tree masses south of the proposed commercial center and existing railroad tracks between 84<sup>th</sup> and 91<sup>st</sup> Street should be preserved as part of the buffer between the commercial area and potential residential uses to the south.
- ! New buffer and open space areas should be planted with mixed hardwood stands.

## **H. Best Management Practices (BMP's)**

### **Existing Conditions**

- ! 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.

### **Future Needs**

- ! 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.
- ! In the past the LPSNRD has recommended that retention facilities be considered in lieu of detention to take advantage of the water quality benefits provided.
- ! 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.

## **I. Noise**

### **Existing Conditions**

- ! Current land use in the subarea consists primarily of residential, office, agricultural and transportation. With these land uses, noise issues primarily focus on vehicular traffic.
- ! Roadway widenings are on-going as part of the City's Southeast Fringe Roadway Improvements. This includes 70th Street and 84th Street, Old Cheney Road and Pine Lake Road. Noise impacts have been identified with these roadway upgrades; however, noise studies on build-out conditions have shown that noise buffers are unfeasible in accordance with the Nebraska Department of Roads Noise Abatement Policy.

### **Future Needs**

- ! Noise studies at the detail design stage would offer the opportunity to establish setback distances prior to development such that future noise issues should be minimized.
- ! The widening of four lane roads to six lanes may have additional noise impacts on adjacent land uses.
- ! Implementing natural buffer features such as vegetation, as well as aesthetically designed berms, may aid in minimizing noise impacts. Guidelines for the feasibility and reasonableness of noise mitigation measures are available in the Nebraska Department of Roads Noise Abatement Policy Manual.

## **J. Odor**

### **Existing Conditions**

- ! With land use in the Subarea primarily consisting of agricultural, office and residential areas, odor concerns are currently not an issue. No large animal feeding operations, which are often a source of problem odors, currently exist or are planned for this area.

### **Future Needs**

- ! With the high quality of living characteristics of this area, maintaining low odor will be expected. Identifying users that would not diminish the current quality will be an important factor in future property use and location.
- ! Property development should be evaluated in relation to the Lincoln Municipal Code regarding Odor Nuisances. Because the Subarea plan identifies some retail, office and other commercial and residential uses, generators of odors will be no different than what is typical for commercial areas elsewhere in the City. Still, mitigation measures should be taken to reduce odors, especially from restaurants.

## **K. Lighting**

### **Existing Conditions**

- ! Current land use results in lighting limited to housing, buildings with small parking areas and vehicle lighting. Consequently, this area is not experiencing any notable lighting issues.

### **Future Needs**

- ! With the proposed retail and office areas, roadway modifications and increased vehicular traffic, lighting levels will certainly increase beyond current conditions. To ensure that lighting does not become a detriment to this area, natural buffers should be implemented into site planning, light fixtures should minimize spill lighting and employ lamp cutoffs, and appropriate siting of parking lots and structures should be a design consideration. Parking lot lighting must comply with the City's new parking lot lighting standards and roadway lighting must comply with City and State lighting requirements.

## **L. Ground Water Quality**

### **Existing Conditions**

- ! Ground water reservoirs in this area are limited in thickness and aerial extent typically resulting in low-volume yields. Water quality can be highly variable ranging from excellent to non-potable.
- ! Water use is limited to individual domestic supplies with scattered irrigation systems. Due to the water issues in this area, rural water is generally the preferred drinking water supply.

No known point- or non-point-source contamination issues are known in this area. Potential contaminant sources would be limited to processes associated with agriculture or private septic systems (non-point-source).

- ! Ground water seeps occur in this area, but are limited in extent and discharge amounts, thus, are a minimal component to surface water. Areas such as Pine Lake probably have minimal influence from ground water.

### **Future Needs**

- ! The City, State, and Federal governments have implemented stringent design standards for potential point-source contamination such as underground storage tanks. These standards severely limit the potential for releases and provide mechanisms to minimize any releases that would occur. These standards should be adhered to with any land use, such as underground storage tanks, proposed in this area to protect water quality and any citizens that would continue to rely on private systems.
- ! With the proposed development, non-point-source contamination concerns, typically occurring with agriculture, should be less, assuming measures are undertaken to detain stormwater runoff properly.
- ! The proposed development would most likely utilize existing potable water supplies, thus, any contaminant releases that could occur, should not impact future urban users in this area. Still, all reasonable measures must be taken to prevent any contaminant release to protect agricultural and residential acreage dwellers that are dependent upon groundwater for their water supply.
- ! The proposed extensions and connection to the City's sanitary sewer system in this area would further protect ground water quality by reducing the number of septic systems currently in use.

## **IV. Community Services**

### **A. Schools**

#### **Existing Conditions**

- ! Lincoln Public School District (LPS) serves the area within the city limits and portions of Pine Lake SID #1 and some acreages south of Highway 2.
- ! Cheney District #153 serves most of the south and east unincorporated area. Cheney Elementary School is located within the Village of Cheney to the southeast of 91<sup>st</sup> and Yankee Hill Road.
- ! Waverly District #145 serves the eastern portion of Pine Lake SID #1 and the area east of the municipal boundary and north of Cheney District # 153.
- ! Norris District #160 is in close proximity to the Subarea to the southeast.
- ! Lincoln Christian School at 5801 S. 84th Street is located within the Subarea and provides a religious based elementary, middle school and high school education.

#### **Future Needs**

- ! The Catholic Diocese of Lincoln is in the process of acquiring land for a potential church and elementary school in the Vintage Heights subdivision on 98th Street approximately ½ mile south of Old Cheney Road.
- ! With annexation into the City of Lincoln, land in the subarea not already included within the Lincoln Public School District will fall under the jurisdiction of LPS.
- ! LPS has identified and acquired potential school sites in the subarea:
  - An elementary school site in the Vintage Heights subdivision at approximately 95th Street, two blocks north of Pine Lake Road.
  - An elementary school site on the north side of Yankee Hill Road at approximately 62<sup>nd</sup> Street.
  - A middle school site in the Vintage Heights subdivision at approximately 93rd Street and Old Cheney Road.

#### **Issues Yet To Address**

- ! The Cheney School District may have a significantly diminished service area in the future as the city expands into the Cheney area. Prior to any potential annexation of the unincorporated village of Cheney the impact of this action on the Cheney School district will need to be addressed.

- ! LPS may need to identify additional school sites to serve other parts of the subarea.
- ! LPS needs to address how it will build and operate the proposed elementary schools and middle school.

## **B. Fire Protection Services**

### **Existing Conditions**

- ! Currently, the Lincoln Fire Department and the Southeast and Bennet Rural Fire Districts serve the Subarea.
- ! The Lincoln Fire Department currently has a station at 2201 S. 84th Street (Station 12), 5051 S. 48th Street (Station 6), and 27th and Old Cheney Road (Station 4), which are located outside the Subarea.
- ! The Southeast Rural Fire District has a station within the Subarea at Pine Lake Road & Highway 2. The Bennet Rural Fire District has a station in Bennet, Nebraska, located outside the Subarea.

### **Future Needs**

- ! 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, particularly for districts with bond issues.
- ! The future annexation of the Southeast Rural First District station at Pine Lake Road and Highway 2 will not effect the station's status. It can continue to serve rural residents even though it is inside the city limits. The Lincoln Fire Department is not interested in using this facility in the future.
- ! The Lincoln Fire Department has determined it will need a new fire station within the boundaries of this Subarea. It will be important for the fire station to be properly sited so that it can maintain a three-minute response time for any development located within the municipal city limits.

## **C. Parks & Recreation**

### **Existing Conditions**

- ! Neighborhood Parks: Edenton South located at Stevens Ridge and Ashbrook Circle is located on the northwestern portion of the subarea and Pine Lake Road and South 60th Street Park is located on the western edge of the subarea. There are also undeveloped neighborhood parks approved west of 84th Street and Glynoaks Drive and a mini-park in Vintage Heights Subdivision west of Glass Ridge Drive and north of Pine Lake Road.

- ! Regional Parks: Jensen Park, an approximately 200 acre regional park, is located in the southern portion of the Subarea.
- ! Recreation Centers: No recreational centers are located in the subarea.
- ! Golf Courses: The Pine Lake Golf & Tennis Club is located ¾ mile north of S. 84th & Highway 2. The Hidden Valley Golf Course is located on the eastern edge of the subarea. Holmes Lake Golf Course and Yankee Hill Golf Course are near the subarea.

### **Future Needs**

- ! Future neighborhood parks are already identified in the Comprehensive Plan for the following:
  - 1) Future urban neighborhood from 56<sup>th</sup> to 70<sup>th</sup>, between Pine Lake Road and Yankee Hill Road,
  - 2) Vintage Heights area from 84<sup>th</sup> to 98<sup>th</sup>, between Old Cheney Rd and Pine Lake Rd, and
  - 3) Expansion of the existing small neighborhood park near Edenton South and Pine Lake. (This potential expansion is reflected in the subarea plan, exact location of the expansion is subject to future discussions with property owners.)
- ! An additional future neighborhood park will be added to the Comprehensive Plan with the adoption of this subarea plan to designate a park between 91<sup>st</sup> and 98<sup>th</sup> Street, between Pine Lake Road and Highway 2 for the future urban residential area.
- ! Review by the Parks and Recreation Department as to whether there is a need to construct a recreational center in this general area.
- ! The Parks and Recreation Department has not begun construction of the community sized Jensen Park.

## **D. Lincoln City Libraries**

### **Existing Conditions**

- ! No Lincoln City Library exists or is one planned within the subarea. The Gere Library at S. 56th Street and Normal Boulevard serves this area.
- ! The citizens of Lincoln approved a bond issue in November 1998 to permit the construction of a 30,000 square foot library in Densmore Park on S. 14th Street, north of Pine Lake Road. This new library is scheduled to open in February 2002 and will relieve the high usage of the Gere branch.

### **Future Needs**

- ! The Lincoln City Library staff has stated that the current Gere branch will be adequate to serve this entire Subarea. The Comprehensive Plan states a “*consolidated library system will eventually consist of a main Bennet Martin Public Library and four branch libraries, one to serve each quadrant of the City.*” (Page 167 of the Plan.)

## **E. Law Enforcement**

### **Existing Conditions**

- ! Currently that portion of the subarea located within the City limits is served by the Lincoln Police Department. The Lancaster County Sheriff’s Department serves that portion of the subarea located outside the City limits.

### **Future Needs**

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

### **Issues Yet to Address:**

- ! The Lincoln Police Department will need to review law enforcement protection to determine future City needs.

**V. Public Utilities**  
**A. Water**

**Existing Conditions**

- ! The annexed portion of the Subarea is located in the Southeast Pressure District and the Cheney Booster District. A reservoir is located ¼ mile east of S. 84th Street and ¼ mile south of Pine Lake Road. There are currently water mains in portions of S. 56<sup>th</sup>, 70<sup>th</sup> and 84<sup>th</sup> Street, Old Cheney and Pine Lake Road.
- ! An existing 24 inch water main in S. 84<sup>th</sup> Street, from the existing reservoir, north to Old Cheney Road will be converted from the Southeast Pressure District to the new Cheney Booster District when the new 48 inch transmission main is completed to the existing reservoir.
- ! A portion of the subarea from approximately south of a ¼ mile north of Yankee Hill Road and east of S. 87th Street is in the Lancaster County Rural Water District #1. The district serves approximately 80 residents in Cheney. The district has maintained that any annexation of land that is in the boundaries of the district, even if the district does not currently serve that property, shall require compensation of the district for the impact on the district's ability to retire bonded indebtedness.

**Future Needs**

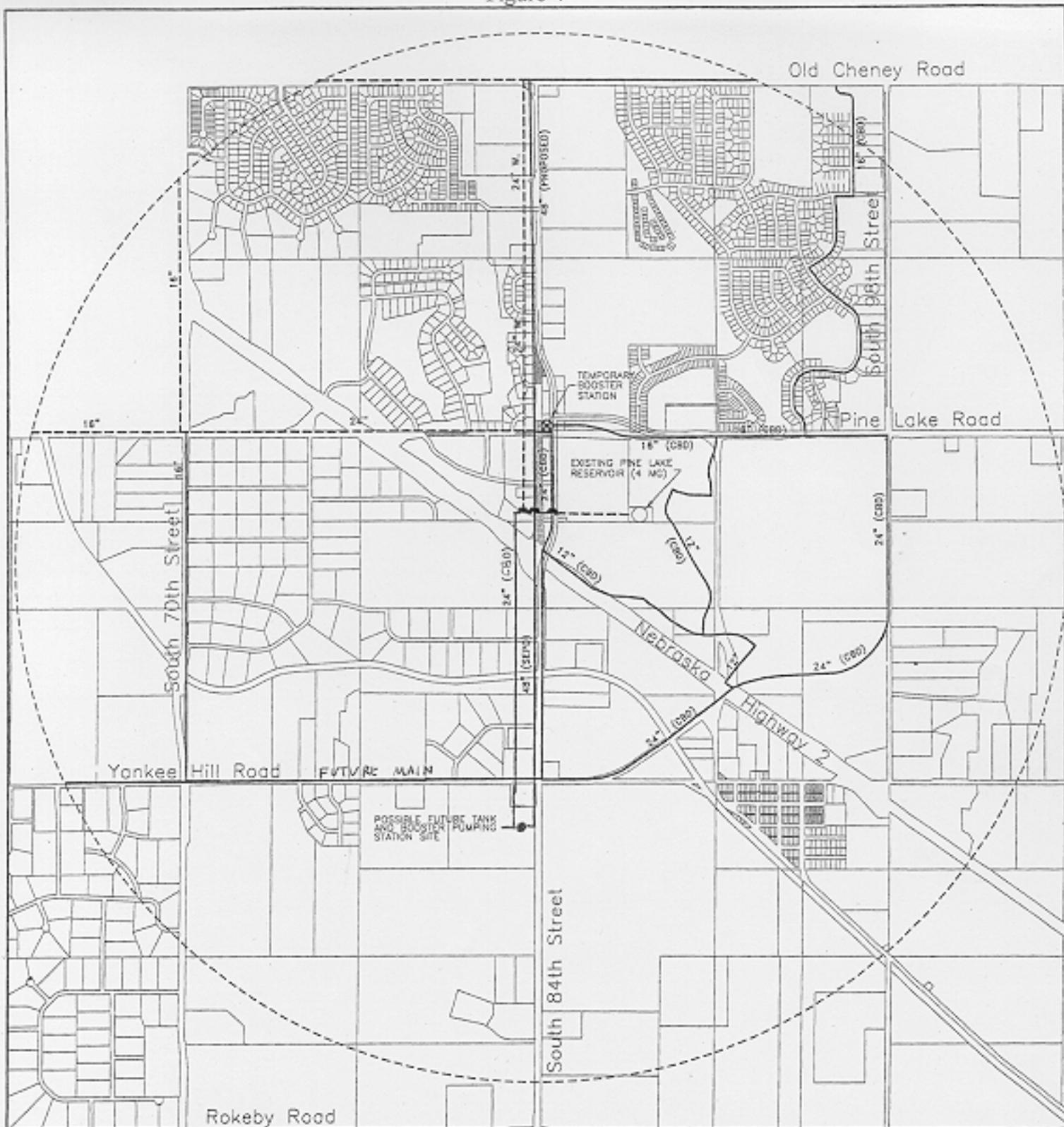
- ! Figure 4 shows a map of the proposed water improvements for a portion of the subarea. This figure requires further refinement and will required further review and study. The Water Department Staff have undertaken some studies of the future needs for this Subarea. Currently, staff anticipates the water master plan will be updated next year, which will include the information and modeling necessary on how to serve this subarea.
- ! Andermatt LLC, developer of the 84<sup>th</sup> & Highway 2 commercial center, proposes to have the existing water reservoir on City owned land be removed from future regional commercial center. Andermatt proposes that the City replace the existing 4 MG reservoir located southeast of S. 84th Street and Pine Lake Road with by adding 4 MG of capacity to the proposed 6 MG reservoir near the southwest corner of S. 84th Street and Yankee Hill Road. The new reservoir is included in the 2000-2006 CIP, but the demolition of the current reservoir on the commercial site is not in the CIP. Costs associated by the relocation or replacement of the existing 4 MG capacity are the responsibility of Andermatt to work out with the City.

**Issues to be Addressed**

- ! For any land currently in the boundaries of the Lancaster County Rural Water District #1, prior to annexation, property owners should work out the details regarding the transfer of land with the Rural Water District.

**Page reserved for**

Figure 4



SEPD = SOUTHEAST PRESSURE DISTRICT

CBD = CHENEY BOOSTER DISTRICT

WATER DISTRIBUTION/ TRANSMISSION  
PROPOSED SUB-AREA PLAN

REVISED

01/17/01

- ! The City, Cheney residents and the Lancaster County Rural Water District #1, will have to address issues related to the impact of the potential inclusion of Cheney into the city limits of Lincoln.
- ! Some of these proposed water mains are not yet in the City's Capital Improvement Program (CIP). As part of the proposal for extending services to this subarea, the impact on CIP will need to be addressed. In addition, the timing of water improvements needs to be coordinated with planned street improvements.
- ! The Public Works Department may have additional comments as specific annexation and zoning proposals are reviewed in greater detail.

## **B. Sanitary Sewer**

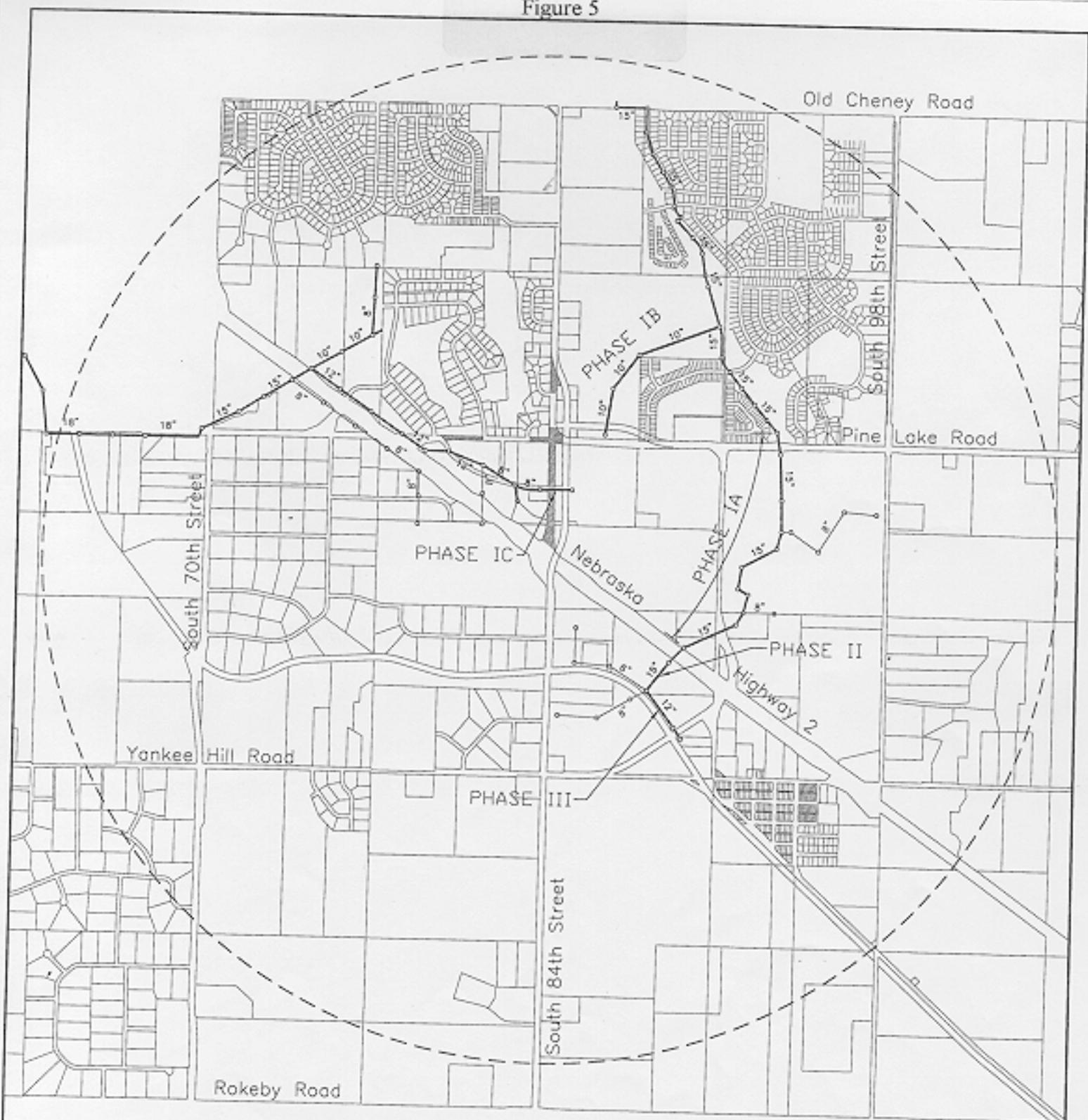
### **Existing Conditions**

- ! Currently, the City's 15-inch Antelope Creek sanitary sewer line ends north of Pine Lake Road and is located within the Subarea. The Beal Slough sanitary sewer line presently terminates north of Pine Lake Road and is located outside the Subarea.

### **Future Needs**

- ! Figure 5 is a map of the potential sanitary sewer improvements for a portion of the subarea.
- ! A section of the Antelope Creek sanitary sewer line between S. 70th Street and Pioneer Boulevard lacks enough slope and therefore presents a potential bottle neck condition when more sewer from the S. 84th & Highway 2 Commercial Area is added. Therefore, this downstream stretch needs to be improved to accommodate the future growth. This project is identified in the 2000-2006 CIP.
- ! Based upon the City Sewer Plan and trunk line capacity, the City Public Works Department has discouraged using pump or lift stations to provide sewer service to an area on the other side of a ridge line.
- ! The regional commercial center is located in three drainage basins which makes it challenging to serve economically with a gravity flow sewer system.
- ! To sewer the subarea and its four drainage basins by gravity flow sewer systems will require several trunk extensions. Two of these basins (Hickman Branch and Stevens Creek) currently have no sanitary sewer facilities and are beyond the scope of the current CIP and Comprehensive Plan.
- ! To provide sewer service economically the north and east central portions of the subarea requires extending the Antelope Creek sanitary sewer line over the ridge line. The City Public Works Department tentatively recommended that as much of the regional

Figure 5



NOTE: ALL SANITARY SEWERS AS SHOWN  
ARE PROPOSED EXCEPT FOR 15"  
SEWER NORTH OF PINE LAKE ROAD,  
WHICH IS EXISTING.

SANITARY SEWER  
PROPOSED SUB-AREA PLAN

OLSSON ASSOCIATES

CONSULTING ENGINEERS

1111 Lincoln Mall, P.O. Box 84608, Lincoln, NE 68501

JULY 2000

commercial center as possible located in Stevens Creek, Beal Slough and Antelope Creek basins be provided with sewer by extending the Antelope Creek sanitary sewer line. A more detailed sanitary sewer engineering study has now been completed by Olsson Associates. The study concludes that the Antelope Creek sanitary sewer line extension could serve the entire regional commercial center by gravity flow except for a small area which should by gravity flow into an extension of the Beal Slough sanitary sewer line.

- ! To provide gravity flow to the western and southern reaches of the subarea will require an extension of the Beal Slough sanitary sewer line. The Beal Slough sanitary sewer line would need to be extended to serve the 70th & Highway 2 commercial area and the small portion of the regional commercial area, as well as the balance of the Beal Slough drainage area located in the subarea. This sewer extension would also permit the potential sewer connection of the Pine Lake SID to the City's wastewater treatment facilities once this area is annexed into the City of Lincoln.
- ! The portion of the Beal Slough subarea to be served will also require major trunk sewer improvements downstream of the subarea. Several remaining phases of the Salt Valley Trunk Sewer Improvements which will serve both the Beal Slough basin as well as the Upper Salt Creek basins have yet to be constructed, as well as the Beal Slough relief sewer improvements along Highway 2 between S. 14<sup>th</sup> and S. 56<sup>th</sup> Streets. Current cost estimates for the remaining phases of the Salt Valley sewer improvements are approximately \$20 million, and estimates for the Beal Slough sewer improvements are approximately \$6-8 million.
- ! To sewer the far eastern section of the subarea would require the construction of a sanitary sewer trunk in the Steven's Creek watershed.
- ! The sanitary sewer improvements and extensions will have to be coordinated as part of the annexation process. Funding by the private sector and the City will be necessary to provide for these sanitary sewer improvements.

### **Issues Yet to Address**

- ! It is possible that the Cheney SID area may be able to be served by the city's sanitary sewer line. If the residents of the Cheney SID are interested in either city sewer or water service this will require annexation into the city limits. Prior to approval of any development proposals (that utilize the Antelope Creek sewer line south of Pine Lake Road) the sizing, depth and capacity of the sewer line shall be approved by the City so that it can accommodate all of the property in the Cheney SID or a determination by the City that this is not feasible. In addition to sewer capacity issues in the Antelope Creek line, it may not be viable to provide gravity sewer service to Cheney without significant reconstruction of their existing system or use of a pumping station.
- ! The Public Works Department may have comments on the sanitary sewer system as annexation and zoning proposals with additional details are submitted.

### **C. Electric System**

### **Existing Conditions**

- ! LES serves the balance of the subarea except for a portion located generally 1/4 to 1/2 mile south of Yankee Hill Road and east of 70<sup>th</sup> Street which is in the Norris Public Power District Service Area.
- ! A 115 kV line serves a large portion of the subarea and is located on the south and east perimeter of the S. 84th & Highway 2 Commercial Area. Over the years, Andermatt has worked closely with Pine Lake Neighborhood Association and LES to relocate the 115 kV line from S. 84th Street and away from the Pine Lake Neighborhood. Andermatt contributed funds to LES to relocate the power line along a longer and more expensive route. In addition, LES purchased a future substation site for the subarea that did not negatively impact the Pine Lake SID.
- ! Substations near S. 80th Street and Old Cheney Road and near S. 56<sup>th</sup> and south of Pine Lake Road presently provide service to the LES Service Area within the subarea.

### **Future Needs**

- ! LES owns land for a substation site near S. 87th Street and 1/4 mile south of Highway 2 which is in the area designated for commercial use in the subarea plan. The 2000-2006 CIP designates that LES will build this substation in FY 2003-2004.
- ! LES will not require any additional transmission lines in this subarea.
- ! Andermatt may request that LES relocate a portion of the 115 kV line that is located in west of S. 98th Street and 1/3 of a mile south of Pine Lake Road, to accommodate the final development design and layout of their development. Actual relocation costs are the responsibility of Andermatt to work out with LES.
- ! LES may have additional comments regarding the annexation and zoning proposals as further specific details are submitted.

### **Issues Yet to Address:**

- ! In October of 2000, LES and Norris Public Power District approved an agreement to plan jointly for the growth of Lincoln and to transfer service area and customers to LES on an orderly basis. As a result, the two utilities agree that LES will be able to maintain and serve a buffer area which is a minimum of one to one and a half miles outside the city limits of Lincoln. With this agreement, LES believes it will be able to expand infrastructure and support the growth of the city in the same manner that is currently being used.

## **D. Natural Gas**

### **Existing Conditions**

- ! The subarea is generally located in the Peoples Natural Gas service area. Peoples Natural Gas has a substation located near the southeast corner of S. 84th Street & Old Cheney Road, which serves portions of this subarea.
- ! Williams Pipe Line Company has a gas line that is located in the regional commercial center.

#### **Future Needs**

- ! Andermatt LLC may request that Peoples Natural Gas may relocate a portion of the gas line that is located west of S. 98th Street and south of Pine Lake Road to accommodate the final development design and layout of their area. Actual relocation costs are the responsibility of Andermatt to work out with Peoples Natural Gas if necessary.

## VI. Transportation

### A. Land Use Transportation Connection

Land use decisions have a significant transportation impact. As of January 1, 1998, in the corridor from 48<sup>th</sup> to 98<sup>th</sup> Street along Highway 2 there was an estimated 1.4 million square feet (SF) of existing commercial space. Over 1 million SF of this space is in the Edgewood/ Trade Center area at 56<sup>th</sup> Street. This commercial space attracts a substantial amount of traffic, with approximately 22,000 cars a day at the Highway 2 and 56<sup>th</sup> Street intersection.

The current Comprehensive Plan Land Use Plan designates two additional areas for commercial development. For transportation modeling purposes the City estimated they would add approximately 2.12 million SF of commercial space to the corridor. These centers and the estimate for modeling purposes were:

- 1) regional commercial center at 84<sup>th</sup> and Highway 2; modeled at 1.9 million SF and;
- 2) a second smaller center at 70<sup>th</sup> and Highway 2; modeled at 220,000 SF.

The Comprehensive Plan Land Use Plan and associated transportation modeling was used in the development of the Long Range Transportation Plan (LRTP) Update to the Comprehensive Plan which was approved in October 2000. To accommodate future levels of traffic the LRTP included four lanes on 84<sup>th</sup> Street, Pine Lake Road and Yankee Hill Road in this area.

Transportation modeling estimates, for the buildout of the Comprehensive Plan, that at the intersection of 84<sup>th</sup> & Highway 2 that there would be approximately 30,000 cars a day on 84<sup>th</sup> Street and that Highway 2 corridor would generally be at the capacity for Level of Service 'C' of 32,000 cars. At 70<sup>th</sup> and Highway 2 the model estimate was approximately 27,000 cars. There are currently approximately 14,000 cars a day at Highway 2 and 84<sup>th</sup> Street.

All of these traffic numbers assume the south and east beltways being built. If the beltways were not built, significantly more traffic would be on Highway 2. The model also assumed that Highway 2 would keep its expressway characteristics of limited access points and traffic signals. Additional commercial access points and signals would diminish the traffic capacity of Highway 2.

Traffic modeling makes it clear that developing **more than approximately 1.9 million SF** of commercial space at 84<sup>th</sup> and Highway 2 **would generate traffic volumes beyond the traffic capacity** of Highway 2 and 84<sup>th</sup> Street. This could lead to the widening of both Highway 2 and 84<sup>th</sup> Street to 6 lanes of through traffic and could have associated impacts on adjacent land uses and the entryway into Lincoln.

### B. Arterial Streets

#### Existing Conditions

- ! The roadway network within the -Subarea<sub>1</sub> but outside the Lincoln municipal limits<sub>1</sub> is a county road system that is an extension of the existing "mile-line" or "section-line" roadway system. The north-south roads serving this area form a consistent one-mile interval

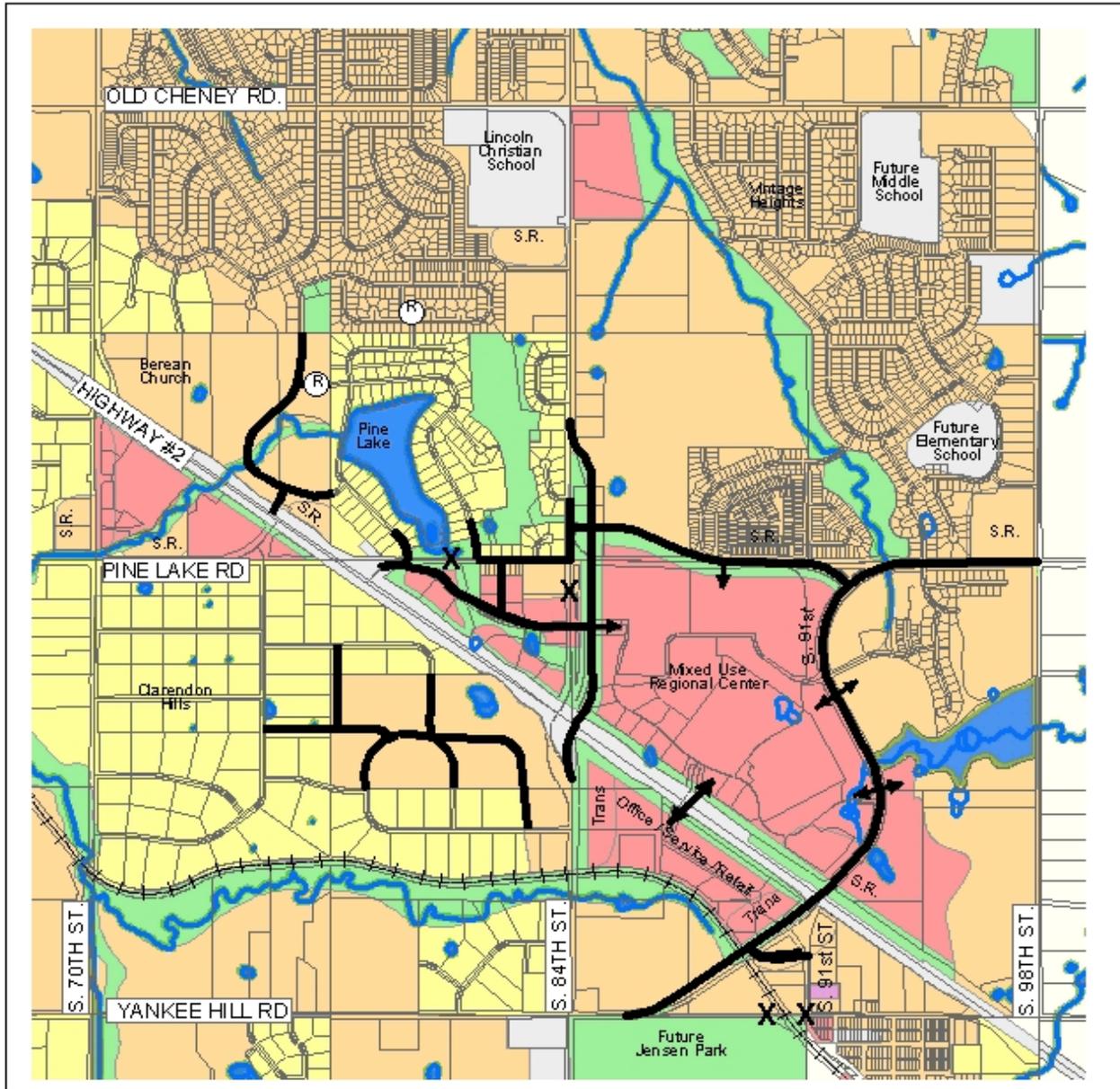
system, which is continuous from Old Cheney Road to Rokeby Road. The east-west roads system is generally complete at the section line interval from S. 70th Street to 112th Street. Several Highway 2 roadway access points are available for both the north-south and east-west roadways.

- ! The Lancaster County's Road and Bridge Construction Program identifies county road improvements for a six-year period with the first year funded for construction and the remaining five years designated as future year projects. The five year element of this program contains one rural road construction project within the Subarea.

### **Future Needs**

- ! Figure 6 shows a map of **some** of the potential road improvements along the Highway 2 corridor.
- ! Andermatt LLC proposes to relocate S. 84th Street and Pine Lake Road and potentially to close a portion of Pine Lake Road from Highway 2 to S. 84th Street. Specific road changes include: the relocation of a portion of S. 84th Street approximately 150 feet east from near Water Tower Court to Highway 2; and the relocation of a portion of Pine Lake Road approximately 100 feet north from S. 84th Street to approximately a quarter mile to the east. With the proposed street relocations, Pine Lake Neighborhood residents will be further removed physically from the commercial development as well as being further away from S. 84th Street upon completion of the roadway relocations. These road changes will reduce traffic, light, noise and visual impacts.
- ! The relocation of these two streets provides for better vehicle stacking in turn lanes waiting to enter the regional commercial center. The relocation of 84<sup>th</sup> Street also provides an area for the landscaping and buffer to the future residences west of 84<sup>th</sup> Street. The lots to the west of 84<sup>th</sup> Street will still be provided with access to the new 84<sup>th</sup> Street. Potentially, portions of the former 84<sup>th</sup> Street and Pine Lake Road right-of-way could be vacated and used for the buffer area.
- ! Portions of Pine Lake Road, between Highway 2 and S. 84th Street are shown to be potentially closed at some point in the future. The residents of the Pine Lake area expressed concern that unless some measure is taken, Pine Lake Road would experience a significant increase in traffic and impact their area. The exact locations and timing of the partial road closures is yet to be determined.
- ! Pine Lake neighborhood residents will be further removed physically from the commercial development as well as being further away from S. 84th Street upon completion of the roadway relocation. The 84<sup>th</sup> Street and Pine Lake Road changes will reduce traffic, light, noise and visual impacts to the neighborhood.

# Southeast Lincoln / Hwy #2 Subarea Figure 6

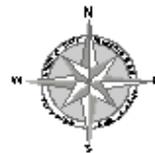


**Potential Future Street Network Along Highway 2 Corridor**

(R) Residential street connections per approved plans and conditions.

- Residential Streets
- Arterial Streets
- X** Street Closings

General location shown - details of specific future locations are to be determined.



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Lincoln City - Lancaster County Planning Dept.

- Pine Lake Road from Highway 2 to S. 84th Street would change from an arterial to a local roadway serving residential areas. As the triangular area south of Pine Lake, between Highway 2 and Pine Lake Road, west of 84<sup>th</sup> Street develops with residential uses the exact location of the residential road network will be established so that there is access to the new location of S. 84<sup>th</sup> Street.
- The intersection of Pine Lake Road (eastern segment) at Highway 2 will be changed to a right-in and right-out only intersection. This will benefit Highway 2 traffic and the Pine Lake neighborhood. Special accommodation for left hand turns will have to be made as long as the Southeast Rural fire station at this intersection is in use.
- A new intersection with a traffic signal should be created at the intersection of 87<sup>th</sup> and Highway 2 to facilitate movement into the new commercial center.
- Relocate Yankee Hill Road and S. 91<sup>st</sup> Street as shown on Figure 6 so that there is a continuous road from 84<sup>th</sup> and Yankee Hill Road heading northeast toward 91<sup>st</sup> and Highway 2 then north to Pine Lake Road. Instead of having both streets intersect Highway 2 at two skewed locations, this new realignment will provide better visibility and one safer right angle intersection at Highway 2. The County Engineer has already purchased the right-of-way south of Highway 2 for the Yankee Hill Road relocation.
- In order to facilitate through traffic moving from 98<sup>th</sup> and Pine Lake to 84<sup>th</sup> and Yankee Hill Road the following should be done: 1) a right hand turn lane should be developed on the northwest corner of 98<sup>th</sup> and Pine Lake Road in order to allow southbound right hand turns to be made, and merge with west bound traffic, without stopping at a signal, and 2) the future signal at this intersection should be timed to facilitate northbound left hand turns from Pine Lake Road onto 98<sup>th</sup> Street.
- Residents of **Cheney** would access the “new” relocated 91<sup>st</sup> Street/Yankee Hill Road northwest of the village between the railroad track and Highway 2. (See Figure 6) Full turning movements into Cheney at this intersection shall be permitted. The Cheney access to the new 91<sup>st</sup> Street/Yankee Hill Road will be temporarily relocated during the initial construction in 2004. Then a new permanent entrance will be built at a slightly different location to the south, connecting into the new 91<sup>st</sup> Street/Yankee Hill Road northeast of the railroad tracks. This relocation will allow the continuation of the full median opening for the new access road into Cheney.

Once the new 91<sup>st</sup> Street/Yankee Hill Road is constructed from Highway 2 to Yankee Hill Road, the segment of “old” Yankee Hill Road will be closed on both sides of the railroad crossing. The portion of “old” Yankee Hill Road immediately north of the future Jensen Park and west of the railroad tracks will remain for use for park access. Cheney’s east access to Highway 2 will be reviewed as part of a future study of the 98<sup>th</sup> and Highway 2 area.

- The Public Works Department, County Engineer and State Department of Roads may have comments on the arterial road network as annexation and zoning proposals with more specific details are submitted.

### **Issues Yet to Address**

- The 2000-2006 CIP includes the following in the subarea:
  - 1) S. 84<sup>th</sup> Street from 1/4 mile south of Old Cheney to 1/4 mile south of Highway 2 in Fiscal Year (FY) 2003-2004;
  - 2) S. 56<sup>th</sup> St. from Old Cheney Rd to 1/4 mile south of Pine Lake Rd in FY 2004-2005;
  - 3) Old Cheney Road from Highway 2 to 1/4 mile east of 84<sup>th</sup> St. in FY 2002-2003;
  - 4) Pine Lake Road from 56<sup>th</sup> to Highway 2 in FY 2005-2006.
  - 5) Pine Lake Road from 84<sup>th</sup> to 1/4 mile east of 98<sup>th</sup> beyond FY 2005-2006.
- The construction and timing of road improvements in the subarea must be coordinated and development. The phasing of commercial development should be tied to the timing of transportation improvements.
- Financing and the obligation of future developments to contribute to the cost of road improvements will need to be addressed in the future with specific development proposals.
- The area of the intersection of S. 98th Street with Yankee Hill Road and Highway 2, north of Highway 2 needs further study. This is a difficult intersection where three roads intersect at odd angles very close to the Highway 2. There has been discussion on if this intersection should remain, be closed or rebuilt in the future as this area urbanizes.

### **C. Residential Streets**

#### **Existing Conditions**

- Currently there are not any residential street connections between the Pine Lake and Edenton South/ Cheney Ridge neighborhoods.

#### **Future Needs**

- As existing acreage developments are surrounded by urban development, or transition to greater residential densities by subdivision, the upgrading and improvement of key residential streets, including connections with arterial roads must be completed. Prior to development approval, these areas impacted by annexation or adjacent to new developments should have streets brought up to an acceptable standard to satisfaction of the City of Lincoln Public Works and Utilities Department.
- The subarea plan provides that the main access point from Highway 2 to these neighborhoods would be just to the southeast of the Berean Church at the intersection of Highway 2 and Pine Lake Road. Unfortunately, this new north/south residential street requires the crossing of a wetland area. The need for neighborhood connections and access, however, is more important than the preservation of the wetland in this instance since there are not viable alternatives.
- As the property between the Pine Lake and Edenton South/ Cheney Ridge neighborhoods

develop the planned residential road connections need to be completed. The subarea plan provides for multiple connections between these areas (Pine Ridge Lane, Westshore Drive and S. 80<sup>th</sup> Street.) These residential connections are a typical requirement and integral part of providing access and alternate routes. These connections were planned as part of the original layout of the Pine Lake and Cheney Ridge neighborhoods. Without these connections traffic patterns are focused on a few residential streets.

- Pine Lake residents have expressed safety concerns about opening these planned roads. However, multiple routes are potentially safer than allowing residential traffic to have only a few routes. The new north/south connection to Highway 2, just east of the Berean Church provides an alternative to trips that may have gone through the Pine Lake area. Additionally, without these multiple connections, residents face substantially increased travel times and increased energy consumption

### **Issues Yet to Address**

- Residential street connections at Northshore Drive and S. 80<sup>th</sup> Street between Pine Lake and adjacent properties have yet to be resolved. The subarea plan shows that Pine Ridge Lane would connect Westshore Drive in Pine Lake with the adjacent property.

## **D. Railroads**

### **Existing Conditions**

- One active railroad line passes through the subarea. It is owned by Omaha Public Power District, and is primarily used to haul coal to its power plant on the Missouri River. This line has at-grade crossings at:
  - 1) Pine Lake Road west of 66<sup>th</sup> Street;
  - 2) S. 70<sup>th</sup> Street, north of Yankee Hill Road;
  - 3) S. 84<sup>th</sup> Street, a 1/4 mile south of Highway 2;
  - 4) Yankee Hill Road, west of 91<sup>st</sup> Street and
  - 5) S. 98<sup>th</sup> Street, south of Yankee Hill Road.
- There is potential for travel delays along highly traveled arterial streets where they cross railroads, potentially increasing travel times and air pollution.
- Andermatt LLC proposal to relocate a portion of the railroad tracks between S. 84<sup>th</sup> Street and Yankee Hill Road in order to expand the commercial area has been withdrawn.

### **Future Needs**

- Detailed development plans will need to focus on a buffer corridor to provide proper separation of the railroad from to the future urban residential uses. Development plans will also need to address the safety issues where both vehicles and pedestrians come in contact with the rail line. A buffer corridor, utilizing existing tree masses and wetlands, may be desirable to separate the railroads from the developing areas.
- The County Engineer is investigating the installation of signals and gates for the rail crossing on S. 84<sup>th</sup> and S. 120<sup>th</sup> (outside subarea). Provisions should be made for signals and gates at the railroad crossings of arterial streets.

### **Issues Yet to Address**

- While the railroad line is active, it is not heavily utilized. Long-term plans should be developed to schedule the trains at off-peak motor vehicle travel times or relocate the active railroad line. It would appear that future grade separations may be cost prohibitive given the small number of trains utilizing the railroad line.

## **E. Trails**

### **Existing Conditions**

- Existing hiker and biker trails within the current trails network extend only as far south as Pioneer Boulevard and the east side of S. 70th Street, which is outside of the subarea.

### **Future Needs**

- The Trails Plan (see Figure 8) shows an extension of the Antelope Creek trail as a single trail corridor crossing the study area and completing a connection to Jensen Park. The details of this alignment are not identified and will need to be addressed with the development of the use permit and preliminary plats in the subarea.
- The trails component of future commercial and residential areas will need to address the future trail connections required to serve the future urbanizing area and to link this network to the existing trails system. The trails and pedestrian system will need to focus on connecting the residential areas with the commercial areas, new school sites, and recreational areas.
- The Parks and Recreation Department may have additional comments regarding the annexation and zoning proposals as specific plans are submitted.

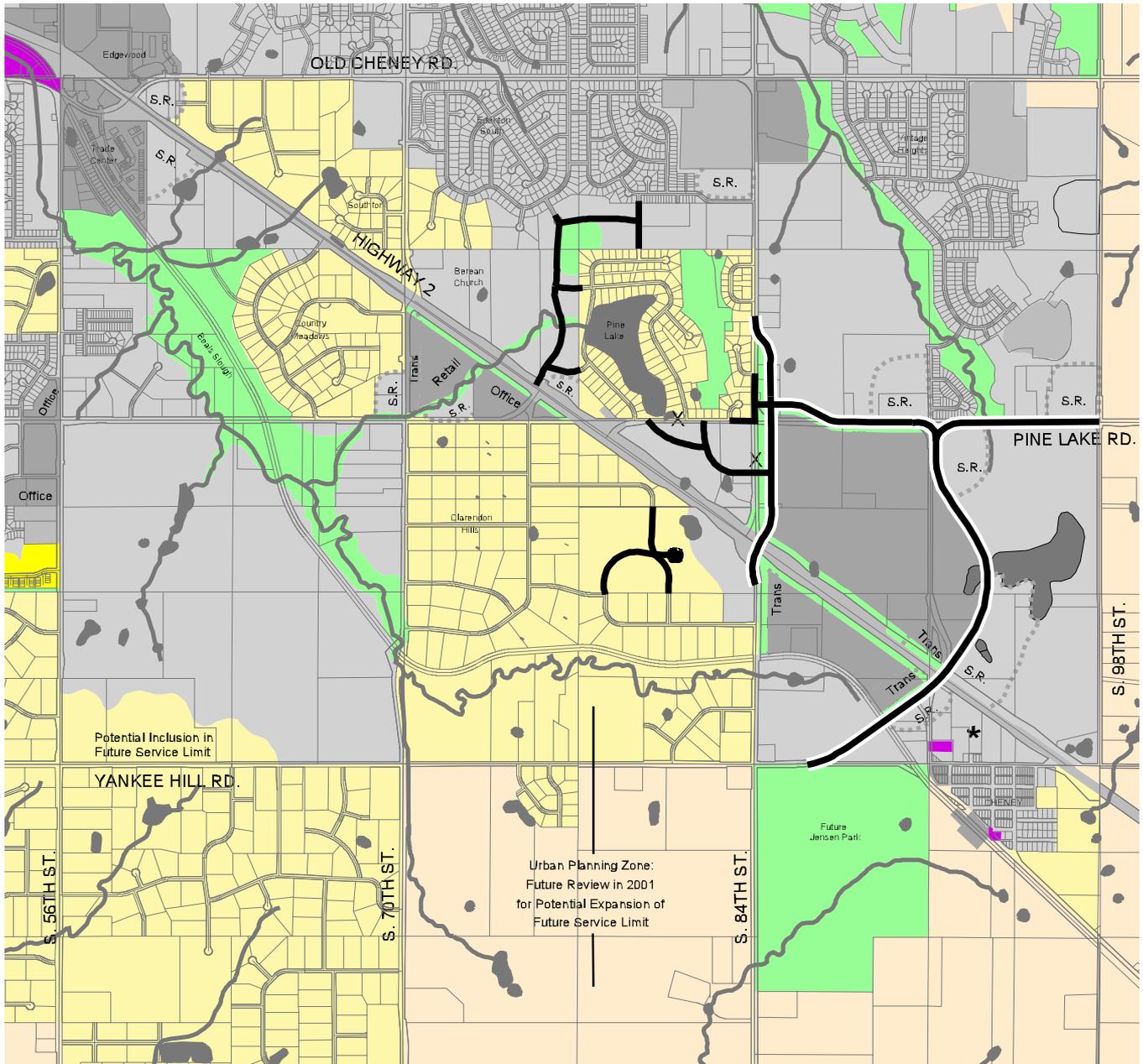
### **Issues Yet to Address**

- Potential grade separated trail crossings for the Antelope Creek trail are shown at Old Cheney Road, Pine Lake Road and Highway 2. The most critical grade separated crossing will be at Highway 2. Prior to the approval of annexation or zoning proposals which involve the Highway 2 trail crossing, the details of the grade separated crossing shall be resolved.
- A new generalized trail route from Country View Estates, west of 56<sup>th</sup> Street to the Beal Slough trail south of Pine Lake Road is shown. This route will need to be further reviewed as specific development plans come forward in this area.

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# Southeast Lincoln / Hwy #2 Subarea

## Figure 7



### Future Trails



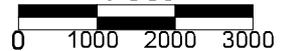
Future Grade Separations



Future Trails



Feet



General location shown - details of specific future locations are to be determined.



## **F. Beltway**

### **Existing Conditions**

- ! *South and East Beltway Study.* The South and East Beltway study corridor is to the south and east of the subarea. A single south corridor and three east corridors are under consideration for the current phase of this study which narrows the focus of the work program to a final single recommended beltway corridor alignment. The final phase of the Study is to complete all local and federal reviews of the Draft Environmental Impact Statement (DEIS) and amend the transportation element of Comprehensive Plan.

### **Future Needs**

- ! *Relationship of the Commercial Area to a South and East Beltway.* The location and construction of the beltway access to Highway 2 and other arterial streets will effect future north-south and east-west travel on the roadway network with traffic focusing on the arterial corridors radiating to and from the beltway access points.
- ! Upon completion of the beltway some of the through traffic trips will shift from Highway 2 to the beltway. (The completion of the beltway is often used as an assumption in transportation modeling done the by the City and traffic consultants.)

### **Issues Yet to Address**

- ! *Beltway Interchanges and Construction Timetable.* The final locations of interchanges and route locations and the timetable for implementation and construction of the South and East Beltway will have major implications for the traffic flow through the Subarea and the development potential for the balance of the Subarea.
- ! The completion of the beltway is an important element when reviewing the transportation impact of the regional commercial center at 84<sup>th</sup> and Highway 2. The full build out the regional center should be tied to the completion of the beltway, unless traffic studies prove that Highway 2 can function without the beltway construction. A substantial portion of the regional center could probably be built without exceeding the capacity of Highway 2 and adjacent arterial streets. Road improvements should be concurrent with development.

- **Efficient Use of Transportation Network;** land use decisions must consider the impacts on the transportation network. The proposed land uses are scaled to the capacity of Highway 2 and 84<sup>th</sup> Street and to retain the community's desire Level of Service C on the roads. Highway 2 is not just a roadway used by local residents, it is a highway that serves the whole community and region. The traffic flow capacity of this corridor should not be overloaded. It is also important to emphasize that the analytical model's future traffic capacity assumes the construction of the beltway and also assumes limited access and traffic signals along Highway 2.
- **Promote a Desirable Entryway;** standards for landscaping and architecture should be developed to promote a desirable entryway into Lincoln along Highway 2 — however, standards alone will have little impact if land use decisions strip the area with commercial uses, signs and cause the widening of Highway 2 to six lanes. It will be difficult to have enough landscaping to reduce the visual impact of potentially 9 or 10 traffic lanes (6 through, dual left and right turn lanes.) An open space corridor (approximately 200 feet from centerline) is shown along Highway 2, adjacent to the new commercial uses, as one part of having a desirable entryway with commercial development.

The subarea plan includes significant important land use decisions. In summary they include:

- C **Clarify the appropriate size and type of uses in the Center at 84<sup>th</sup> & Highway 2:** this subarea plan designates the area from approximately 91<sup>st</sup> to 98<sup>th</sup> for predominately residential use, while including a 44 acre tract for a mix of commercial uses at the northeast corner of 91<sup>st</sup> and Highway 2. The overall site includes a regional center with approximately 1.9 million SF of commercial space -- larger than the present Westfield shopping center. The plan encourages the planned center at 84<sup>th</sup> and Highway 2 to develop with a mix of uses, including residential and appropriate transitions to existing residential areas.
- C **Retention of Low Density Residential Character:** the character of this area today is predominately low density residential. The Comprehensive Plan encourages preserving and respecting the character of the existing neighborhoods. The impact on existing areas should be a priority in all land use and transportation decisions in this area. The low density residential designation is kept on existing neighborhoods. In addition, the property on the southwest corner of 84<sup>th</sup> & Highway 2 should remain low density residential. It does not have a safe access point to either Highway 2 or 84<sup>th</sup> Street. This site is fully integrated into the land use and road pattern of the surrounding neighborhoods and due to the features of the site can be developed residentially.
- C **Changes from Low Density to Urban Residential:** several vacant properties along Highway 2 are appropriate for urban residential. Development of residential is possible along Highway 2 and will retain the residential character of the area. Several of these properties have existing topography and trees which help screen the property from the highway while others may require additional screening.

These properties are key to the overall vision for the area. Commercial development on these properties could have significant transportation impacts, such as necessitating six lanes on both Highway 2 and 84<sup>th</sup> Street, and could impact existing residential uses. The impact on the traffic network of strip commercial may also impact the mobility of existing residents and a visual impact on the entryway into the community.