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# **Southwest/Northwest Growth Priority Analysis**

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**A Financial Impact Analysis  
Focused on Directional Growth Comparisons**

**Document presented to the Ames City Council  
and prepared by the  
Department of Planning and Housing  
December 19, 2006**



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### Objective of the Study:

The City of Ames faces a choice as to where future residential development in the City should occur. For several years the two main growth priority areas identified by the City Council in the Land Use Policy Plan (LUPP) have been the Southwest and Northwest priority growth areas (see figure 1).

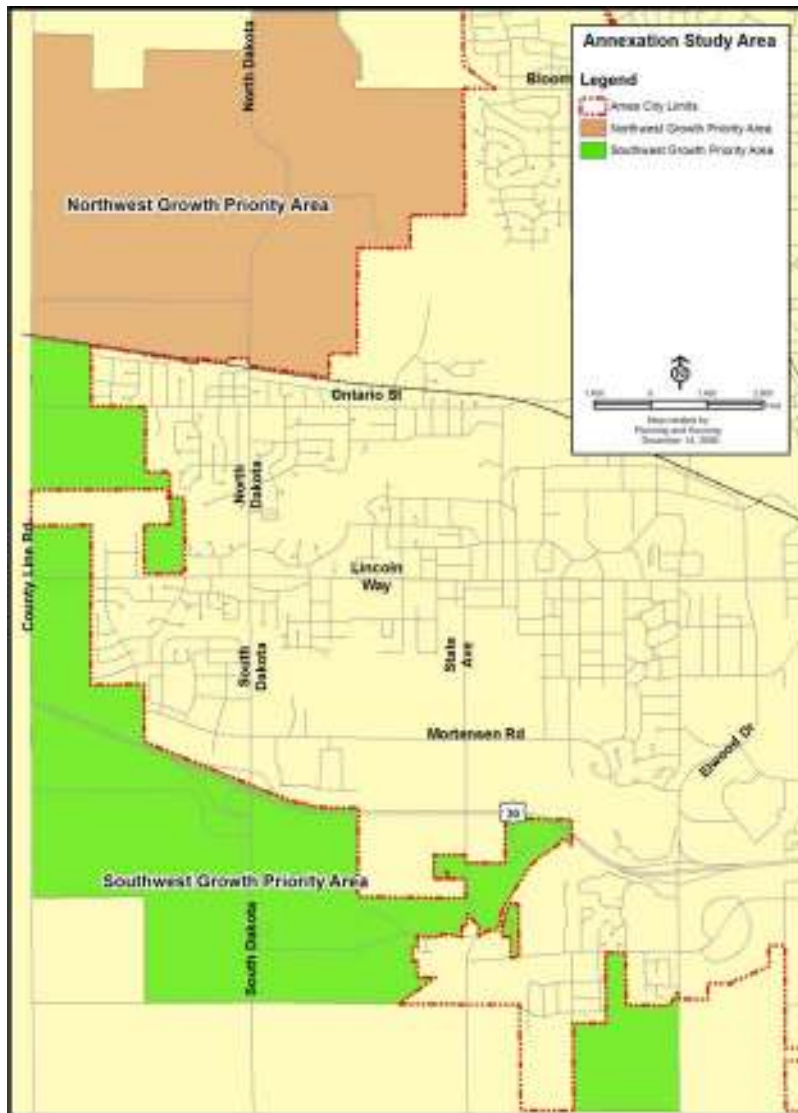


Figure 1 - Original Growth Priority Areas

In February of 2006, an official annexation request for roughly 442 acres in the Northwest Growth Area was received from the Fieldstone Development L.C. group (see Appendix 1 for the area representing the annexation request). In May of 2006, the City Council directed staff to conduct a more detailed benefit/cost analysis of initial growth sub-areas within both the Northwest and Southwest.

After further analysis, staff divided the two original growth priority areas into sub-areas. Those sub-areas were delineated either by natural elements or by the need for different utility services.

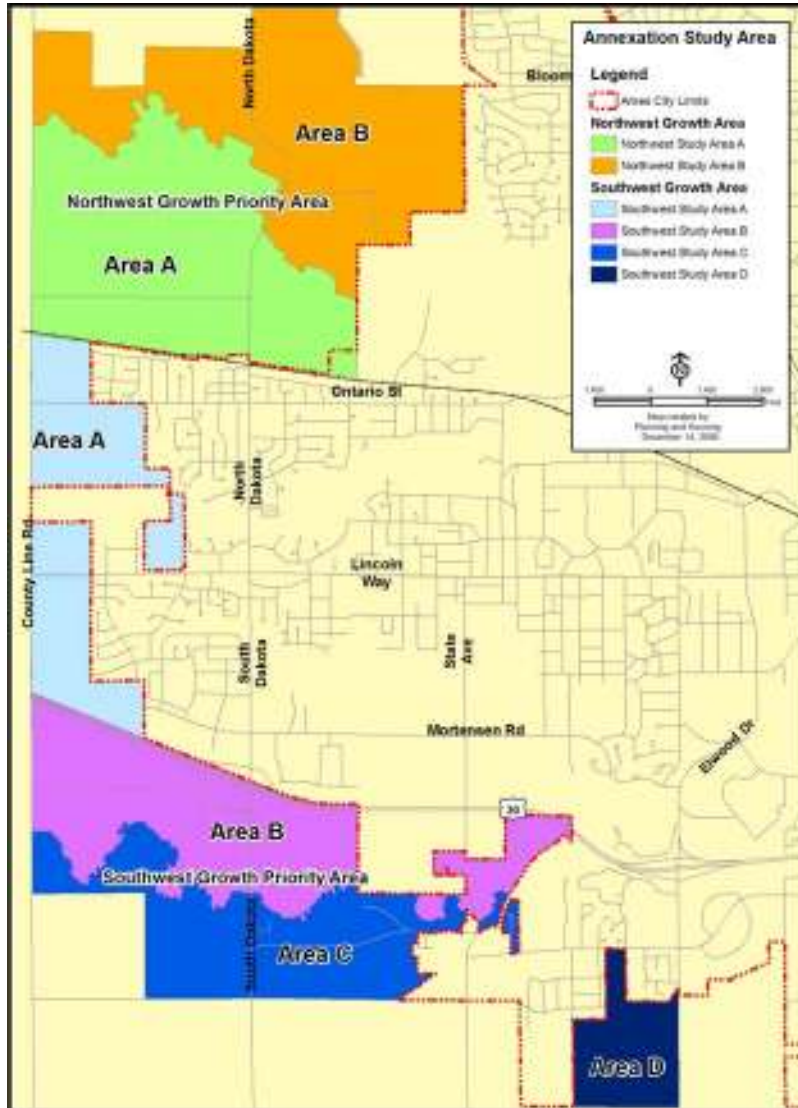


Figure 2 - Growth Priority Study Areas

For the purposes of this analysis, one primary study area has been identified in each of the growth priority areas (see Figure 3). These two areas are contiguous to the City limits and would be the next logical areas to serve with sanitary sewers. The primary study area in the Northwest growth priority area is delimited by Onion Creek to the North, the railroad tracks to the South, County Line Road to the West and the existing City boundary to the East. The primary study area in the Southwest growth priority area is delimited by US Highway 30 to the North, Worle Creek to the South, County Line Road to the West and the current City boundaries to the East.



Figure 3 - Primary Study Areas

The following table summarizes the number of acres, gross and net, extracted from the entire growth priority areas as well as from the two primary study areas shown above.

**Table 1 - Growth Priority/Study Area Gross and Net Acres**

<b>Area</b>	<b>GROSS Acres</b>	<b>NET Acres</b>
<b>Northwest Growth Area</b>	<b>1,677</b>	<b>762</b>
Primary Study Area	857	442
<b>Southwest Growth Area</b>	<b>1,748</b>	<b>780</b>
Primary Study Area	821	193

Analysis of these primary study areas has allowed staff to estimate the cost of public infrastructure to serve each area, and to develop a final cost per acre for each area that would allow for comparisons. This information can guide the City Council in determining which direction should be selected to facilitate growth that will lead to the population goal defined in the Land use Policy Plan.

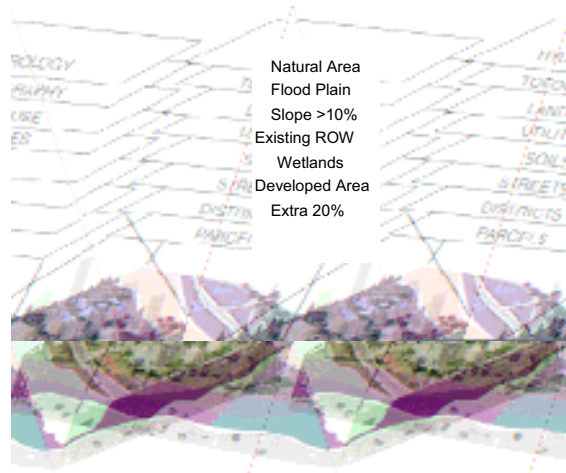
This analysis, similar to the Annexation Study Phase II completed in February 2000, has a goal to identify the net developable acres in both study areas, and then estimate the cost of public infrastructure that will be required to serve the projected population within each study area.

This report also addresses various issues raised by members of the City Council and the community at large, including the following:

- Pre-existing development, including commercial development
- Pre-existing infrastructure
- Cost for infrastructure extensions
- Impact on school district enrollments
- Impact from lands owned by ISU

**Land Analysis:**

To get a better understanding of the study areas and to accurately identify the amount of net acreage available, the City of Ames Geographic Information System (GIS) was used to extract information from different sources and layers of information. The types of layers used, along with source documents, are shown in Table 2.



**Table 2 – Layers of Information used to calculate Net Acres**

LAYER	SOURCE	APPENDIX
Natural Areas	Norris Study, 1995	2
Floodplain Areas	FEMA, Q3 Flood Insurance Rate Map (FIRM)	3
Steep slopes ( $\geq 10\%$ )	IDNR, geological survey 1998	4
Existing Right-of-way	Public Works GIS Data	5
Existing wetlands	IDNR, 2005	6
ISU/Affiliated Land	Story County Assessor	7 and 8
Pre-Developed Areas	Visual Inspection of Aerial Photography	9

*\* An extra 20% is also subtracted for future right-of-way*

As noted in Table 2, Appendices 3 through 9 show graphical representations of the various layers of information. Additional explanation is needed for three additional appendices.

The first issue relates to previous investments in commercial property adjacent to either of these study areas. Appendix 10 shows existing commercial zones areas in west Ames. The largest commercially zoned area adjacent to either study area is located on the west side of South Dakota along Mortensen Road. While a relatively small amount of pure commercial development has occurred at this location, several “mixed use” commercial/residential structures have been built. There are still approximately 22 acres of vacant commercially zoned land in this location.



The second issue relates to land owned or controlled by Iowa State University and the likelihood of that land being developed privately. Appendices 7 and 8 show land owned by the University or one of its affiliated organizations, such as the Committee for Agricultural Development or the Iowa State University Foundation. Staff met with ISU representatives several times during the course of this study. These representatives stated that the University has no intention of making any of these lands available for private development. Rather, the University's long-range plan places a high premium upon holding onto these lands for future teaching and research uses in locations convenient to the main campus. This is particularly true for University land within or adjacent to the Southwest growth area. Furthermore, University affiliates are continuing their efforts to acquire additional agricultural lands immediately south of the City for these same long-term purposes. Staff was assured, however, that the University has no intention of acquiring any unincorporated lands that lay within the City's Southwest Growth Area.

Finally, it should be noted that development of land throughout many parts of the priority growth areas raises the possibility of eventual creation of annexation islands. The Code of Iowa generally prohibits annexations that create such islands. Appendix 11 shows these potential annexation islands. Neither of the primary study areas currently under consideration would create such an island. However, they could contribute to the likelihood of islands during later phases of annexation and development.

The overall impact of the conditions described by these layers is shown below. Table 3 shows the number of acres and percentages extracted from each of the previously mentioned layers. To get the final net acres for these primary study areas (Figure 4), the GIS system "merged" all of the layers together and made sure no overlapping areas were remaining. Figure 4 graphically displays the net developable acres in both primary study areas.

**Table 3 – Number of Acres extracted from each Layer\***

LAYER OF INFORMATION	Northwest Primary Study Area		Southwest Primary Study Area	
	# of Acres	Percent of gross area	# of Acres	Percent of gross area
Acres (Gross)	857		821	
GIS Net Result	553		242	
Highly Natural Area	133	15.56%	99	12.12%
Flood Plain (using Q3)	55	6.37%	93	11.34%
Slope $\geq$ 10%	113	13.16%	112	13.67%
Existing ROW (including RR and parcels)	43	5.04%	233	28.36%
Wetlands	5	0.63%	3	0.37%
ISU/Affiliated Land	26	3.03%	245	29.88%
Land Developed	74	8.60%	73	8.89%
Other 20% (for future ROW, etc)	111		48	
<b>Final Acres (Net)</b>	<b>442</b>	<b>51.6%</b>	<b>193</b>	<b>23.6%</b>

\* Overlapping layers. The final value has been generated using a GIS system

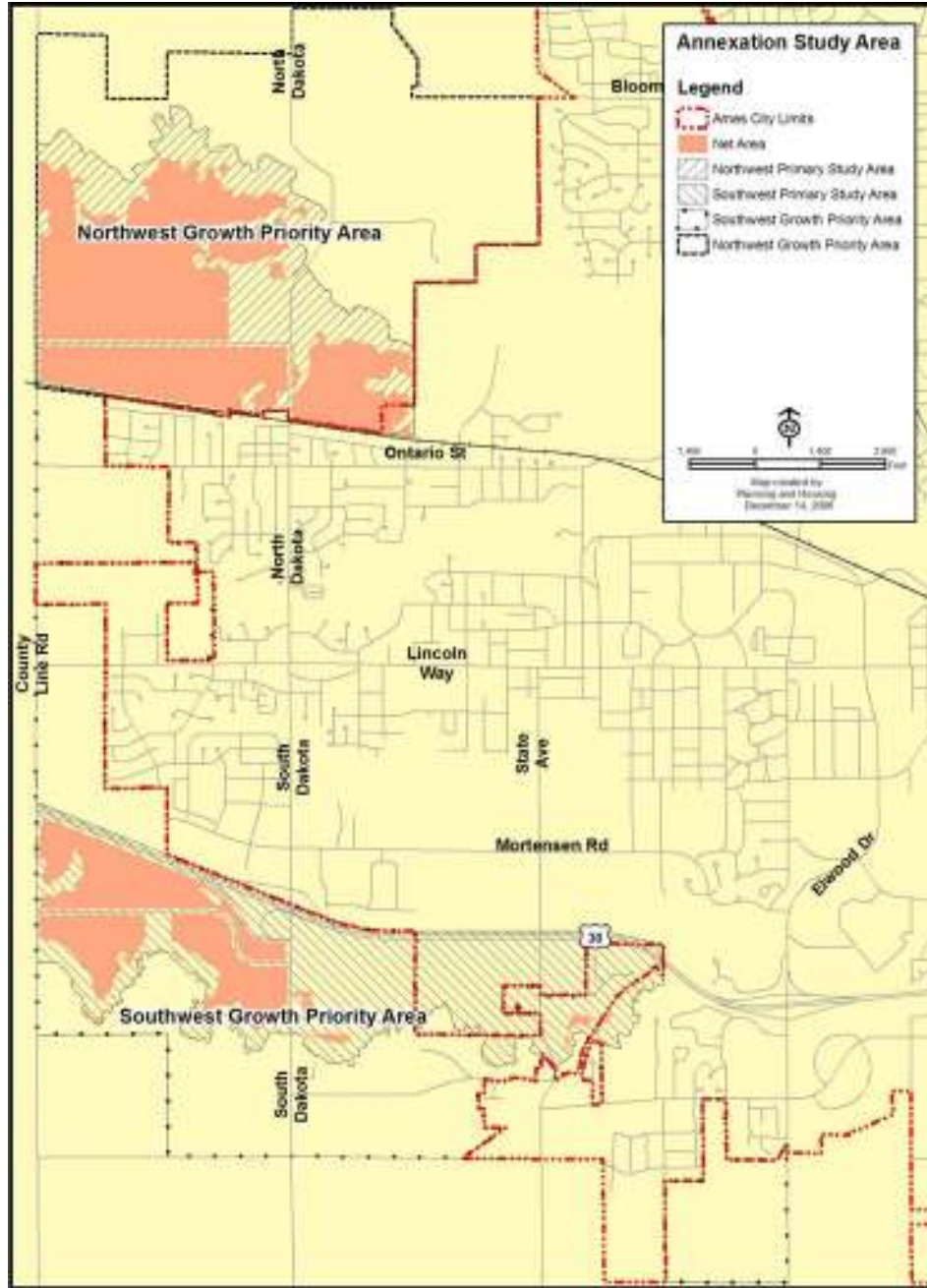


Figure 4 - Net Developable Land in Primary Study Areas

### Population Assumption:

The City's Land Use Policy Plan (LUPP) contemplates a City population of 60,000 to 62,000 by the year 2030 (*LUPP, p. 14*). The plan lays out policies and future land use designations to accommodate that growth. This study identifies population estimates for the Northwest and Southwest primary study areas based on data provided by the Census Bureau and on historical data from the City.

The potential population in each growth area was estimated by multiplying the net developable acres by the number of dwelling units projected for each study area (see Table 4). Once the number of dwelling units was determined, these numbers were multiplied by the Average Household Size of 2.30 to arrive at a total potential population for each study area. Staff used a number of dwelling units per net acre of five, which was determined in the Land Use Policy Plan Evaluation of 2002 to be the historical average. The Average Household Size (formerly known as people per dwelling unit) is taken from the 2000 Census.

**Table 4 – Population Estimates for Study Area**

Current Population for Ames	52,319	<i>(2004 Estimate)</i>
Average Household Size	2.30	<i>(2000 Census)</i>
Number of dwellings/Acre	5.00	<i>(Based on historical city-wide average of 5 per net acre)</i>

	<b>Added Dwellings</b>	<b>Added Population</b>	<b>New Total Population</b>
Northwest Primary Study Area	2,212	5,088	57,407
Southwest Primary Study Area	964	2,217	54,536

A related question regards how much additional population growth remains within subdivisions already approved within the current city limits before they are completely built out (see Table 5 and Figure 4). To help answer this question, a list of active residential subdivisions was created. The number of lots left to be developed and the estimated populations are shown in Table 5 and Figure 4, along with the estimated number of dwelling units that will likely be added to the City within these subdivisions.

**Table 5 – Active Subdivisions**

<b>Subdivision</b>	<b>Estimated Added dwellings</b>	<b>Estimated Added Population</b>
Taylor Glen	35	80
Ringgenberg Farm	351	808
Sunset Ridge	274	631
Northridge Heights	212	488
South Fork	40	93
Somerset	76	176
<b>TOTAL</b>	<b>989</b>	<b>2,276</b>

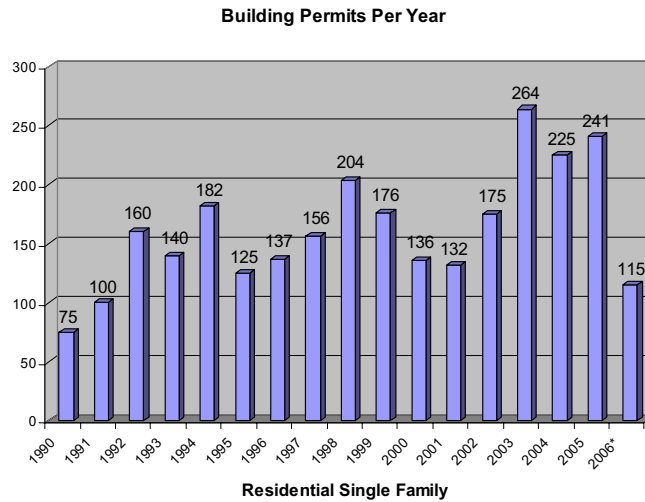


**Figure 5 - Active Subdivisions**

Subsequent sections in this study will assume that this added population of 2,276 people can be added and accommodated within the City.

Using the average number of building permits issued every year for the past ten years for the single family type of residential structure (180) (see Building Permit chart below), it is estimated that there are approximately four (4) to six (6) years left before complete build-out of the City within these existing residential subdivisions.

It should be noted that a considerable amount of land laying outside the City limits remains undeveloped within that portion of the Southwest Growth Area east of County Line Road between US 30 and the railroad tracks (Area A on Figure 2). While this land would provide the most orderly expansion for City growth in west Ames, none of the current property owners have expressed a desire to annex and develop their land at this time. Therefore, this area is not included in the build out projection.



When the estimated population from the active subdivisions is added to the estimated population from the two designated growth areas (including all six study areas), the total population estimates are as shown in Table 6.

**Table 6 - Expanded Population Estimates**

	<b>NET Acres</b>	<b>Added Dwellings</b>	<b>Added Population</b>	<b>Total Population</b>	<b>Active Subdivision Population</b>	<b>Projection Population</b>
<b>Northwest growth Priority</b>						
Sub Area A (Study Area)	442.42	2,212	5,088	57,407	2,276	59,689
Sub Area B	319.75	1,599	3,677	55,996	2,276	58,272
<b>TOTAL</b>	<b>762.16</b>	<b>3,811</b>	<b>8,765</b>	<b>61,084</b>	<b>2,276</b>	<b>63,360</b>
<b>Southwest Growth Priority</b>						
Sub Area A	236.38	1,182	2,718	55,037	2,276	57,313
Sub Area B (Study Area)	193.80	964	2,217	54,536	2,276	56,812
Sub Area C	252.80	1,264	2,907	55,226	2,276	57,502
Sub Area D	98.21	491	1,129	53,448	2,276	55,724
<b>TOTAL</b>	<b>780.18</b>	<b>3,901</b>	<b>8,972</b>	<b>61,291</b>	<b>2,276</b>	<b>63,567</b>

When combined with the anticipated population growth from existing subdivisions, both growth priority areas would provide most of the population growth needed to reach the City’s targeted population defined by the LUPP of 60,000 to 62,000 by the year 2030.

Given the growth pattern in Ames over recent years, four to six years supply of residential land is a comparatively small number. It frequently takes at least two to four years for developers to acquire new land and to bring it through the required processes of annexation, rezoning, master planning, sketch planning, preliminary platting and final platting, plus installation of infrastructure, before homes can be built. These processes can be lengthy and are one of the major reasons for the City to make a decision soon regarding the direction for future City growth.

### School District Analysis:

An important aspect of land development within the City is the impact on school district enrollment figures. Recent residential growth to the north of Top O’Hollow and Bloomington Road has directed many Ames students into the Gilbert Community School District. Some of the growth to the southwest has occurred within the United Community School District. Meanwhile, community members and the City Council have gained a growing awareness of the impact of level or declining student enrollments on the Ames Community School District.

Using data from the previous steps, the number of acres within each school district was calculated for each of the growth study areas. (See table 7 and Figure 6 for a better visual representation)

**Table 7 – School Districts within each Primary Study Area**

School Districts in NET area	Southwest Primary Study Area		Northwest Primary Study Area	
	Area acres	% of Net area	Area acres	% of Net area
Ames	82	42%	206	47%
Gilbert	-	0%	56	13%
United	111	58%	180	41%
<b>TOTAL</b>	<b>193</b>		<b>442</b>	

Utilizing the same technique used to estimate the number of dwelling units and added population, the number of dwelling units within each School District is estimated in Table 8.

**Table 8- Estimated Dwelling Units in School Districts**

Area	Southwest Primary Study Area		Northwest Primary Study Area	
	Area – acres	Dwelling Units	Area – acres	Dwelling Units
Ames	82	410	206	1,030
Gilbert	-	0	56	280
United	111	554	180	900
<b>TOTAL</b>	<b>193</b>	<b>964</b>	<b>442</b>	<b>2,210</b>

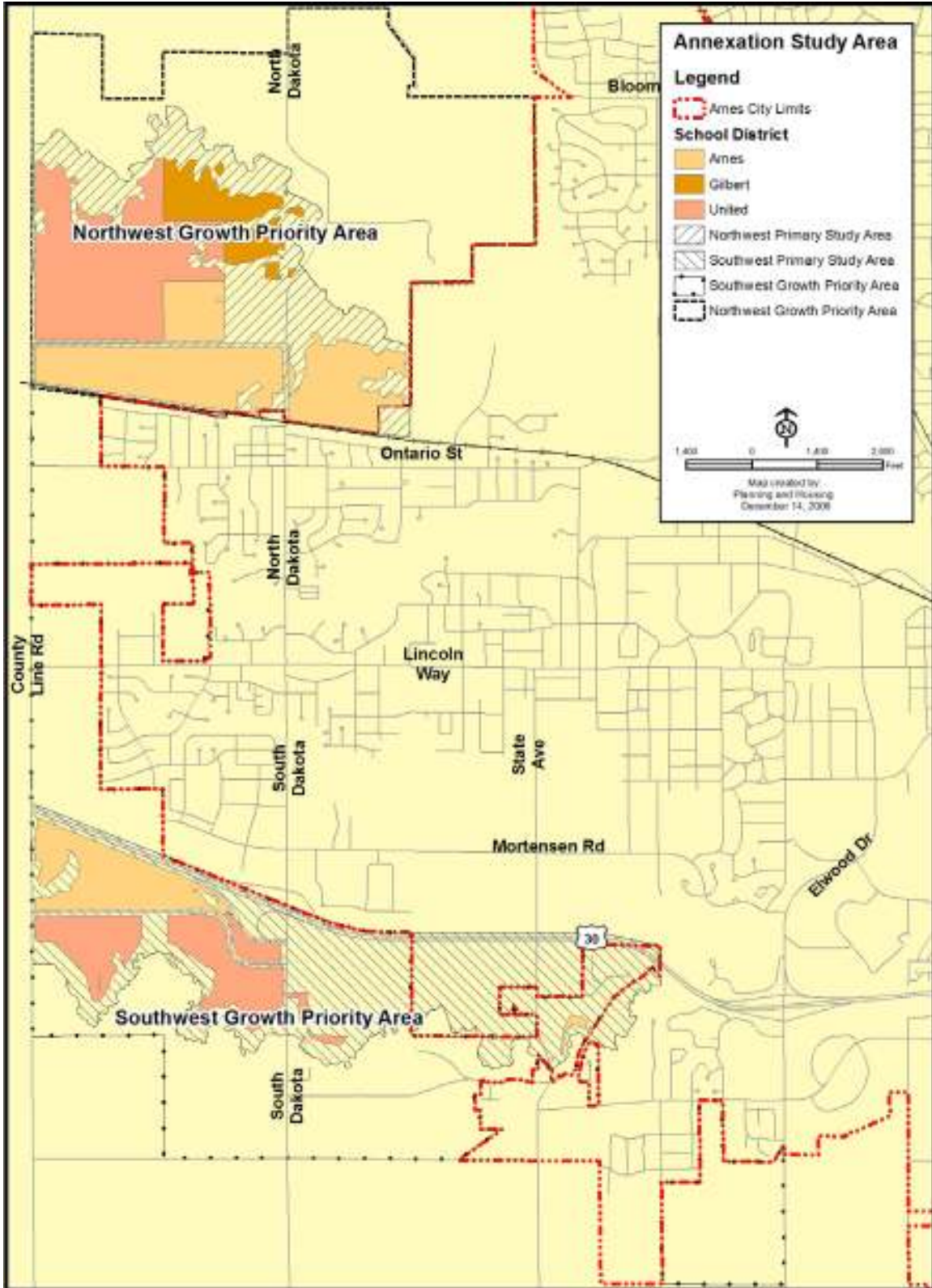
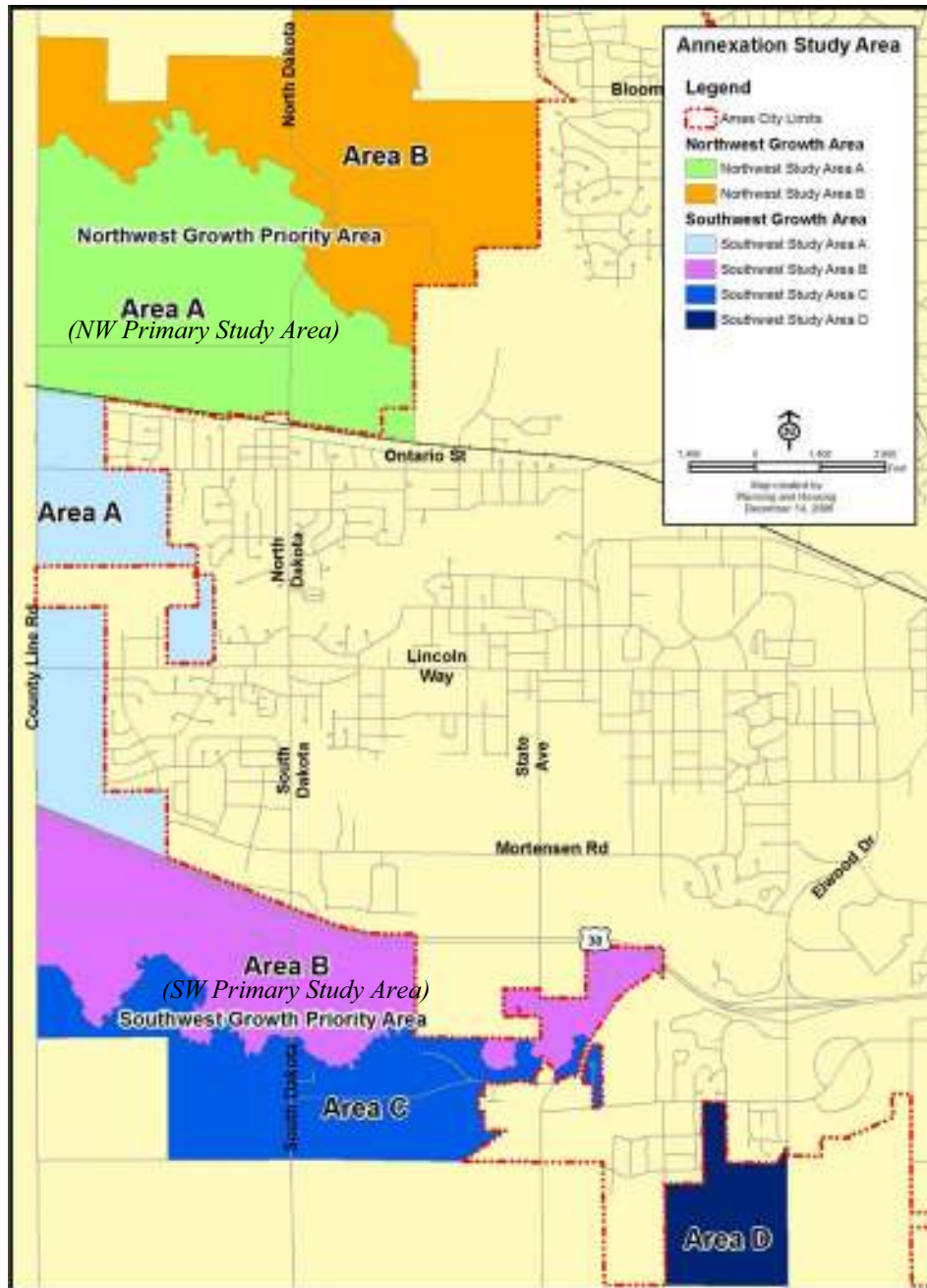


Figure 6 – Developable Land within School Districts

**Financial Analysis of NW/SW Growth Alternatives:**

Following is a summary of the estimated financial impact of City of Ames growth alternatives to the Northwest or Southwest. Originally staff focused on the two primary study areas, meaning NW Area A and SW Area B. However, due to the interrelatedness of the various study areas and the need to identify “next steps” following initial investments in public infrastructure, the financial analysis was expanded to include both growth priority areas with details for all six study areas. These study areas are again shown in Figure 7 below.



**Figure 7 - Growth Priority Study Areas**



By extending the financial analysis to these six study areas, staff believes that the City Council will have a better basis on which to make both this immediate decision and longer term decisions related to future City expansion. Information will be presented regarding alternative growth locations with their respective estimated costs.

The analysis is based on a review of the Northwest and Southwest growth priority areas by the Planning and Housing Department staff which determined that a total of 780 net acres are available in the entire Southwest growth priority area and a total of 762 net acres are available in the entire Northwest growth priority area. The financial analysis is based on complete build-out of both areas at a rate of five dwelling units per acre, an average household size of 2.3, and an average of 180 new single family units being constructed per year.

This study focuses only on residential development. While it was not assumed that commercial development would occur in either area, such growth would actually have a greater positive impact on property tax. These financial estimates reflected in this report are based on current costs, input from City departments, and further review by the Director of Finance. It is important to note that the same assumptions were used for both growth priority areas to provide the same relative basis for comparison.

Financial estimates were based on full build-out of the respective growth priority areas. Much of the City's capital investment and related debt service is required at the beginning of the development, while related revenue will be realized as the development progresses and is completed. To evaluate the differences in cash flow, staff provided an analysis of debt service coverage over the life of the development.

The study analyzes infrastructure costs from two perspectives. The first, **Perspective 1, analyzes the total costs of infrastructure, regardless of who pays for these expenses.** It is important to note that the Fieldstone developers have indicated a desire to build a Village in hopes of benefiting from the City's Capital Investment Strategy. That strategy currently only applies to the Southwest Growth Priority Area. If the City Council decides to extend this Strategy to the Northwest Growth Priority Area, this could result in the City paying any or all of the costs associated with constructing the major sewer main, water main and arterial street paving.

It must also be noted, however, that the current Fieldstone proposal does not meet the city's Village ordinance requirements. Either the developers' proposal or the City's ordinance must thus be changed before this development could qualify for public incentives under the Capital Investment Strategy.

This analysis also includes a second scenario for financing infrastructure costs. **Perspective 2 reflects the City's current subdivision ordinance.** That ordinance requires developers to pay for only extension of utilities and streets through their subdivision, and calls for the City to bear the cost of larger infrastructure ("oversizing") required to serve locations beyond the subdivision.

Under both perspectives, an assumption of a development rate of 180 single family homes per year was made, which is the average number of single family residential building permits issued by the City of Ames over the past 10 years. At this pace, both priority growth areas require approximately 21 years for full build-out. It was also assumed that required capital improvements would be funded by abated General Obligation bonds at 4% interest over 12 years.

The report makes a clear distinction between perspectives 1 and 2 for each type of utility infrastructure and streets improvement for each of the study areas. Figure 8 is a graphical representation of the entire infrastructure that will be required in both growth priority areas.

#### **Water Utility:**

Under perspective 1, the Northwest growth priority area would require an investment of \$3,643,855 for the water utility system. Under the same perspective, the Southwest growth priority area would require an investment of \$4,230,994.

Under perspective 2, the capital investment for the Northwest growth priority area would be \$838,062 as opposed to \$934,824 for the Southwest growth priority area.

All the cost reflected in table 10 and 11 are estimates based on conceptual modeling by the engineers of Public Works Department.

#### **Sanitary Sewer Utility:**

Tables 10 and 11 summarize the capital investment required for both the Northwest and Southwest growth priority areas.

Under perspective 1, the Northwest growth priority area would require an investment of \$3,171,694 for the sanitary sewer utility. Under the same perspective, the Southwest growth priority area would require an investment of \$3,639,896.

Under perspective 2, the capital investment for the Northwest growth priority area would be \$1,116,274 as opposed to \$960,348 for the Southwest growth priority area.

All the costs reflected in Tables 10 and 11 are estimates based on conceptual modeling by the engineers of Public Works Department. If City Council would decide to expand into the Northwest growth priority area, a detailed routing study would need to be conducted by an outside consultant. This type of study has already been accomplished in the Southwest growth area (Worle Creek Sanitary Sewer Extension Study).

**Street Improvement/Transportation System:**

The Street Improvement and Transportation System costs shown in this report have been derived from the Ames Area Metropolitan Planning Organization (MPO) Long Range Transportation Plan that was published in 2005. Using this document as a reference, staff has been able to clearly identify all of the major street and transportation system improvements that will be required for each of the growth priority areas. Furthermore, staff has been able to assign each of the major projects to each of the study areas.

Overall, under perspective 1, the Northwest growth priority area would require an investment of \$2,259,956 for street improvements plus an additional \$5,000,000 for the transportation system. This five million dollars would be dedicated to the construction of a grade separation at the intersection of North Dakota Avenue and the Union Pacific railroad. In the Southwest growth priority area, the amount of dollars required to fulfill the Perspective 1 requirements would be \$9,979,675 for the street improvements and an additional \$2,100,000 for the transportation system require for the widening of South Dakota Avenue between Lincoln Way and Mortensen Road.

Under Perspective 2, the Northwest growth priority area would require an initial investment of \$378,318 for the street improvement phase and additional \$5,000,000 for the transportation system. Because it would be impossible for the City to create an assessment district to recuperate costs for the overpass, staff has included the same amount of dollars invested in perspective 2 for this project. The Southwest growth priority area would require a capital investment of \$2,073,826 for the street improvement and an additional \$2,100,000 for the transportation system. Once again, the transportation system cost will procure some difficulties for the City to recuperate some of the cost related to the project due to the fact that it is not related to a specific development but to the entire growth priority area. Table 9 describes in detail all of the different costs related to specific projects for each of the different perspectives and growth priority areas described above.

**Electric Services Utility:**

Part of the Northwest growth priority area is within the City's electric utility service area. This area will add approximately 250 customers with a capital cost of \$244,750. The capital cost would be recovered in approximately 2.5 years. Site plans for the development must consider the existing 69/161 kV transmission line on 215<sup>th</sup> Street. In accordance with our current policy, developer would be responsible for the cost of any relocation of this line if needed.

The Southwest growth priority area is outside the City of Ames Electric service territory.

**Table 9- Street Improvement and Transportation System Costs**

	<b>Perspective 1</b>	<b>Perspective 2</b>
<b>Northwest Growth Area</b>		
<b>Area A</b>		
215 <sup>th</sup> St. Paving	\$1,859,956	\$378,318
ND/Ontario Intersection	\$200,000	
Ontario-3 lanes	\$200,000	
North Dakota Overpass	\$5,000,000	\$5,000,000
<b>Area B</b>		
None		
<b>Southwest Growth Area</b>		
<b>Area A</b>		
County Line Rd.	\$942,936	\$185,752
Mortensen Rd. Extension	\$2,800,000	\$588,000
<b>Area B</b>		
County Line Rd.	\$1,272,508	\$271,218
240 <sup>th</sup> St.	\$2,101,473	\$423,535
<b>Area C</b>		
Dartmoor Rd.	\$1,389,669	\$280,808
County Line Rd.	\$461,153	\$116,444
County Line Road Culvert	\$600,000	\$600,000
South Dakota Avenue Bridge	\$1,500,000	\$1,500,000
<b>Area D</b>		
Elwood Dr.	\$1,011,936	\$208,069

NW/SW Growth Alternatives –Perspective 1

	Northwest Area			Southwest Area				
	Area A	Area B	Overall	Area A	Area B	Area C	Area D	Overall
<b>Net Developable Acres</b>	442	320	762	236	193	253	98	780
<b># of Single Family Units</b>	2,212	1,599	3,811	1,182	964	1,264	491	3,901
<b>Added Population by Area</b>	5,088	3,677	8,765	2,718	2,217	2,907	1,129	8,971
<b>Total Estimated Population</b>	<b>59,683</b>	<b>58,272</b>	<b>63,360</b>	<b>57,313</b>	<b>56,812</b>	<b>57,502</b>	<b>55,724</b>	<b>63,566</b>
<b>Infrastructure Costs</b>	<b>Total Cost</b>	<b>Total Cost</b>	<b>Total Cost</b>	<b>Total Cost</b>	<b>Total Cost</b>	<b>Total Cost</b>	<b>Total Cost</b>	<b>Total Cost</b>
Street Improvements	\$ 2,259,956	\$ -	\$ 2,259,956	\$3,742,936	\$3,373,981	\$1,850,822	\$1,011,936	\$ 9,979,675
Transportation System	\$ 5,000,000	\$ -	\$ 5,000,000	\$ -	\$ -	\$2,100,000		\$ 2,100,000
Sanitary Sewer	\$ 2,252,330	\$ 919,364	\$ 3,171,694	\$ -	\$1,589,300	\$1,651,400	\$ 399,196	\$ 3,639,896
Water	\$ 1,701,249	\$1,942,606	\$ 3,643,855	\$1,052,076	\$ 983,018	\$1,847,241	\$ 348,659	\$ 4,230,994
<b>Totals</b>	<b>\$11,213,535</b>	<b>\$2,861,970</b>	<b>\$14,075,505</b>	<b>\$4,795,012</b>	<b>\$5,946,299</b>	<b>\$7,449,463</b>	<b>\$1,759,791</b>	<b>\$19,950,565</b>
Cost per Acre	\$ 25,370	\$ 8,944	\$ 18,472	\$ 20,318	\$ 30,810	\$ 29,455	\$ 17,957	\$ 25,578

Table 10 - Perspective 1

NW/SW Growth Alternatives: Perspective 2

	NW GROWTH AREA			SW GROWTH AREA				
	Area A	Area B	Overall	Area A	Area B	Area C	Area D	Overall
<b>Net Developable Acres</b>	442	320	762	236	193	253	98	780
<b># of Single Family Units</b>	2,212	1,599	3,811	1,182	964	1,264	491	3,901
<b>Added Population by Area</b>	5,088	3,677	8,765	2,718	2,217	2,907	1,129	8,971
<b>Total Estimated Population</b>	<b>59,683</b>	<b>58,272</b>	<b>63,360</b>	<b>57,313</b>	<b>56,812</b>	<b>57,502</b>	<b>55,724</b>	<b>63,566</b>
<b>Infrastructure Costs</b>	<b>Total Cost</b>	<b>Total Cost</b>	<b>Total Cost</b>	<b>Total Cost</b>	<b>Total Cost</b>	<b>Total Cost</b>	<b>Total Cost</b>	<b>Total Cost</b>
Street Improvements	\$ 378,318	\$ -	\$ 378,318	\$ 773,752	\$ 694,753	\$ 397,252	\$ 208,069	\$ 2,073,826
Transportation System	\$ 5,000,000	\$ -	\$ 5,000,000			\$ 2,100,000		\$ 2,100,000
Sanitary Sewer	\$ 705,056	\$ 411,218	\$ 1,116,274	\$ -	\$ 445,050	\$ 462,300	\$ 52,998	\$ 960,348
Water	\$ 411,262	\$ 426,800	\$ 838,062	\$ 285,186	\$ 196,240	\$ 377,938	\$ 75,460	\$ 934,824
<b>Totals</b>	<b>\$ 6,494,636</b>	<b>\$ 838,018</b>	<b>\$ 7,332,654</b>	<b>\$1,058,938</b>	<b>\$1,336,043</b>	<b>\$3,337,490</b>	<b>\$ 336,527</b>	<b>\$ 6,068,998</b>
Cost per Acre	\$ 14,694	\$ 2,619	\$ 9,623	\$ 4,487	\$ 6,923	\$ 13,192	\$ 3,434	\$ 7,781

Table 11 - Perspective 2

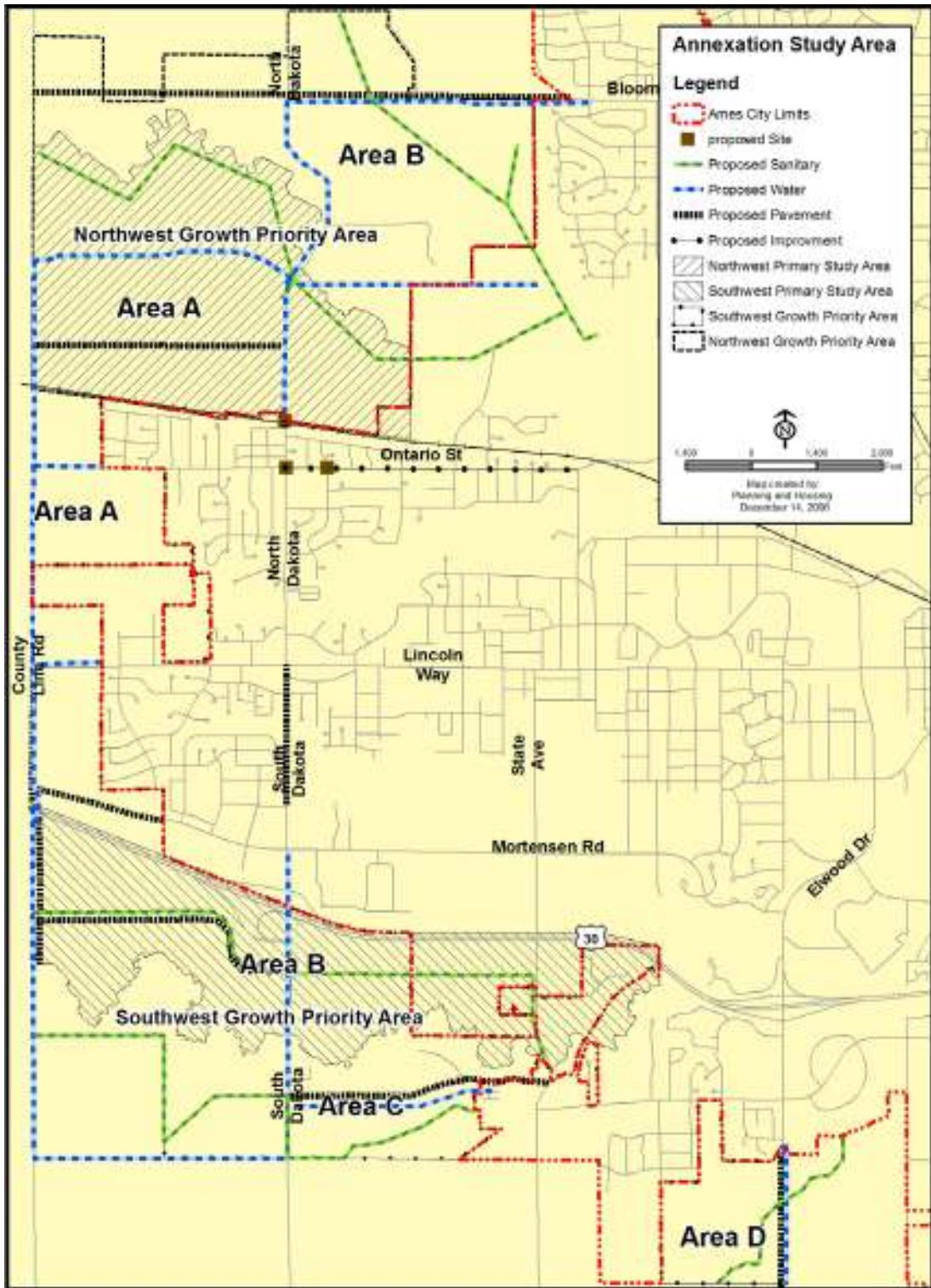


Figure 8 Proposed Infrastructure

### Growth impacts on operating budget:

The purpose of this study is to differentiate costs between the two study areas. While growth in any direction will bring significant operating budget costs, there is not a higher cost to grow in any one direction as opposed to another. This study has assumed that the cost per acre to provide City services is not affected by location. Therefore, operating budget costs will be similar whether growth occurs to the Southwest or the Northwest.

### Recent Capital Investments:

City support for development of new areas in west Ames is not new. Since the current LUPP plan was adopted in 1997, the City has made significant investments that benefit the western portion of the community (see table 12). While many of these improvements are physically located in or abutting the Southwest growth priority area, their impacts and benefits extend across the entire western part of Ames, including the Northwest growth priority area. This is particularly true for the western water pressure district and for the US 30/South Dakota transportation system improvements.

**Table 12 – Recent Investment in Growth Priority Areas**

U.S. 30/ South Dakota Interchange	\$ 6,228,800
Widening of South Dakota	\$ 2,480,500
Traffic Signal at South Dakota/Mortensen	\$ 128,700
Mortensen Road extension West	\$ 767,900
Water tower at County Line Road	\$ 1,151,400
Water/Sewer infrastructure oversize to Ferguson subdivision	\$ 188,616
Fire Station #3	\$ 1,310,000
<b>TOTAL</b>	<b>\$12,255,916</b>

### Non-Directional Capital Costs:

Regardless of the direction the City grows, it is clear that some other capital costs will occur. For example, at some point the water treatment plan will reach its maximum capacity and an expansion of the current facilities will be needed. Growth to either the Southwest or the Northwest will also hasten the day when consideration must be given to relocating Fire Station 2 farther west. A large community park is also envisioned to serve either the Northwest or Southwest growth areas as development occurs.

Other investment in the transportation network will also be needed. Based on the current Long Range Transportation Plan adopted in 2005, a westward extension of Bloomington Road will someday require a \$18,700,000 investment by the City. The firm employed to conduct that plan, HWS Consulting Group, has indicated that the need for this network improvement cannot be attributed to any individual area. Therefore, this substantial cost has not been assigned to either area.



Widening of South Dakota is another project that will affect all western portions of the City. Once again, residents of both growth areas will benefit from these road improvements. Therefore, those costs are not assigned to one specific growth area.

### **Non-Financial Development Issues**

#### **Impact on School Districts:**

As was mentioned earlier in this report, enrollment in the Ames Community School District has declined in recent years, even as the City itself has experienced sustained, moderate growth. This topic is becoming more and more important to the success of the community; and should not be overlooked when consideration is given to annexation of a major piece of land to the City. The number of new households forecasted for each study area provides a good indication of the relative impact of growth decisions on the various school districts.

#### **Existing Commercial Land in the Southwest Area:**

A Community Commercial Node is currently under development in the Southwest growth priority area west of the intersection of Mortensen Road and South Dakota. Approximately 22 acres of commercial land is still vacant and available for development. Several mixed use buildings have been constructed in this area in the last few years, but the commercial floors in these buildings remain largely vacant. This area is well suited to serve both the Southwest and Northwest growth areas.

#### **Avoiding Impacts of “Leap-frog” Development:**

Since efficiency is a core City value, it is always in the City’s interest to avoid “leap-frog” development of land. This refers to instances where infrastructure must be extended across undeveloped land in order to reach the next area for development.

In the cases of both primary study areas, a sanitary sewer main would need to be extended a significant distance across undeveloped and/or undevelopable property in order to reach areas proposed for future growth. In both cases, some of this land is owned by ISU, and the University has indicated that it will not develop this land.

Assuming that a developer or the City bears the cost for extending streets and utilities across undeveloped property, cost recovery of that investment would be a high priority insofar as possible. An assessment district could be instituted to insure financial participation from other parties that subsequently develop along the main in the future.

#### **Routes for Sanitary Sewer Mains:**

In anticipation of future growth within the Southwest Growth priority area, in 2003-2004 the City Council, land owners and other community members engaged in a thorough discussion of the impacts of extending a sanitary sewer main along Worle Creek. An

extensive sanitary sewer route study was conducted, which ultimately resulted in the decision to plan for two separate sewer mains along the ridges above Worle Creek, rather than one sewer main in the creek valley.

There has not yet been such a study for the sewer main that will serve the Northwest study area. The Fieldstone developers hope to identify a route to reach their development that crosses land owned by parties who are willing to allow installation of the sewer main. Given the level of community interest in these types of projects, however, it is possible that a sewer routing study may also need to be conducted prior to construction of a new sewer to serve the Northwest primary study area.

#### **Willing Developer in the Northwest Area:**

This study came about after a request for annexation was received by the owner of a 442 acre parcel of land in the Northwest primary study area. That developer, Fieldstone Development LLC, is ready and anxious to pursue annexation and development of their property within the City.

There has not been an expression of immediate interest in annexation and development within the Southwest primary study area. However, the owner of a 254 acre parcel has expressed interest in development at some time in the future. Even though the City has identified the route and costs associated with extension of sanitary sewer to this area, the active interest of a landowner or developer is still required to pursue growth.

#### **Avoidance of Annexation Islands:**

As was noted on Appendix 11, future development within either growth area may eventually lead to situations where “islands” could be created. These islands are not only prohibited by the Code of Iowa; but frequently also arouse great opposition by property owners who do not desire to be a part of the City. In fact, some opposition to development may occur even if islands are not created, due to the greater proximity of urban development to properties presently in less developed locations. Neither of the primary study areas will create an annexation island if developed. However, it is important to note that islands would be created by annexation of Northwest study area B, Southwest study area A and Southwest study area C.

## **SUMMARY AND CONCLUSIONS**

Comparison of the relative benefits and costs of the potential growth areas is a complex and multi-faceted task. This report has endeavored to address the financial and non-financial impacts of future growth in both the Northwest and Southwest primary growth areas. The report has also studied the impacts of growth within other portions of the Southwest and Northwest Growth Priority Areas in order to help predict capital costs and impacts of other future options for western growth.

The following points can be made in summary of this report:

- Many investments have already been made to facilitate long-term growth in the Southwest and Northwest portions of the City.
- Regardless of the growth direction, the City will incur a significant amount of added operating costs.
- All growth alternatives contain significant costs for extension of infrastructure.
- The degree of public cost-sharing for infrastructure will range from “oversizing” to some other, higher amount as approved by the City council. More precise cost sharing arrangements must be determined through negotiations with prospective developers after consideration of each area’s costs and benefits.
- Growth in either primary study area will require extension of a sanitary sewer main across large parcels of undeveloped land.
- Based on the adopted Long Range Transportation Plan, additional transportation system investments will be required regardless of the growth direction. This is particularly evident with the extension of Bloomington Road.
- Iowa State University is a large stake holder in any westward development, due to their ownership and plans for long-term use of large parcels of land in both areas.
- The current supply of subdivided land within the City will last 4-6 years at current rates of development. Since development of land typically requires several years’ work, additional land should be brought on-line soon in order to not dampen marketplace demand.
- An annexation request has been submitted by a developer in the Northwest primary study area. No formal request has been made for immediate development within the Southwest primary study area.

### Financial Conclusions:

Conclusions regarding the relative financial impacts of growth can best be drawn from Tables 10 and 11. These tables show the added population, total infrastructure cost, and cost per developable acre for all six study areas under both perspectives.

Cost per developable acre provides the most meaningful indicator of cost effective growth on both of these tables. It should be noted, however, that Northwest Area B cannot be developed until Northwest Area A has first covered the cost for constructing a railroad overpass and extension of a sewer main. Likewise, Southwest Area C cannot be developed until the utility and street improvements are completed as part of Southwest Area B.

Given this qualifier, **the most cost effective areas to develop based upon overall costs** are presented below in order of preference:

ORDER OF PREFERENCE	COST PER ACRE	COST PER ACRE	ADDED POPULATION	CUMULATIVE POPULATION
1	SW Area D	\$ 17,957	1,129	55,724
2	SW Area A	\$ 20,318	2,728	58,452
3	NW Area A	\$ 25,370	5,088	63,540
4	NW Area B	\$ 8,944	3,677	67,217
5	SW Area B	\$ 30,810	2,217	69,434
6	SW Area C	\$ 29,455	2,907	72,341

The first two areas shown each have one major advantage and one major disadvantage. Unlike the two primary study areas, both can be served without expensive “leap-frog” extension of sanitary sewer infrastructure. However, no developer has stepped forward from either of these areas to propose development that would meet the City’s near-term needs. Furthermore, even if both of these areas were developed, the added populations would not achieve the 60,000-62,000 goal specified in the LUPP.

**Under Perspective 1, Northwest Area A thus emerges as the most cost effective choice of land available for immediate growth.** That area is followed by Northwest Area B, which would build upon the infrastructure investments in Northwest Area A. Together these two areas provide more than enough land to meet the LUPP population goal.

Table 11 showed the added population, “oversize” infrastructure cost, and cost per developable acre for all six study areas. Based upon that information, and after considering the sequential qualifier noted above, **the most cost effective areas to develop based only upon oversizing costs** are presented below in order of preference:

ORDER OF PREFERENCE	STUDY AREA	COST PER ACRE	ADDED POPULATION	CUMULATIVE POPULATION
1	SW Area D	\$ 3,434	1,129	55,724
2	SW Area A	\$ 4,487	2,728	58,452
3	SW Area B	\$ 6,923	2,217	60,669
4	NW Area A	\$ 14,694	5,088	65,757
5	NW Area B	\$ 2,619	3,677	69,434
6	SW Area C	\$ 13,192	2,907	72,341

The comment made above regarding Southwest Areas D and A applies here to those same areas, as well as to Southwest Area C. Unless someone steps forward now to develop these lands, then another area must be selected to meet the City's near-term need for developable land.

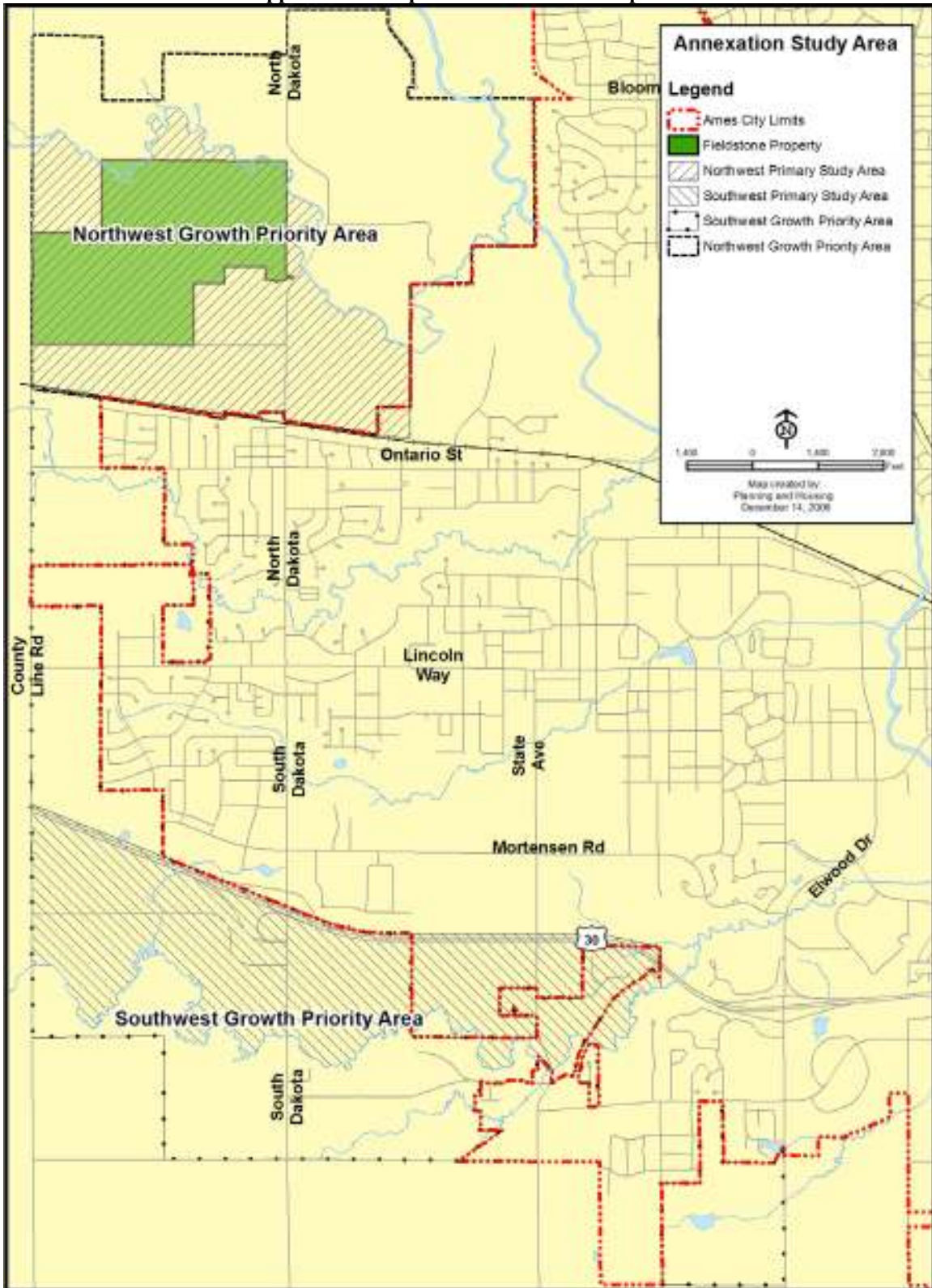
After Southwest Areas D and A, Southwest Area B is the next most cost-effective choice under this perspective. **If a developer in this area commits to pay for all infrastructure costs except oversizing, Southwest Area B emerges as the most cost effective choice of land available for immediate growth.** That would be followed by Northwest Area A. It is important to note that both of those areas would be needed to meet the LUPP population goal.

**Unless willing developers step forward in the areas ranked above Northwest study area A, then that area is needed under both perspectives to reach the LUPP population goal. Since a major land-owner in Northwest study area A is ready to proceed with development, it seems appropriate for the City Council to direct staff to begin negotiations regarding annexation and extension of infrastructure to this area. These negotiations should have two purposes. Given this developer's desire to qualify for Capital Investment Strategy funding assistance, the first purpose should be to determine if an acceptable village development can be presented to the City Council. The second purpose should then be to determine how much public investment is required to accomplish this development and to determine an acceptable pay-back on the City's investment.**

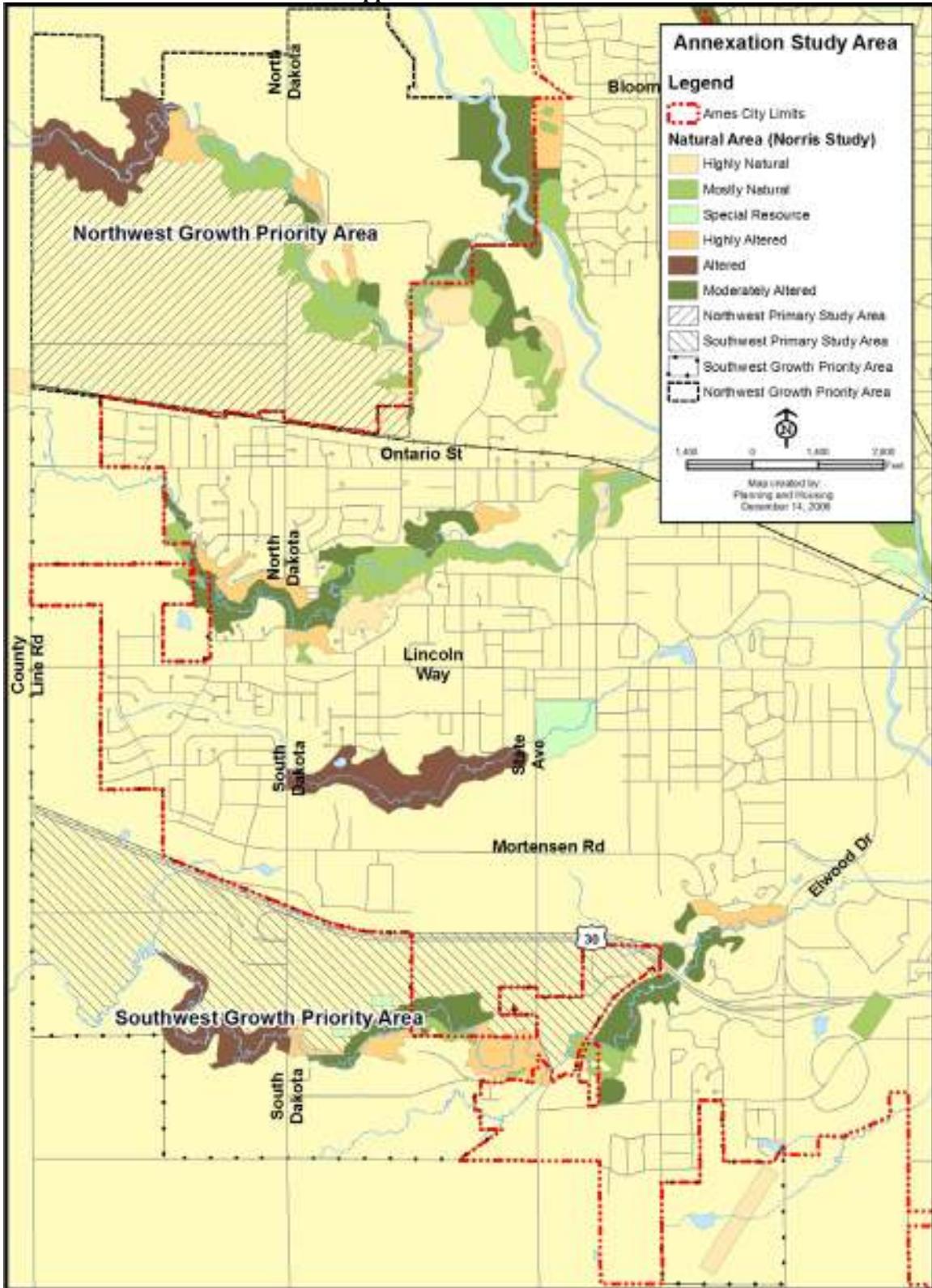
## **APPENDIX: MAPS and GRAPHICS**



Appendix 1 - Proposed Fieldstone Development



Appendix 2-Natural Areas

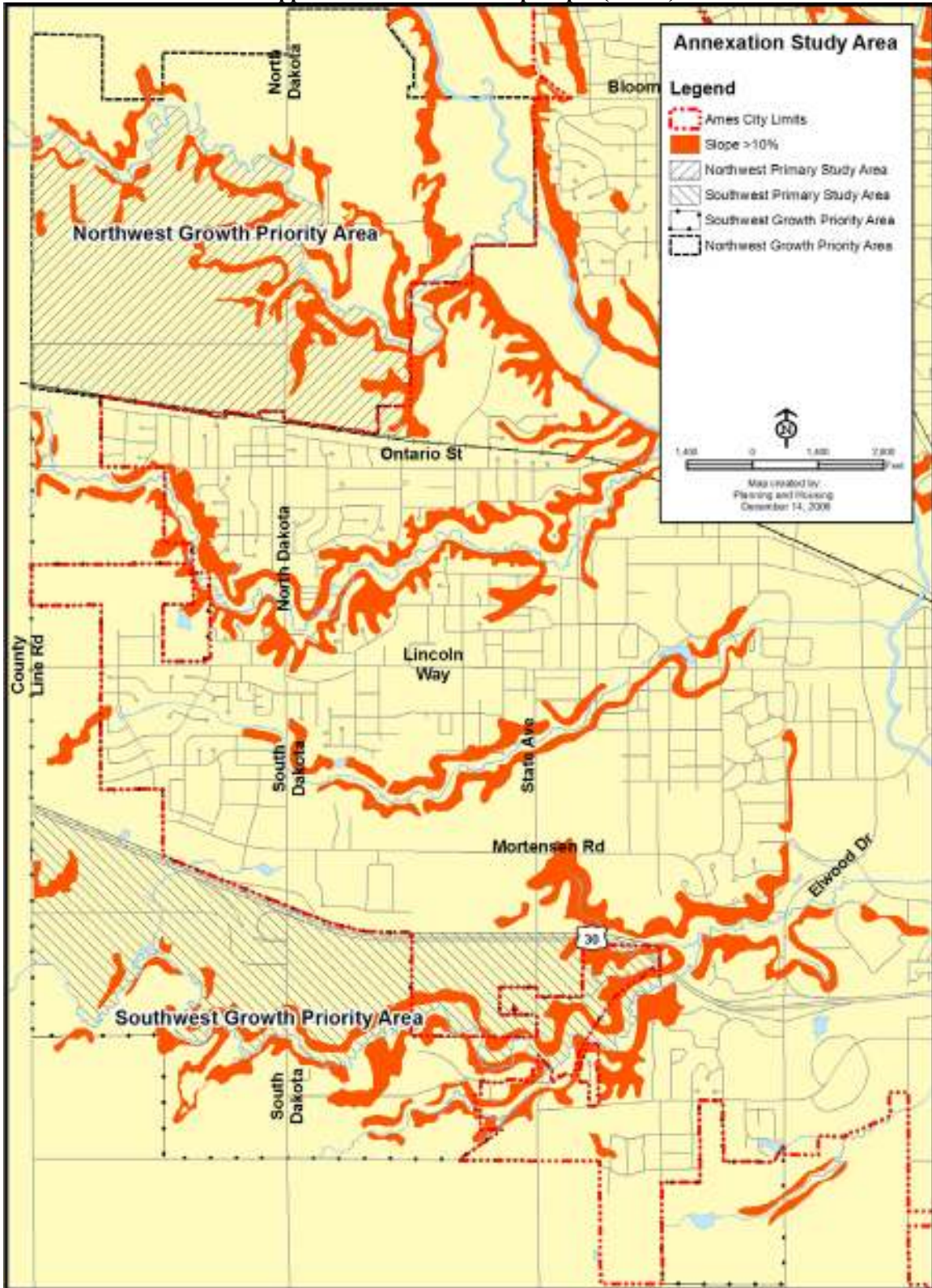




Appendix 3-Floodplain Areas



Appendix 4-Areas with Steep Slopes ( $\geq 10\%$ )



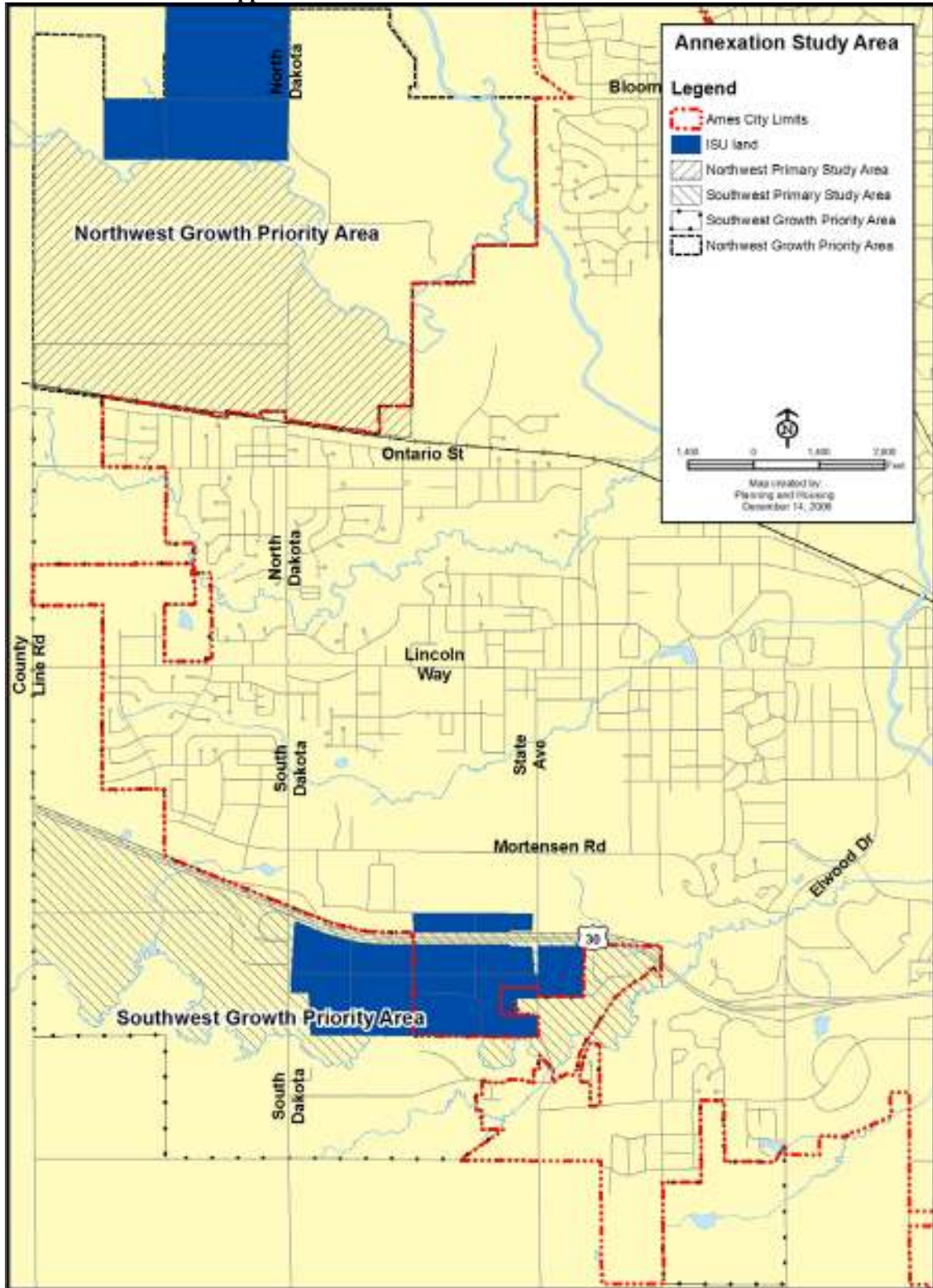
Appendix 5-Existing Right-of-way Areas



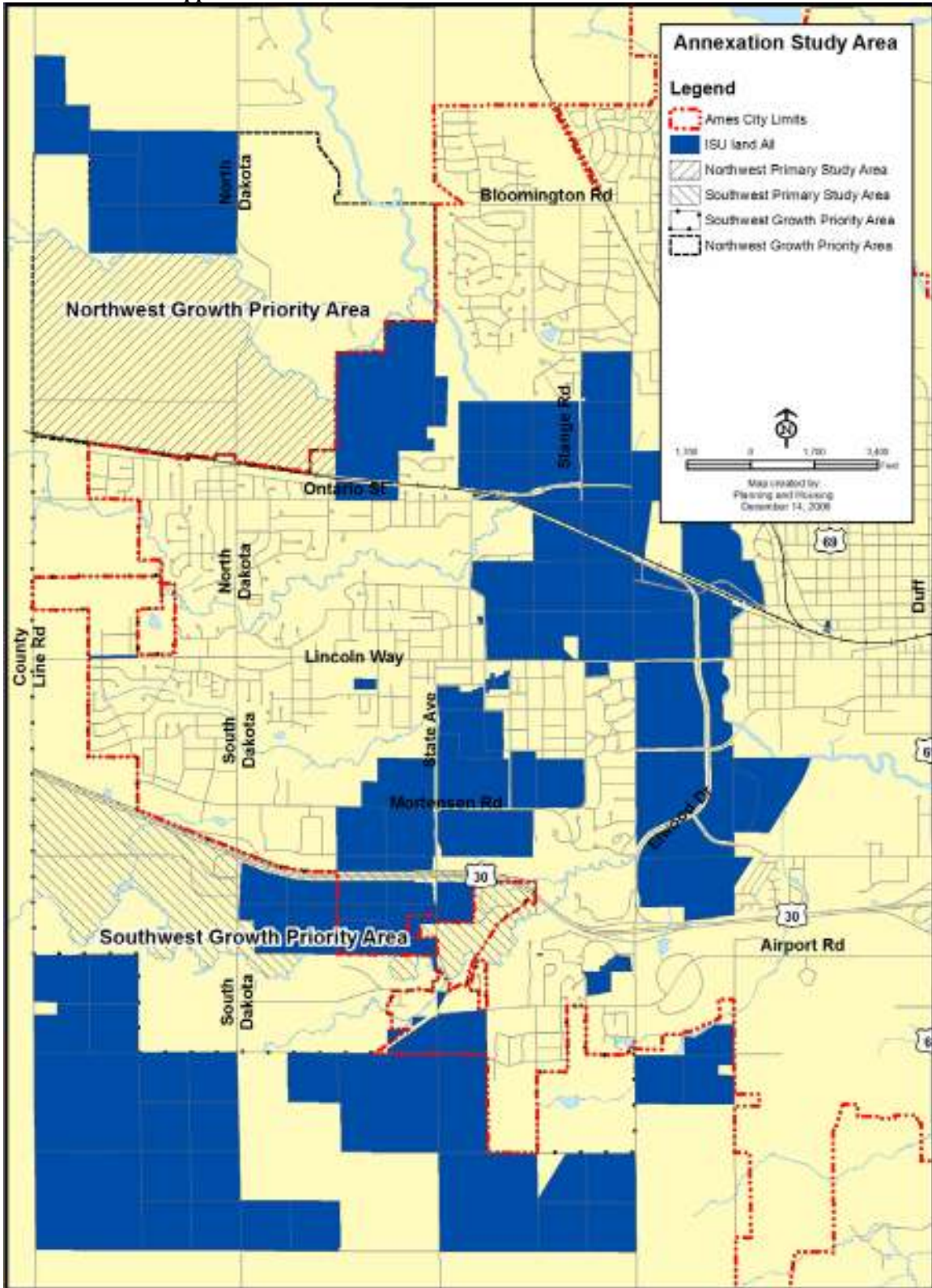
Appendix 6-Wetlands Areas



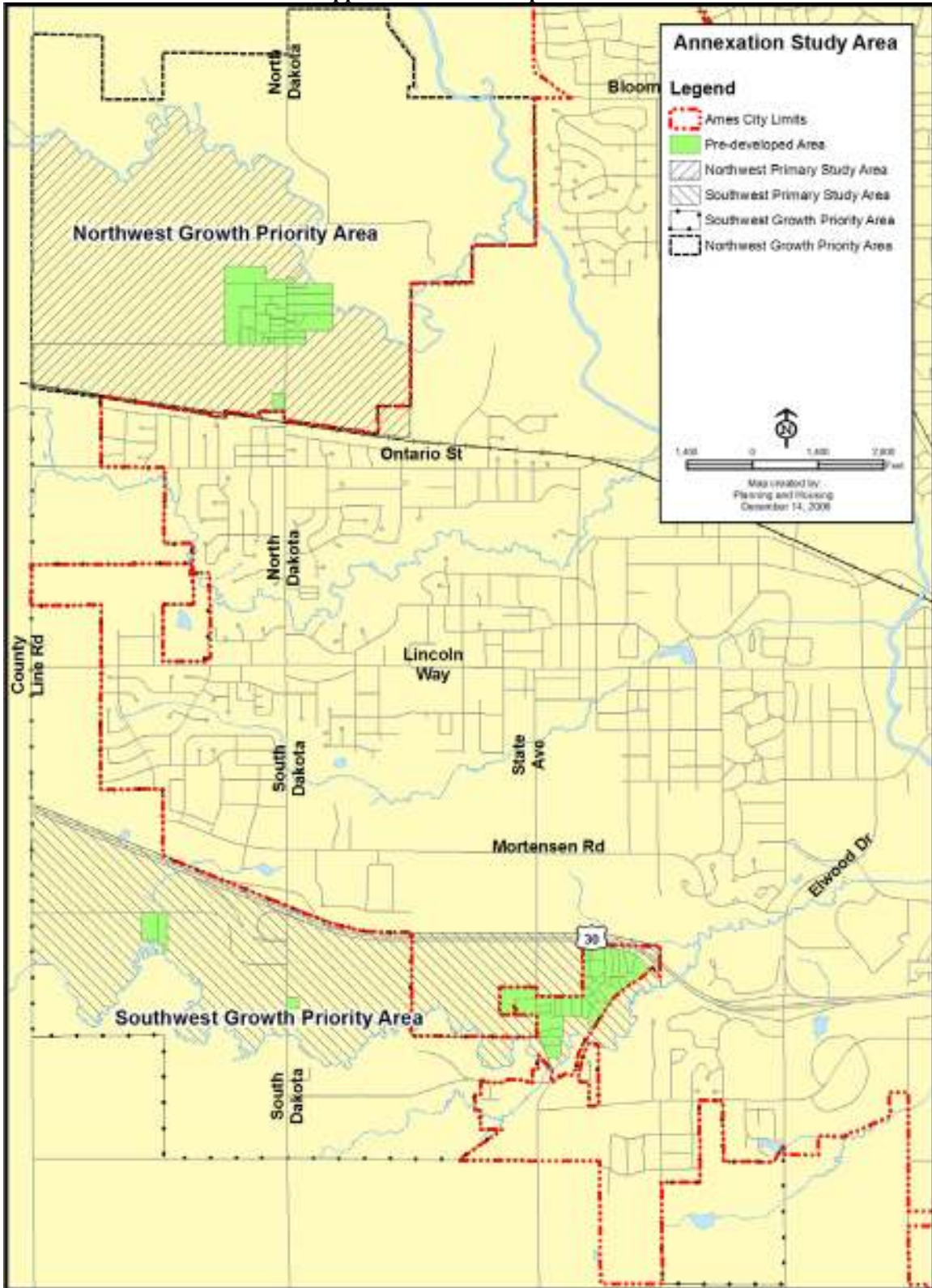
Appendix 7-ISU/Affiliated Land within Growth Areas



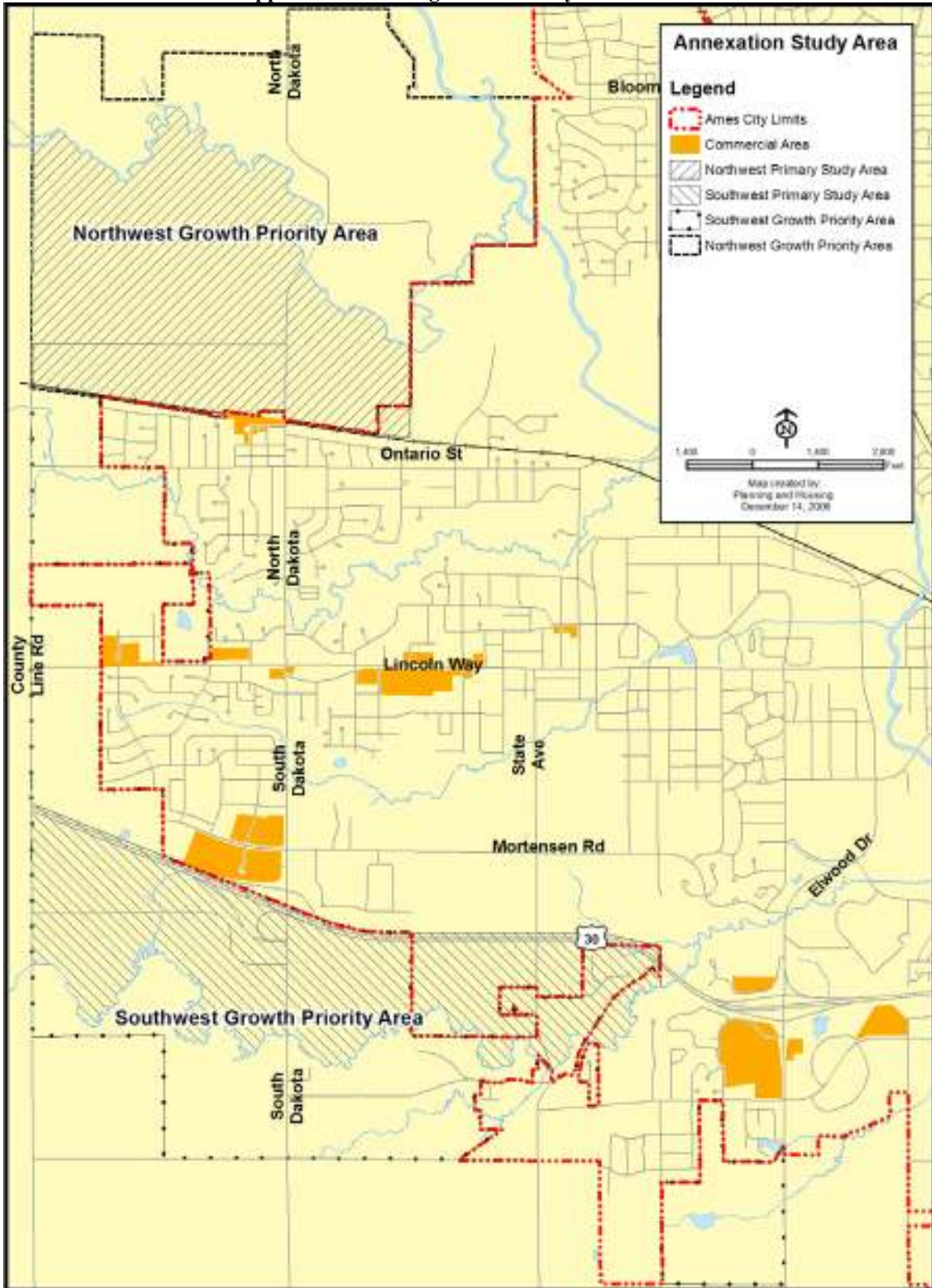
Appendix 8-ISU/Affiliated land within and Outside Growth areas



Appendix 9-Pre-developed Areas

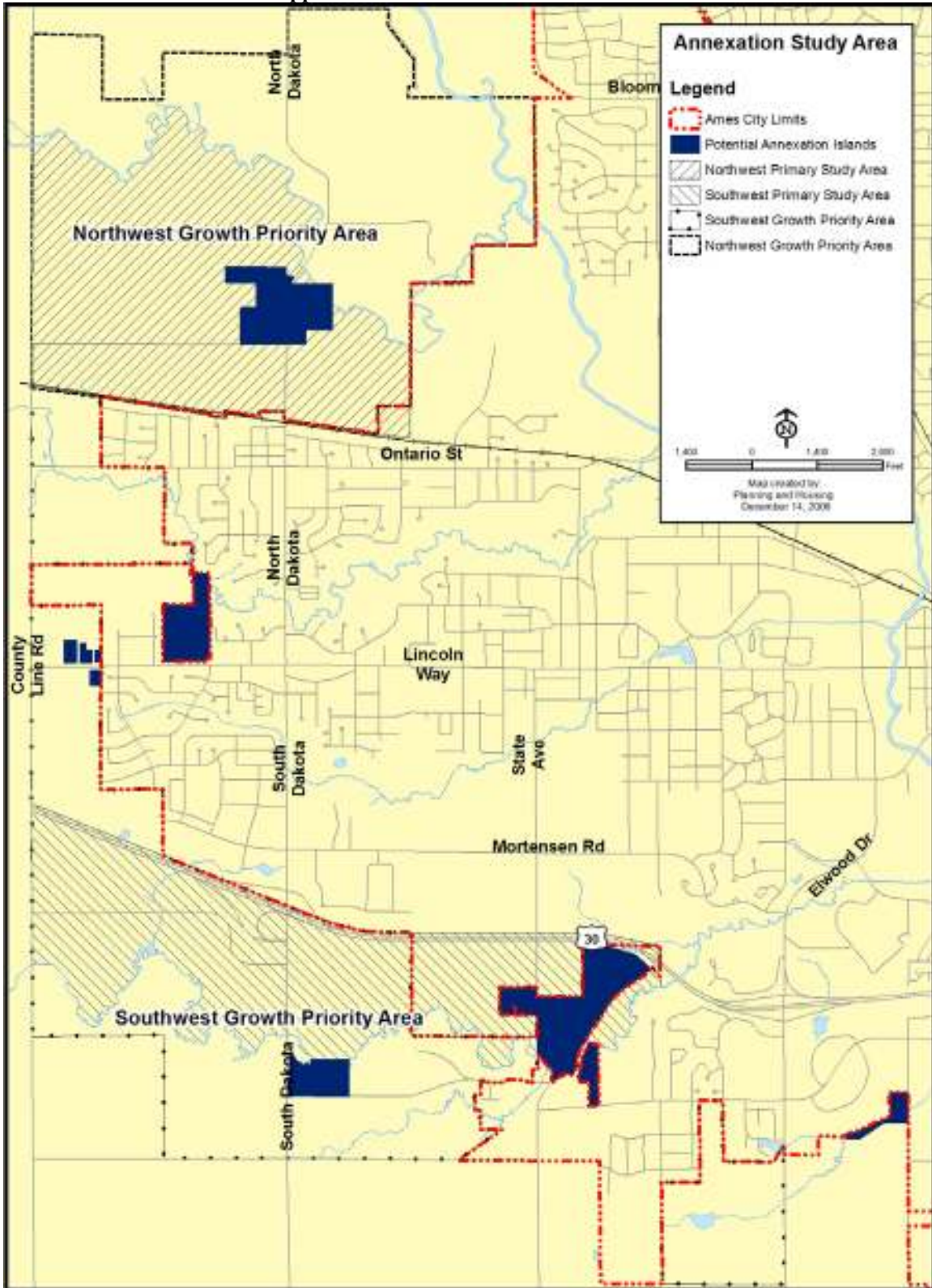


Appendix 10-Existing Commercially Zoned Areas





Appendix 11-Potential Annexation Islands



Appendix 12-School Districts

