

Chapter 5 – Land Use

Land use is at the core of the topics covered in a Comprehensive Plan. It defines a primary way of thinking about the physical growth of the community. It also is essential to the function of zoning because it provides the strategy upon which zoning should be based.

Existing Land Use

Figures 5.1 and 5.2 illustrate Pierre's general land use pattern and the City's current zoning districts. Commercial areas are concentrated in the downtown, along State Highway 34, and along Garfield Avenue. Industrial properties are found in the southeast portion of the city adjacent to State Highway 34 and also surrounding the airport properties. The City's main concentrations of residential property are northwest, northeast, and east of the downtown. Recent residential development is concentrated along 4th Street. Park and recreation areas are found mainly along the Missouri River, on school properties, and along a central drainage basin which essentially divides the city into eastern and western parts. The balance of Pierre's land is agricultural or undeveloped.

Land Use Analysis

Four key issues were identified which pertained to land development in Pierre:

- Need to preserve land for future urban density development.
- Need to provide locations for economic development projects.
- Need to revitalize the downtown area.
- Need to prepare for anticipated demographic and housing market changes.

Determining the future land development patterns and needs for Pierre was a primary factor in the decision to update the comprehensive plan. The City's internal annexation studies had highlighted future development areas in Sections 21 and 22 north of the existing City limits. This anticipated need for future urban development contrasted with the perspective of County officials who felt that the market demand for rural development near the City was sufficient reason to allow rural scale development in these same Sections.

Another factor which promoted interest in completing an updated comprehensive plan was a concern that citizens were subsidizing the development of new areas for city growth. This led to an analysis of relative costs of new development.

Development Constraints. In order to evaluate the opportunities for future urban scale development, the land adjoining the developed parts of the City was analyzed to determine constraints on development. In addition to existing rural residential development which has already occurred, Pierre has four main land development constraints that impact where future urban scale development should occur (Figure 5.3):

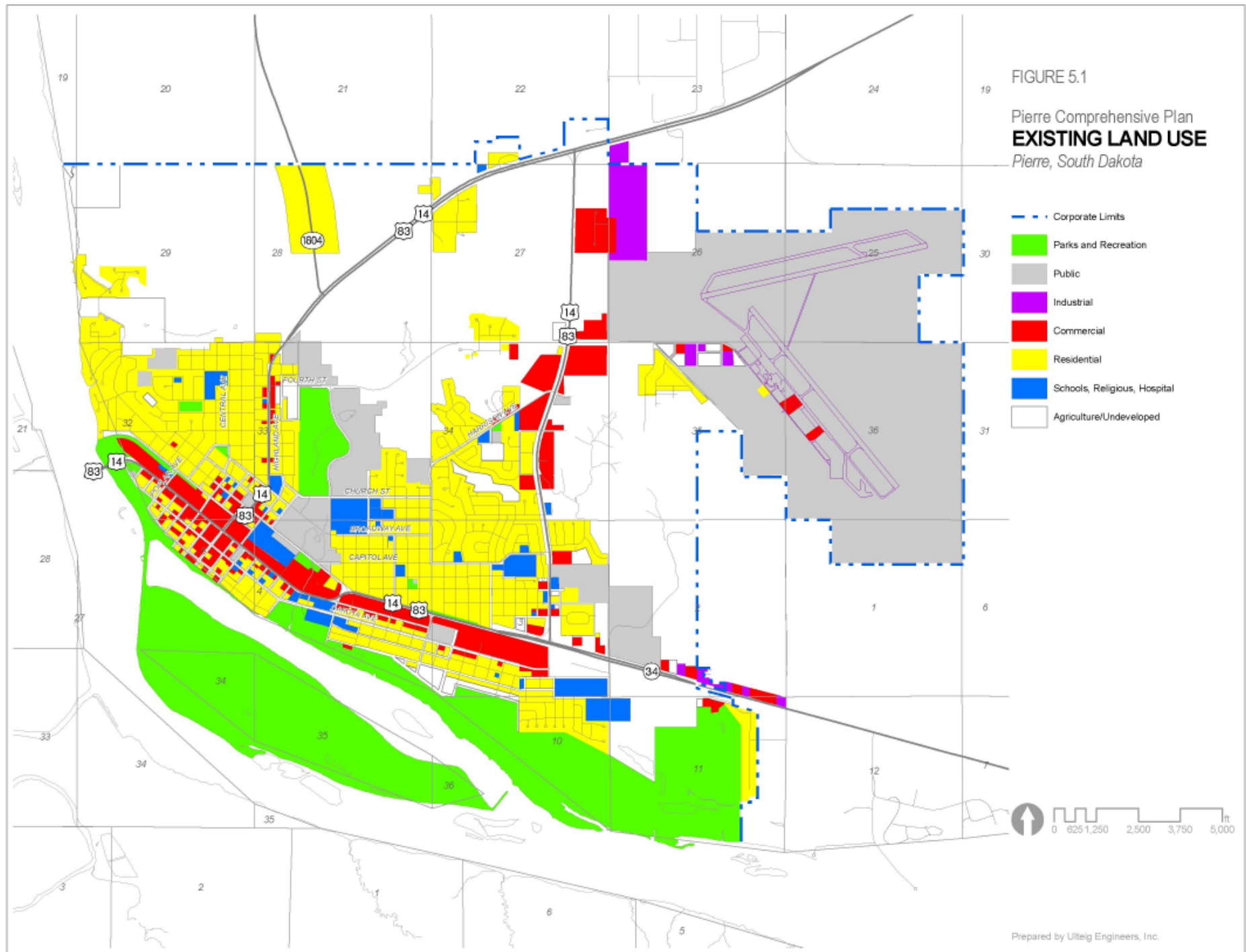
- Steep slopes
- Flood prone areas
- Airport safety zone restrictions
- Problematic Pierre Shale geology

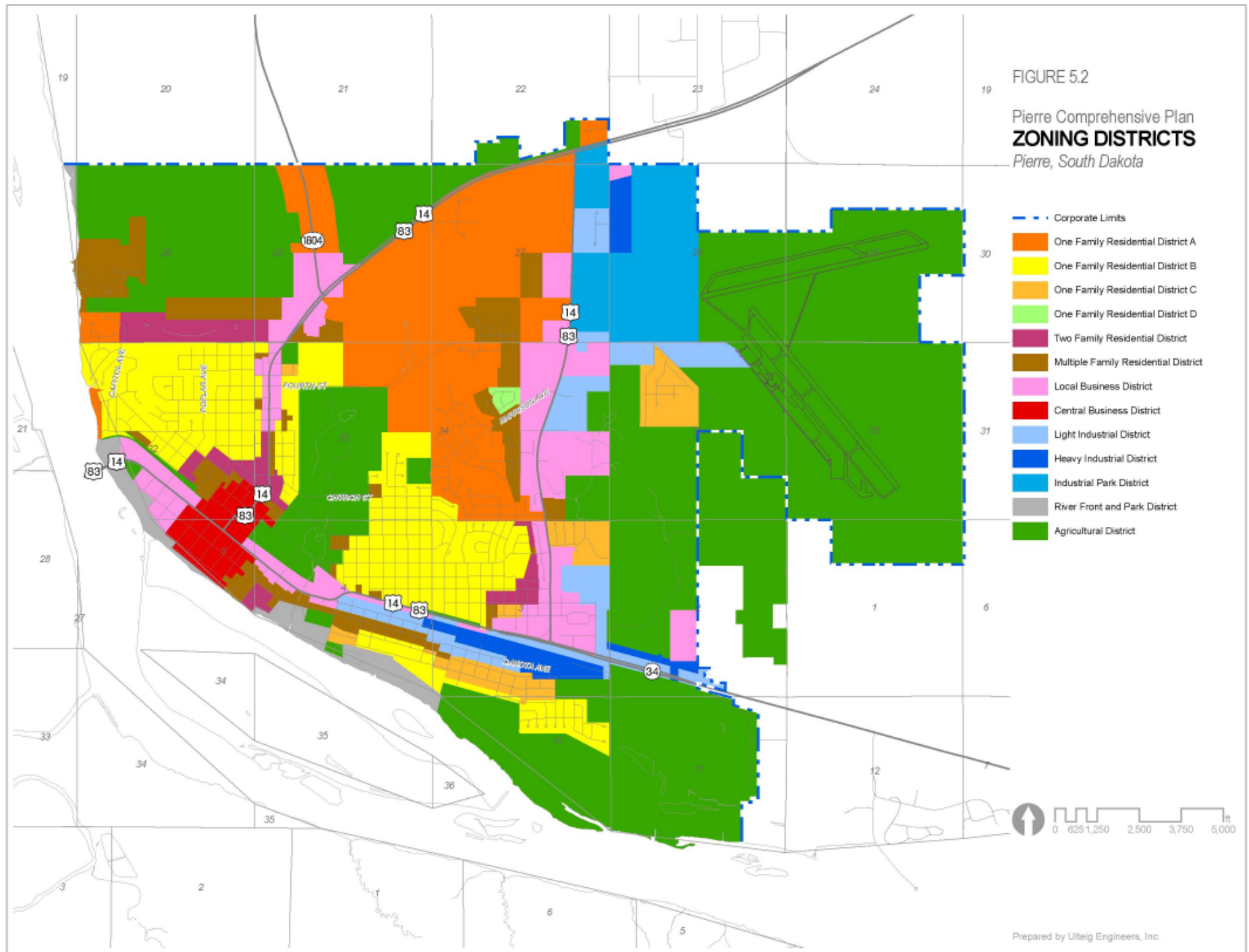
Steep slopes constrain development in the following ways:

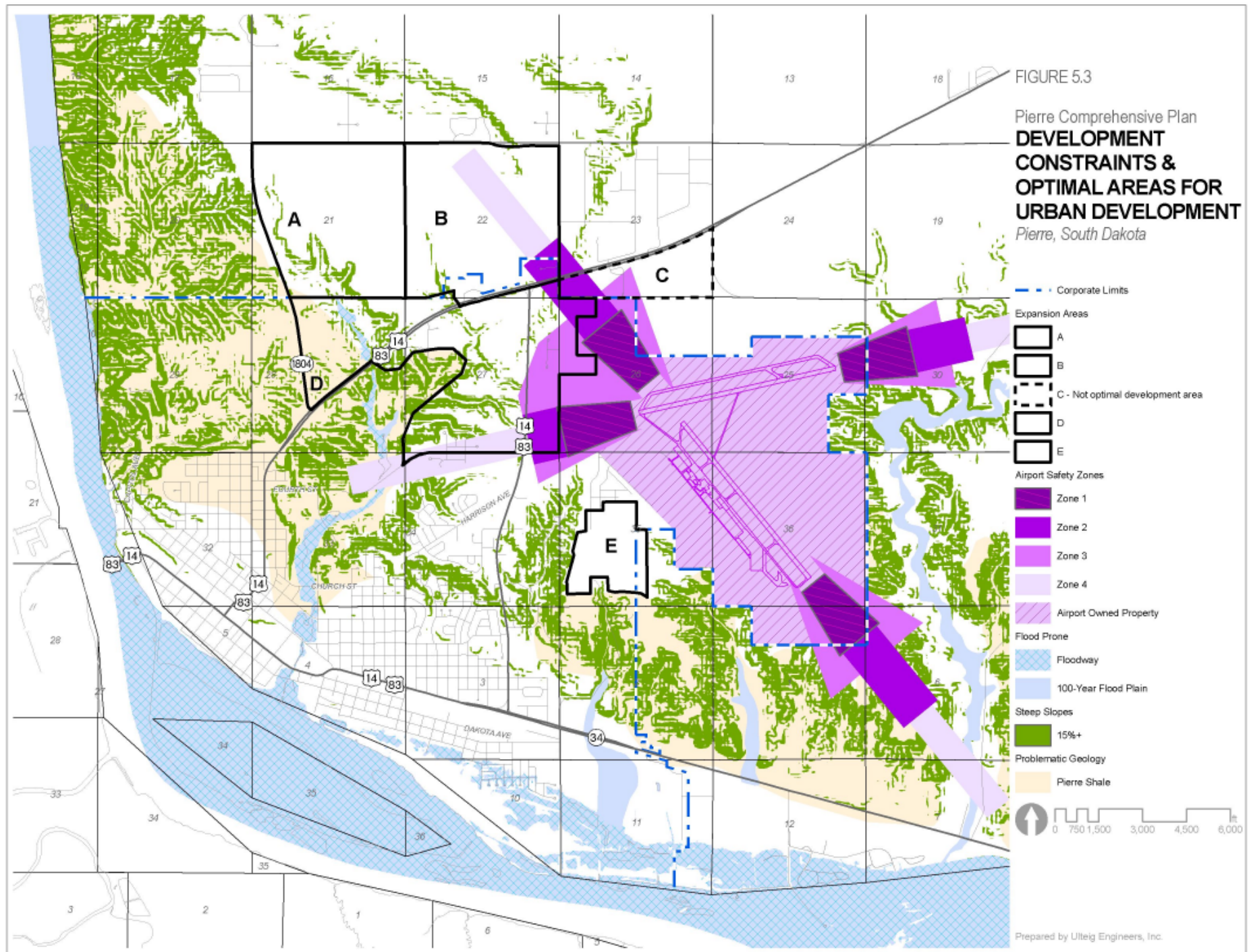
- Large developments in areas of steep slopes require significant and expensive regrading in order to provide appropriate locations for structures, parking lots, and transportation routes.
- Smaller developments may be able to take advantage of smaller flat areas or use engineering and special construction techniques to resolve technical issues. However these solutions increase the cost of development.
- It is preferable not to build streets at more than an 8% grade.

Figure 5.3 illustrates areas within and adjoining the City which have more than 15% slope.

Flood prone areas include areas of steep slopes which are prone to rapid changes in watercourse elevations and flash floods. They also include relatively flat areas where water is likely to accumulate during high rainfall or sudden snowmelt events. Areas identified by FEMA as floodways may not be developed. Figure 5.3 illustrates the existing 100 year floodplain and areas in the floodway.







Airport safety zones identify areas of risk at the ends of runways where development restrictions are appropriate. As a rule of thumb, the closer property is to the end of a runway, the lower the intensity of land use which should be allowed. Figure 5.3 illustrates the location of the four types of airport safety zones for which the intensity of development should be limited and Table 5.1 describes the four zones. Zone 1 is located just off the end of the runways, and since it has the highest levels of risk it needs the greatest level of restriction on the intensity of land use. Zone 2 also has relatively high levels of risk and should have a high restriction level. Zone 3 had more moderate risk levels and may therefore have lesser development restrictions. Zone 4 has the lowest risk levels and may therefore have the least development restrictions.

Table 5.1. Airport safety zone descriptions and risk levels

Zone	Nature of Accident Risk	Relative Risk Level
1	Landing undershoots and overshoots; overruns on aborted takeoffs; loss of control on takeoff	Very High
2	Aircraft at low altitude with limited directional options in emergencies: typically under 400 feet on landing; on takeoff, engine at maximum stress	High
3	Turns at low altitude on arrival for aircraft flying tight base leg present stall-spin potential; likely touchdown area if emergency at low altitude on takeoff, especially to left of centerline	Moderate
4	Low altitude overflight for aircraft on straight-in approaches, especially instrument approaches; on departure, aircraft normally complete transition from takeoff power and flap settings to climb mode and begin turns to en route heading	Low to Moderate

Areas where Pierre Shale geological conditions exist are prone to heaving and shrinking and slope stability problems. There is a history of structural damage from slides in these areas of Pierre. Those areas of Pierre Shale which also contain steep slopes typically experience greater threats of slides and slumping.

Based on the impacts of these development constraints, the optimal areas for urban scale development are located primarily in Sections 21 and 22, the northern and eastern parts of Section 27, and a large tract of land located primarily in Section 35 southwest of the airport (Figure 5.3). *Relative Cost Constraints.* The previously mentioned concern that City investment in new development was in effect subsidizing it led to an analysis of relative costs of new development. While there are a wide

variety of costs associated with providing city services to new development, most of these costs are not likely to vary much based on physical location. The provision of sewer and water are exceptions to this. Generally speaking, the further away from the treatment plant the more costly it is to provide service. These costs may be related to operations and maintenance, but they are certainly related to the capital investment of putting pipe in the ground. In that respect, development costs in Pierre may be relatively inefficient because of the terrain which makes the cost per acre of development higher.

An analysis of the cost of providing water and sewer trunk lines to new development was completed for four of five specific future development areas (Figure 5.3). Area C is not included in the following comparison because the extension to this area was not in the 2005 Sanitary Sewer Facilities Plan. The costs of extending water and sewer trunk line services to the other four areas ranged from \$2.03 million to \$5.85 million (Table 5.2).

Table 5.2. Growth area water and sewer main development cost estimates

Future Development Areas	Utility Extension Costs	Cost per acre
Area A	\$4,558,000	\$8,466
Area B	\$2,082,800	\$3,510
Area C	Extensions not planned	NA
Area D	\$4,802,000	\$6,945
Area E	\$1,549,000	\$10,019

Some of the investment in Area D can occur incrementally to serve new development areas. However, service cannot be completed to Areas A and B without extending service to at least a portion of Area D. It takes the least investment to extend services to Area E located near the airport. However, Area E is relatively expensive to serve on a per acre basis. Please note that the capacity constraints of some of the downstream sewer lines will require relief sewer installation. The costs presented here do not include the cost for capacity increases via relief sewer.

Agricultural Land Considerations. Land in the Pierre area was evaluated for prime farmland and farmland of statewide importance because the presence of significant amounts of such land may affect the appropriate designation of future land uses. Only a few small areas were found to be considered farmland of statewide importance, and no land was classified as prime farmland. Some land was identified as prime farmland if irrigated.

Land Use Requirements. The previous analyses help identify optimal locations and suggest an order for future development. The following observations provide a basis for assessing the need for various land uses:

Pierre's location and relative isolation from other population centers has a strong impact on its economic development opportunities. This suggests its retail trade growth will remain moderate. As noted previously, state government plays a major role in stabilizing the economy in the community. Economic development planning is beyond the scope of this Comprehensive Plan. However, it is important to ensure that the Plan coordinates with economic development objectives of the City of Pierre.

The key methods a community can usually help economic development are by influencing cost factors which can determine the viability of a business. These include:

- Available land and buildings and infrastructure
- Labor supply and skills
- Amenities which influence quality of life
- Governmental policies and regulations

Pierre has strengths which include:

- Highly educated workforce
- Many amenities
- High tech infrastructure
- Airport with capabilities for many types of aircraft

Pierre has limitations in the following areas:

- Location does not adjoin interstate highway
- Small regional workforce
- Airport with limited flights on major airlines and limited local charter operations
- High cost of living relative to most communities in the region

The constraints pertaining to transportation and workforce suggest that there is limited potential for significant industrial development. However, the relatively educated workforce, excellent communications infrastructure, and abundance of locations for more office development all lend to opportunities for many other types of job development. Strategies which could assist these opportunities include:

- Develop more housing options
- Develop more amenities

- Develop incentive programs to encourage investment in businesses which build on the strengths of the community
- Develop economic incentive zones to encourage investment at strategic locations
- Encourage business development in the following areas: health care, communications-focused, and tourism-based businesses, and retirement lifestyle centers.
- Provide at least one location for the types of businesses that are considered to have the most potential for locating or growing in Pierre.

Another practical consideration is the amount of land being set aside for economic development. In addition to the existing land available for industrial development, the future land use plan illustrated in Figure 5.5 provides another 114 acres. There are over 226 acres of land recommended for commercial development along the U.S. Route 14 and Garfield Avenue corridors.

While new development areas were a key issue leading to the preparation of a new comprehensive plan, during the study process, it became obvious that there was community interest and a need to also examine downtown redevelopment. The potential for competition between land uses in the downtown core and the urban fringe was recognized as an issue which could result in the loss of incentive for downtown revitalization.

Downtowns in many parts of the U.S. have been experiencing resurgence in recent years. While downtowns were originally built as mixed use centers which included residential uses, since the 1970's they have been largely centers for commerce and entertainment. However, the high downtown vacancy rates of recent years have actually pointed to new opportunities. As noted previously, the demographics of city dwellers are changing and a large segment of the urban population is interested in the housing options which downtowns can provide. It is only when downtowns start to add more residential opportunities that they will be able to function as mixed uses.

The keys to making downtowns successful mixed use areas again include:

1. Coordinated focused and committed effort by business, government and residents to revitalize downtown.

2. Clear boundaries of where downtown and where downtown redevelopment is intended to occur.
3. High quality city services and amenities, including the streetscape.
4. Cleanliness and safety
5. Preservation of historic and architectural unique buildings.
6. Streamlined and supportive regulations.
7. Devoting city investment to housing.
8. Downtown needs to be surrounded by solid instead of fragmented neighborhoods.

The issue of gateways was another significant land use identified during the comprehensive plan development. The City's image consists of impressions and visual representations called to mind when the City of Pierre is mentioned. It is in the City's best interest to cultivate and maintain a strongly positive image, which is shared by a majority of its residents, neighbors, and visitors. The community features that contribute to Pierre's image are the Capitol building and grounds, the Missouri River and related parks, trails, and recreation areas, the Oahe Dam, the County Courthouse, and museums. First impressions are of great importance for a positive community image. The entry points into the City of Pierre need to convey an attractive, welcoming appeal. Figure 5.5, shows five of the most significant arrival points, and indicates the general vicinities where landscaped gateway features should be considered. Nuisance enforcement and development standards should also be used to ensure that community entrances are attractive. Development standards that encourage landscaping, aesthetic building and parking lot design, consolidation of driveways, and sign requirements are needed.

Eventual urban development in Sections 21 and 22 will prompt the need for additional public facilities such as a new elementary school, a new fire station, and possibly additional parks. Chapter 6 provides more details regarding these needs.

Land Use Plan Recommendations

Based on the previous analyses and detailed discussions with the Comprehensive Plan Steering Committee, the future land use plan includes the following recommendations. Many of these

recommendations are illustrated in Figure 5.4. Please note that the future land use map (Figure 5.4) uses more general categories than the existing land use map (Figure 5.1) in order to allow more flexibility to respond to future development proposals. Therefore the color scheme of the two map legends are different.

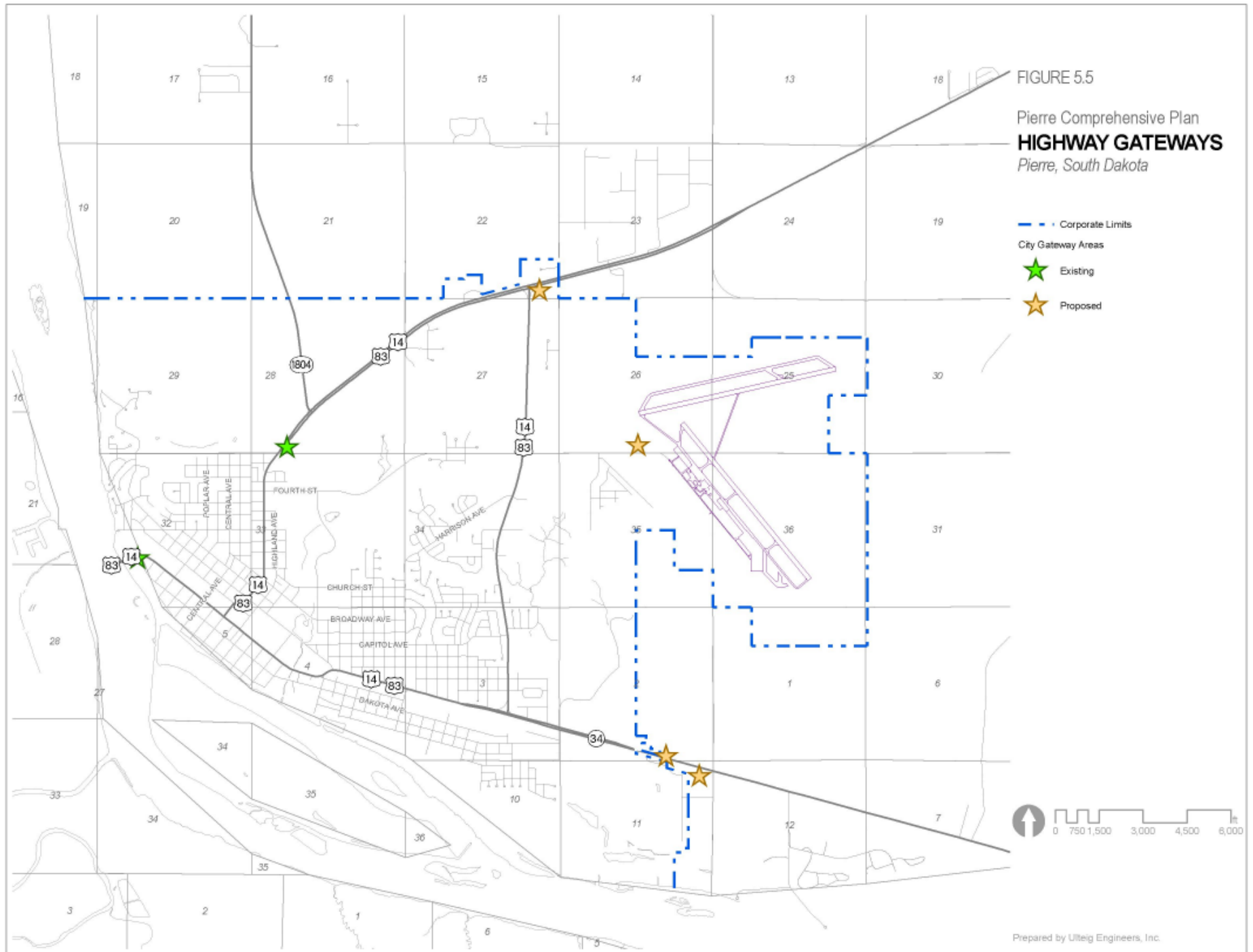
Future industrial development should focus on land surrounding the airport. If there is interest in railroad dependent industrial development, this development should occur east of Garfield Avenue.

Future commercial development should focus on creating distinct types of commercial centers at specific locations:

1. Reserve land for large lot commercial development in Section 27, as illustrated in the future land use map (Figure 5.4).
2. Reserve land for general commercial uses and neighborhood oriented commercial uses in Section 22, as illustrated in the future land use map (Figure 5.4).
3. Garfield Avenue/U.S Route 14 intersection should be the epicenter for highway commercial development and long term residentially related commercial development.
4. U.S Route 14/State Highway 1804 intersection should be the epicenter for a small scale highway commercial development.
5. Downtown should be the center of specialty retail and commercial space.
6. Establish a separate large lot commercial zone for uses requiring lots larger than 10 acres and dependent on automobile oriented traffic.
7. Encourage apartment, office, and institutional uses as alternatives to commercial strip development along major streets.
8. Discourage commercial and industrial development outside city limits unless the uses are supportive of agricultural operations.

Future residential development should focus on the following objectives:

1. Encourage residential development in Section 27 as illustrated in the future land use map (Figure 5.4).
2. Reserve Section 21 and the western portion of Section 22 for future urban development as illustrated in the future land use map (Figure 5.4).



3. Allow the development of rural residential housing in the eastern portion of Section 22 when appropriate utilities are available and the property is annexed into the City of Pierre.
4. A full range of traditional single family housing should be developed in Sections 27 and 35. In order to accommodate the various price points for the full range, it may be necessary to modify zoning and subdivision regulations for more flexibility in regulatory lot sizes and other development requirements. These options should also allow for low income housing, workforce housing, and lifestyle housing centers.
5. Reserve land for mixed rural residential and large lot commercial development in Sections 21, 23, and 28 as illustrated in the future land use map (Figure 5.4).
6. Provide rural residential living options in Section 28 and 29 in ways that protect natural resources.
7. Encourage a variety of higher density housing options in downtown Pierre including high end multi-family and alternative retirement living centers.

Future public lands development and open space preservation should focus on the following objectives:

1. Major portions of Whiskey Gulch and Hilgers Gulch should be left undeveloped as wild and scenic areas.
2. Some portions of Hilgers Gulch should be developed into linear green spaces with nodes of activity centers.
3. Some large tracts for future ball fields, *etc.* should be set aside as future regional park locations. Locations for these park areas are dependent on timing and location of future residential development. If at all possible they should be linked to future school sites or other public uses.
4. Downtown green or open spaces, such as pocket parks, should be a part of the downtown revitalization.
5. An undeveloped strip of land adjacent to the Missouri River from Downs Marina to the Farm Island Recreation area should be reserved as a conservation/wildlife area.

Other land use related recommendations include:

1. Establish an airport safety zone overlay district that addresses land use intensity and other safety parameters for areas at the end of runways.

2. Revise the downtown commercial zone to encourage and facilitate mixed use development and downtown revitalization. This zone should promote high density residential development, require pedestrian oriented streetscapes and open spaces, and allow a wide variety of commercial, medium or high density residential and public uses.
3. Expand the revised downtown commercial zone to cover additional land to the east and west of the existing district boundaries as illustrated in the future land use map (Figure 5.4).
4. Additional district amendments to the zoning ordinance for consistency with the future land use plan should be made over time, as development proposals initiate the changes.
5. Allow the development of rural residential housing in portions of Section 21, 27, and 28 when appropriate utilities are available and ensure drainage, soils and slope concerns are addressed.
6. Amend the City regulations to include landscape requirements to protect and enhance the visual image of the community.
7. Continue to pursue funding opportunities to complete the buyout of southeast Pierre to mitigate the flood hazard potential and to eliminate services to a checkerboard pattern of remaining residential homes.

Future development patterns need careful timing in order to provide the most cost effective approach to providing City services. The recommended timing is as follows:

1. Redevelopment and infill in the downtown area should be promoted and encouraged immediately.
2. Development in Sections 27 and 35 should be allowed to occur as market forces dictate.
3. Development in Sections 21 and 22 should be planned now, but held as urban reserve until Section 27 is developed to the point extension of City services will occur without leapfrog development.
4. Planned rural residential development in Sections 19, 20, and 29 should be allowed to occur as market forces dictate after appropriate guidelines and regulations are in place to ensure protection of natural resources.
5. Infill development at locations where the City already provides City services should be encouraged and promoted.

Land Use Goal

The City of Pierre will promote compact development and redevelopment while providing adequate land for present residential, public and economic needs.

Objectives:

1. Promote only compact, contiguous growth along the city's fringe to promote an efficient use of present and future public investments in roads, utilities and other services.
2. Prevent unlimited outward expansion by maintaining urban growth boundaries with provisions for phased annexation and extension of streets and utilities.
3. Require adequate provision of city services before development is approved in future growth areas.
4. Maintain an adequate supply of development land within the urban service area at all times.
5. Secure suitable park, school and fire station sites ahead of development within growth areas.
6. Guide new development with urban design amenities to prevent costly infrastructure upgrades or retrofitting in the future.
7. Beyond the urban service boundary, encourage agriculture to remain the primary land use activity and minimize the cost of providing future public services and facilities by maintaining a rural population density and preserving agricultural lands.
8. Preclude development in areas that are environmentally unsuitable for buildings or septic systems, and protect major drainageways, floodplains, steep slopes, Pierre Shale soils or other natural areas from incompatible development which may result in environmental problems.
9. Reserve the land in Section 21 and the western part of Section 22 for future urban scale development.
10. Encourage the land in Sections 20 and 29 be preserved for agricultural and open space uses, but allow limited rural residential development with appropriate guidelines to protect natural resources.
11. Protect the present and future functionality of the airport from encroachment by incompatible land uses and intensities.
12. Encourage the revitalization of downtown Pierre through new streetscaping, redevelopment, increased residential density, and increased economic activity.
13. Promote the walkability of downtown Pierre.
14. Encourage downtown property enhancement through joint public-private partnership programs, and consider implementing a Main Street program.
15. Encourage apartment, office and institutional uses as alternatives to commercial strip development along major streets.
16. Avoid scattered or strip commercial and industrial development outside the urban service area and direct such uses into existing developed locations where adequate services, including major street access, and proper water and sewer systems are available.
17. Require appropriate screening and landscaping of commercial, industrial and multiple family housing structures and facilities.
18. Prohibit spot location of mobile homes by requiring that mobile homes be located in designated and properly developed mobile home parks.
19. Establish an area wide approach to cooperatively manage future growth including state government, city and county governments, school districts and other public utility providers.