Sturgis

Sturgis 2030:
A COMPREHENSIVE PLAN

RDg PLANNING • DESIGN

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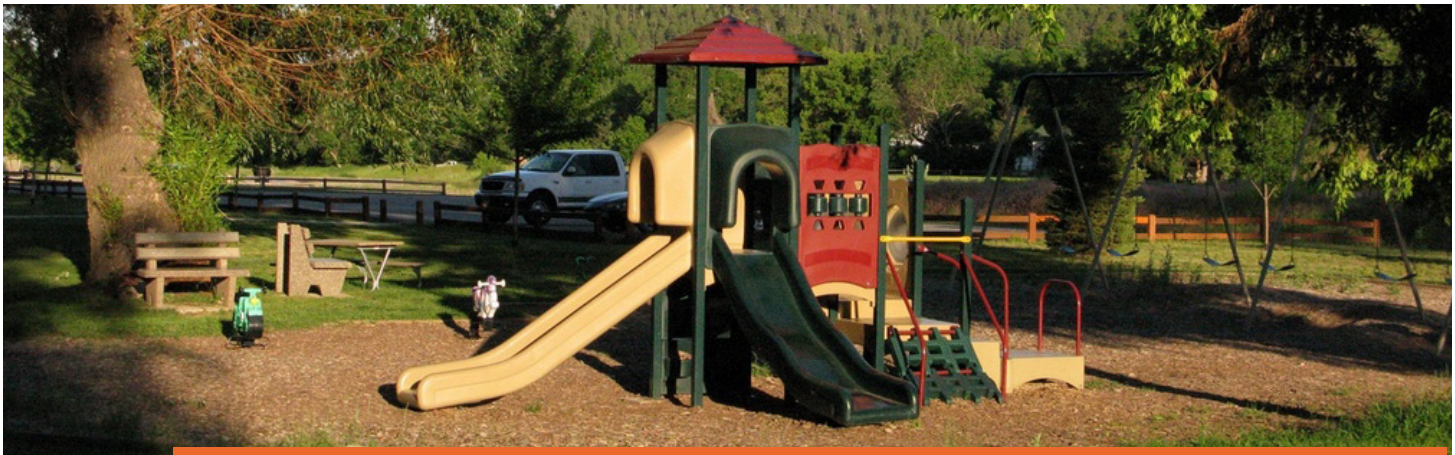

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Introduction

Sturgis is one of America's special places. The mention of the city's name brings instant recognition and often a knowing smile from coast to coast. Its association with the motorcycle and the renowned Rally produces one of the nation's most recognizable community brands – a brand that conjures up images of lifestyle, the open road, and a considerable and unique measure of magic.

But strong brands, while a blessing and a foundation, can also be limiting, and Sturgis is infinitely more than a motorcycle rally. It is a vital community full of great people with a deep attachment to their place, in a location rich in natural resources, scenic beauty, and evocative history. From its beginning over 130 years ago as a boom town supplying goods and services to soldiers at Fort Meade, Sturgis has grown into a mature city in the dynamic Black Hills region. A combination of its iconic status, history, and unique environment together can propel the town forward into this still new century. Recognition of this potential motivated community leaders to undertake the Future Sturgis process in 2008, creating a strategic outline for a new vision of Sturgis. This comprehensive plan is designed to build on this process, proposing a detailed program of specific actions and concepts that will advance the economy of the city, improve the lives of its residents, and secure its status as a regional and national destination.

WHY A PLAN?

The comprehensive plan for Sturgis has two fundamental purposes. First, the plan enables the city to manage its development by providing the legal basis for zoning and subdivision regulations. Secondly, a comprehensive plan presents a unified and compelling vision for a community, derived from the aspirations of its citizens, and defines the specific actions necessary to fulfill that vision.

The Legal Role

Communities prepare and adopt comprehensive plans for legal purposes. South Dakota State Statute 11–4–1 gives cities the ability to adopt zoning and subdivision ordinances to promote the health, safety, or general welfare of its citizens. Zoning ordinances recognize that people in a community live cooperatively and have certain responsibilities to one another. Other land use regulations, such as subdivision regulations, are based on the premise that growth should

comply with specific standards and proceed in an economi–cally efficient, cohesive manner. Together, these ordinances help determine how land is developed within a municipality.

However, land use decisions should follow an accepted and reasonable concept of how the city should grow. Therefore, South Dakota state law requires the adoption of a comprehensive plan as a prerequisite for implementing development regulations. State Statute 11–4–3 requires a comprehensive plan to address, at a minimum:

- Land use or the planned distribution of activities and uses of land in the community
- Transportation facilities
- Community facilities, including recreation facilities, schools, public buildings, and infrastructure

The Community Building Role

A land use plan that provides a basis for zoning and subdivision regulations helps communities develop efficiently and respon–sibly. Yet, the greatest value of a comprehensive plan for Sturgis is to build on Future Sturgis to create a detailed concept for the community's future, based on the participation of residents in the planning process. Such a concept addresses both demographic and economic changes and opportunities. Beyond a vision, the plan is a working document that presents strategies for realizing the city's potential.

THE COMPREHENSIVE PLAN: APPROACH AND FORMAT

The mission of the Future Sturgis process was to "create a value–added community that provides the citizens a voice in revital–ization of the greater Sturgis area." The guiding vision of this predecessor process, developed through a committee structure that promoted extensive citizen engagement, is summarized in Chapter Five of this plan, which then uses it as a launching point for an outcome–oriented approach to city development policy.

The Sturgis Plan is organized into two parts. Part One presents a snapshot of the city, analyzing existing human, economic, and physical conditions and growth needs. Part Two establishes a plan that builds on the Future Sturgis vision and the city's opportunities for growth and enhancement. The plan weaves traditional plan elements, like land use, housing, infrastructure, and transporta–tion, into an integrated development concept that provides added dimension and strategic approaches to the results of the Future Sturgis program. A summary of the plan's organization follows.

Part One: Sturgis Today: A Snapshot of Current Conditions and Future Needs

Sturgis Today, Part One of the plan, reviews the current status of Sturgis in 2011, and provides the factual and analytical basis of the plan in four chapters:

Chapter 1: Demographic and Economic Profile, considering such variables as population characteristics, population growth forecasts, employment and income characteristics, and key housing factors.

Chapter 2: Land Use and Development, considering development and land use patterns, densities, and projections of land needs to satisfy probable growth demand.

Chapter 3: Transportation and Infrastructure, reviewing the city's framework systems, specifically its access network, water, stormwater, and sanitary sewer systems.

Chapter 4: Public Facilities and Infrastructure Profile, reviewing key community investments in Sturgis, including the transportation network, parks and recreational facilities, public buildings, and infrastructure.

Part Two: Sturgis Tomorrow: A Plan for Community Development

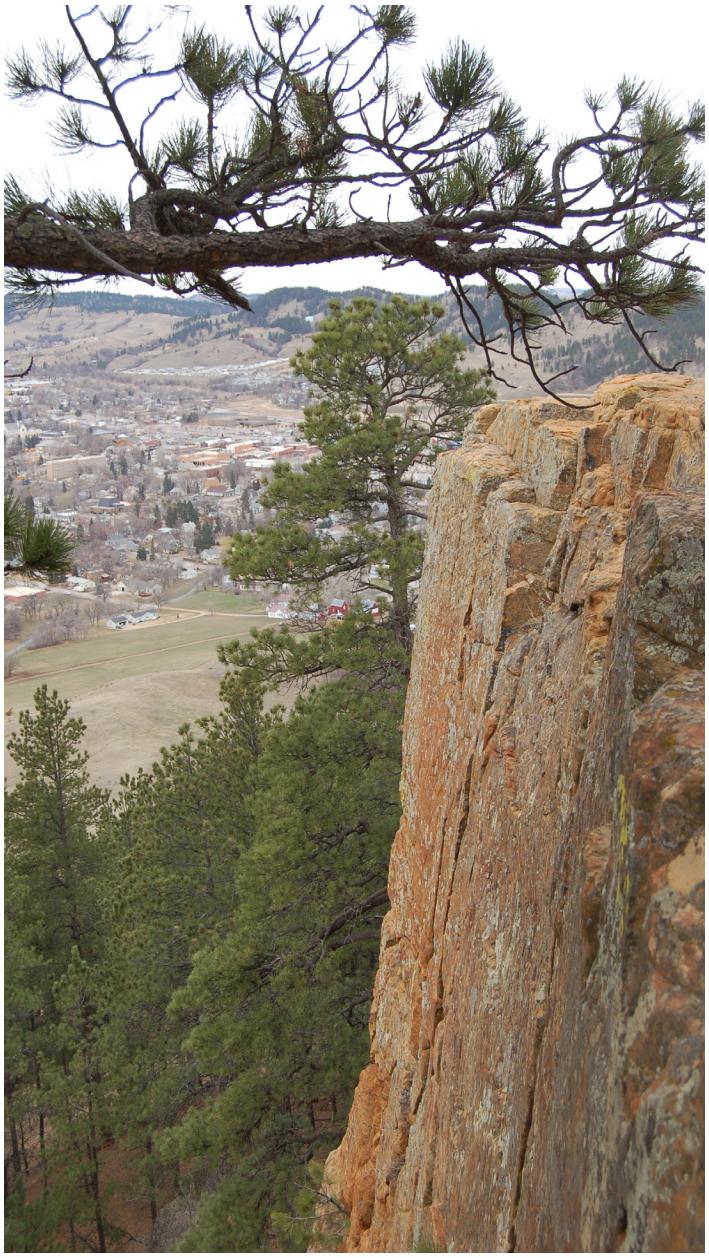
This section presents detailed strategies and recommendations that accommodate potential growth and direct development potential in ways that maximize community benefit.

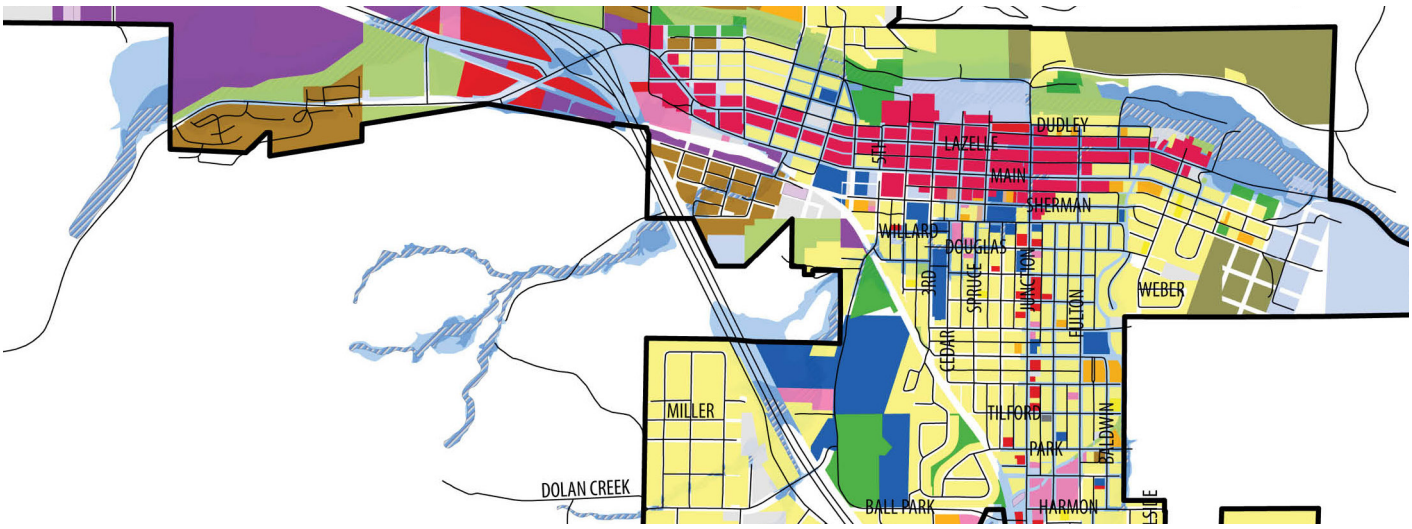
Chapter 5: Future Sturgis, summarizing the goals and objectives identified by each of the Future Sturgis committees.

Chapter 6: The Development Vision, unifying land use, transportation, parks, infrastructure, and housing elements into a cohesive growth plan for Sturgis.

Chapter 7: Concepts for Sturgis' Key Districts, providing a more detailed look at the city's four pivotal development focuses, including Main Street.

Chapter 8: Implementing the Sturgis Plan, summarizing the plan's recommendations and policies, and presenting an implementation schedule with preferred time frames for executing individual projects and initiatives.





PART ONE:
Sturgis Today

1

Demographic and Economic Profile

Understanding of key characteristics and trends that affect Sturgis' people helps us plan for the city's future. This chapter presents and interprets important demographic and economic factors that have an impact on the city's physical and community development. These variables include population trends and forecasts, income, employment, and housing characteristics.

POPULATION CHARACTERISTICS

This discussion looks at Sturgis' historic population change and includes forecasts for population growth for the next twenty years. These forecasts provide the basis for calculating future land needs for residential, commercial, and industrial development.

Historic Population Change (Figure 1.1)

• *Between 1960 and 2000, Sturgis experienced steady population growth, increasing by just under 40% during that forty year period.* This represents an annual growth rate of 0.82%. Generally, a good standard for healthy growth in a mature, non–metropolitan community is an annual growth rate in the range of 1%.

• *Growth in Sturgis compares favorably with other regional cities, and is very similar to Rapid City's growth trajectory.*

• *The 2010 Census credited Sturgis with a moderate population gain of about 3%.* Because natural population change in Sturgis would have produced a small decline, a positive showing since

Figure 1.1. Population Change, Sturgis and Regional Cities, 1960–2010

	1960	1970	1980	1990	2000	2010	% Change, 1960–2010	% Change, 2000–2010
Sturgis	**4,639**	**4,536**	**5,184**	**5,330**	**6,442**	**6,627**	**42.9%**	**2.9%**
Rapid City	42,399	43,836	46,492	54,523	59,607	67,956	60.3%	14.0%
Spearfish	3,682	4,661	5,251	6,966	8,606	10,494	185.0%	21.9%
Box Elder	–	607	3,186	2,680	2,841	7,800	1185.0%	174.6%
Belle Fouche	4,087	4,236	4,692	4,335	4,565	5,594	36.9%	22.5%
Hot Springs	4,943	4,434	4,742	4,325	4,129	3,711	–24.9%	–10.1%
Lead	6,211	5,420	4,330	3,632	3,027	3,124	–49.7%	3.2%
Meade County	12,044	17,020	20,717	21,878	24,253	25,434	111.2%	4.9%

Source: US Bureau of the Census

Figure 1.2. Age Distribution in Sturgis, 1990 and 2000

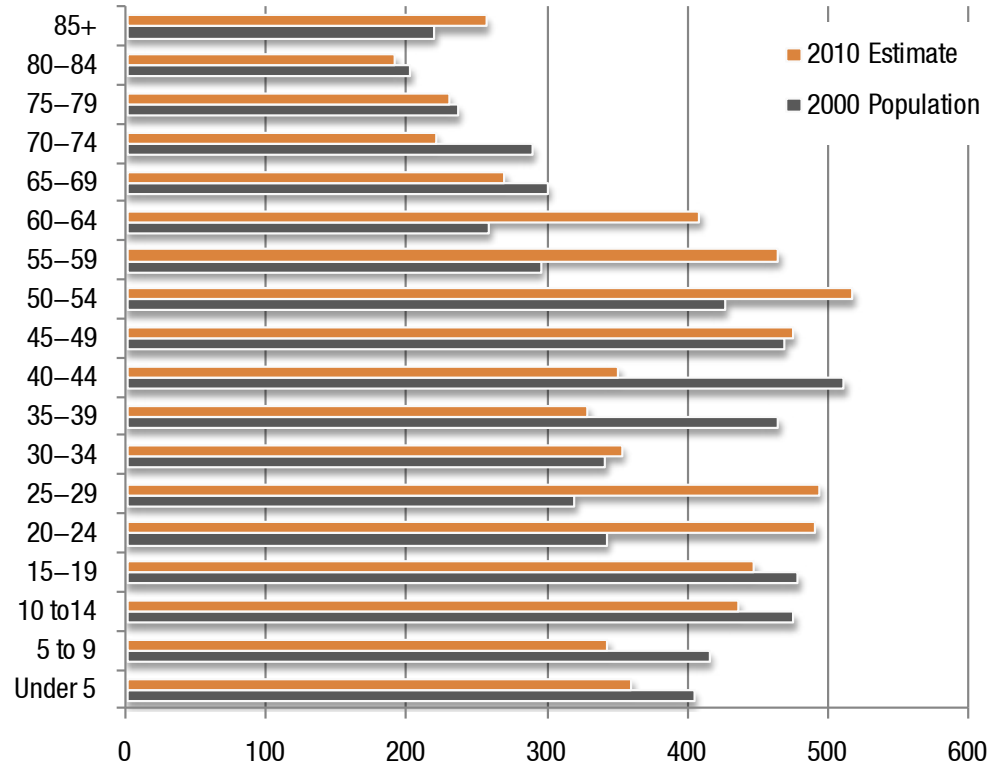


Figure 1.3. Cohort Migration, 2000–2010

Age Group (Cohort)	2000 Cohort Population	2010 Estimated Cohort Population	Difference	Difference (%)
0–5	**404**	**359**	**–45**	**–11%**
4–9	**415**	**343**	**–72**	**–17%**
10–14	**475**	**435**	**–40**	**–8%**
15–19	478	447	–31	–7%
20–24	342	491	149	43%
25–29	319	493	174	54%
30–34	341	352	11	3%
35–39	**464**	**328**	**–136**	**–29%**
40–44	**511**	**350**	**–161**	**–31%**
45–49	468	474	6	1%
50–54	426	516	90	21%
55–59	295	464	169	57%
60–64	258	408	150	58%
65–69	300	269	–31	–10%
70–74	289	220	–69	–24%
75–79	236	230	–6	–3%
80–84	202	192	–10	–5%
Over 85	219	256	37	17%

Source: US Bureau of the Census, RDG

? ABOUT POPULATION CHANGE

Three factors determine population change in cities. The first is **natural population change** – the balance of births and deaths. Cities with older populations will tend to have more deaths than births, trending toward a declining population. Those with younger families will have more births than deaths, producing a larger population. The second factor is **net migration** – are more people moving into or out of the community? The third is **annexation** – has the city expanded its boundaries to include new populated areas? Together, these three factors help us explain whether and why a city is growing.

2000 represents continued movement of people into the city. However, other regional cities, including Rapid City, Spearfish, and Belle Fouche, grew more rapidly than Sturgis.

• *Rural Meade County historically has grown at a far faster rate than Sturgis, but this differential slowed during the last decade.* In 1960, Sturgis accounted for 39% of the county's population; by 2000, this proportion dropped to 26%, despite the city's rapid growth during the 1990s.

Age Distribution and Migration (Figures 1.2, 1.3)

• During the 1990s, Sturgis' annual growth rate approached 2%, producing an increase in most age groups. This growth slowed considerably during the last decade, and age distribution estimates seem to suggest an aging population. Growth appears most rapid among baby boom age cohorts, between 50 and 64 in 2010.

• RDG estimates suggest a decline in the number of young children (under age 14) during the last decade, evidence of a slow down in the number of younger households coming into the city.

WHAT DOES MIGRATION TELL US?

A good demographic analysis goes beyond changes in total population. We can look at how well Sturgis is retaining or attracting specific age groups, such as younger families or seniors. To do this, we use a technique called **cohort survival.** This tells us how many members of specific age groups will survive to be counted at a later time. For example, if the Census counted 1000 people between the ages of 25 and 34 for a hypothetical city in the year 2000, we can predict statistically that about 985 of those would live to be counted in 2010 in the group (or cohort) between the ages of 35 and 44. If the census counts a significantly larger population over that number, we can conclude that people in that age group have tended to **migrate** to the city from outside. This helps us plan for future facility and land needs. However, If people have migrated out of the city, the community may want to address how to become more attractive to this age group. Census 2010 provides us with recent and reliable information that allows us to understand and respond to these issues.

Housing Development (Figure 1.4)

• *Recent housing development helps explain population change in Sturgis since 2000.* Between 2003 and 2009, Sturgis added 202 units, most of which were single–family homes.

• *During this period, Sturgis developed 46 multi–family units, 42 of which were in an assisted senior living development.* Assisted living units have an impact on the city's housing supply, because they free single–family homes for new occupants. As a general rule, about half of the units of such developments are occupied by people from outside the city limits.

Population Performance and Forecasts (Figures 1.5, 1.6)

Projecting future population is an essential first step toward defining Sturgis' future land use and community service needs. The previous analysis establishes the assumptions used to forecast future growth. Figure 1.5 analyzes the impact of migration on Sturgis' population between 2000 and 2010.

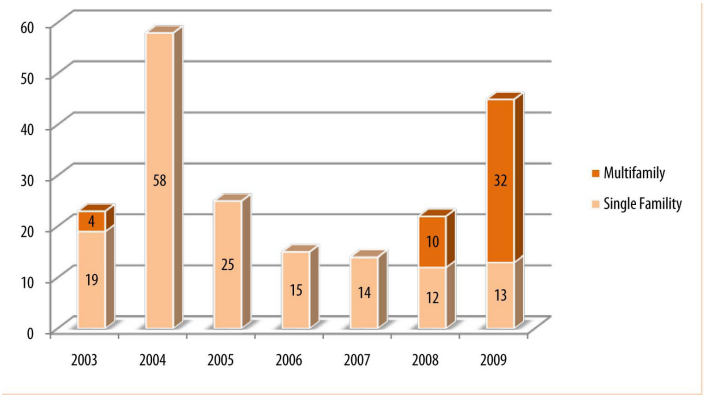
Natural population change calculated by applying the cohort survival method (see sidebar) predicted a minor decline of about 2% in Sturgis' population between 2000 and 2010. In reality, Sturgis registered a 3% population gain during that same period. This variance is the result of migration, as enough people moved into the city to counteract the slight imbalance of deaths over births among an aging population. The annual growth rate during the last ten years is below the city's historic 50–year rate of 0.8%. However, housing construction activity was at least somewhat consistent with this long–term average rate.

Based on this information, continued use of the historic growth rate of 0.8% appears to be a reasonable goal for future planning purposes. This growth rate suggests that Sturgis may not grow as quickly as its peer communities, specifically Rapid City and Spearfish, in the I–90 corridors, but will nonetheless attract a

THE HOW AND WHY OF POPULATION FORECASTS

There are several ways to forecast population, and we compare all of them before settling on a specific method. One technique is **regression analysis** – plotting past population on a graph, drawing a line or curve that best fits the points, and projecting that line out into the future. Related to this is a view of **historic growth rates**, especially appropriate if growth has been relatively steady over the long–term. Another uses an **adjusted cohort survival and migration analysis**, a sensitive technique that is most useful after a census when recent counts are available. We have used the historic growth rate technique. We must recognize, though, that all population forecasts are educated guesses, based on current assumptions. Unforeseen circumstances can change them dramatically. However, these projections do help us understand future housing, land development, park, and facility needs.

Figure 1.4. Housing Development, Sturgis, 2003–2009



proportionate share of regional growth. Clearly, the overall region continues to grow at a significant rate. These growth histories suggest the strategic importance to Sturgis of implementing policies that attract younger populations. (Figure 1.6)

ECONOMIC CHARACTERISTICS

Sturgis is both an independent economic center and part of an inter–dependent regional economy. Consequently, many Sturgis residents commute to workplaces in other regional cities, while other regional residents travel to jobs in Sturgis. Regional interde–pendence also affects consumer spending, as regional shoppers gravitate to larger, more diverse retail centers. This section explores economic characteristics that affect policy priorities for Sturgis.

Employment Characteristics (Figures 1.7, 1.8)

• *Based on 2009 estimates, over 72% of Sturgis' workforce is employed in service and sales; management, professional, and related occupations; and the service sector.* About 25% of the city's workers are employed in industrial and transportation sectors. (Figure 1.7)

• *Most jobs local to Sturgis are in the public and service sectors.* The city's six largest employers, including the Fort Meade VA Hospital and Black Hills Special Services, account for over 1,800 jobs, and have the status of regional employers. On the other hand, the largest private sector employer is a supermarket. Largest manufacturing employers include ammunitions manu–facturers and screen printing related to the Rally. (Figure 1.8)

• *The Deep Underground Science and Engineering Laboratory (DUSEL) offers significant potential for Sturgis' economy.* The laboratory, under development at the former Homestake Mine in Lead, will provide multidisciplinary research opportunities in particle physics, nuclear physics, and astrophysics, as well as associated research in biology and geology and a variety of educational programs. DUSEL will emerge as a significant employment center, with substantial benefits for Sturgis if the city

Figure 1.5. Current Population Estimates for Sturgis

	Predicted Population (based on survival & birth rates)	Actual Population
2000	6,442	6,442
2010	6,317	6,627
Change	–125	185
Percent Change	–1.9%	2.9%

Source: RDG, US Bureau of the Census

Figure 1.6. Future Population Scenarios, 2010–2030

Source	2010	2015	2020	2025	2030
Natural Change	6,317	6,310	6,303	6,258	6,169
0.7% Annual Growth	6,627	6,868	7,117	7,376	7,643
0.8% Annual Growth	**6,627**	**6,896**	**7,177**	**7,468**	**7,772**
1.9% Annual Growth	6,627	7,281	7,999	8,789	9,656

Source: RDG

Figure 1.7. Employment by Occupation, 2009 Estimate

Sector	Sturgis	Meade County
Sales & office occupations	27.52%	27.10%
Management, professional, & related occupations	23.01%	28.19%
Service occupations	22.09%	16.58%
Production, transportation, & material moving occupations	14.85%	14.80%
Construction, extraction, & maintenance occupations	11.41%	11.31%
Farming, fishing, & forestry occupations	1.11%	2.03%

Source: Claritas, Inc. 2010

Figure 1.8. Major Employers, Sturgis, 2010

Employer	Business Type	Estimated Workforce
Fort Meade Veterans Affairs	Health Care	600
Black Hills Special Services	Education	553
Meade County School District	Education	360
Sturgis Community Health	Health Care	200
Meade County	Government	137
City of Sturgis	Government	90
Lynn's Dakota Mart	Groceries	59
Dakota Arms	Manufacturer	45
Jamison International	Manufacturing	30
Corbon	Manufacturer	25

Source: Sturgis Economic Development Corporation

can attract staff members and associated research and industries.

Income Characteristics (Figure 1.9)

• *Sturgis' median household income is lower than that of Meade County, neighboring Lawrence County, or South Dakota as a whole.* About 50% of the city's earners are employed in the traditionally lower–paying sales and service sectors. Sturgis median income is about 75% of the county wide average, indicating that higher income residents tend to live outside the city limits. The city's distribution is evenly split among three ranges: less than $25,000; between $25,000 and $50,000; and over $50,000.

Commuting Patterns (Figure 1.10)

• *Workers in the Black Hills region are highly mobile and tend to move throughout the area for employment.* Average commuting time for smaller cities in the region (including Sturgis) indicate that the typical resident travels outside the city for employment.

• *Sturgis falls within a middle range for commuting time among regional communities.* The average estimated commuting time is just under 19 minutes, greater than that for Rapid City, Spearfish, or Deadwood. Deadwood has a significant number of people employed locally, indicated by the very high percentage who walk to work.

Taxable Retail Sales (Figure 1.11)

Retail sales are an important indicator of economic activity. Sales in Sturgis, uniquely, are generated from two sources: regular, year–round sales, and Rally–related sales. The importance of retailing and related services to the city's economy caused Sturgis to undertake a special study of retail gaps and opportunities.

• *Sturgis is a relatively high retail sales producer, generating over $18,000 in per capita taxable sales.* This lags behind per capita sales in the two major retail centers that flank Sturgis along Interstate 90 – Rapid City and Spearfish. The Sturgis sales statistics include the Rally.

• *Sales in Sturgis grew, but at a somewhat slower rate than comparable cities.* Vermillion, comparable to Sturgis because of proximity to metropolitan retail centers, experienced the largest proportional gain in this sample, attributable to the opening of a Walmart superstore.

• *Some of the sales lag was caused by stagnant Rally revenues during the post–2008 "Great Recession" period.* Annual Rally sales declined by about $1.25 million between 2000 and 2009. Preliminary reports from 2010 suggest a resurgence in revenues.

• *Sturgis' "routine" retail performance indicates that local consumers are doing a considerable amount of shopping outside the city, specifically in Spearfish and Rapid City.* Appropriate retail goals include retention of more local spending and attracting unique or destination retailers.

Figure 1.10. Estimated Commuting Time, Sturgis and Regional Cities, 2009 Estimates

City	Average Time to Work	% Walking to Work
Hill City	25.9	7.5
Gillette	19.6	1.63
Lead	19.2	4.8
Sturgis	**18.9**	**3.4**
Belle Fouche	18.4	1.9
Spearfish	17.7	6.7
Deadwood	17.7	20.5
Rapid City	17.5	1.8

Source: Claritas, Inc. 2010

Figure 1.9. Comparative Average Household Income, Sturgis and Counties

Community	Under $15,000	$15,000–24,999	$25,000–34,999	$35,000–49,999	$50,000–74,999	Over $75,000	2009 Median Income
Sturgis	**18.62**	**15.50**	**13.76**	**20.08**	**19.97**	**12.07**	**$36,595**
Meade County	9.65	10.38	12.21	20.71	23.81	23.24	$47,862
Lawrence County	15.58	15.22	12.87	17.66	19.62	19.06	$40,386
South Dakota	13.53	12.37	13.06	17.31	21.72	22.01	$44,568

Source: Claritas, Inc., 2010

Housing Supply Considerations (Figures 1.12–1.14)

Population change, income, and employment strongly affect a community's housing supply. Important findings about housing occupancy and value in Sturgis follow.

• *Housing development in Sturgis slowed during the last decade.* About 26% fewer units were built between 2000 and 2009 than during the 1990s. However, the 1990s were a period of unprec–edented growth for the city and may be atypical. Except for a dramatically high output in 2004, single family construction was relatively steady during the 2000s, and held its own even in the recession period after 2008 .

• *In common with national trends, Sturgis saw little non–senior rental development during the 2000s.* Federal policy and private financing practices favored owner–occupied development and easy access to mortgages, producing the artificial impression to many consumers that owning was actually less expensive than renting. The consequences of those practices became abun–dantly clear after 2008, and tighter underwriting standards will create more rental demand.

Figure 1.11. Taxable Retail Sales, Sturgis and Other South Dakota Communities

Community	2000	2005	2009	Change 2000–2009	Per Capita Taxable Sales
Rapid City	$1,527,485,385	$1,944,962,421	$2,122,896,125	39.0%	31,239
Spearfish	167,999,342	234,258,011	267,278,719	59.1%	25,470
Madison	90,226,629	109,963,915	138,138,456	53.1%	20,914
Sturgis	**102,366,617**	**131,354,622**	**121,312,260**	**18.5%**	**18,306**
Vermillion	69,972,603	89,329,747	125,868,756	79.9%	12,083

Source: South Dakota Department of Revenue and Regulation

• *Median housing value in Sturgis has more than doubled during the past twenty years.* Rapid population growth during the 1990s produced a 56% increase in median value during that decade. Appreciation continued during the 2000s: the median value increased by about the same amount as during the 1990s, although the percentage increase decreased somewhat, based on 2009 estimates. These data will be updated with the release of the 2010 Census. (Figure 1.11)

• Median contract rent in Sturgis has grown slowly and will probably remain below the level necessary to make new construction feasible. Median monthly contract rents were flat at just below $300 through the 1990s, a decade of rapid community growth that should have produced significant increases. Available sources indicate that typical rents are in the range of $350 to $400 in 2010. This rent level is too low to support the cost of new rental development. (Figure 1.14)

• Sturgis has a relatively good balance of owner and renter–occupied units. About two–thirds of the city's housing units are owner–occupied. However, construction activity during the last twenty years substantially increased the ownership component of the housing supply, from 58% in 1990 to an estimated 65% in 2010. (Figures 1.12,1.14)

• Housing in Sturgis is relatively affordable in comparison with other regional cities. A traditional measure of affordability is a home price equal to a maximum of three times individual income. Figure 1.13 extrapolates this standard to a community–wide

comparison of median income and value. In general, a value to income ratio over 3.00 indicates a concern about citywide afford–ability; 2.50 to 3.00 is an optimum target; and a ratio below 2.50 suggests an undervalued market. With a ratio of 2.80, Sturgis appears to have a good balance of values high enough to sustain new development, but low enough to remain relatively affordable. (Figure 1.13)

Figure 1.12. Housing Occupancy, Sturgis and Regional Cities, 2009

City	% Owner Occupied	% Renter–Occupied
Hill City	78	22
Gillette	70	30
Lead	68	32
Belle Fouche	66	34
Sturgis	**65**	**35**
Rapid City	60	40
Deadwood	57	43
Spearfish	49	51

Source: Claritas, Inc. 2010

Figure 1.13. Value/Income Ratio, Sturgis and Regional Cities, 2009

City	Median HH Income	Median House Value	I/V Ratio
Spearfish	33,816	119,733	3.54
Rapid City	43,621	144,779	3.32
Deadwood	44,326	141,146	3.18
Hill City	55,511	176,639	3.18
Sturgis	**36,594**	**102,326**	**2.80**
Gillette	69,809	$184,931	2.65
Lead	36,733	79,533	2.17
Belle Fouche	37,318	70,116	1.88

Source: Claritas, Inc. 2010

Figure 1.14. Changes in Key Housing Occupancy Indicators, 1990–2010

	1990	2000	2010	Change, 1990–2000	Change, 2000–2010	% Change, 1990–2000	% Change, 2000–2010
Total Housing Units	2,358	2,989	3,154	631	165	26.8%	**5.52%**
Owner–Occupied Units	1,280	1,744	1,895*	464	151	36.3%	8.66%
% Owner–Occupied	58%	64%	65%*				
Renter–Occupied Units	912	994	1,021*	82	27	9.0%	2.72%
% Renter–Occupied	42%	36%	35%*				
Vacant Units	166	251	238	85	(13)	51.2%	(5.18%)
Vacancy Rate	7.0%	8.4%	7.5%				
Seasonal Vacancy	0.21%	1.47%	––				
Median House Value	$47,400	$74,200	$102,326*	26,800	28,126*	56.5%	37.91%
Median Contract Rent	$289	$294		5		1.7%	

*Estimates

Source: US Bureau of the Census, 2010

2

Land Use and Development Patterns

Land use is the central element of the traditional comprehensive plan, establishing the physical configuration of the city – the mix and location of uses and the nature of community systems that support them. Because the land use plan is a statement of policy, public and private decision makers depend on it to guide individual actions such as land purchases, project design, and the review and approval process. This chapter considers existing development patterns in Sturgis and the influence of its natural environment. It concludes by calculating future land use needs, providing a basis for the future development plan in Part Two.

THE NATURAL SETTING

The experience of Sturgis is irrevocably tied to its Black Hills environment, both a critical resource and a major determinant of the city's form and character. While this comprehensive plan addresses elements of urbanization – growth, community development, transportation, parks, and economics – it must do so with respect for the almost mystical quality of its natural context. Furthermore, major environmental assets such as Bear Butte and its surrounding state park, Bear Butte Creek, and the Black Hills National Forest have great economic potential to diversify the attraction of Sturgis beyond the Rally. Figure 2.1 illustrates some of Sturgis' natural features and places the developed city in its physical context. Key form–giving characteristics follow.

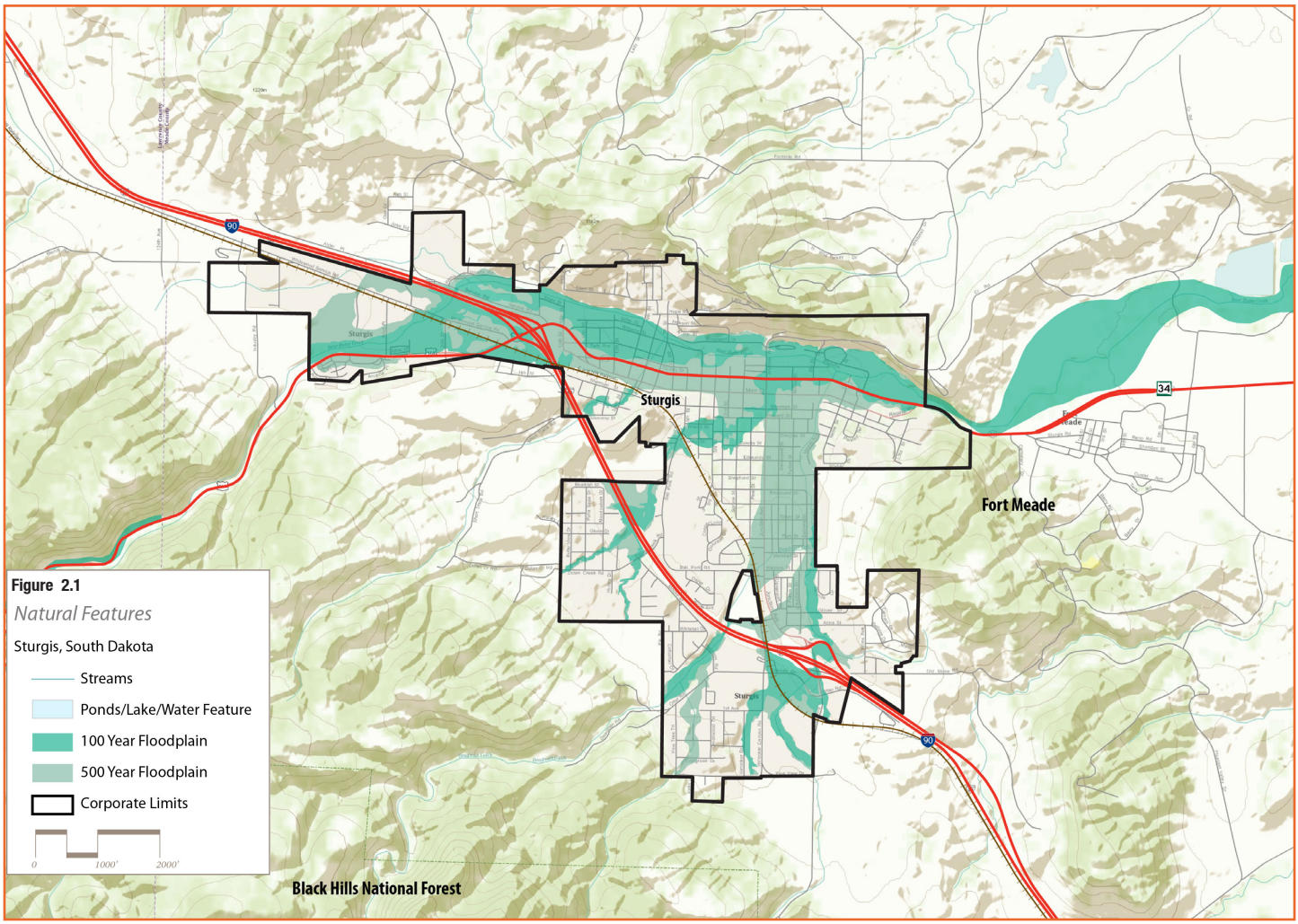
• *Sturgis developed in a bowl between two ranges of hills running from northwest to southeast.* These hills, which form the northern edge of the Black Hills in this area, became a transportation corridor initially used by the Fremont, Elkhorn & Missouri Valley Railroad, now the Dakota, Minnesota & Eastern, and later by Interstate 90. The hills created Sturgis' urban form, which narrows to the northwest and broadens with the widening of the bowl to the southeast.

• *The Black Hills and the Natural Forest form the southern edge of the city's urban area.* Sturgis' water supply was once provided by a chain of five crystal clear ponds above Vanocker Canyon south of the city. Vanocker Canyon Road runs along the floor of this scenic Black Hills canyon. Reuse possibilities for the City Lakes are discussed in Chapter Seven of this plan.

• *Bear Butte Creek forms the northern boundary of the city.* The creek is prone to flash floods, and its flood plain constrains development along or near its banks. Tributary streams run down from the hills out of Boulder Canyon along US 14A from the southwest and from the south. A major stormwater management project included a drainage canal that extends from Ballpark Drive to the Creek. This structure reduced flood risk on the east side of the city.

Features of the Natural Setting. Above: Drainage canal on Bear Butte Creek tributary; Right: Bear Butte

• Bear Butte rises from surrounding tableland northeast of the city. The Butte is sacred to many native peoples, including the Lakota Sioux and Cheyennes. Religious ceremonies take place during the year on the mountain which is regarded as a place of meditation and peace. The surrounding state park includes a campsite with horseback riding, fishing, and boating; a buffalo herd; and a visitor center and summit trail.



LAND USE PATTERNS IN STURGIS

The original Sturgis town site was laid out in 1878 and the city officially incorporated in 1888. The original city grid was platted in an east–west corridor paralleling Bear Butte Creek west of Fort Meade, and initially grew south from the creek. The hills to the north helped direct growth to the south, and the city gradually developed along two crossing corridors – Lazelle Street and Junction Avenue. These corridors eventually emerged as the city's principal arterials and attracted a mix of commercial and residential land uses. In common with many towns, the major Lazelle arterial developed one block north of the traditional Main Street district, in itself becoming an early bypass that ultimately attracted auto–oriented commercial development.

By the 1970s, Interstate 90 replaced previous highways as the primary regional traffic corridor, and defined the edge of Sturgis development on the west and south. The city's principal I–90 interchanges were at Lazelle and Junction, on the west and south sides of town respectively, producing a cluster of traveler services at those locations. A new interchange at Junction Avenue/ Vanocker Road is producing new commercial opportunities at that location. During the last twenty years, development has increasingly taken place south of I–90.

Figure 2.3 is the Existing Land Use Map, displaying Sturgis' existing land use patterns. Figures 2.2, 2.4, and 2.5 inventory land use in the city and, for interpretive purposes, compare land use distribution and development intensity with other communi–ties in RDG's database.

Residential Uses

• *Residential land use makes up the largest single land use category in Sturgis, accounting for just under 40% of the city's urbanized area.* Most traditional residential neighborhoods crossed the topographic bowl defined by surrounding hills, generally extending about ½ mile east and west of the Junction Avenue. A shallower development corridor follows the Lazelle corridor and is limited by Bear Butte Creek. Recent residential growth diverged from these crossroads corridors, focusing on the eastern edge of town north of I–90 and in newer neighborhoods south of the interstate.

• *About 83% of Sturgis' residential land is single–family.* The city's 33 acres of multi–family land accommodates an estimated 400 housing units at an average net density of 12 units per acre. This suggests that about 60% of the city's rental housing is in single–family structures.

• *Sturgis displays the relatively low–density development pattern typical of hilly settings.* Challenging topography, a preference for

Figure 2.2: Land Use in Sturgis, 2010

Land Use Category	City Total (Acres)	Percent	Acres per 100 People
Residential	**809.93**	**37.8%**	12.22
Single–Family	669.33	31.2%	10.10
2–4 Family	3.77	0.2%	0.06
Multi–Family	29.01	1.4%	0.44
Mobile Home	107.82	5.0%	1.63
Commercial	**162.82**	**7.6%**	2.46
Office	34.72	1.6%	0.52
Retail	96.26	4.5%	1.45
Parking	3.04	0.1%	0.05
Commercial Rec.	28.79	1.3%	0.43
Industrial	**210.97**	**9.8%**	3.18
General Industrial	179.81	8.4%	2.71
Lt. Industrial/Warehousing	31.16	1.5%	0.47
Civic	362.15	16.9%	5.46
Public–Semi Public	117.00	5.5%	1.77
Civic	110.45	5.2%	1.67
Parks & Rec.	134.70	6.3%	2.03
Transportation	598.53	27.9%	9.03
Total Developed Land	2,144.39	100.0%	32.36
Agriculture and Open Space	237.59		3.59
Vacant Urban Land	189.02		2.85
Total Area	2,571.00		38.80

Source: RDG Planning & Design, 2010

WHY COMPARE WITH OTHER CITIES?

Comparing land use from city to city puts numbers in context and helps us interpret their meaning. For example, we have found that towns with less than 1 acre of commercial land per 100 residents in many cases should concentrate on attracting more retail development. (The exception to this are towns with very strong central business districts and no auto–oriented development). Towns with more than 10 acres of residential land per 100 people are comparatively dispersed. We often find this low density in places with challenging topography like Sturgis. We can also measure industrialization by comparing intensities.

large lots, and relatively small amount of higher–density, multi–family housing contributes to this pattern. Sturgis devotes about 12.2 acres of land per 100 residents, compared with a range between seven and ten acres per 100 people displayed by other similarly–sized communities in a sample in RDG's database of midwestern and western towns. Lower–density cities typically have a higher per capita cost of services because of additional linear feet of road, sewer, and utility lines needed to serve a fixed number of housing units. Because of limited availability of land in and around Sturgis, new development should use land more efficiently, while still maintaining the open character of the landscape so much a part of the Black Hills area.

Commercial Uses

- Commercial uses in Sturgis are concentrated in several settings, each with somewhat different roles. These include the traditional Main Street district, the Lazelle and Junction Avenue corridors, and commercial and visitor service clusters oriented to the I–90 interchanges.

- *The Main Street district,* between Middle and 4th Streets, includes specialty retailers, entertainment and hospitality

Commercial Districts. From top: Main Street, South Junction/Vanocker Canyon, and Junction Avenue.

Figure 2.4: Comparative Land Use by Percentage of Developed Area

	Sturgis	Yankton, SD	Gillette, WY	Plattsmouth, NE	Pella, IA	37 City Average
Residential	37.8%	25.3%	34.8%	**47.0%**	26.8%	36.2%
Commercial	7.6%	6.2%	**14.7%**	5.0%	4.3%	6.7%
Industrial	9.8%	7.1%	13.4%	2.0%	**18.0%**	7.5%
Civic	10.6%	**29.4%**	7.5%	10.0%	26.2%	15.1%
Parks	5.0%	**14.1%**	8.4%	7.0%	5.1%	9.3%
Transportation	**29.2%**	17.9%	21.2%	**29.0%**	19.6%	25.4%
Total Developed Area	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: RDG Planning & Design, 2010

Figure 2.5: Comparative Land Use by Acres per 100 People

	Sturgis	Yankton, SD	Gillette, WY	Plattsmouth, NE	Pella, IA	37 City Average
Residential	12.22	**7.5**	8.27	9.13	9.75	9.04
Commercial	**2.46**	1.83	1.68	0.98	1.56	1.49
Industrial	3.18	2.12	3.18	0.47	**6.53**	2.31
Civic	3.43	8.71	1.77	1.91	**9.37**	4.17
Parks	2.03	**4.16**	1.99	1.46	2.01	2.75
Transportation	9.03	5.29	**5.04**	5.62	7.12	6.37
Total Developed Area	38.80	29.61	23.76	**19.57**	36.34	26.41

Source: RDG Planning & Design, 2010

uses, offices, and financial institutions. City Hall and the Meade County courthouse and offices are just one block off Main Street. A number of Main Street buildings and sites are used during the Rally period only, and are vacant or used for storage during much of the year. Some Main Street retailers are replaced by Rally–oriented businesses during the tourist season.

• *The Lazelle corridor,* between Middle Street and 14th Street, exhibits a mix of commercial, civic, residential, and some industrial uses. Commercial uses, including large format establishments, are typically in detached structures with their own parking. Lazelle businesses serve the Sturgis–area market, but the corridor also has large open areas or parking lots used intensively only during the Rally.

• *The Junction Avenue corridor,* between Lazelle and Harmon, is a mixed use urban corridor with small–scale local businesses, often in converted houses, mixed with residential uses. This use mix creates an attractive community corridor, with a residential scale that contrasts with the more conventional Lazelle strip.

• *Exit 30 (US 14A).* This cluster, from about 14th Street west, straddles Interstate 90 and includes lodging, restaurants, and commercial strip centers oriented to both local use and visitor services. US 14A, which extends Lazelle Street west, is the principal access from I–90 to Boulder Canyon and Deadwood.

• *Exit 32 (Vanocker Canyon Road).* This cluster, on Junction Avenue/Vanocker Canyon south of Harmon Street, includes both locally–oriented commercial uses and visitor services in detached or strip commercial buildings. The construction of a new interchange east of the previous Vanocker Canyon Road interchange, opens new development opportunities south of I–90.

• *Sturgis has a large amount of commercial land relative to its population.* Significant regional commercial centers generally have between 1.5 and 2.0 acres of commercial land for each 100 residents, while places that have unusually low amounts of commercial land fall below 1.00 acres per 100 people. In contrast, Sturgis has almost 2.4 acres per 100 people, a high proportion given the city's relative lag behind Rapid City and Spearfish in per capita taxable sales. Commercial land in full use only during the Rally accounts for much of this anomaly.

• *Sturgis' nearness to Rapid City and Spearfish affects the city's commercial environment.* These regional centers attract consumer dollars, complicating the city's efforts to attract year–round retailers.

Commercial Districts. Lazelle Street during Rally Week.

Industrial Uses

• Older industrial development in Sturgis followed the railroad corridor. The Sturgis Industrial Park, served both by the railroad and US 14A, is now the city's largest industrial concentration. Contemporary industrial development has occurred in this park where firearms–related industries make up some of the city's largest industrial employers.

Public and Semi–Public Uses

• *Sturgis' civic and public uses include school sites, parks, city and county government facilities, the National Guard Armory, and the cemetery.* The city does not have a large campus or public institution within its corporate limits, but Fort Meade just east of Sturgis covers over 200 acres and includes facilities open to the general public.

• *Park land, the largest single public use, is well above the traditional standard of 10 acres per 1,000 residents.* The largest concentrations of green space, the Bear Butte Creek corridor and the Ballpark complex, are both north of I–90. Chapter Three provides a more detailed analysis of the city's park system.

• *While not included in the inventory of land in public use within Sturgis' corporate limits, other important public lands require consideration.* These include property now owned by the US Forest Service southwest of Elk Road on the south side of the city, and the City Lakes off Vanocker Canyon Road, surrounded by the National Forest. Chapter Seven discusses use concepts for these sites.

Land for potential public use. Above: City Lakes; right: US Forest Service property southwest of Elk Drive.

• *Transportation uses, including streets, interstate right–of–way, and the railroad, account for about 28% of the city's developed land, second only to residential uses.* As such, street right–of–ways represent one of the city's major public spaces, and their character should be considered appropriately.

FUTURE LAND USE NEEDS

Population and development projections identify land needs for urban uses during the planning period. Chapter One proposed a population growth scenario based on an historic annual growth rate of 0.8%, producing a 2030 population of about 8,000 people. This section uses that scenario to calculate the amount of land needed for development during this period, providing the basis for the land use plan presented in Chapter Six.

Residential Land Use Projection

A 20 year housing demand model shows the number of housing units needed to accommodate the projected 2030 population. This is then converted to a land requirement, based on a mix of housing types and target densities. This method is based on the following assumptions and methods:

• Average people per household will remain constant at 2.29 during the next twenty years. Nationally, household size has been declining steadily with an aging population. However, a large cohort of households of child–bearing age is likely to reverse this decline.

• Households generate housing demand. Unit demand is calculated by dividing the number of people living in households (excluding people living in group quarters) by the average number of people per household. This household count equals the projected number of occupied housing units.

• The city's vacancy rate remains constant during the next twenty years. A vacancy rate is necessary to provide choice in the housing market. The number of required housing units is the sum of household demand and the projected number of vacant units.

• Some units will leave the housing supply because of change in use or demolition. Replacement need for these units is factored into the demand calculation.

• Cumulative need shows the number of total units needed between the base year of 2010 and the year indicated at the end of the period.

Figure 2.6 displays this calculation of need, and indicates a cumulative demand for 605 housing units in Sturgis between 2010 and 2030, based upon the projected population growth.

Residential Land Needs

Sustainable community development will involve ongoing housing improvement (including replacement of substandard housing) and moderate, managed growth. Figure 2.6 calculates residential land demand based on the following factors:

• New construction is be based on the following distribution: 65% single–family detached; 15% single–family attached or townhome; and 20% multi–family.

• Gross residential density assumptions used for these calculations are:
  – 3 units/acre for single–family detached housing;
  – 6 units/acre for medium–density types, including single–family attached, duplexes, or townhomes;
  – 12 units/acre for higher–density multifamily development.

• Land designated for residential development in the land use plan should be about twice the "hard land demand" (the area actually needed for construction. This makes the plan flexible

enough to respond to land availability issues, provides market choice and prevents artificially inflating land values.

This calculation indicates a twenty–year "hard demand" for about 156 acres of new residential land between 2010 and 2030. At two times the "hard demand," the land use plan should designate about 300 acres of possible residential development over the next 20 years. The development concept presented in Chapter Six shows how this new residential area should be distributed in the Sturgis planning jurisdiction.

Development Program

Figure 2.8 distributes housing needs among different price and rent ranges, based on affordability matched to the current income distribution of households in Sturgis. Housing cost ranges are in current (2011) dollars and help inform both density assumptions used in this section and citywide housing goals. The develop–ment program is based on the following assumptions:

• New development in Sturgis will be about 65% owner–occu–pied and 35% renter–occupied housing, consistent with the city's current mix. This includes development of a substantial amount of new, high–quality rental housing.

Figure 2.6: Projected Housing Development Demand

	2010	2015	2020	2025	2030	Total
Population at the End of Period	6,627	6,896	7,177	7,468	7,772	
Household Population at End of Period	6,448	6,710	6,983	7,267	7,562	
Average People/Household	2.21	2.21	2.21	2.21	2.21	
Household demand at End of Period	2,916	3,035	3,158	3,286	3,420	
Projected Vacancy Rate	7.50%	7.50%	7.50%	7.50%	7.50%	
Unit Needs at End of Period	3,152	3,281	3,414	3,553	3,697	
Replacement Need		15	15	15	15	60
Cumulative Need		143	148	154	159	605
Average Annual Construction		29	30	31	32	30

Source: RDG Planning & Design, 2010

Table 2.7: Required Residential Land 2011–2030

2011–2020	% of Demand	Units	Gross Density (du/A)	Land Needs (Acres)	Designated Land (x2)
Single Family Detached	65%	190	3	63.2	126
Single Family Attached	15%	44	6	7.3	15
Multi–family	20%	58	12	4.9	10
Total	**100%**	**292**		**75.3**	**151**
2020–2030					
Single Family Detached	65%	204	3	67.9	136
Single Family Attached	15%	47	6	7.8	16
Multi–family	20%	63	12	5.2	10
Total	**100%**	**313**		**80.9**	**162**
Total 2008–2030		**605**		**156.3**	**313**

Source: RDG Planning & Design, 2010

? WHAT DOES HOUSING AFFORDABILITY MEAN?

The housing development program presented here and summarized in Figure 2.8 is based on "affordability." We define housing as "affordable" if the resident household pays 30% or less of its adjusted gross income for housing. This is the federal standard and was traditionally used as a private underwriting standard in more prudent times. While the term "affordable housing" is often used as a synonym for low– and moderate income development, it is in fact a relative thing and means different home or rent costs for different income groups. Table 2.8 matches price points to incomes, using the 30% standard. The challenge for local housing policy is how to help the private homebuilding and development industry satisfy these targets.

• The proposed demand for different price ranges of owner–occupied housing is based on the income distribution of house–holds who are candidates for homeownership. This method indicates a demand for some owner–occupied housing at prices that the new construction market cannot produce. This market may be taken up by use or upgrading of existing housing, innova–tive programs like rent–to–own development, second mortgage programs that use blended sources of financing to reduce monthly mortgage payments, or construction of market rate rentals.

• Primary markets for rental development include people who prefer renting to owning at a specific stage of life, are transi–tioning to residency in Sturgis, cannot get mortgage financing under tightened underwriting standards, or cannot afford to own a home.

The analysis indicates:
• A need for new housing across all income ranges.

• A 20–year need for approximately 100 owner–occupied units with prices below $140,000 and 73 units with effective rents (direct costs paid by renters) below $750 in current dollars, a total of 173 "affordable" units.

Housing policy for Sturgis should help the private market meet demand for various income groups and housing prices. Providing higher–cost or market rate development requires designating land for residential purposes and building infrastructure to support new development. However, moderately–priced housing is more difficult, because the private market alone is rarely able to build it. Moderately–priced housing can be produced indirectly. For example, a new housing development that meets the needs of high–income, empty–nester households may encourage them to sell current homes to a moderate–income families. Other approaches include new land use policies such as mixed use development, small–lot single–family, and other innovations that reduce development cost per unit; and occupancy and financing approaches that offers new residents a gateway into the city. These approaches are discussed in Chapter Seven.

Figure 2.8: Ten Year Pricing and Development Program

	2010–2014	2015–2020	Total
Total Need	**143**	**148**	**291**
Total Owner Occupied Units	**93**	**96**	**189**
Affordable Low: $60,000–100,000	20	21	41
Affordable Moderate: $100–130,000	29	30	59
Moderate Market: $130–200,000	29	30	59
High Market: Over $200,000	15	15	30
Total Renter Occupied Units	**50**	**52**	**102**
Low: Less than $450	19	20	40
Affordable: $450–700	16	17	33
Market: Over $700	14	15	29

Source: RDG Planning & Design, 2010

Commercial and Industrial Land Needs

A growing population creates demand for new commercial devel–opment, and retail growth is an element of Sturgis' economic development strategy. While a comprehensive plan does not include a retail market analysis, it does identify adequate space to meet population demands and future growth potential.

In Sturgis, new commercial development falls into two categories: projects that serve the local consumer market, and projects that take advantage of the Sturgis brand and Black Hills location to attract business from outside the immediate market area. For example, a national, big–box or specialty retailer could consume much more commercial land then necessary to support service needs of local residents.

On the other hand, demand for future industrial land is linked to opportunity and recruitment, rather than exclusively to popu–lation growth. A single major corporate decision can dramati–cally increase (or decrease) the projected industrial demand in a community.

Despite these differences, similar projection methods are used to predict future commercial and industrial land needs. These methods include:

• *Population proportion.* This method relates land needs to population projections. It assumes that the absolute amount of commercial or industrial land per 100 people will remain rela–tively constant and that new development will grow in proportion to population growth.

• *Residential use proportion.* This assumes a constant relationship between the amount of land used for residential and commercial or industrial purposes, thereby relating commercial and industrial growth rates to residential development rates.

Figures 2.9 and 2.10 use these methods to estimate commercial and industrial land needs. The land designated for each use in the Future Land Use Plan should be about 1.5 times the hard demand

or conversion need for commercial and 3 times the need for industrial. Like the approach used in the residential model above, this provides market choice and prevents artificial inflation of land cost. Using the largest of the alternative projections suggests designating:

• about 47 acres of additional land to support local demand (1.5 times hard demand). Combined with Sturgis' 163 acres of existing land in commercial use, this designates 210 total acres of commercial land. The plan should identify additional land to accommodate a large national retailer.

• about 122 acres of additional industrial land (3 times the hard demand). Combined with Sturgis' 211 acres of existing land in industrial use, this designates 333 total acres of industrial land. Again, the plan should include the flexibility to accommodate a very large industry not anticipated by this model.

Figure 2.9: Required Commercial Land, 2011–2030

	2010	2020	2030	Additional Hard Demand	New Designated Land (x1.5)	Total Designated Land (Existing + Planned)
Population Proportion Method						
Projected Population	6,627	7,177	7,772			
Commercial Use/100 res.	2.46	2.46	2.46			
Projected Commercial Use (acres)	162.82	176.32	190.94	28.13	42.19	204.49
Residential Use Proportion Method						
Residential Land (acres)	809.93	885.26	966.20			
Commercial/Residential Ratio	0.20	0.20	0.20			
Projected Commercial Use (acres)	162.82	177.96	194.23	31.42	**47.12**	**209.94**

Figure 2.10: Required Industrial/Business Park Land, 2011–2030

	2010	2020	2030	Additional Hard Demand	New Designated Land (x1.5)	Total Designated Land (Existing + Planned)
Population Proportion Method						
Projected Population	6,627	7,177	7,772			
Industrial Use/100 res.	3.18	3.18	3.18			
Projected Industrial Use (acres)	210.97	228.22	247.15	36.18	108.53	320.31
Residential Use Proportion Method						
Residential Land (acres)	809.93	885.22	966.12			
Industrial/Residential Ratio	0.26	0.26	0.26			
Projected Industrial Use (acres)	210.97	230.58	251.66	40.69	122.06	**333.09**

3

Transportation and Infrastructure

Sturgis' transportation and infrastructure systems form the fundamental framework of the community, both sustaining present development and supporting future growth. The access system includes the street network and the city's evolving pathway network, while infrastructure includes the water, stormwater management, wastewater, and private utility systems.

TRANSPORTATION AND STREETS

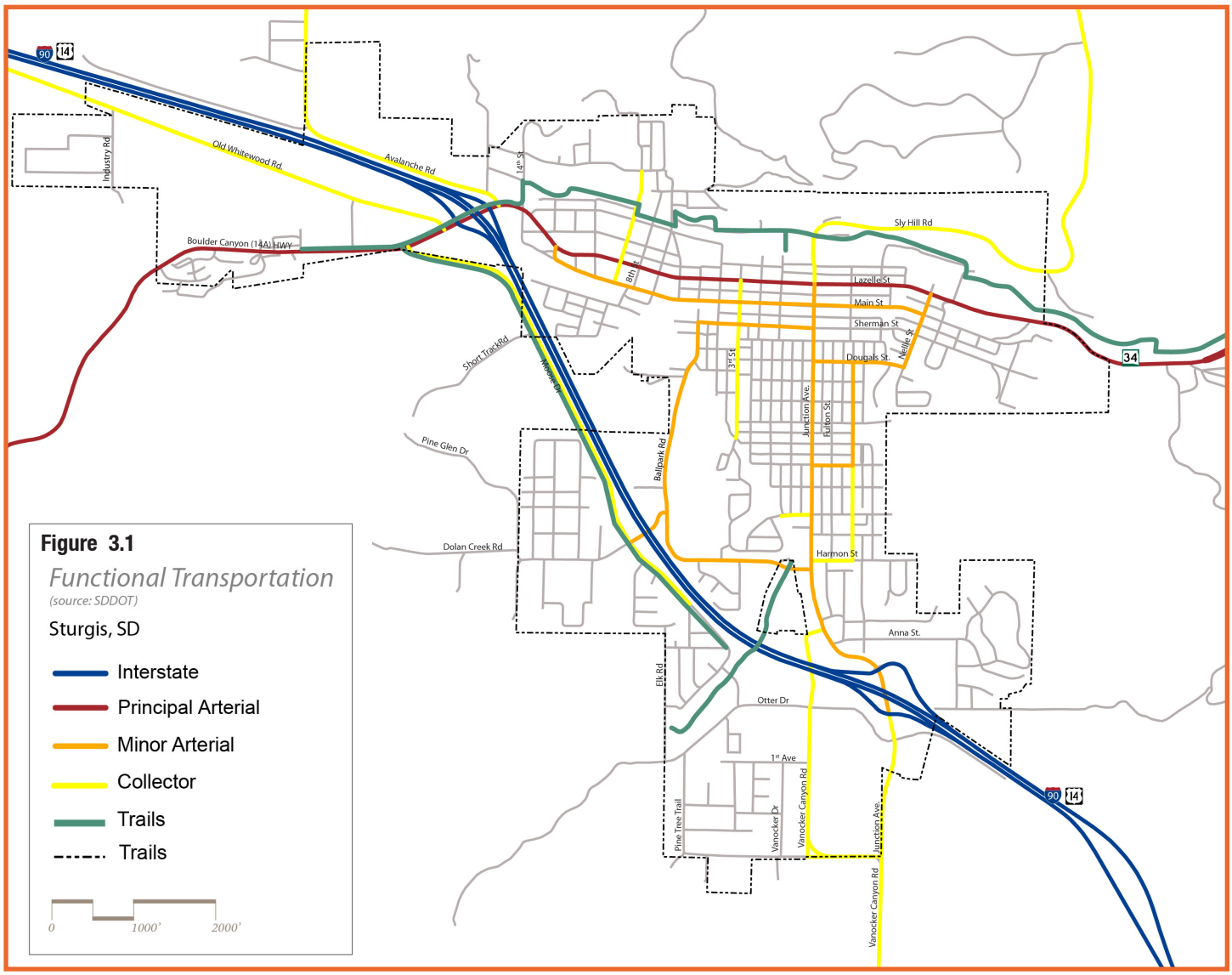
This section addresses Sturgis' transportation system, providing a basis for developing future policies and projects. It considers the structure of the city's street system and the roles of its individual parts components. Sturgis is unusual for the extraordinary short–term traffic load placed on the system during the Rally period in August, when the city welcomes up to 100,000 daily visitors. The system's "level of service," an engineering standard that generally measures speed and smooth operation, understandably falls dramatically during this event. However, the congestion and processional quality of motorcycle and conventional traffic is fully expected and is indeed part of the ambience of the event. On an overall basis, Sturgis' network should:

- Provide safe, convenient, and smooth access to Sturgis' residents, businesses, and visitors during the basic year.
- Accommodate the Rally's seasonal load by providing enough mobility to ensure public safety and reasonable access without attempting to achieve a normal year–round level of service standard during unique events.
- Promote active transportation, including pedestrian and bicycle access as an alternative to motor vehicles for short, local trips.

Existing Street Network

The Street Classification Map (Figure 3.1) displays the city's current Functional Classifications as established by the South Dakota Department of Transportation. A street segment must be designated part of the Federal Aid system to be eligible for federal funding when implementing major improvements.

In addition to Interstate 90, the SDDOT classifies the Sturgis network as follows:



Principal Arterials serve regional needs and connect major activity centers, and often carry state and/or federal highway designations. Sturgis' principal arterials include:

- Lazelle Street (SD 34)
- U.S. Highway 14A (Boulder Canyon Road).

Lazelle is a four– to five–lane facility through the Sturgis jurisdiction. Boulder Canyon Road (US 14) narrows to a two– to three–lane facility with paved shoulders as it leaves the city on the way to Boulder Canyon and Deadwood.

Minor Urban Arterials connect with and complement principal arterials by serving activity centers and linking various parts of the city. In Sturgis, some minor arterials owe their status to the destinations that they serve rather than their traffic volumes. Most of these facilities are two– to three–lane facilities. Minor arterials in the state classification system for Sturgis include:

- Junction Avenue (SD 79), I–90 to Lazelle Street (SD 34)
- 11th Street/Main Street from 11th Street and SD 34 (Lazelle Street) south to Main Street, then east to Nellie Street
- The Ball Park Road/5th Street/Sherman Street system, an inner loop of streets extending from SD 79 and Ball Park Road, northeast to 5th Street, then to Sherman Street, the east to Junction Avenue.
- Fulton Street from Deadwood Street to Douglas Street.
- Dolan Creek Road from Ball Park Road to Moose Drive.
- Sherman Street, 9th Street to Junction Avenue.
- Douglas Street, Junction to Nellie
- Nellie Street, from Douglas to Lazelle

Urban Collector Streets link neighborhoods together, and connect them to arterials and activity centers. Collectors are usually two–lane facilities with substantial system connectivity, often with on–street parking, designed for relatively low speeds (35 miles per hour or less). The state classification includes the

Steps in the Functional Hierarchy. Top: Lazelle (principal arterial) during the Sturgis Rally. Middle: Junction Avenue, recently improved as a three–lane minor arterial. Bottom: Harmon Street, a collector linking Junction Avenue to neigh–borhoods on the east side of town.

following streets in the city's– collector network.

- Sly Hill Road from the intersection of Junction Avenue and Dudley Street north over Sly Hill
- Avalanche Road from Lazelle Street to the city landfill
- Whitewood Service Road
- 9th Street, Main to Ellen
- 3rd Street, Lazelle to Boulevard
- Harmon Street from SD 79 (Junction Avenue) to Fulton Street
- Park Street from the DM&E railroad tracks to SD 79 (Junction Avenue)
- Fulton Street from Harmon Street to Deadwood Street
- Moose Drive, US 14A to approximately Whitetail Drive
- Old Vanocker Canyon Road from Junction Avenue to Pine View, and Pine View between Old and New Vanocker Canyon.
- New Vanocker Canyon Road (SD 79) from the I–90 inter–change south.

The Sturgis Major Street Plan

In June, 2008, the City of Sturgis adopted a Major Street Plan, required under state statute for approval and acceptance of subdivision plats. This major street plan is a local planning and programming document that differs in some cases from the state classification system, but responds specifically to local needs and the individual roles of different facilities.

Specific differences include:

Addition of Junction Avenue (SD 79) as a principal arterial.

Classification of Whitewood Service Road, Sly Hill Road, and Avalanche Road as "rural minor arterials." The state system classifies these roads as collectors.

Addition of the following streets as minor arterials:

- Deadwood from Junction to Fulton, not classified in the state network.
- 1st Street from Sherman to Lazelle, not classified in the state network.
- 2nd Street from Sherman Street to Lazelle, not classified in the state network.
- Moose Drive from US 14A to Dolan Creek Road, classified as a collector in the state network.

Addition of the following streets as part of the city–adopted system of collectors:

- William Street from SD 34 (Lazelle Street) to 9th Street
- Sherman Street from Junction Avenue to Nellie Street
- Douglas Street from 3rd Street to Junction Avenue.
- Dakota Street from 3rd Street to Junction Avenue.
- Deadwood Street from Spruce Street to Junction Avenue.

- Spruce Street from Deadwood Street to Sherman Street
- Marshall Street from SD 79 (Junction Avenue) to Fulton Street
- Sherman Street/8th Street from 10th Street to Main Street

Future Collectors

The 2008 Sturgis Major Street Plan anticipates changes in development patterns that could require new collector streets. Some of these segments are already included in the SDDOT federal aid network, while others represent new system additions. Additional candidate segments listed in the Major Street Plan included:

- Moose Drive from Dolan Creek Road to Raccoon Road.
- Raccoon Road from Moose Drive to Otter Road.
- Otter Road from Raccoon Road to Vanocker Road.
- Cedar Street from Douglas Street to Dakota Street.
- Douglas Street from Cedar Street to Junction Avenue.
- Dakota Street from Junction Street to Cedar Street.
- Anna Street from Junction Avenue to the City boundary.

Traffic Capacity Analysis (LOS)

Level of Service (LOS) analysis, based on the ratio of average traffic volume (V) on a street segment or intersection with the design capacity (C) of the facility, is the traditional measure of street performance. LOS focuses on speed and smoothness of traffic flow under specific volume conditions. The V/C ratio corresponds to an LOS "grade" for the facility, that in turn describes the performance of the street. LOS categories are described as follows:

LOS A: Free–flowing operation. Vehicles face few impediments to maneuvering. The driver has a high level of physical and psychological comfort. Minor accidents or breakdowns cause little interruption in the traffic stream. LOS A corresponds to a V/C ratio of 0 – 0.60.

LOS B: A reasonably free–flowing operation. Maneuvering ability is slightly restricted, but ease of movement remains high. LOS B corresponds to a volume–capacity (V/C) score of 0.60 – 0.70.

LOS C: Stable operation. Traffic flows approach the range in which traffic increases will degrade service. Minor incidents can be absorbed, but a local slowdown will result. LOS C . to a V/C score of 0.70 – 0.80.

LOS D: Borders on unstable traffic flow. Small traffic increases produce substantial service deterioration. Maneuverability is limited and comfort reduced. LOS D represents a V/C score of 0.80 – 0.90.

LOS E: Typical operation at full design capacity of street. Operations are unstable because there is little margin of error in the traffic system. LOS E corresponds to a V/C score of 0.90 – 1.00.

LOS F: A breakdown in the system. Such conditions exist when queues form behind a breakdown or congestion point. This condition occurs when traffic exceeds the design capacity of the street.

Figure 3.2 presents the capacity of various street sections at LOS D, the point at which congestion problems begin to appear.

Figure 3.3 displays the application of LOS methodology to key street segments in Sturgis under both normal and Rally traffic conditions.

Evaluation

The LOS review shows that existing streets deliver a LOS of A

Top: Dolan Creek Road and sidepath, linking southside neighborhoods with the ballpark area. Above: US 14A south of I–90, a major concentration of visitor and commercial services.

? WHAT ARE THE LIMITS OF "LEVEL OF SERVICE?"

Level of Service basically measures how fast traffic can move. However, fast traffic is not always a good thing. Overcapacity causes traffic to move too fast, creating safety problems. Traffic should follow a "Goldilocks" principle: not too fast, not too slow, just about right. Also, LOS measures one variable and does not consider other important values, such as street connectivity, neighborhood preservation, environment, design and visual quality, sustainability, bicycle and pedestrian access, and economic development. Unlike school, a grade of "A" is not necessarily desirable and may indicate too much street. A grade of "C" or "D" maybe more desirable, representing a street appropriately sized for its context. If the desirable and safe speed for a street is 30 mph, the street's design or width should not encourage motorists to drive at 50.

and B under normal circumstances. Traffic volume can grow considerably before a capacity problem begins to appear. As one would expect, the system functions very differently during the Rally. The city has used portable stop signs and parking restricting traffic movement to manage the traffic load, and these techniques generally have worked effectively. Making expensive capital changes to improve traffic flow during the Rally is unnecessary and can have unintended consequences, such as increasing speeding during the rest of the year. Most people know that traffic may move slowly through Sturgis and off I–90 for one week in August and, in some ways, the volume and processional quality of traffic is part of the Sturgis experience. Additional low–cost techniques such as directional signage can keep unwanted traffic out of residential neighborhoods during Rally Week. In addition, creating alternative routes that serve major year–round needs and has economic development benefits can also reduce congestion during special events.

Figure 3.2: Typical Traffic Capacity by Facility Type

	Capacity at LOS D (VPD)		
	2–Lane	3–Lane	4–Lane
Minimal Access	12,500	16,500	25,400
Residential	12,300	16,250	25,300
Mixed Zoning	11,200	14,850	23,600
Central Business District	9,400	12,650	20,500

Other Systemic Issues

While Sturgis' streets have more than enough capacity to meet normal traffic demands, this does not mean that the system is problem–free. Street network issues that help frame a system improvement agenda for the city include the following:

• *Southwest street connectivity within I–90.* Sherman, 5th Street, and Ball Park Road form a continuous inner–loop that helps distribute traffic around the city. However, this loop directs all traffic back to busy areas along Junction Avenue and lacks an outlet across the railroad to Lazelle Street on the west side of town. A grade separation under the DM&E at 8th Street does not connect to any part of the street system. Improved connec–tivity from the ball park area to the west side of town would both improve the network and open development opportunities.

• *Neighborhood short–cutting.* Motorists use streets like Douglas Street to Nellie or Deadwood Street to 3rd to avoid the Junction/Main and Junction/Lazelle intersections. Overuse of these routes can affect neighborhoods and place structural stress on local streets.

• *The Lazelle Corridor.* City transportation policy, established in the 2008 Major Street Plan, rightly calls for diverting truck traffic accessing Sturgis from Junction Avenue to Lazelle Street. However, a lack of local streets north of Lazelle between Junction

Figure 3.3: Performance of Key Street Segments.

Street Name	Location	Capacity (VPD)	2009 Volume	V/C Ratio	2009 LOS	2010 Rally (carried through)	Rally LOS
Junction Ave.	Vanocker Canyon Road to Glover St.	14,850	9,814	0.66	B	18,119	F
Junction Ave.	Harmon St. to Marshall St.	14,850	10227	0.69	B	18,119	F
Junction Ave.	Main St. to Lazelle	12,650	8324	0.66	B	18,119	F
Main St.	Junction Ave. to Middle St.	9,400	1471	0.16	A	Closed	NA
Main St.	3rd Street to 4th Street	9,400	1598	0.17	A	Closed	NA
Sly Hill Road	Dudley St. to W. Woodland Dr.	12,300	742	0.06	A	NA	NA
US 14A	South of I–90	25,300	5,258	0.21	A	42,000	F
Lazelle Street	I–90 to Junction	23,600	10,940	0.46	A/B	42,000	F
Lazelle Street	Junction to City Limits	23,600	9,106	0.39	A	42,000	F
SD 34	Between Sturgis and Ft. Meade	25,300	4,510	0.18	A	42,000	F
Ball Park Road	Junction to 5th Street	12,300	2,460	0.20	A	NA	NA
Moose Drive	At Dolan Creek Road	12,300	1,324	0.11	A	NA	NA
Harmon Street	Junction to Fulton	11,200	1,138	0.10	A	NA	NA
Fulton Street	Deadwood to Lazelle	12,300	565	0.05	A	NA	NA

and 6th Street also causes most local traffic bound for commer–cial and community destinations and the community center to depend on Lazelle. As a result, conflicts occur between local and regional traffic, and local access is particularly difficult during the Rally. Truck traffic also adds to the traffic friction: trucks make up about 5% of average daily traffic (ADT) on Lazelle between I–90 and Junction, compared with about 2% east of Junction.

• *Main Street Connection to Westside.* Main Street is both a major visitor destination and a significant community street. However, its western connection to Lazelle is awkward and difficult to find, partially because of the geometry of the intersection. An improved Main and Lazelle intersection point would encourage Main Street bound motorists entering town from Exit 30 and US 14A to use Main rather than Lazelle for access, relieving traffic on Lazelle and providing a development catalyst along Main.

• *Exit 30 and Avalanche Road Intersection.* The Lazelle inter–change with I–90 (Exit 30), and the Lazelle/Avalanche Road and Lazelle/14th Street intersections are very closely spaced, and with other driveway cuts, creates traffic conflicts and traveler confusion. In addition, both the interchange ramps and the Avalanche Road intersection are signalized, creating stacking and traffic flow problems and some inconvenience for travelers who think that Avalanche is the entrance ramp to I–90. The sidepath connecting visitor and commercial services south of I–90 to the Bear Butte Trail also must negotiate this gauntlet of crossings, challenging pedestrians and bicyclists. Rationalizing these inter–sections would greatly improve safety and ease and comfort of access.

• *Junction and Ball Park Road.* Ball Park Road, the key link in the city's inner loop system, is the city's third busiest street, behind Lazelle and Junction. Its signalized terminus at Junction Avenue is about 150 feet south of Harmon Street, another important street that provides primary access to the hospital. This close spacing, combined with traffic volumes, the center left–turn lane on Junction, and adjacent curb cuts, creates a confusing and potentially hazardous condition at a key intersection.

• *Collector Access South of I–90.* Much of Sturgis' new residen–tial development has occurred south of I–90, requiring improved collector street service. Improvement of Moose Drive provides a good collector corridor between US 14A and Whitetail Drive, but continued access to the Vanocker Canyon interchange is an indirect route requiring turns on Raccoon and Otter Drives. New development should include a more efficient connection south of I–90 to the interchange area, a focus of additional mixed use development.

Trails and Pathways

While Sturgis is identified with "bikes" with motors, it also has built a growing system for the non–motorized variety. The rela–tively short distance between major destinations in Sturgis makes bicycle and pedestrian transportation a good option for many trips. Pathway facilities in Sturgis include:

- *Bear Butte Trail,* the city's primary east–west trail, extending about 3 miles from Sturgis High School and the Fort Meade area to 7th Street. This trail connects many of the city's major parks along the creek.

- *Bear Butte/US 14A Extension.* This trail connects the Bear Butte Trail to the commercial corridor along Boulder Creek Road (US 14A) south of I–90. The path crosses the creek on the 7th Street bridge, follows William Street between 7th and 9th Street, follows the creek again between 9th and 14th, and links back to a sidepath along US 14A and through the I–90 interchange, ending at Adair Avenue.

- *Moose Drive Sidepath.* This roadside path connects US 14A

Looking south on Junction toward the Ball Park Road intersection. This key intersec–tion is complicated by offset streets, a free center left–turn lane, and adjacent curb cuts. Access control and improved align–ments would provide safer operations.

to Elk Road, and intersects with a pathway spur on Dolan Creek Road.

- *Dolan Creek Path.* This short spur link the Moose Drive Sidepath to the ballpark area.

- South Drainageway, a new trail under construction along the Bear Butte Creek tributary from Ball Park Road and under I–90, eventually to Elk Drive, under construction in 2010.

Many of Sturgis' streets are also relatively friendly to bicycle use. However, the city does not have designated bicycle routes or lanes. While many consider bicycle facilities to be recreational, they are important to an integrated, sustainable transportation system. Chapter Seven presents a concept for such a multi–modal system in Sturgis

A Transportation Agenda

Based on this analysis of the Sturgis system, an agenda for future transportation planning includes:

• Adopting standards and specifications for street pavement widths, parking, boulevard width, and minimum right–of–way dedications.

Multi–Modalism in Sturgis. Left top: Sidepath along Moose Drive. Left bottom: New trail construction along south drainageway in 2010. Above: Motorcycles, bicycle, cars and even helicopters near Bear Butte.

• Updating the functional classification map to bring the state land local major street system into harmony.

• Continuing to perfect traffic management techniques during the Rally.

• Improving the street network to provide alternative routes to major development areas and destinations and greater connec–tivity to improve both Rally and year–round circulation.

• Realigning and improving critical intersections such as the Exit 30/Avalanche Road areas, westside connectivity of Main and Lazelle Streets, and the Ball Park/Junction/Harmon area.

• Improving collector access south of I–90 to serve continued residential development and new regional commercial growth possibilities.

• Improving pathway connectivity and adapting strategic street links to create a fully connected, active transportation system.

•Establishing a community–wide, visitor–oriented wayfinding system to Main Street and other key community destinations.

WATER SUPPLY

The Sturgis Water Department is responsible for providing water that is safe, high in quality, and in adequate quantity to meet domestic, commercial, industrial and fire suppression require–ments. A three member Utilities Board, appointed by the Mayor, governs the Department, whose administrative offices are located in City Hall at 1040 2nd Street. The Department manages several properties throughout the city that make up the water supply system. Those properties include six pump houses, a shop and garage, a well house, and three reservoirs.

Capacity Scenarios

The Department serves a population of more than 6,442 customers with average use of 945,500 gallons per day (gpd), and maintains 2,869 residential and 365 commercial accounts as of January, 2011. Peak demand is 2,750,000 gallons per day. The city maintains seven wells and three storage reser–voirs. If all seven wells are operational, the 24–hour production capacity is 3,600,000 gpd. Wells 1 through 4 are old facilities with operating issues, and three wells have water quality issues. The production of the remaining wells over a 24–hour period is 1,764,000 gpd. This range represents the theoretical best and worst case scenarios. For planning purposes, it is reasonable to use a scenario in which the most vulnerable and the highest producing wells are simultaneously out of service. This scenario has a 24–hour production of 2,196,000 gallons.

Under optimum conditions, the system has excess capacity of 850,000 gpd over a 24–hour period. However, good manage–ment practice cannot depend on optimum conditions, and must consider operational safety factors. A potential non–operational situation produces a deficit of 554,000 gallons during peak day demand. This would reduce fire suppression capacity, deplete reserves, and possibly interrupt service.

Water Rates

Administrative provisions allow the Department to provide water to properties outside the corporate limits. The rates for accounts outside the city are 1.5 times higher than those inside the city. At the time of this report there were only eight accounts served outside the corporate limits. Those properties served outside the corporate limits must agree to waiving protests to annexation should the city elect to annex the served area.

The Department is an Enterprise Funded entity that derives its revenue from charges to the water customers. A demand charge is based on meter size. Rates are normally reviewed and adjusted every three years. Commercial and residential proper–ties are charged at different rates, with rate differences based on an historical rationale. As of this date, charges are scheduled to increase for residential accounts by $0.15 per 1000 gallons per year through 2012. For commercial properties charges are scheduled to increase by $0.25 per 1000 gallons per year through 2012. Figure 3.4 summarizes water rates as of January, 2011.

Figure 3.4: Water Rates Summary

	2010	2011	2012
Residential (2,869 customers)			
$/1,000 gallons	$2.15	$2.30	$2.45
Base Minimum	$12.00	$12.50	$13.00
Commercial (365 customers)			
$/1,000 gallons	$2.25	$2.50	$2.75
Base Minimum			
¾" to 1"	$12.00	$12.50	$13.00
1 ¼"	$22.00	$22.50	$23.00
1 ½"	$32.00	$32.50	$33.00
2"	$42.00	$42.50	$43.00
3"	$62.00	$62.50	$63.00
4"	$82.00	$82.50	$83.00

Capital Project Needs

Necessary projects are generated by four specific needs:

- The ability to respond to emergency situations, most notably fire suppression.
- Provision of adequate water supply and service to the existing and future customer base.
- Capacity to plan for and accommodate new growth through annexation.
- The unusual peak demands created by the population bubble generated by the Sturgis Rally.

The water system depends on two major capital components: supply and distribution systems. The supply system, in turn, is composed of the water source (wells) and storage (reservoirs). In addition to the steady demand of regular customers, fire suppression requires delivery of large volumes of water over a short period of time. Physical and population growth also factors into future needs. The 2009 *Study of Municipal Water System for City of Sturgis, South Dakota* identified five areas to be consid–ered for potential future annexation into the city. Should all of the identified areas be annexed and developed, the peak flow demand during the Rally is projected to more than double to 6.2 million gallons per day.

Water mains throughout the city range from 4 to 12 inches in diameter, with undersized 4–inch mains located throughout the city. Many of the mains are very old and have met or exceeded their design life. The Department will extend water mains to most locations within its service area as requested. At the discretion of the Municipal Utility Board, the cost of any water main extension may be covered by the Department. Potential growth and expected revenue are primary factors impacting the extension of new mains.

The "Water System Facilities Plan for Drinking Water State Revolving Fund Program" (January 1, 2011) for the City of Sturgis identifies the total project budget and respective priority projects for the Department. The total project budget is based on current State Revolving Fund (SRF) loan rates and terms. The total project budget was determined to be $2,600,000. The projects funded by this budget include the following:

Current Recommended Projects

- Well #1 Removal and Replacement
- Well #3 Well House Improvements and Booster Pump
- Pine Acres Booster Water Main
- Hospital Area Water Main Replacement: Marshall St. from Davenport to Fulton

Probable Cost: $2,595,824

Future Recommended Projects

Wells

- Well #7 Booster Pump System Upgrade
- Well #4 Upgrades
- Well #5 Upgrades

Water Mains

- Glover St. from Junction to Fulton
- Marshall St. from Fulton to Baldwin
- Baldwin St. from Marshall to Harmon
- Fulton St. from Harmon to Marshall
- Davenport St. from Park to Marshall
- Shepard St. from Junction to Fulton
- Fulton St. from Shepard to Edmunds
- Douglas St. from Junction to Drainage Channel
- Edmunds St. from Fulton to Drainage Channel
- Pine Acres Fire Hydrants
- Lazelle St.
- Main St.
- Davenport St. from Howard to Deadwood
- Fulton St. from Harmon to Park and Celia to Glover

Tank, Pressure Reducing Valve (PRV) and Telemetry (SCADA)

- North Steel Tank Upgrades
- South Steel Tank Upgrades
- North Concrete Tank Upgrades
- Pressure Reducing Valve Stations (5)
- SCADA System Upgrades

Probable Cost: $2,883,383

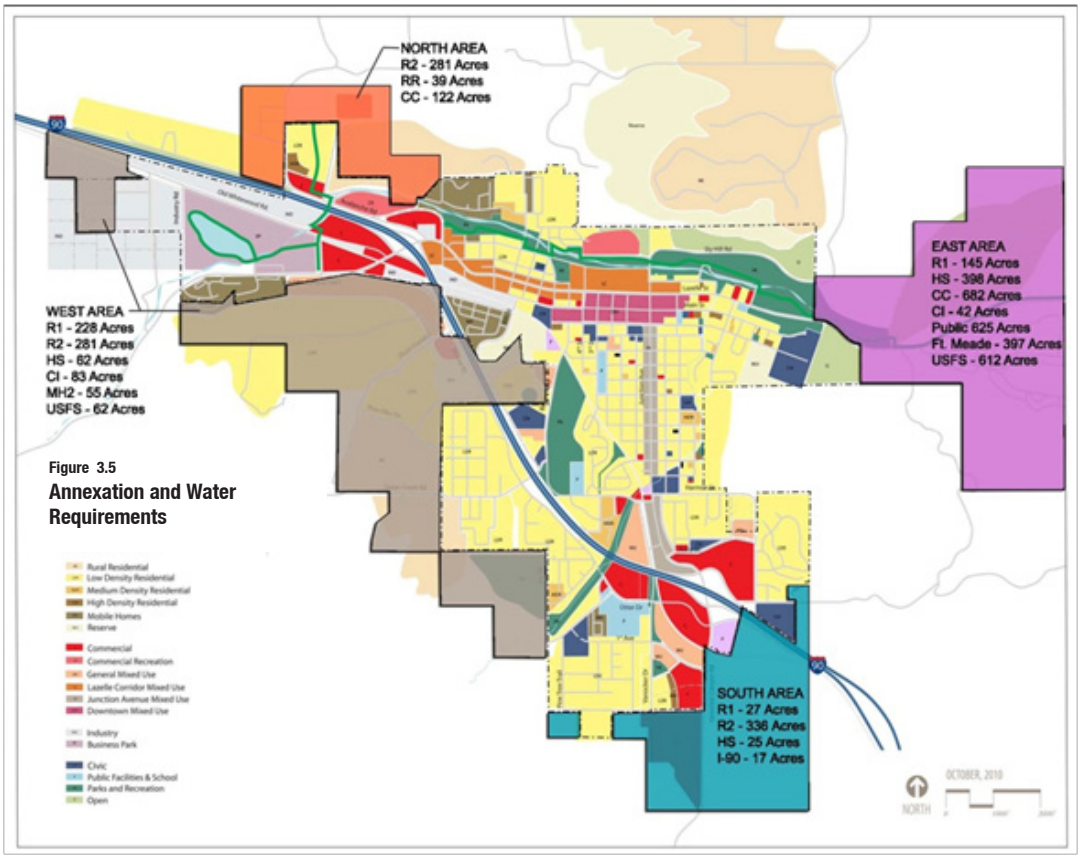


Figure 3.5
Annexation and Water Requirements

Figure 3.6: Projected Water Demand for Growth Areas

Area	Peak Demand (gallons/day)	
	Normal	Rally
East	400,120	1,207,320
South	824,300	824,600
West	173,600	235,600
North	191,800	265,00

Funding options for these improvements include the South Dakota State Revolving Loan Fund, U.S. Department of Agriculture loan fund, and Community Development or Rural Development Grants.

Community Growth

Economic development and city growth both depend on water supply. A Sturgis ordinance prohibits new private water systems within one mile of the corporate limits. Consequently, any development within or immediately outside of the city must be served by the City Water Department. The 2009 water study identified four major areas that would be considered for annexation into the city, as displayed in Figure 3.5.

Figure 3.6 shows the demand for water generated by full development of these potential growth areas, which are coordinated with the city development concept discussed in Chapter Seven. Rally–related peak water demand is roughly 3 times greater for most of the proposed annexation area. This places unusual demands on the water system that require careful management both during the extreme peak demand period and to serve future development.

Another unusual condition related to service beyond the current city limits involves service to the Fort Meade campus. The City of Sturgis currently provides a 4" water supply pipeline connection to the Fort Meade water system. This allows the City to supplement or replace the current level of water supply demand to the Fort Meade water supply tanks. The *Study of Municipal Water System for City of Sturgis* (August, 2009) concludes that the City can provide reliable water service to the Fort Meade area if the two systems are integrated.

Water System Evaluation

The Sturgis Water Department currently provides good quality water and adequate volume to meet the current domestic and commercial needs of the community. Although volumes under total operating conditions are adequate for fire suppression, lack of redundancy and restrictions in the distribution system leave some areas of the City vulnerable. The Water Department has identified its needs and recognizes that improvements will be made to the system to maintain or improve the current level of service. Improvements are needed in supply, storage and distribution. A rate structure has been adopted to meet the operating costs of the system.

Rates appear to be based on historical practice that has evolved over time to cover operating expenses and maintain existing facilities. Commercial and industrial rates are higher per unit than rates for the same unit for residential users.

Major improvement projects presently do not have funding secured. Funding mechanisms beyond normal operation and repair and maintenance are not identified. One new well was scheduled for construction in 2010 but was not completed.

Sturgis meets the peak Rally demand, but this taxes the system and leaves little room for contingencies. For example, if the highest producing well failed during the Rally, the city would have difficulty meeting domestic and commercial needs. There is also a reasonable expectation that an adequate water supply would not be available to fight a significant fire.

A number of major older mains, such as those on Lazelle Street and on Main Street in the downtown district are inadequate in either size or condition. This inadequacy, combined with the age and construction type of Main Street buildings may create a fire suppression risk, exacerbated by the additional local water demand caused by the number of people at the Rally. Mains in some older parts of the community are undersized, beyond their design life, or simply non–existent. Service reliability and fire protection are below standard in these areas.

Improvements are being made to the system; however, it will take several years and a considerable investment to bring the existing system into standard condition. Meanwhile, other parts of the system continue to age and will require attention. Plans are in place to both increase current well production, where possible, and replace inefficient wells.

Consumption rates for residential users will have risen by 23% from 2009–2012 with the base rate rising by 30%. Commercial base rates will increase by 35.5% from 2009–2012. The consumption rates will increase from 3.8% for the largest users to 30% for the smaller commercial users; all over the period from 2009–2012. The cost of public utilities is a local decision. The impact of rates versus level of service requires careful consideration by the community.

Recommendations

• A rate study was recently completed for the Municipal Utilities Board. Rates through 2012 were based on operational and

improvements costs through that year. A combination of grant funding, loans and the adopted rate adjustments are required to fund improvements. As of February, 2011, necessary loans and grants have not yet been secured. The rate study concludes that a deficit will occur in 2012. The rate structure will need to be re–considered on or before that date. At that time, the rationale for the difference between residential and commercial rates should also be reviewed.

• Additional storage components, including compartmentalized storage tanks and new tanks, should be considered to address the peak demand required during the Rally.

• Redundancy in the system should be improved.

• Separate, independent bodies administer the water system and the remaining public works services of the city. The city's Capital Improvements Plan should be adopted by both the Municipal Utility Board and the City Council to ensure that improvements are compatible.

• Water system improvements are recommended in the Facilities Plan through 2012. A long term (10 – 20 years) water system improvement plan, including schedule and funding, should be established.

WASTEWATER TREATMENT

Wastewater is treated by an open lagoon system owned and operated by the City. The lagoon is located about 1.25 miles northeast of the city. Effluent from the lagoon system is discharged by irrigation to agricultural ground. Discharges to Bear Butte Creek are not authorized. Bear Butte Creek is designated as a cold water fishery.

The lagoons have a capacity of 180 days. In order to provide storage over the winter, 150 to 160 million gallons of treated effluent per year must be applied to the ground, most of which is now applied to 167 acres of hay ground. The 20–year contract for land application expired in January, 2011. In addition to the City of Sturgis, the lagoons serve the Sturgis–Brown High School, National Guard complex, and Fort Meade. These extra–territorial service areas are all located east of the city limits.

The city's sanitary sewer collection system uses clay and pvc pipe, maintained and monitored with a city–owned sewer jet and camera system. The clay sewers were grouted approximately twelve years ago. Inflow and infiltration affects the volume of flow and the capacity of the treatment system.

Evaluation

Sturgis generally enjoys good sanitary sewer and wastewater management service, but additional capital investment is needed to maintain acceptable service. A high percentage of the sewer collection system has reached and exceeded its useful life. As a result, pipe failures resulting in blockages, and extraneous flow are occurring and will become more frequent with time.

The operation of the lagoon system is limited by non–discharge authorization to the Bear Butte Creek, the lack of a current agri–cultural discharge agreement on private property, and inflow and infiltration that affects lagoon capacity.

Recommendations:

- Develop an incremental sanitary sewer replacement program.
- Complete an inflow/infiltration study and sewer assessment report.
- Extend operation of the lagoon by meeting requirements and obtaining a discharge permit for lagoon and negotiating a long–term right to irrigate with lagoon effluent.
- Develop maps of the collection system with sufficient detail to be useful to the city and developers.

STORM WATER MANAGEMENT

Storm water management affects the quality of life of the residents of Sturgis and has a major influence on the city's ability to grow. Good stormwater management protects the life and property of the city's residents. It also establishes the basis by which residential and commercial developers properly address drainage issues and advance development plans.

Regulatory Environment

The City of Sturgis has met the requirement of coverage under the Storm Water Discharge for Small Municipal Separate Storm Sewer Systems (MS4) permit, granted by the South Dakota Department of Environment and Natural Resources. The permit's main requirement is the development and implementation of a Stormwater Management Program. Federal and State regula–tions require that City of Sturgis' program address each of the following program components:

- Public Education & Outreach
- Public Involvement
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post–Construction Runoff Control

• Pollution Prevention/Good Housekeeping for Municipal Operation

State regulations require that MS4 operators develop, implement, and enforce a storm water management program designed to reduce discharge of pollutants from the MS4 to the maximum extent practicable. The City must develop procedures to meet the six requirements listed above. All six components must be completed within ten years of the permit issuance.

Physical Drainage Patterns and Floodplains

Drainage in Sturgis runs from the surrounding hills into the Bear Butte Creek basin, with the predominant flow direction being from the southwest to northeast. Most of the Bear Butte Creek flood–plain has been maintained as open space, although some struc–tures, including the city's public works yard, encroach somewhat into this area. A major drainage canal increased capacity of a tributary stream and serves as an efficient stormwater conduit for neighborhoods on the east side of the city. Additional improve–ments are being made to this drainage corridor south of Interstate 90. Some residential areas east of Junction and north of I–90, served by the canal, remain in the 500–year floodplain, as does the Lazelle Street commercial corridor and part of the Main Street district.

While most of the city's most flood–prone areas are largely open, some sites with significant commercial development or potential are located within the 100–year zone. These include the triangle formed by US 14A and the Whitewood Service Road, and the southwest quadrant of Exit 32.

Eastside Drainage Canal.
This structure efficiently conducts stormwater to Bear Butte Creek and away from the developed part of the city. Downstream, the creek is primarily a green corridor, lined by city parks and open space.

Evaluation

The City of Sturgis has met several of the goals outlined in the city's Stormwater Management Program. The 2009 Annual Report lists the goals met and not yet met. Complete implementation of the six minimum measures is required within five years of adoption of the program. A report has not been completed since 2009.

Stormwater management is mandated as part of the Federal Clean Water Act. Each regulated community must meet the conditions of the program adopted by the city. The program's progress is to be reviewed annually in the city's Stormwater Management Program Report.

Recommendations

• Submit annual reports to the South Dakota Department of Environment and Natural Resources as required. The annual reports must be brought up–to–date and delivered to the State to meet the permit requirements and to avoid enforcement action.

• Implement and complete the goals adopted by the city's Stormwater Management Program.

• Use conservation development design techniques and project–specific practices such as wetland and retention areas to reduce drainage outflow from newly developing areas. Establish a no net flow rate increase standard for major new developments to prevent overloading existing drainage corridors.

• Remove trash and sediment from storm sewers and Bear Butte Creek.

• Improve the environmental and visual quality of the Bear Butte Creek corridor, particularly west of Junction Avenue.

• Develop uplands open spaces on key properties to reduce flows into the city basin.

• Develop detailed system maps for utilization by the city and developers.

4

Parks and Community Facilities

If transportation and infrastructure are the framework of the city, parks and community facilities are the public features that bring the city to life and protect and serve its citizens. Sturgis has built an enviable array of resources that have served the city well in the past and form the basis for excellent service in the future. This chapter considers Sturgis' existing park and recreation facilities and community resources, including all city–owned and operated recreation areas and other parks with public access.

THE STURGIS PARK SYSTEM

Sturgis' residents enjoy a variety of open space, parks and recre–ation opportunities within and immediately surrounding the city. Because parks and recreational facilities are a fundamental part of community life, Sturgis must provide additional facilities as the community grows to maintain the level of service that its citizens expect. This analysis of existing city–owned and operated recre–ation areas and other parks with public access considers:

- Current levels of service in the existing system.
- Service coverage to identify park and facility development needs.
- Condition inventory of existing parks.

Park Service Evaluation

Park service adequacy is evaluated in three ways:

- *Facilities by Classification.* Parks are classified into different categories to determine the level and area they serve.
- *Facilities by Geographic Distribution.* The service radius of each facility is analyzed to identify geographical gaps in service.
- *Facilities in Relation to Population Service Standards.* National standards for the provision of park and recreation facilities are applied to Sturgis' present system.

Facilities by Classification

The Sturgis planning area includes about 104 acres of parkland. Traditional park area standards set by the National Recreation and Park Association (NRPA) suggest 10 acres of park land per 1,000 residents. At present, Sturgis contains approximately 17.33 acres per 1,000 residents, meeting this traditional, if somewhat outdated rule–of–thumb. Contemporary evaluation uses a level of service standard, measuring local satisfaction with the current level of open space and making necessary additions as the community moves forward.

This analysis uses an NRPA–developed park classification system to classify Sturgis' facilities. Figure 4.1 lists Sturgis' park facilities by category with amenities described. The categories of this hierarchy include miniparks, neighborhood parks, school parks, and community parks.

• *Miniparks.* Miniparks generally address specific recreation or open space functions. These parks typically cover less than one acre and have a service radius of less than a quarter of a mile. Because of maintenance difficulties with multiple smaller sites and their small service area, most cities discourage the development of miniparks. Sturgis currently has seven miniparks: Centennial Park, Harmon Street Park, Hillview Park, Meade Avenue Park, Rose Park, Starline Park and Willow Park. The city should avoid future minipark development except for unique areas or special use open spaces. Parks of less than three acres provide limited services and numerous miniparks create higher maintenance costs for the Parks Department.

• *Neighborhood Parks.* Neighborhood parks are the basic unit of a community's park system and provide a recreational and social focus for residential areas. These parks provide space for informal active and passive recreational activities. The typical service radius for neighborhood parks is between ¼ and ½ mile to provide for comfortable and safe pedestrian access. Neighborhood parks adequate in size to accommodate the requisite facilities should contain at least 5 acres.

The Sturgis planning area contains four parks in this category, including:

- 6th Street Complex
- City Municipal Park
- Woodland Park
- Lions Park

Traditional NRPA standards call for about two acres of neighborhood parkland per 1,000 residents. Sturgis currently has about 26.5 acres of neighborhood parks, which translates into 4.4 acres per 1,000 residents which meets the NRPA standard. In addition, larger community parks also fill neighborhood park functions.

• *School Parks.* School park facilities can help to meet neighborhood park needs, particularly when located in areas not served by a neighborhood park. The grounds of the Bear Butte Elementary School serve as a neighborhood park and this playground fills a service gap in the center of town. The Sturgis Elementary School playground includes several different styles of playground equipment, full–size basketball court and open play areas.

• *Community Parks.* These typically include areas of diverse use and environmental quality. Such parks meet community–based recreation needs, may preserve significant natural areas and often include areas suited for intense recreation facilities.
Typical criteria for community parks include:

- Adequate size to accommodate activities associated with neighborhood parks, but with space for additional activity.

- A special attraction that draws people from a larger area, such as a swimming pool, pond or lake, ice skating rink, trails, special environmental or cultural features, or specialized sports complexes.

Community parks generally contain between 30 and 50 acres and serve a variety of needs. The typical service radius of a community park is approximately ½ mile to 3 miles. Traditional NRPA guidelines for community park areas call for 5 to 8 acres per 1,000 residents. Sturgis' community parks include Owens Field Complex (Girls Softball), Little League/Strong Field Complex, Fort Meade Softball Complex and Sturgis Fairgrounds. Together, these parks cover approximately 82 acres. Athletic facilities

A Hierarchy of Parks. From left on facing page: Meade Avenue Park (minipark), Woodland Park (neighborhood park), Sturgis Elementary School (school park), Strong Field (community park)

associated with the city's high school and middle schools such as Woodle Field also function as community parks but are not included in the area to population analysis.

At about 13.8 acres per 1,000 residents, Sturgis currently meets the NRPA standard for community parks. As Sturgis continues to grow, additional space for a new community park should be identified.

Figure 4.1: Park System Analysis

Facility	Location	Total Acres	Playground Areas	Play Fields	Courts	Special Amenities
Community Parks						
Little League Complex Strong Field	1918 Ball Park Rd. 1930 Ball Park Rd.	19.00	N/A	1 American Legion, 1 Pony League, 4 Little League	N/A	Concessions/restrooms, off–street parking, bleachers
Sturgis Fairgrounds	1802 Ball Park Rd.	20.00	N/A	N/A	N/A	Rodeo grounds
Owens Field (Girls Softball Complex)	1510 Ball Park Rd.	5.24	N/A	3 Game, 1 Practice	N/A	Concessions/restrooms, off–street parking (limited),
Hills and Plains Park	Blanche & Lazelle St.	25.00	N/A	Soccer Fields (1 large or 2 small); practice field (the "deer field" to north)	N/A	Concessions; restrooms; grandstand seating; lighted fields; off–street parking (~60 spaces); Colonel Sturgis statue; Freedom Site Memorial; BMX jump park (east side of site, temporary)
Fort Meade Softball Complex	Fort Meade	13.33	N/A	3 softball fields (2 lighted, 1 unlighted); also used for youth football fields	N/A	Concessions/restrooms, bleacher seating

Figure 4.1: Park System Analysis (cont.)

Facility	Location	Total Acres	Playground Areas	Play Fields	Courts	Special Amenities
Neighborhood parks						
6th Street Complex	830 Sixth St.	4.00	N/A	N/A	Tennis Courts (6); Half Court Basketball (1)	Tennis court lighting; off–street parking (40 spaces); restrooms
City Municipal Park	780 Sly St.	5.50	Large playground, swings (6 belt, 2 bucket), spring riders, several specialty play components, rock climbing wall	N/A	Sand Volleyball Court (1)	4 Shelters (Old Stone Shelter with fireplace, Stock Shelter, L–Shelter, Log Shelter – south side of creek); restroom facilities; off–street parking; picnic tables; park benches; grills; chess tables; donor plaza; drinking fountain; bike/pedestrian trail connection; performance stage
Woodland Park	781 Sly St.	6.00	Small, modern component play–ground structure, spring riders (3); sand digger (1); swings (4 belt, 2 bucket)	N/A	N/A	Woodland Shelter/restroom facility; large grill; disc golf course; bike/ pedestrian trail connection; picnic tables; park benches
Lions Club Park	590 Lazelle St.	8.0	Timber playground structure, swings (4–belt, 2 bucket), spring riders (2), sand digger (1), merry–go–round	N/A	N/A	Ice skating pond; large pavilion (upper level); log shelter (lower level); water feature pond with fountain; restroom facilities; drinking fountain; off street parking (40 spaces –upper level, 10 gravel surface spaces – lower level); picnic tables; park benches; grills (7); bike rack

Figure 4.1: Park System Analysis (cont.)

Facility	Location	Total Acres	Playground Areas	Play Fields	Courts	Special Amenities
Mini Parks						
Centennial Park	14th St.	0.50	Slide, swings (2 belt, 2 bucket), merry–go–round, sand play area	N/A	N/A	Bike/pedestrian trail connection, picnic tables, bike racks, park benches
Harmon Street Park	Harmon St.	0.25	N/A	N/A	N/A	Undeveloped open space as part of Hillview Development
Hillview Park	Colorado Ave.	1.00	N/A	N/A	N/A	Undeveloped open space as part of Hillview Development
Meade Avenue Park	Meade Ave. & Douglas St.	0.33	Slide, swings (2 belt, 2 bucket), climber, merry–go–round	N/A	Half–court Basketball (1)	Picnic table, unstructured open lawn area
Willow Park (Pine Acres)	1st Ave.	0.33	Slide, swings (4 belt), merry–go–round, sand digger, spring rider	N/A	Half–court Basketball (1)	Horseshoe court (1), picnic table (1)
Rose Street Park	Sherman St. & Rose St.	0.25	Infant maze play structure, steel slide, swings (4 belt, 2 bucket), climber, spring riders (3), sand digger (1), merry–go–round	N/A	N/A	Picnic table, unstructured open lawn area
Starline Park	Starline Ave. & Oak Grove Court	0.33	N/A	N/A	N/A	Picnic table, unstructured open lawn area
School Sites/Other Public Use Sites						
Nolin Monument Site	Junction Ave. & Harmon St.	.35	N/A	N/A	N/A	Historic Nolin Monument, open lawn area
Sturgis Elementary School	1121 Ball Park Rd.	5.5	Component play structures (3 total), climbers (2), swings (14 belt)	A portion of the little league fields are located on north half of property	Half–court Basketball (1), Full Court Basketball (1)	Benches
Sturgis Middle School	Douglas St.	.5	N/A	N/A	N/A	Open lawn area at south end of site
Woodle Field	Blanche St.	8.0	N/A	Football Field, Running Track	N/A	Sports lighting, stadium seating, running track renovation currently underway; concessions; restrooms

Facilities by Geographic Distribution

As previously noted, neighborhood parks comprise the basic unit of a park system. A standard ¼ and ½ mile service radius, corresponding to comfortable walking distance, can be used to evaluate neighborhood park distribution. Because large community parks serve much larger areas, they often attract users beyond walking distance requiring bicycle or automobile access. Figure 4.2 illustrates the distribution of Sturgis' park facilities and their respective service areas.

North of Interstate 90, some newer development areas and established parts of central Sturgis lack easy access to parks. South of the Interstate, Willow Park, a minipark of about 1/3 acre, is the sole existing park, a major service deficiency. New park development and improved trail access to existing parks are necessary to meet the city's growing park and recreation needs, particularly for growth areas south of I–90.

Facilities in Relation to Population Service Standards

The population analysis in Chapter One projects a potential 2030 city population of 7,975. Figure 4.3 identifies the future park needs associated with this future population based on current community standards. This analysis assesses park land needs based on a ratio of existing service levels to a projected 2030

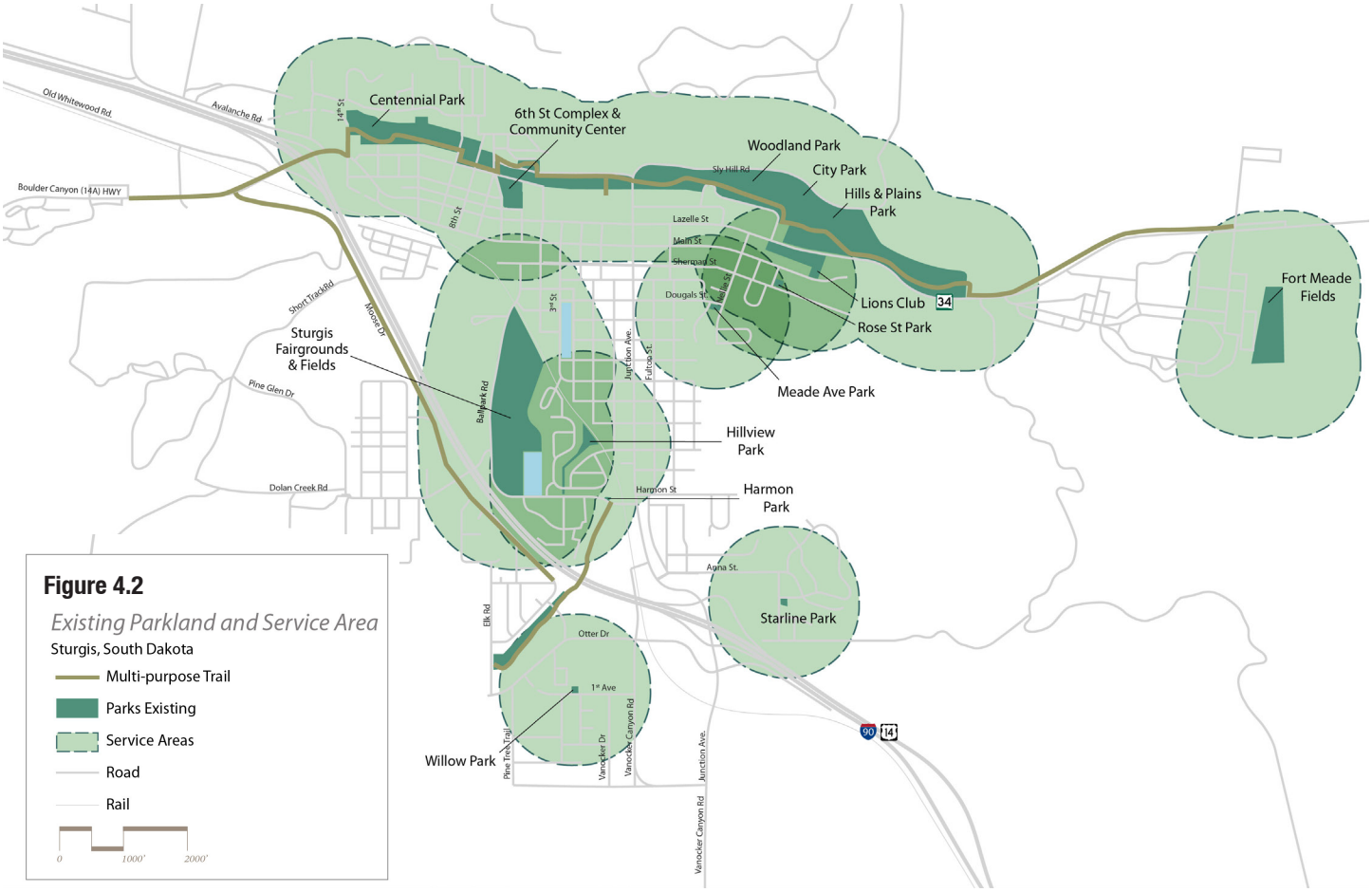


Figure 4.2

Existing Parkland and Service Area

Sturgis, South Dakota

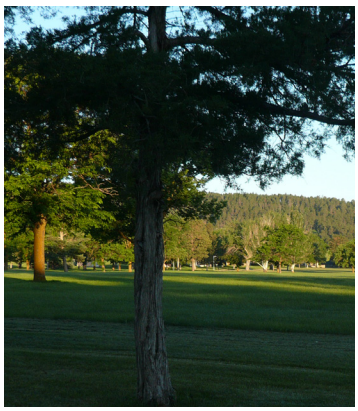
Multi-purpose Trail
Parks Existing
Service Areas
Road
Rail

0 1000' 2000'

Figure 4.3: Future Parkland Needs

Park Type	Existing Acreage	Existing Acres per 1,000 Residents	2030 Total Parkland Needed	Additional Parkland Needed
Neighborhood Parks	22.8	3.4	26.8	3.9
Community Parks	111.3	16.4	130.6	19.2
Mini & Specialty Parks	0.5	0.1	0.6	
Total Park & Recreation Area	**134.7**	**19.8**	**158.0**	**23.3**

Source: RDG Planning & Design



population. This methodology suggests a need for an additional 23 acres of park land by 2030, with a critical need south of I–90. This should be seen as a minimum amount of additional park land. Future park sites should provide quality park spaces that have adequate access for residents.

Park Site Evaluation and Recommendations

Centennial Park

This park is located east of 14th Street along the south side of Bear Butte Creek. It contains picnic facilities, grills, limited play–ground equipment and good trail connections. The park lacks off–street parking; as a result, park patrons use commercial parking lots to the south in the Lazelle corridor.

Recommendations:

- Provide off–street parking.
- Improve trail continuity and route clarity from both the east and west.
- Provide routine maintenance to remove weeds from play–ground surfacing and add surfacing to provide proper depth.
- Improve playground facilities and provide additional uses within existing park

City Park

City Park is located on Sly Hill Road along Bear Butte Creek. City Park is one of Sturgis' signature parks, with excellent main–tenance, a distinctive playground facility, and four shelters. Restroom facilities are available on the east side of the site and at Stock Shelter. The Bear Butte Creek Trail runs through the park, linking it to other parts of the city. A portion of City Park lies south of Bear Butte Creek and contains a small log shelter, chess tables and unstructured open space.

Recommendations:

- Improve drainage from City Park to Bear Butte Creek to improve overall conditions, and reduce yearly maintenance of park and sand volleyball courts.
- Restore and maintain the Old Stone Shelter
- Provide additional sand volleyball courts to encourage a new sand volleyball league for residents.
- Improve Sly Hill Road crossing at Bear Butte Creek.
- Provide parking at log shelter south of Bear Butte Creek.
- Improve small stage to encourage small concerts and other events within the park.
- Provide adequate safety surfacing under spring riders in lawn areas.

Harmon Street Park

This park is an undeveloped portion of the Hillview Addition located north of Ball Park Road adjacent the drainage canal. The park lacks amenities but has space for a small playground or play court.

Centennial Park Playground. This area should be improved to provide additional features for active play.

Old Stone Shelter at City Park. This historic structure provides great atmosphere but needs restoration and continued maintenance.

Recommendations:

- Meet with neighborhood residents to determine best use for park and identify possible improvements.

Hills and Plains Park

Hills and Plains Park is located on the north side of Lazelle Street east of Blanche Street. This 25–acre park includes soccer fields, the Bear Butte Creek Trail, a skate park, the Freedom Site Memorial, concessions, and restroom facilities.

While reasonably well–maintained, updates could improve the user experience. Areas for improvement include the concession/ restroom structure, parking facilities, path lighting, and passive

recreation opportunities.

Recommendations:

- Replace concession/restroom facilities.
- Organize and improve parking throughout site.
- Provide path lighting along the Bear Butte Creek Trail.
- Improve creek access at east edge of park to offer fishing opportunities.
- Enhance landscaping in east half of park.
- Design and install a park identification sign.

Hillview Park

Currently, this park is an undeveloped open space in the Hillview Subdivision. The linear park offers limited development possi–bilities beyond passive recreation such as a walking path.

Recommendations:

- Meet with residents in Hillview area to discuss possible uses of the open space.
- Develop an internal pathway for pedestrians and small children on bicycles and tricycles.

Lions' Club Park

This park is located on the south side of Lazelle Street at Regent Street. It features a large shelter, restroom facilities, playground, and water feature. Most parking is provided on the upper level (south side) of the park, supplemented by a gravel parking area along Lazelle Street. Vehicular access to the lower level of the park is awkward. Playground equipment has variety but is outdated and in some cases may pose a safety hazard to users.

Recommendations:

- Make ice skating rink area more usable during winter months. Investigate use of seasonal liner or revising existing soil to clay liner to provide water retention within the ice skating basin.
- Provide new irrigation system for the "upper level" of the park to help improve turf condition. Selective canopy thinning of the large shade trees may also help improve turf conditions by allowing additional light to penetrate down to the turf.
- Update playground equipment and safety surfacing to comply with the current edition of the Public Playground Safety Handbook.
- Relocate spring riders from lawn area into a playground area with adequate safe zones or provide adequate safety surfacing surrounding spring riders in current location.
- Consider planning and installing new playground on "upper level" of park near pavilion shelter.
- Provide ADA accessible pathway between the "upper level" and "lower level" of the park.
- Consider replacing the existing log shelter with an updated

Hill and Plains Park.
Right: Freedom Site Memorial.
Above: Welcome sign.
Below: Lighted soccer fields.

Lions' Club Park
Above: Shelter.
Below: Playground equipment recom–mended for upgrade and safety improvements.

Woodland Park. Above: Park shelter, the largest in the Sturgis system. Left: Contemporary play equipment.

Small Neighborhood Playgrounds. Above: Rose Park. Left: Meade Avenue Park. Playgrounds at these miniparks need re–equipping to provide contemporary playspace for children. Shelter and benches for adults watching children, and a serpentine, child–sized paths could also add to their use and quality.

shelter that would be more useful for users.

- Enhance the existing pond at the east end of park to include additional visitor amenities (i.e. benches, fishing access points); improve water quality by dredging silt and enhancing aeration within the pond.
- Upgrade and improve definition of lower level (Lazelle Street) park entrance and parking.

Woodland Park

Woodland Park is located west of City Park along Sly Hill Road north of Bear Butte Creek. The park contains Sturgis' largest park shelter/restroom facility and features off–street parking, a playground, swings, grills, a disc golf course, connection to the Sturgis trail system and other park amenities. This park is well–maintained and has modern playground equipment for young children.

Recommendations:

- Continue routine maintenance program. Monitor playground surfacing to maintain quality.
- Provide better guidance to disc golf course.

Meade Avenue Park

This neighborhood park is located at the southeast corner of Douglas Street and Meade Avenue. The park features swings, a slide, merry–go–round, a basketball court and unstructured open lawn areas. The park is accessed by street side parking along Meade Avenue. Playground equipment is outdated and poses some safety hazards to users.

Recommendations:

- Replace outdated playground equipment as scheduled in 2011.
- Provide parking and improve sidewalk access to the park.
- Provide shelter and benches for parents.

Rose Park

Rose Park is located at the intersection of Rose Street and Sherman Street. The park includes swings, a slide, merry–go–round, infant maze play structure, spring riders, picnic table, and unstructured open lawn area. The park is fairly well– maintained but needs updates and additional maintenance. Some of the play equipment is outdated and presents potential hazards to users.

Recommendations:

- Provide safety surfacing under play climber.
- Improve safety zone for swings.
- Replace slide with new slide which meets current play standards.
- Keep surfacing clean and provide adequate depth to cushion falls.

Southside Open Space. Developing neighborhoods south of I–90 are underserved by parks. Now, Willow Park (left) is the only public park serving the area, However, opportunities like the Game, Fish, and Parks Department land along Elk Drive could satisfy the need for neighborhood and community open space.

- Replace outdated equipment with new equipment as funds become available. Remove hazardous equipment.
- Provide shelter and benches for parents.

Starline Park

This mini–park is located at the intersection of Starline Avenue and Oak Grove Court west of Exit 32 and approximately two blocks north of Interstate 90. The park contains newly planted trees and unstructured open lawn area and is in good condition.

Recommendations:

- Consider installing small playground structure for neighbor–hood use.

Skateboard Area

The existing skateboard facility is located in a parking lot at 3rd and Lazelle Street. The park consists of modular skate ramps which are easily moveable. The parking lot location is highly visible, but lacks permanence or connection with other park uses.

Recommendations:

- Develop a permanent skateboard park with features that maintain user interest. Location should be accessible from the city trail system.
- Collaborate with local user group to determine best location and design for a permanent facility.

Willow Park (Pine Acres Park)

Willow Park within the Pine Acres Subdivision is located on 1st Avenue between Greenwood Trail and 1st Avenue South. The park includes a playground, half–court basketball court, horseshoe court, picnic tables, and open lawn area. Park maintenance is fair, with playground surfacing requiring weed removal. Playground equipment is outdated and presents possible hazards to users.

Recommendations:

- Properly maintain playground areas and safety surfacing.
- Replace playground equipment with new equipment.
- Provide shelter and bench for parents.

Potential New Park Opportunities

In addition to these parks, Sturgis has several potential opportu–nities for major park and open space development. These include:

- The "Marcotte Property," a major site located on the west side of Vanocker Canyon Road south of Interstate 90. This site has commercial development opportunities as well as open space possibilities.

- South Dakota Game, Fish, and Parks Department property west of Elk Road and adjacent to the Black Hills National Forest. This land has potential for both neighborhood park and resort/recreational development.

- The City Lakes site, a unique chain of scenic lakes surrounded by the National Forest in the south hills above Vanocker Canyon.

Chapters Six and Seven discuss these opportunities in more detail.

COMMUNITY FACILITIES

City Hall and Library Complex

Sturgis City Hall is located at 1040 2nd Street in the downtown district. The structure, originally built for other purposes in 1963, is an excellent example of adaptive reuse. The building currently houses the Public Library and city offices, including the offices of the Mayor and City Manager; the Rally Department; and the Human Resources, Water, Finance, Legal, Planning (including GIS services), and Code Enforcement Departments. The building features a second–floor outdoor patio, as well as the Lushbaugh conference room and two additional conference rooms. Parking is provided along 2nd Street and Sherman Street, in a public lot across 2nd Street, and at a bicycle rack. The facility complies with the Americans with Disabilities Act.

Evaluation

The existing facility serves government uses relatively well, although, in common with other reuse projects, some functional compromises exist. The upper floor deck may provide some opportunity for expansion, although reprogramming of space within existing walls is usually preferable.

A need for additional meeting space has been addressed through the addition of new conference rooms and modifications to the Lushbaugh Room.

Recommendations:

- Evaluate whether recent renovations and new spaces satisfy the need for conference space.
- Review the use of space in the building, including offices and the library to ensure efficient use of the space available.
- Continue to expand library services to outlying areas through the Libraries Coalition. Costs should be equitably shared by all benefiting jurisdictions.

Sturgis Community Center

The Sturgis Community Center, located at 1401 Lazelle Street, was built in 1992. The 68,000 square foot facility houses an indoor swimming pool with 72–foot waterslide, sauna, hot tub, full–size gymnasium with elevated running track, weight lifting/fitness room, cardio room, two racquetball courts, men's and women's locker rooms, 444–seat theater, meeting rooms, offices, lobby and concessions facilities.

The gymnasium can be used for basketball and volleyball. The 1/17–mile running/walking track is located above and around the main space. The Cardio Room contains stairmasters and tread–mills while the Weight Room contains Nautilus, Body Master and Olympic style free weights as well as elliptical, Aerodynes and Lifecycles.

The Meade Room is available for rental meetings or programs and comfortably accommodates 75 people. The room is also used for Sturgis City Council Meetings. The Lazelle Room is a smaller meeting room used for parties and activities which can accom–modate small groups. In addition, the historic Sturgis Auditorium & Armory at 1019 Main Street is available for public use. This building contains a 6,650 square foot gymnasium, restrooms, and kitchen facilities.

Evaluation

The facility is in good condition and receives continued routine maintenance. The men's and women's locker rooms received a recent renovation and updating.

Information provided by the Recreation Department indicates that the center's programs and public activities receive heavy use, with most activity taking place during the fall, winter and spring months. Programs managed through the Community Center

Major civic resources. Left: City Hall and Library, on 2nd Street between main and Sherman Streets. Right: Sturgis Community Center viewed from Bear Butte Creek.

including swimming lessons, youth and adult fitness programs, youth after–school programs, basketball leagues, volleyball leagues, an adult softball league, a youth football league, dance classes, and martial arts classes.

The lack of an outdoor pool or water play area reduces summer use of the building and grounds. The existing indoor pool lacks a zero–depth entry and wading area, limiting use by small children and people with disabilities.

The center's Lazelle Street location is convenient for motorists, but difficult for pedestrians and bicyclists. The connection from the Bear Butte Creek Trail to the Community Center is indirect, and requires users to use the 7th Street bridge, one of the weak links in trail connectivity. Access from most of Sturgis requires pedestrians and cyclists to cross Lazelle Street.

Most of the center's fitness equipment was purchased in 1992 when the facility was constructed. A need exists for near–term equipment upgrades to remain competitive in the Sturgis market. Gymnasium space is at a premium throughout Sturgis, and finding adequate practice time for teams has become an issue. Additional fitness class space is also needed. Currently, classes overlap into the racquetball courts and meeting rooms, creating some conflict between uses.

The building currently operates at capacity. However, the building design and additional space both accommodate expansion to increase services and offer additional program to the community.

Recommendations:

- Continue routine maintenance of the facility.
- Complete a long–term master plan for the Community Center building and campus, based on current and projected use. In the study, program building expansion options for additional fitness and dance program space and a new gymnasium.
- Upgrade fitness equipment to remain competitive with other providers.
- Develop a plan for an outdoor splash/wading park on the site, possibly adjacent to the existing indoor swimming pool. This would provide some increased summer use of the facility while also offering water play for younger, non–swimmers. Such a project may also provide an outdoor deck and concession space for summer use by all community members. A well–programmed and designed facility could provide a seasonal leisure park at a fraction of the cost of an outdoor pool or full water park.

Fire Department and EMS Services

The Sturgis Fire Hall and Ambulance Station at 1901 Ball Park Road was built in 2003. Of its 23,000 square feet area, 6,600 square feet are devoted to office and meeting rooms with sleeping quarters, with the remainder used for apparatus storage. The site, just under two acres in area, provides 30 parking spaces. The facility is handicapped accessible.

? HOW ARE FIRE PROTECTION SERVICES RATED?

Fire protection ratings influence local insurance rates and have an impact on business and investment decisions. The ISO (Insurance Service Office) rates services on a 1 to 10 scale, with ratings weighted as follows: 40% for water supply; 26% for equipment; 24% for personnel; and 10% for dispatching capabilities. The heavy weighting on water supply reflects the criticality of this factor for adequate fire suppression beyond daily maximum consumption.

Minimum specifications and standards are applied to fire equipment. Those standards compare available equipment with the number and types of structures within Sturgis. Regular testing of the equipment is also a factor. Four of the 26 percentage points allowed for equipment, are awarded based on the % of built areas in the district with an adequately equipped first–due engine company within 1.5 miles and an adequately equipped ladder company within 2.5 miles. For this reason fire station locations become very important in consideration of this credit.

Of the 24 percentage points allowed for personnel, 15 are based on the number of firefighters available for initial response and how quickly they can respond. Nine points are allowed for training.

The joint emergency services of fire protection and ambulance serves an area of 580 square miles within and immediately outside of the corporate limits of Sturgis. The Fire Chief is a full–time employee, with the rest of staffing provided by 50 volunteers, 15 of which are core responders. Their ability to respond is not limited by job location or other factors. The department also employs a half–time maintenance person and two volunteer Assistant Fire Chiefs. Ambulance service is provided by five full–time

staff, including three full–time paramedics and two full–time Emergency Medical Technicians; and assisted by other part–time EMS staff. This service is tax–neutral, and is self–supporting on a fee–for–service basis.

The efforts of the Fire Department have resulted in an Insurance Service Office (ISO) rating of 5.0. ISO analyzes data and assigns a classification rating from 1 to 10. Class 1 represents superior property fire protection and Class 10 indicates the fire suppression program does not meet ISO's minimum standards.

Evaluation

The existing facility is only seven years old and is in good condition. Its space and storage capacity is adequate for community fire protection. Some equipment is currently housed in a private storage building located approximately 12 miles east of the City. However, this equipment is not relevant to community fire production and is primarily used for wildland fire suppression. Community growth could require additional facility space or a satellite station. Existing cold storage space can accommodate additional equipment on an interim basis.

Fire Department and EMS Services response time is adequate for most of the year and for the area within the current corporate limits of the City. In 2010, Sturgis attempted to annex areas to its east, including campground and seasonal facilities used primarily during the Rally. Although this specific referendum failed, the city is likely to expand in the near future. The nature of annexation will determine impact on the City's ISO rating. Traffic congestion during the Rally can have a severe effect on response time. An enhanced transportation network that provides alternative routes can counter this problem and provide lasting community–wide benefit.

Older or substandard water mains in the established area of the city can also create capacity issues for the fire department. The downtown area's less than ideal water distribution system may limit fire suppression capacity, especially during the Rally season.

Recommendations:

- Evaluate equipment requirements and storage needs necessary to accommodate projected growth in Sturgis. Based on this evaluation, provide storage that allows the equipment to be available for intended use or dispose of equipment that does not serve its purpose. Required equipment should be stored at the Fire Hall or at a satellite station for quick access and response.
- Review the effect on response times during the Sturgis Motorcycle Rally or by future city development. Enhancements include transportation network improvements presented in Chapter Six; and a strategically located satellite station.

Either of these measures could maintain or improve the ISO rating. A satellite facility could also serve as a temporary ambulance station during the Rally and other special events.

- Upgrade water mains in conjunction with complementary street or sewer reconstruction projects, especially in older parts of the city that are more susceptible to serious fires.

Police Department

The Sturgis Police Department is housed in the Law Enforcement Center (LEC) at 1400 Main Street, adjacent to the Meade County Courthouse. This facility houses the Sturgis Police Department, the Meade County Sheriff's Department, the dispatch center and the Meade County jail. The LEC was established through a Mutual Operating Agreement between Meade County and the City of Sturgis. The Sturgis Police Department occupies 3,289 square feet of the LEC's gross floor area of 13,980 square feet. Other space allocations include Meade County Sheriff's Department (3,448 square feet), Sturgis/Meade County Dispatch (739 square feet), and common area (6,504 square feet).

The City of Sturgis is responsible for 20% of the utilities, insurance, and maintenance of the building exterior; 50% of the common area maintenance; and 100% of the maintenance cost for the area occupied by the City of Sturgis Police Department. Payment to the County for the city's share of the cost is due in January for costs incurred the previous 12 months ending in July. In addition, the city pays a share of custodial fees that may be adjusted annually according to cost–of–living increases. The city clears snow and ice on parking spaces assigned to it. The agreement was last renewed in 2009 and runs for five years from the date of agreement execution. The City of Sturgis and Meade County may agree mutually to end the agreement at any time.

As of January, 2011, the Sturgis Police Department personnel consists of 19 full–time staff. Of these, 16 are sworn officers, including the Police Chief, Assistant Chief, three Patrol Sergeants,

one Detective Sergeant, one Sergeant assigned to the school system, eight Patrol Officers, and one Detective; and three civilian employees. During the Sturgis Motorcycle Rally, the Department employs approximately 107 sworn officers and 20 civilians to provide law enforcement support on a 24–hour a day basis.

In addition to normal law enforcement duties the Department's responsibility includes joint administration of the animal shelter with Meade County. Animal shelter staff includes the Animal Control Officer, a Shelter Technician, and a Secretary. Thirty–three percent of the calls to the Department are animal control related. The Police Department also provides a school resource officer.

Evaluation

In 1993 the City of Sturgis and Meade County had the foresight to establish the Joint Law Enforcement Center. This facility is sound and has adequate room for Police Department personnel. Shared usage provides efficiencies between the City and County law enforcement agencies.

Staffing of the Police Department during the Motorcycle Rally presents unique event and crowd management challenges. Sturgis addresses the Rally's influx of people, which can swell the city's daily population by 100,000, with its resultant law enforce–ment issues by hiring temporary law enforcement officers and security personnel. The law enforcement structure during this period is well established and, while challenging, has become close to routine and serves both the Rally population and city residents well.

During the normal year, the Department adequately meets its manpower needs. The Police Department has the flexibility and management efficiency to serve modest population growth without the addition of staff.

The physical facility of the Police Department is adequate except for storage space for equipment and large evidence. The Command Trailer and large evidence such as automobiles, motorcycles, and large equipment must be stored outside. Outside storage may not adequately maintain the integrity of evidence.

The Animal Shelter serves the current needs of Sturgis and Meade County very well. Sufficiency and condition of the shelter should be evaluated on an 8 to 10 year basis. Accelerated growth in the county could reduce this review interval.

Recommendations:

- Continue the successful operation of the Joint Law Enforcement Center with Meade County. Long term planning should consider an expanded facility or a Community Public Safety Building which would include the Police Department, the Sheriff's Department, the Fire Department and Ambulance Service.
- Develop standard storage space for large evidence. If current practices do not adequately provide for the integrity of large evidence, a secured storage facility should be developed. Additional space may be considered to house Police equipment.
- Review departmental staffing needs every three to four years to maintain an appropriate level of service. The Police Department should be able to provide good law enforcement service over the next eight to ten years at current popula–tion growth rates. Faster growth in population or urban area will stress the department's services and require department expansion.

Public Works Department

The Public Works complex along Dudley Street between Junction Avenue and 1st Street, includes three buildings. The original office, shop, yard and garage structure dates from 1960 and includes 15,921 square feet. A 2,210 square foot Sanitation Garage was added in 1988, and a 1,400 square foot office was completed in 2005. The complex has 20 parking spaces, and the new newer buildings are accessible to disabled people.

The Department's responsibilities include stormwater manage–ment, buildings, sanitation, streets, wastewater, street lighting, traffic signals, snow removal, street sweeping, and special sani–tation. It is staffed by 19 full time employees.

The Department provides sanitation service to about 2,700 customers, including all households and most of the city's commercial properties. Equipment includes four automated and two rear loaders, and two backup trucks. Waste collected includes household garbage, cardboard, rubble, and business waste. Service is provided outside the city to Sturgis–Brown High School, the National Guard complex, and Fort Meade.

Rubble is hauled to a City–owned and operated rubble site on Avalanche Road, the former city landfill. The remainder of solid waste is taken to the Belle Fouche sanitary landfill for final disposal. The rubble site accepts approximately 200 – 300 cubic yards per day. Its remaining life is estimated at 12 – 15 years. Special sanitation service is provided for approximately 19 days during the August Sturgis Rally.

Evaluation

The overall service provided by the Public Works Department is generally acceptable to the community. Operations that affect the visual quality of town, including curb repair, pothole patching,

pavement marking, vegetation on sidewalks, and sign conditions appear to take a lower priority to other operations.

The original Public Works complex is relatively unattractive in its highly visible setting near downtown and along Bear Butte Creek. Much of the facility is in Bear Butte Creek's 100–year floodplain. Relocation of the facility to an industrial area outside of floodplains would open the creek greenway to redevelopment and provide a more contemporary operational base for the Department.

While sanitation service to the community is good, recycling as an alternative to conventional solid waste disposal in a distant landfill should be expanded. The city's fee structure should encourage recycling efforts, and convenient drop–off sites should be established.

Recommendations:

- Expand efforts to improve Sturgis' appearance by providing regular programs to repair curbs and potholes, mark pavement, replace signs, and control weeds along major community corridors. Engage Sturgis residents as volunteer partners in a continuing civic maintenance effort.
- Increase recycling efforts on economic and convenience fronts, establishing a fee structure that rewards individual recycling and makes the practice convenient for residents.
- Relocate the Public Works Department operation to a more appropriate industrial site that offers contemporary space, full accessibility, and a location out of flood–prone areas. Master plan a facility for joint use with flexibility to meet future police and fire storage needs and accommodate a possible satellite fire station.

Airport

The Sturgis Airport covers 251 acres east of the city at 13345 Alkali Road. The airport includes a 60' x 80' main building, built in 1994 and accessible to disabled people, and 25 parking spaces. Average weekly traffic is ten operations inbound and outbound combined, with an increase during the Rally, during a seven–day operating week. The facility is operated by a contract manager who also provides manufacturing, fueling, and mechanic service.

Evaluation

The 5,100 foot runway is in excellent condition and is long enough for most propeller– driven planes and some jets. Despite its light traffic, airport availability adds value to the community; it is an important criterion for businesses considering investment in a city.

Recommendations:

- Continue to operate the airport under its current manage–ment structure.
- Extend the runway to 5,500 feet.

- Build a wildlife fence and consider construction of a terminal structure.
- Develop a back–up management plan in absence of manager.
- Review the benefit of additional hangars to attract airport business.
- Follow the growth of the DUSEL research facility at the Homestake Mine in Lead, and re–assess airport needs with evolution of the facility.

Liquor Store

The Sturgis Liquor Store is located at 1075 Lazelle Street. The new 6,400 square foot store was completed in January 2011, and is operated by one full time employee, two permanent part–time employees, and three part–time employees. The building adds on–street parking and will provide good service for up to 20 years. The revenue generated by the Liquor Store provides support for the Sturgis Community Center and the General Fund, contrib–uting approximately $400,000 between 2007 to 2010. Enhanced revenues from an expanded facility may reduce general fund requirements to support the community center.

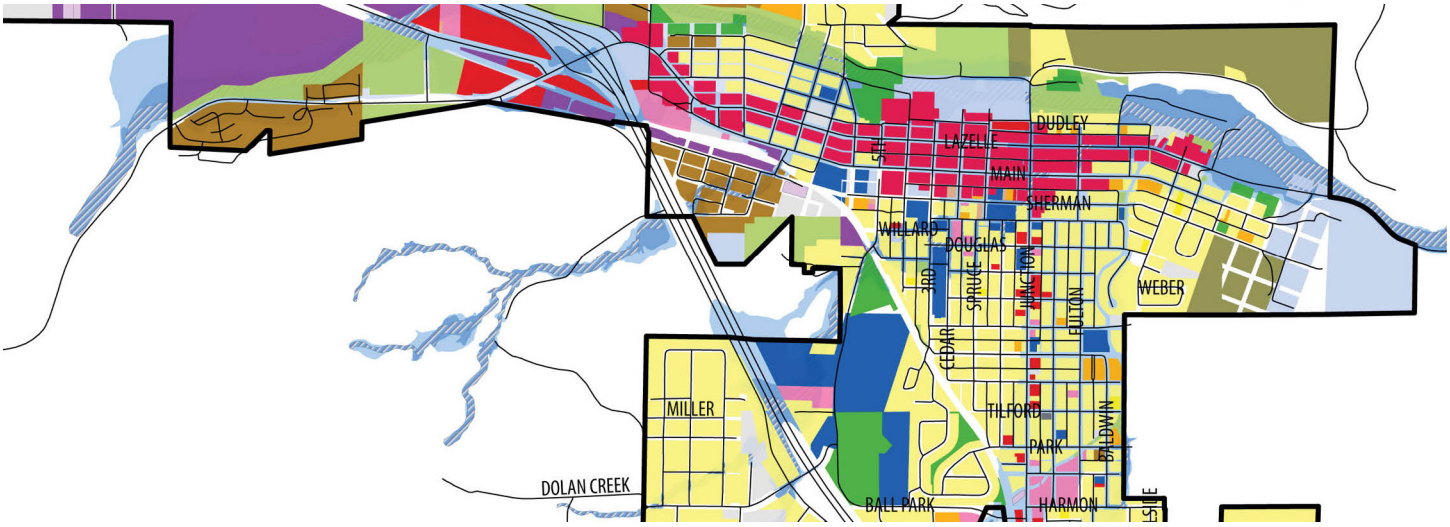
Evaluation

The Liquor Store provides a good source of revenue to the city. The new building will serve the Sturgis community, the surrounding area and any dramatic increase in population for the foreseeable future.

Recommendation:

- Continue to operate the Liquor Store under current manage–ment structure.
- Implement contemporary retailing practices and enhance–ments over time to continue to increase revenues.


Black Hills Souvenir T's • Kid's T's
Sturgis T's • Caps
STOP



PART TWO:
Sturgis Future


OVERPRICED T'S
OPEN

5

The Future Sturgis Process

The engagement of Sturgis' residents and business owners is essential to a successful planning effort. The Sturgis Comprehensive Plan included many oppor–tunities for public participation, including workshops, on–site studios, stakeholder discussions, and informal open houses. The plan's agenda was built on the foundation of an earlier visioning and goal–setting process, called Future Sturgis. This chapter summarizes the directions of this community effort.

Future Sturgis, a community visioning process that began in Spring 2008, invited the citizens of Sturgis to share their ideas for improving the city. A series of meetings were sponsored by Sturgis Economic Development Corporation, the City of Sturgis, Sturgis Area Business Alliance, Sturgis Regional Hospital and Foundation, Citizens for the Betterment of Sturgis, Sturgis Chamber of Commerce, Sturgis Rally Department, Sturgis Jaycees, USDA–Rural Development and Meade County Schools. The program's goal was to identify ways to achieve community growth and improve the quality of life for Sturgis residents. Initial community input identified five priority areas, which in turn became the focus of individual working groups. These priority areas included:

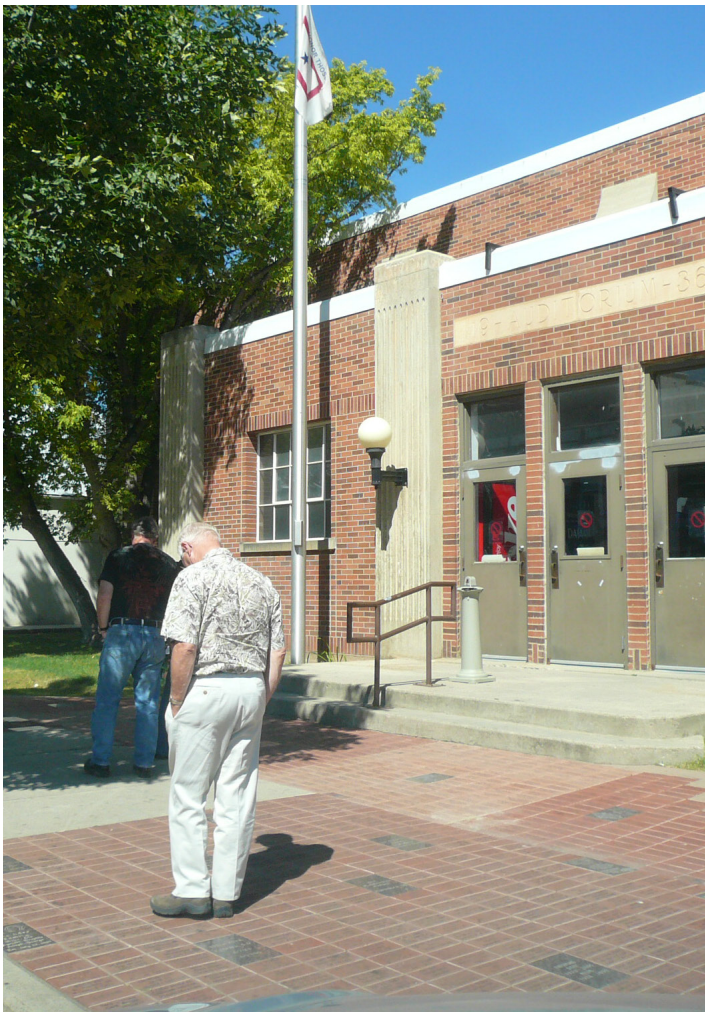
- Community Pride
- Bridging Economic and Social Gaps
- Industrial Development
- Retail Development
- Tourism

Each group identified specific goals and strategies for a more successful Sturgis. While the scope of goals sometimes included issues that are not ordinarily included in comprehensive plans, the overall program provided the foundation for the recommen–dations of this document. Goals that are addressed specifically in the comprehensive plan are noted by their chapter reference in parentheses.

COMMUNITY PRIDE

The Community Pride working group's overall goal was to "Enhance Sturgis' identity and heritage, foster pride in the Sturgis community, and enhance the way Sturgis presents itself to fellow citizens and visitors". The group identified the following focus areas:

• Lazelle Street, the city's primary east–west travel corridor, and the initial introduction to Sturgis for many visitors from around the country and even the world.



• Junction Avenue, emerging as a corridor with the construction of an enhanced Exit 32. A priority for the street was increasing its potential as a mixed use community corridor without losing its residential scale.

• Main Street, the traditional image center of Sturgis and the iconic backdrop for the Sturgis Motorcycle Rally.

• The "S–Curve" area, the western, and still primary, entrance to Sturgis from I–90 along Lazelle Street.

• The issue of vacant Main Street buildings, where revenues during the Rally alone meet owner's expectations and provide no particular incentive for operating year–round or even extended season businesses.

The group has successfully implemented a number of visual improvement programs. Issues that remain on the community agenda include:

• Improving property maintenance through Code Enforcement. (Chapter 6)

• Improving the appearance and development potential of Exits 30 and 32. (Chapter 7)

• Developing capital improvements and policy strategies that will extend Sturgis' peak season, ultimately establishing Main Street as a strong, year–round central district. (Chapter 7)

• Implementing NeighborWorks Beautification project in 2011.

BRIDGING ECONOMIC AND SOCIAL GAPS

Participants in the Future Sturgis process expressed concerns about economic and social barriers within the city. This working group's goal was to "Bridge economic and social gaps within Sturgis, to create a higher quality of life for all Sturgis residents." Areas of focus included:

• Sturgis youth, including recreational, entertainment, and economic opportunities.

• Overall recreation and entertainment in the community for people of all ages.

• Service and access for older adults.

• Mobility, including public transportation services.

Specific goals included:

• Expanding opportunities for academic enrichment and after–school programs.

• Increasing recreation and entertainment opportunities for both youth and adults. (Chapters 6 and 7)

• Improving health care access for seniors.

• Offering more senior oriented housing, including assisted living. (Chapter 6)

INDUSTRIAL DEVELOPMENT

Economic development is linked to social equity, population attraction, and creation of opportunity. The city has a limited private sector employment base, and creating new entrepre–neurial potential is important for balanced growth. The Industrial working group has a focused goal to "Create 150 quality primary jobs through recruitment, retention, expansion and creation of new businesses within three years". The working group estab–lished the outlines of a detailed economic development program that includes:

• Strengthening the Sturgis Economic Development Corp (SEDC) by:
  – Retaining an executive director.
  – Developing a long term plan for the SEDC board.
  – Developing a working plan to guide the SEDC executive director.

• Expanding and adding new sites at the Industrial Park by:
  – Developing relationships with landowners.
  – Securing funding.
  – Identifying target sites through the comprehensive land use planning efforts. (Chapter 6)

• Creating a workforce development program.

• Creating opportunities for incubator development (Chapter Six)
  – Exploring the feasibility of a speculative industrial building or incubator.
  – Working with area agencies for incubator applications.
  – Establishing a smaller site application separate from the industrial park.
  – Developing a profile for a spec building.
  – Establishing a regional SEDC network.

• Identifying and maintaining 12 business prospects.

• Establishing a long term economic development plan.

• Engaging existing businesses in the economic development process.

RETAIL

The Rally creates unique opportunities and challenges for retailing in Sturgis. Vendors, restaurants, and entertainment venues that set up during the Rally bring significant retail dollars to the city and region. However, many of these businesses close or disappear during the rest of the year, and the land and buildings

OVERALL GOALS OF FUTURE STURGIS

COMMUNITY PRIDE
Enhance Sturgis' identity and heritage, foster pride in the Sturgis community, and enhance the way Sturgis presents itself to fellow citizens and visitors.

BRIDGING SOCIAL AND ECONOMIC GAPS
Bridge economic and social gaps within Sturgis, to create a higher quality of life for all Sturgis residents.

INDUSTRIAL DEVELOPMENT
Create 150 quality primary jobs through recruitment, retention, expansion and creation of new businesses within three years.

RETAIL
Strengthen existing retail services while expanding regional retail opportunities in Sturgis.

TOURISM
Enhance and promote year round tourism for the benefit of ALL in the greater Sturgis area.

that they occupy remain empty. Local and regional retailing tends to gravitate toward Rapid City and Spearfish (consistent with findings in Chapter 1). The goal of the retail working group is to "Strengthen existing retail services while expanding regional retail opportunities in Sturgis". Objectives of the group include:

• Developing a new comprehensive plan and zoning ordinance that identifies and encourages year around retail and service businesses. (The city retained Buxton consulting to complete a retail opportunities plan, and Chapter7 of this comprehensive plan deals specifically with these key issues)

• Securing land near I–90 exits for new retail development and recruiting appropriate businesses.

• Developing a downtown redevelopment plan. (Chapter Seven)

• Creating a "One Stop Fast Track Shop" that makes Sturgis more business friendly.

• Utilization of the Buxton Study, a retail market analysis, in economic development initiatives

TOURISM

Tourism is a key component of the regional Black Hills economy, but in Sturgis is highly focused on the Motorcycle Rally. An important tourism focus is to diversify awareness and use of important attractions beyond the Rally, taking advantage of other features and environmental resources. The goal of the Tourism working group was to "Enhance and promote year round tourism for the benefit of ALL in the greater Sturgis area." Objectives included:

• Creating, managing and promoting events and experiences in the Sturgis area.

• Continuing to enhance and further develop legendary Main Street and the Downtown corridor into a year round tourist desti–nation. (Chapter 7)

• Working towards retaining tourists in Sturgis, and marketing the city as a regional base for visitors.

6

A Development Vision

The heart of this comprehensive plan is a unified development vision for Sturgis – a concept that unifies land use, transportation, parks, infra–structure, housing, and other systems into a coordinated program for the city's future. This vision builds on the work of Future Sturgis and recognizes that long–term goals are realized incrementally through many short–term decisions. In addition to major projects and ideas, this chapter also provides a sound basis for public and private planning decisions.

DEVELOPMENT PRINCIPLES

Chapter One projected Sturgis' growth potential and estimated the amount of land needed to meet this potential. This new development should be distributed in ways that maximize benefit and minimize unnecessary costs to the entire community. It should use land efficiently, be environmentally and economically sustainable, and reinforce the quality and character of Sturgis. "Smart growth" principles, applied to overall city development policy, can help Sturgis develop in an economically sound, envi–ronmentally sustainable, and mutually beneficial way. They ensure that investments have multiple benefits and that as Sturgis grows, it grows together rather than apart. Sturgis will grow "smart" if it:

Uses Urban Services Efficiently

An efficient Sturgis will maximize investments in streets, infra–structure, and public services, and use every unit of service to the greatest advantage. New development should generally be contiguous to existing development or take advantage of under–utilized "infill" areas to produce a unified and economically efficient, and attractive city. This principle avoids stretching city services out over wide areas, which increases the cost of services and requires people to travel farther to destinations.

Encourages "Human–Scaled" Design in Major Activity Centers

In a culture oriented to personal transportation, urban develop–ment often consumes large areas of land. People in the West enjoy privacy and the sense of openness provided by the landscape. But we also thrive on the human scale of more intimate envi–ronments. The Rally, with its juxtaposition of masses of people and machines in a dense urban environment, is testimony to these twin impulses. City environments should provide choice – places that offer both walkable scale and greater space. Even when densities are low, careful design and planning can create environments that are both efficient and a pleasure to experi–ence. Our landscape can accommodate cars and large–format retail without being dominated by parking lots, traffic noise,

USES URBAN SERVICES EFFICIENTLY

ENCOURAGES HUMAN–SCALED DEVELOPMENT

MIXES LAND USE

CREATES HOUSING CHOICE

and separated buildings that do not relate to each other. Well–planned, large–scale commercial and industrial developments are important to future economic growth, but can have detail and scale that learn from the quality of traditional town–building.

Mixes Land Uses

In Central Sturgis, radiating from the Junction and Lazelle intersection, residential, retail, public, and even light industrial uses are located near each other. However, low–density, dispersed growth tends to separate land uses into distinct "zones." The original zoning concept, first enacted in New York City in 1916, grew out of a need to separate living places from major industries to protect the health of residents, and this is still good policy in most cases. But mixing compatible yet different uses in a modern setting creates more interesting and efficient places. Different uses with similar impact, or developed in ways that are compatible, make it possible for people to walk from home to shopping, school, church, or recreation; increase variety; reduce unnecessary energy use; increase social contact, and provides greater flexibility for builders and developers.

Creates Housing Opportunities and Choices

Sturgis has a fairly balanced mix of owner and renter occupied units, with many of the city's renter occupied units in single–family style units. New city development should provide a range of housing opportunities, enabling young households to establish themselves in Sturgis, families to grow, and seniors the chance to stay in their hometown. Restricted availability of mortgages, as a consequence of the housing finance crisis of 2008 and demographic change, are creating demand for multi–family development, innovative small lot single–family, and attached urban housing. Sturgis should provide opportunities for people at all stages of life to find their place in the city.

Keeps All Parts of the City Connected

Newer residential development often occurs in separated and sometimes isolated pods, with few street, greenway, or trail connections to other parts of the city. Often, these neighborhoods are cut off by barriers such as major highways or railroads. Sturgis has worked to overcome some of these barriers, with links such Dolan Creek Road and its parallel path, connecting south side neighborhoods to the ballpark area. New growth should avoid isolation and include connections that unite it with the established community.

Preserves Open Space and Vital Natural Areas and Manages Impact

Sturgis' environment is an enormous asset that naturally attracts people. Development patterns that preserve open spaces and environmental features add value to property by increasing its desirability. Techniques that minimize impact can assure that

the human–made and natural environments can coexist to the benefit of both. But even more importantly, preserving and capi–talizing on the unique potential of open spaces and environmental resources helps the city preserve its soul – its room to breathe, the quality of the gifts that we have been given, and a sense that there are things beyond ourselves. But great environments need not stand pristine and unused, but should be used to add enjoyment to our lives.

Creates Transportation Options
Many communities have begun to realize the need to provide a wider range of transportation options. A completely auto–dependent city limits access of such groups as young people and seniors. An increase in the city's physical size should not reduce access. Better coordination between land use and transporta–tion, good connectivity within the street network, and developing multi–modal (or complete) streets that accommodate all forms of transportation improves access to the city's features. Equally important, incorporating physical activity into the daily routine of citizens creates a healthier and more physically fit community.

Achieves Community and Stakeholder Collaboration in Development Decisions
Sturgis should be a great place to live, work, and play year–around. The Future Sturgis effort demonstrated the power of a close partnership of all sectors of the community. Partnerships between neighborhoods, adjoining communities, developers, nonprofit organizations, and the city will support and accelerate implementation of the Sturgis Plan.

DEVELOPMENT FRAMEWORK

The Development Framework for the Sturgis Plan is based on the smart growth principles discussed above, market projections, existing priorities, and community–wide goals. The Framework establishes the overall structure for the Plan and includes the following principles:

Balanced Residential Neighborhoods. Residential develop–ment should be focused in growth centers that are contiguous to and connected with the established city and are feasibly served by urban infrastructure.

Commercial and Industrial Growth. Commercial development should occur in areas that serve the present and future population of Sturgis effectively, and conveniently and capitalize on access and natural assets. Industrial growth should occur in areas that logically continue existing patterns, and have good transportation and infrastructure service.

Transportation Connectivity. The transportation system should

KEEPS ALL PARTS OF THE CITY CONNECTED

PRESERVES OPEN SPACE AND NATURAL AREAS

CREATES TRANSPORTATION OPTIONS

ACHIEVES COMMUNITY COLLABORATION

link all parts of the city together, encourage new growth, and accommodate all modes of transportation.

Infrastructure for Growth. Water, sanitary sewer, and storm–water management systems must grow to support future popu–lation and efficient expansion of the city.

Open Space and Recreational Access. The park and recreation system should use environmental assets and provide a relatively equal level of quality service to all parts of Sturgis.

A Strong City Center. The city's traditional Main Street and surrounding neighborhoods are both the soul of the city and create an image known around the world. The Sturgis legend, symbolized by the image of the street, provides the city with an unparalleled opportunity for the rest of the year.

The Sturgis Development Concept, Figure 6.1, illustrates the Development Framework, described below.

Balanced Residential Neighborhoods

Sturgis' new residential areas should provide a mix of housing types, connected to the rest of the city by streets and pathways. Many factors affect the location of development in and around Sturgis, including Fort Meade on the east, the Black Hills National Forest on the south, and steep hills and large lot development to the west and north. To the maximum degree possible, new residential areas should be contiguous to the existing urban area, permitting service by incremental utility extensions. Primary residential growth centers will include:

- *Dolan Creek,* north of Dolan Creek Road between Pine Glen Road and Short Track Road. Along the north side of Dolan Creek Road, west of I–90. Urban development in this area requires extension of sewers in the Dolan Creek corridor and improvement of Dolan Creek and Short Track Road. Development design should include stormwater manage–ment features, including detention facilities, to delay storm–water from reaching downstream drainageways to the north.

- *Jack Pine,* among gentle hills west of the Jack Pine Gypsies Racetrack. Required improvements involve improvements of Pine Glen and Short Track Roads and sewer extensions along the drainage corridor that roughly parallels Short Track. In common with the Dolan Creek growth center, stormwater management practices that detain stormwater from reaching downstream watercourses should be integrated into devel–opment design.

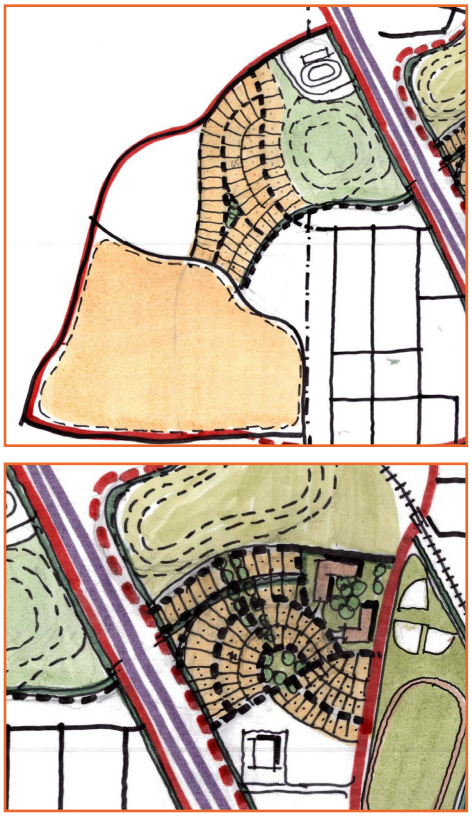
- *Ballpark Urban Village,* a concept for a mixed density project between Ballpark Road and I–90 and south of Farley Street. This infill project on a scenic site features small lot single–family development, attached urban housing, multi–family potential, and a neighborhood commons.

- *Vanocker Mixed Use,* a residential component to a mixed use development south of Exit 32, east and west of Vanocker Road and adjacent to the Pine View neighborhood.

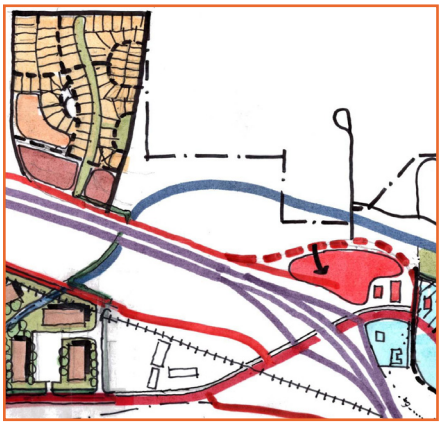
- *Foothills East,* completing residential construction in buildable areas east of Baldwin Street and along an extension of Harmon Street. These development areas continue existing east to west drainage patterns, and utilize the east side drainage corridor for stormwater management through the canal and sanitary sewer service.

- *Northwest/Avalanche Road,* continuing development north along County Road 10 and west along Avalanche Road. This area drains to the south into the Bear Butte system, and also requires storm management features to detain stormwater from reaching the main drainageway. A trail crossing under I–90 along with Bear Butte Creek would link this area into the rest of the Sturgis pathway system.

These areas together produce approximately 620 acres for future residential development, consistent with land need estimates presented in Chapter 2. Future development would focus on the



Conceptual sketches completed at Sturgis community planning charrette. Top: Dolan Creek and Jack Pine areas, envisioned as primarily single–family areas with stormwater retention facilities. Bottom: Ballpark Urban Village, a mixed density concept between the ballpark and fairgrounds complex and I–90.



Conceptual sketch from Sturgis community planning charrette. Left: Proposed residential development north of Avalanche Road, west of Exit 30.

area east of Vanocker Canyon Road and south of Interstate 90.

Land Use and Development Policies

- Provide mixed residential styles and densities to accommodate a range of housing preferences and needs.
- Incorporate neighborhood greenways into the city–wide trail and greenway system.
- Integrate stormwater retention facilities into greenway systems and project design to reduce stress on the city's surface drainageways.
- Provide an interconnected street system between neighborhoods that accommodates all types of transportation and reinforces neighborhood quality and informal contact.
- Develop a more direct arterial and collector street system on the south side of I–90.

Commercial and Industrial Growth

Future Sturgis emphasized growing and diversifying Sturgis' commercial and industrial base. The city has substantial opportunities, and its land use concept should provide contemporary settings for existing and new businesses and low–impact industries. These sites should use the city's transportation, location, and environmental assets to full advantage, and include:

- Commercial growth centers at six primary locations:

  – Within the traditional downtown along Main Street
  – Along Lazelle Street, including new development on the National Guard site and along the central part of the corridor between Middle and 4th Streets.
  – Along a Junction Avenue mixed use corridor that provides new local–service development that remains consistent with residential scale north of Harmon Street.
  – In a signature retail and office district related to Junction at and around the reconstructed Exit 32.
  – Industrial development that expands the Sturgis Industrial Park to the west and east.
  – Development of a new signature research park along US 14A, capitalizing on nearby Homestake neutrino lab and converting gravel pits to a significant water amenity.

Land Use and Development Policies

- Mix uses along significant community corridors and within planned projects to create more efficient and diverse urban settings, and to integrate residential areas with local commercial and office services.
- Establish standards for parking, project appearance, pedestrian access, and relationship between residential and non–residential land uses.

Traditional housing styles, appropriate for small residential lots such as those envisioned for the Ballpark urban village.

Research Park concept, redeveloping gravel pits between US 14A and Whitewood Service Road. Pits would become a permanent water detention feature.

- Encourage business park development that accommodate high–quality office, research, and limited industrial uses in marketable settings.

- Include adequate landscaping and, where necessary, buffering for new development, especially along high visi–bility corridors. High impact uses should be buffered from surrounding lower intensity uses.

- Provide transitions between natural environments and Sturgis' urbanized edge.

Chapter 7 considers the city's key development districts, including these commercial and mixed use settings, in greater detail.

Transportation Connectivity

The transportation system is Sturgis' most visible infrastructure investment and guides the growth of the city. Natural features, human–made barriers including I–90 and the railroad, and piecemeal development patterns have limited street connec–tivity in some parts of the city. Improved connectivity unifies the city, improves access, and creates alternative routes, especially important for managing the Rally and other peak events. The transportation system is discussed in greater detail later in this section. This system is guided by the following recommended policies.

- Designate Sturgis' future streets ahead of development through an official map, and dedicate rights–of–way as growth occurs.

- Evaluate each development project in relation to the broader land use plan and transportation system.

- Provide new development with connections to both the major street system and to adjoining developments along local streets, avoiding isolated enclaves. Provide multiple entrances to individual developments.

- Provide multi–modal features that include sidewalks, trails ,and bike lanes as appropriate to the street's design.

- Design streets to a scale appropriate to surrounding land uses and the character of adjacent neighborhoods.

Infrastructure for Growth

Urban infrastructure must develop to support future geographic and population growth. Chapter Three examined the city's existing water, wastewater, and stormwater systems and provided general recommendations for their rehabilitation and expansion. The analysis also considered needs to expand water supply and distribution to potential growth areas. Figures 6.2 and 6.3 illus–trate sanitary and storm sewer recommendations to serve the major growth centers presented in this Chapter.

Open Space and Recreation Access

To sustain a high quality of life, Sturgis will build on the outdoor activities residents and visitors value. Strengthening and stra–tegically expanding the parks and trails system both equalizes service to all parts of the city and brings the Black Hills into the city. A green web within the community can connect recreation features, neighborhoods, and community destinations. These amenities both benefit citizens of Sturgis and help expand tourism and the visitor market beyond the Rally period.

Open Space and Recreation Policies

- Offer neighborhood park services within a maximum walking distance of one–half mile for all Sturgis residents.
- Provide equivalent quality park services to new growth areas, including areas north and south of Interstate 90.
- Preserve environmentally sensitive areas including drainage swales, steep slopes, native prairie, and wetlands.
- Use greenways and paths to connect neighborhoods with each other and with major community and commercial features.
- Define and market the Sturgis park and recreation system as a signature feature for the community.
- Secure public access to trails and pathways through easements and charitable donations rather than outright property purchases to the greatest degree possible.
- Connect the city's trail and pathway system to the Black Hills, including the Centennial Trail and National Forest.
- Provide clear wayfinding, park graphics and trail markers.
- Develop specific plans for the responsible development of the former City Reservoirs and the Pineview property currently owned by the South Dakota Game, Fish, and Parks Department but potentially available to the city.

A Strong City Center

The core of Sturgis revolves around the traditional Main Street and surrounding residential areas. Main Street is also the iconic center of activity during the Rally and presents a face known around the world. A strong core goes beyond the Rally period, though, and depends on creating a vital, twelve–month district. A more detailed vision for the district is presented in Chapter 7.

City Center Development Policies

- Incorporate features into the core that extend the legend and experience of Sturgis beyond the two–week period surrounding the Rally.
- Improve the function, safety, and appearance of the Main Street district.
- Integrate the key corridors of Sturgis – Main Street, Lazelle Street, Bear Butte Creek, and Junction Avenue – that form the fabric of the city core.
- Establish development design guidelines consistent with the scale and proportions of the core district.
- Provide incentives and policies that lead to more intensive use of buildings and sites in the core.
- Increase the number of people living in and around the core.

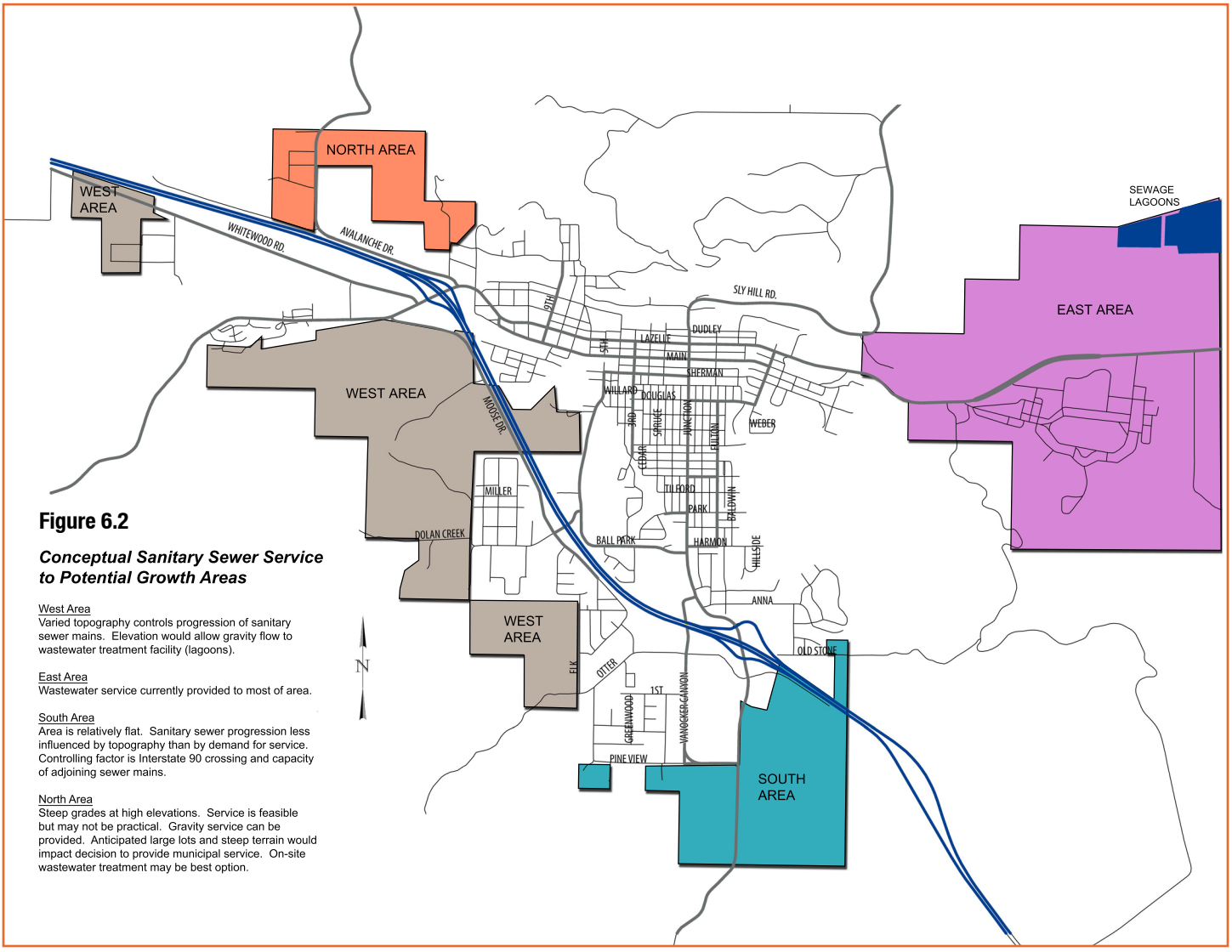


Figure 6.2

Conceptual Sanitary Sewer Service to Potential Growth Areas

West Area
Varied topography controls progression of sanitary sewer mains. Elevation would allow gravity flow to wastewater treatment facility (lagoons).

East Area
Wastewater service currently provided to most of area.

South Area
Area is relatively flat. Sanitary sewer progression less influenced by topography than by demand for service. Controlling factor is Interstate 90 crossing and capacity of adjoining sewer mains.

North Area
Steep grades at high elevations. Service is feasible but may not be practical. Gravity service can be provided. Anticipated large lots and steep terrain would impact decision to provide municipal service. On-site wastewater treatment may be best option.

North Area
With controlled development, such as including large lots, and with appropriate detention, the area will be able to accomodate proper drainage.

East Area
Straddles Bear Butte Creek which simplifies storm sewer drainage improvements to this area. No additional demand on existing system.

West Area
The three segments within the West Area will be individually addressed.

The southwest section is drained by a natural drainage channel that eventually enters the existing concrete drainage channel. No other significant infrastructure exists. The impact of development in the area on existing development immediately downstream should be reviewed. The concrete drainage channel capacity should also be reviewed to ensure it can handle additional flows. Detention and retention ponds would help control impact on existing facilities.

The middle section crosses Interstate 90 at two locations. Stormwater drainage infrastructure in the area is limited. Flooding control can be controlled with piping, detention or retention ponds.

The northwest section crosses Interstate 90 at Highway 14 (Exit 30). There is limited infrastructure in place to serve development within the existing corporate limits. Impact on downstream pipes, inlets and drainage channels must be addressed as development occurs. Proximity to Bear Butte Creek will facilitate proper drainage.

South Area
Natural drainageway traverses the area. Pipes in place to carry current flow across Interstate 90. Development in area would require stormwater detention or retention. This should reflect the requirements of the City's Stormwater Management Plan. The concrete drainage channel capacity must be reviewed as development occurs.

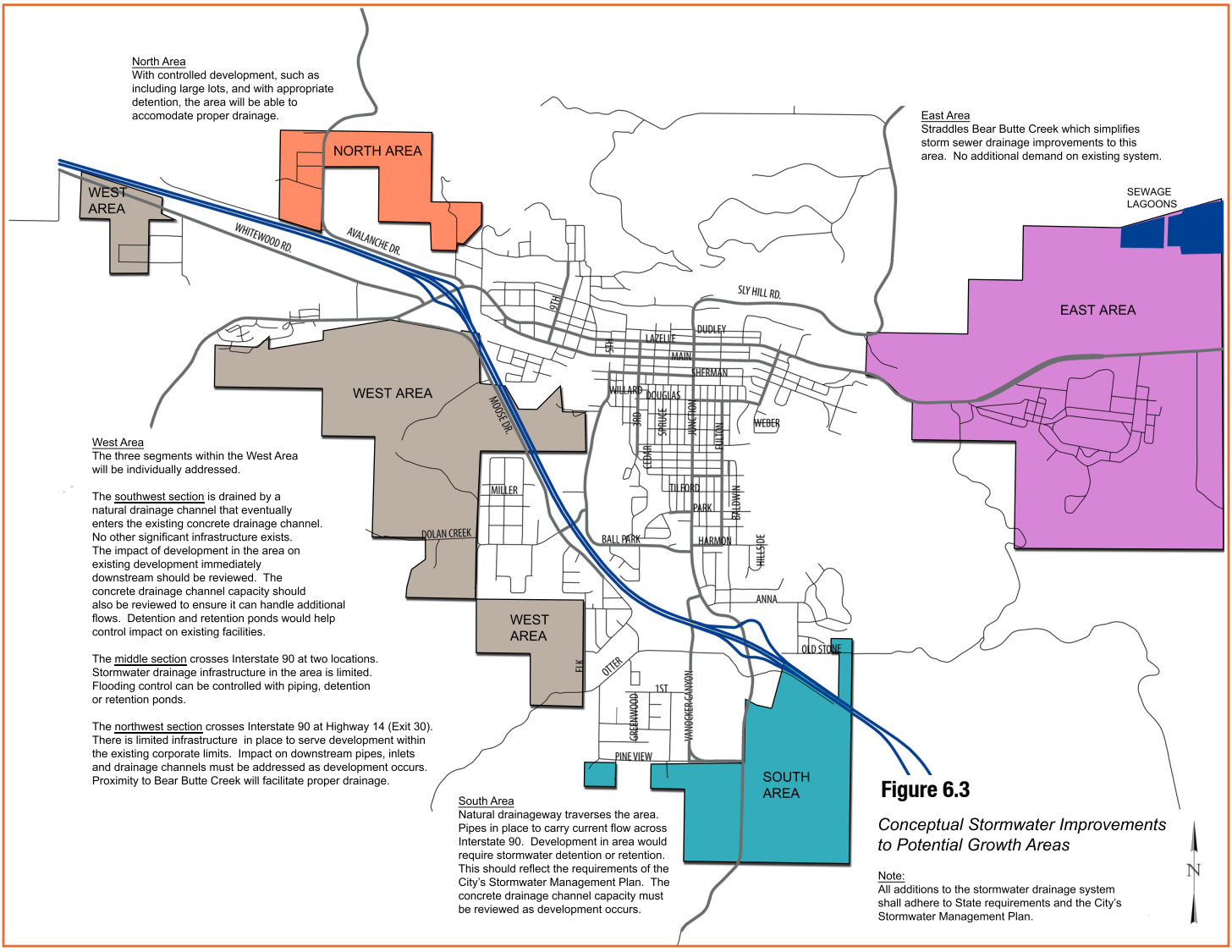


Figure 6.3

Conceptual Stormwater Improvements to Potential Growth Areas

Note:
All additions to the stormwater drainage system shall adhere to State requirements and the City's Stormwater Management Plan.

PLAN ELEMENTS

This section defines the specific components that implement both the Development Framework and Future Sturgis goals that relate to the scope of a comprehensive plan. These specific plan elements include:

- Future Land Use and Development Strategy
- Balanced Transportation
- Parks and Recreation
- Housing Policy
- Key Districts

The "key districts" considers areas of unusual opportunity for the city, including Main Street, the Lazelle and Junction corridors, the two I–90 exits, and the Games, Fish and Parks and City Lakes properties. Because strategies for these areas integrates land use, redevelopment, transportation, parks and recreation, infra–structure, and economic development, recommendations for these strategic areas are presented as Chapter 7 .

FUTURE LAND USE AND DEVELOPMENT STRATEGY

A Future Land Use Plan addresses three overall areas of concern:

- **Community growth,** considering land that will be converted to urban uses during the planning period. The previous Development Framework discussion identified the directions of the community growth, including residential growth centers and focuses on commercial and industrial development.

- **Strategic direction areas,** considering projects and policies for critical areas that have both land use and major public/ private investment implications. These "key districts" are discussed fully in Chapter Seven. However, one district – the Junction Avenue corridor – places a higher priority on land use policy (such as zoning) than on capital investment, and is discussed in this section.

- **Managing incremental land use decisions,** establishing criteria for the location of individual uses or project types. While big ideas and directions are important, community development is implemented over the long period by hundreds of individual decisions, from where to locate a business, to whether to grant rezoning and subdivision approval. The Land Use Decision Matrix, presented in this section, provides the context for these decisions.

Future Land Use Plan

The Future Land Use Plan (Figure 6.4) illustrates the proposed distribution of land uses in Sturgis. It represents a fusion of the community growth concept (Figure 6.1), existing developed land uses, and the criteria for locating land uses presented in the Land Use Decision Matrix (Figure 6.5).

Strategic Districts: the Junction Avenue Corridor

While Sturgis' key districts are addressed in Chapter Seven, the critical issues for the Junction Avenue corridor involve land use policy: how to channel market demand for local service commer–cial and office uses into a mixed use urban corridor that respects the residential use and scale of the street and surrounding neighborhoods. The Junction Avenue corridor fills many roles, including:

- A mixed use urban corridor with a residential scale that serves local commercial needs.
- A visitor gateway between I–90 interchange and Harmon Street
- A north–south link between the city and the Black Hills environment.

The corridor has both positive and negative aspects that general policy and zoning regulations could address and enhance. Policy directions for the corridor include:

- Improving landscaping, wayfinding, and traffic management on the south reach of the corridor, between the drainage canal and the I–90 interchange.

- Creating a new urban corridor zoning district permit–ting specific types of office and commercial uses, while

Adaptive reuse on Junction Avenue. This creative conversion of a house to a florist shop has become a landmark long the street.

preserving residential scale and character.

- Encouraging rehabilitation or adaptive reuse of existing structures.

- Developing a parkway link connecting the three parallel "central district" corridors: Main, Lazelle, and Bear Butte Creek.

The corridor has two distinct contexts, roughly divided by the drainage canal near the Harmon Street/Ball Park Road intersec–tion. More specific policies should be applied to these areas.

North Segment: Harmon to Main

For this section of Junction, the city should establish a new Mixed Use Urban Corridor zoning district. The zoning district should be designed to permit a broader range of uses while maintaining the residential scale of the street. Specific criteria should include (but may not be limited to) the following:

• *New permitted land uses.* Permitted uses should include resi–dential, office, and low–impact retail uses.

• *Prohibition of parking as a principal use.* The practice of paving land for parking lots that are then rented to vendors during the Rally should not be permitted on the Junction Avenue urban corridor. Parking and open lots are permitted only as accessories uses to a permanent, primary commercial, office, or residential use.

• *Building scale.* When uses change, the residential scale of Junction Avenue should be maintained. Adaptive reuse of existing buildings should be encouraged. When new develop–ment occurs, the corridor district should establish a maximum building footprint, probably in the range of 3,000 square feet. Residential details and pitched roofs should be incorporated into the design of new buildings.

• *Limited parking along Junction Avenue.* Parking exposure along the street should be minimized. No more than 40% of the frontage of a property along Junction Avenue should have adjacent off–street parking.

• *Required landscaping.* Residentially scaled front yards should be maintained along Junction Avenue. Therefore, parking adjacent to Junction Avenue should have a landscaped setback of at least 20 feet.

• *Signage.* Signage along the urban corridor section of Junction should also respect the street's scale. Therefore, all new signs should be monument or ground signs. Total signage area should

The south segment of Junction Avenue. A combination of hard surfacing, conflicting driveway accesses, and a continuous center left–turn lane creates both safety and aesthetic challenges along a main gateway route to Sturgis.

! CASE STUDY: SOUTH LOCUST IN GRAND ISLAND, NEBRASKA

South Locust Street in Grand Island, Nebraska has been through a lot. Once the city's leading commercial corridor and primary gateway to town, the corridor was decimated by a legendary tornado in 1975. Although businesses rebuilt, growth patterns took major commercial development in other directions, and South Locust began a long, slow period of economic decline.

In about 2000, buoyed by the upcoming construction of a new interchange from Interstate 80, business owners initiated a major corridor improvement project. Landscaping, lighting, and other enhancements were financed by tax increment financing and a business improvement district (BID), through which property owners assessed themselves for improvements and maintenance. In 2002, the corridor also completed a master plan for new devel–opment. The results have been dramatic, with new businesses, including a Walmart supercenter restoring the economic vitality of the corridor. South Locust is once again a gateway to town, and now is the permanent site of the Nebraska State Fair at adjacent Fonner Park.

be no more than 50% of the street frontage along Junction Avenue. Sign height should be restricted to a maximum of eight to ten feet.

• *Project Review.* In this sensitive corridor, projects that change land use should receive individual public review. Therefore, all new development projects must be reviewed and approved by the Planning Commission.

South Segment: Harmon to I–90

South of Harmon, developments are more auto–oriented with larger setbacks and less landscaping. Policies and improvements for this section of Junction should, at a minimum, include:

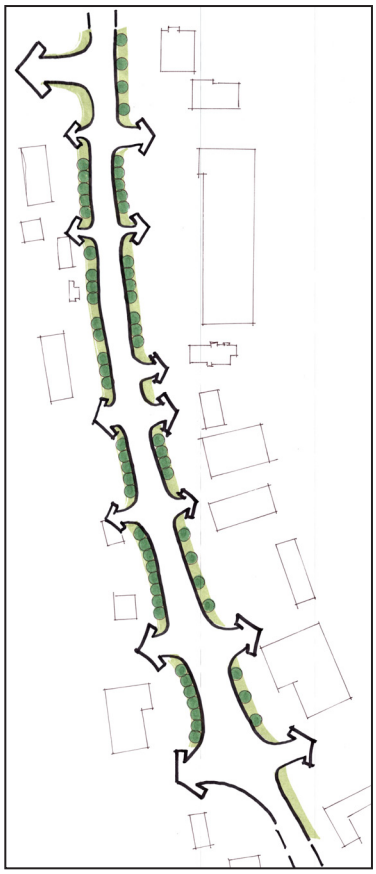
• *Site landscaping.* Sturgis should undertake a corridor improve–ment project that improves landscaping of existing commercial sites. In other cities, funding of these projects can be accom–plished cooperatively through a business improvement district. All new projects should be required to have a minimum amount of landscaping. These improvements should incorporate stormwater management techniques that improve the quality and volume of stormwater runoff entering Bear Butte Creek.

• *Access Management.* The combination of un–managed driveway access and a three–lane street section creates a confusing and potentially hazardous situation. A program to improve traffic movement and safety in this segment includes:

– Redesigning parking lots for greater efficiency.
– Consolidating access points.
– Aligning driveways directly opposite each other wherever possible.

• *Traffic Control.* Both Ball Park Road and Harmon Street are important collectors to community destinations – Ball Park to the fairgrounds, ballpark areas and parts of central Sturgis, Harmon to the hospital and the east side of town. These important streets intersect Junction Avenue very near each other, but are misaligned and only Ball Park is signalized. To improve street linkages and safety the Ballpark Drive/Harmon Street intersections should be aligned and commonly signalized.

• *Redevelopment.* The city should encourage redevelopment of underused sites. This may include the use of incentive programs such as tax increment financing.



Access management concept sketch for South Junction Avenue. While a three–lane facility is a highly functional design, unmanaged access points create serious and potentially hazardous conflicts in the continuous left–turn lane. An access management program can often add parking spaces and align driveways, reducing these conflicts and improving the safety, appearance, and function of the corridor.

Decision Making Framework

The Future Land Use Plan (Figure 6.4) and land use policies should provide both guidance and flexibility to decision makers in the land use process. A Land Use Plan provides a development vision for the city that guides decision–makers through the process of community building. However, it does not anticipate the design or specific situation of every rezoning application. Therefore, the plan should not be an inflexible prescription of how land must be used. Instead, it provides a context that helps city administrative officials, the Planning Commission, the City Council, and private decision–makers make logical decisions which implement the plan's overall principles.

The Land Use Plan, the Land Use Decision Matrix (Figure 6.5), and the Compatibility Matrix (Figure 6.6) provide tools to help guide these decisions. The Land Use Decision Matrix identifies various use categories and establishes criteria for their applica–tion, which in turn are reflected by the Future Land Use Plan. The Compatibility Matrix (Figure 6.6) considers the compatibility of adjacent land uses, and establishes levels of review and regula–tions that are necessary to help them co–exist. Together, these tools provide both needed flexibility and consistency with the plan's overall objectives.

Figure 6.5: Land Use Decision Matrix

Land Use Category	Use Characteristics	Features and Location Criteria
Open Space	– Generally in open spaces with steep slopes, may have agricultural uses. – Agriculture or open space uses will remain the principal use during the planning period. – Extension of urban services is unlikely during the foreseeable future, and may not be feasible. – Extremely low residential densities, typically below 1 unit per 20 acres, may be permitted.	–These areas should remain in primary open space, grasslands, or forested use. Urban encroachment, including large lot subdivisions, should be discouraged. – Applies to areas designated for conservation, including floodplains and steep topography. –Primary uses through the planning period will remain open or agricultural.
Urban Reserve (UR)	– Generally in open space use or agricultural. – Reserve areas may eventually be served with municipal water and sewer and may be in the path of future urban development. However, develop–ment will likely occur after the planning horizon contained in this plan.	– These areas should be reserved for long–term urban development. – Primary uses through the planning period will remain in open land uses. – Any interim large lot residential development should accommodate future development with urban services.
Rural Residential (RR)	– Restrictive land uses, emphasizing housing and open space. – Civic uses may be allowed with special use permission.	–Applies to areas where conventional large lot subdivi–sions have been established. –In many cases, houses use individual wastewater systems and are unlikely to experience extensions of urban services. Large lot residential is likely to be the permanent development stage. –Gross densities will generally be less than one unit per acre. – For those areas bordering forested areas, steep slopes, or other sensitive environmental features addi–tional set–backs and buffering requirements should be established to promote conservation and provide fire protection.
Low Density Residential (LDR)	– Restrictive land uses, emphasizing single–family detached development, although innovative single–family forms may be permitted with special review. – Civic uses are generally allowed, with special permission for higher intensity uses. – Developments will be provided with full municipal services.	– Primary uses within residential growth centers. – Should be insulated from adverse environmental effects, including noise, smell, air pollution, and light pollution. – Should provide a framework of streets and open spaces. – Typical densities range from 1 to 4 units per acre, although individual attached projects may include densities up to 6 units per acre in small areas. – For those areas bordering forested areas, steep slopes, or other sensitive environmental features addi–tional set–backs and buffering requirements should be established to promote conservation and provide fire protection.

Figure 6.5: Land Use Decision Matrix (Continued)

Land Use Category	Use Characteristics	Features and Location Criteria
Medium–Density Residential (MDR)	– Restrictive land uses, emphasizing housing. – May incorporate a mix of housing types, including single–family detached, single–family attached, and townhouse uses. – Limited multi–family development may be permitted with special review and criteria. – Civic uses are generally allowed, with special permission for higher intensity uses.	– Applies to established neighborhoods of the city which have diverse housing types, and in developing areas that incorporate a mix of development. – Developments should generally have articulated scale and maintain identity of individual units. – Tend to locate in clusters, but should include linkages to other aspects of the community. – Typical maximum density is 4 to 12 units per acre, typically in a middle range. – Innovative design should be encouraged in new projects. – Projects at this density may be incorporated in a limited way into single–family neighborhoods. – May be incorporated into mixed use projects and planned areas.
High–Density Residential (HDR)	– Allows multi–family and compatible civic uses. – Allows integration of limited office and convenience commercial within primarily residential areas.	– Locate at sites with access to major amenities or activity centers. – Should be integrated into the fabric of nearby residential areas, while avoiding adverse traffic and visual impacts on low–density uses. – Traffic should have direct access to collector or arterial streets to avoid overloading local streets. – Requires Planned Unit Development designation when developed near lower intensity uses or in mixed use developments. – Developments should avoid creation of compounds. – Attractive landscape standards should be applied. – Typical density is in excess of 10 units per acre. – May be incorporated into mixed use projects and planned areas.
Mobile Home Residential (MH)	– Accommodates mobile homes that are not classified under State law as “manufactured housing.” – May include single–family, small lot settings within planned mobile home parks. – Manufactured units with HUD certification that comply with other criteria in State statute may be treated as conventional construction.	– Develop in projects with adequate size to provide full services. – Generally locate in complexes, but should include linkages to other aspects of the community. – Typical maximum density is 8 units per acre.

Figure 6.5: Land Use Decision Matrix (Continued)

Land Use Category	Use Characteristics	Features and Location Criteria
Mixed Use (MU) **Lazelle Mixed Use (LMU)** **Junction Avenue Mixed Use (JA)**	–Incorporates a mix of residential, office, and limited commercial uses. – Includes a variety of mixed use contexts including: – Lazelle Mixed Use Corridor – Junction Mixed Use Corridor	– Developments should emphasize relationships among parts. – Pedestrian traffic should be encouraged and neigh–borhood scale retained when applicable. – Projects in MU and JA districts should avoid large expanses of parking visible from major streets. – Signage and site features should respect neighbor–hood scale in appropriate areas. – Commercial and office development in mixed–use areas should minimize impact on housing. Should be located at intersections of major or collector streets. – For the Lazelle Mixed Use area, prominent parking lots should be well landscaped and buffered from the adjoining street. – A new Urban Corridor zoning district should be estab–lished to specifically address the Junction Mixed Use area. Specific recommendations are described in the section on the Junction Avenue District.
General Commercial (COM)	– Includes a variety of commercial uses, including auto–oriented commercial development. – Includes major retailers, multi–use centers, restaurants, and other services. – Commercial may also be accommodated in MU areas	– Locate along arterials or other major streets, and in areas that are relatively isolated from residential, parks, and other vulnerable uses. – Traffic systems should provide alternative routes and good internal traffic flow. – Negative effects on surrounding residential areas should be limited by location and buffering. – Activities with potentially negative visual effects should occur within buildings. – Development should maintain good landscaping, focused in front setbacks and common boundaries with lower–intensity uses. – Pedestrian/bicycle connections should be provided for consumer–oriented uses. – For those areas bordering forested areas, steep slopes or other sensitive environmental features addi–tional set–backs and buffering requirements should be established to promote conservation and provide fire protection.

Figure 6.5: Land Use Decision Matrix (Continued)

Land Use Category	Use Characteristics	Features and Location Criteria
Commercial Recreation (CR)	– Includes high intensity private recreation facilities including the large campgrounds used during the Rally. – Usually auto–oriented with uses that can generate noise and lighting issues.	– Sites should have direct access to major regional transportation facilities, without passing through resi–dential areas. –Negative effects on surrounding residential areas should be limited by location and buffering. –Good landscaping and restrictive signage standards should be maintained. –Good pedestrian/bicycle connections should be provided into surrounding areas. – For those areas bordering forested areas, steep slopes or other sensitive environmental features addi–tional set–backs and buffering requirements should be established to promote conservation and provide fire protection
Downtown Mixed Use	– Traditional downtown district of Sturgis, centered on the Main Street corridor. – Includes mix of uses, primarily commercial, office, and limited upper level residential. – Should be the primary focus of major civic uses, including government, cultural services, and other civic facilities. – Developments outside the center of the city should be encouraged to have “downtown” characteristics, including mixed use buildings and an emphasis on pedestrian scale.	– Establishes mixed use pattern in the traditional city center. May also apply to planned mixed use areas. – Recognizes downtown development patterns without permitting undesirable land uses. – District may expand with development of appropri–ately designed adjacent projects. – New projects should respect pedestrian scale, and design patterns, and setbacks within the overall district. – Historic preservation is a significant value. – Good pedestrian and bicycle links should be provided, including non–motorized access to surrounding resi–dential areas.
Business Park (BP)	– Business parks may combine office and light industrial/research uses. – Limited industrial provides for uses that do not generate noticeable external effects.	– Limited industrial uses may be located near office, commercial, and, with appropriate development standards, some residential areas. – Strict control over signage, landscaping, and design is necessary for locations nearer to low intensity uses. – Zoning regulations should encourage business parks, including office and office/distribution uses with good development and signage standards. – For those areas bordering forested areas, steep slopes, or other sensitive environmental features addi–tional set–backs and buffering requirements should be established to promote conservation and provide fire protection

Figure 6.5: Land Use Decision Matrix (Continued)

Land Use Category	Use Characteristics	Features and Location Criteria
General Industry (GI)	– Provides for a range of industrial enterprises, including those with significant external effects.	– General industrial sites should be well–buffered from less intensive use. – Sites should have direct access to major regional transportation facilities, without passing through resi–dential or commercial areas. – Developments with major external effects should be subject to review. – For those areas bordering forested areas, steep slopes or other sensitive environmental features addi–tional set–backs and buffering requirements should be established to promote conservation and provide fire protection
Civic (CIV) **Public Facilities/ Utilities (PF)**	– Includes schools, churches, libraries, and other public facilities that act as centers of community activity. – Includes facilities with industrial operating char–acteristics, including public utilities, maintenance facilities, and public works yards.	– Civic uses may be permitted in a number of different areas, including residential areas. – Individual review of proposals requires an assessment of operating characteristics, project design, and traffic management. – Industrial operating characteristics should be controlled according to same standards as industrial uses. When possible, should generally be located in industrial areas. – Facilities like the wastewater treatment plant, mainte–nance shops, and storage areas should be well buffered from less intense uses.
Parks and Greenways (PARKS & GWY)	– Traditional park and recreation areas including both passive and active recreation uses. – Environmentally sensitive areas and crucial scenic corridors that should be preserved and possibly incorporated into the city's trail system.	– Parks should be centrally located with easy access for both pedestrian and auto users. –Residents should be within approximately a half mile of a neighborhood park. –All parks should be connected through the city's trail and greenway system. – Environmentally sensitive areas, including wetlands, native prairies, and drainage channels should be protected and incorporated into the city's greenway network.

Figure 6.6: Compatibility Matrix

PROPOSED LAND USE	EXISTING LAND USE: Rural Residential	Reserve	Low Density Residential	Medium Density Residential	High Density Residential	Mobile Home	Mixed Use	General Commercial	Commercial Recreation	Downtown MU	Limited Industrial Business Park	General Industry	Civic
Rural Residential	–												
Reserve	4	–											
Low Density Residential (LDR)	4	4	–										
Medium Density Residential (MDR)	4	4	5	–									
High Density Residential (HDR)	3	4	4	5	–								
Mobile Home (MHR)	3	4	3	4	5	–							
Mixed Use (MU, LC, JA)	2	4	3	4	4	4	–						
General Commercial (COM)	3	4	2	3	3	4	5	–					
Commercial Recreation (CR)	3	4	2	2	3	3	3	5	–				
Downtown Mixed Use	2	4	3	4	5	1	5	4	2	–			
Limited Industrial Business Park (BP & LI)	3	3	2	2	2	2	3	4	5	1	–		
General Industry (GI)	3	2	1	2	2	2	3	4	4	1	4	–	
Civic (CIV) & Parks & Rec	3	4	4	4	4	3	4	4	4	4	2	1	–
Public Facilities	2	4	2	3	3	3	3	3	3	3	4	3	2

Compatibility Matrix Key

5: The proposed use is completely compatible with existing land uses. Development should be designed consistent with good planning practice.

4: The proposed use is basically compatible with the existing adjacent use. Traffic from higher intensity uses should be directed away from lower intensity uses. Building elements and scale should be consis–tent with surrounding development. Impact on the extension of urban services should also be considered.

3: The proposed use may have potential conflicts with existing adjacent uses that may be resolved or minimized through project design. Traffic and other external effects should be directed away from lower–intensity uses. Landscaping, buffering, and screening should be employed to minimize negative effects. A Planned Unit Development may be advisable.

2: The proposed use has significant conflicts with the pre–existing adjacent use. Major effects must be strongly mitigated to prevent impact on adjacent uses. A Planned Unit Development is required in all cases to assess project impact and define development design.

1: The proposed use is incompatible with adjacent land uses. Any development proposal requires a Planned Unit Development and extensive documentation to prove that external effects are fully mitigated. In general, proposed uses with this level of conflict will not be permitted.

BALANCED TRANSPORTATION

The transportation plan for Sturgis should meet current and future mobility needs while enhancing the character of the city's environment. Chapter 3 discussed functional and circulation issues in the Sturgis network, problems that become worse during the Rally. A plan for an enhanced transportation network involves both broad policies and specific project recommendations. Overall transportation policies address:

- A Connected Network
- Problem Area Solutions
- Enhanced Urban Corridors
- Street Standards
- Balanced, Multi–Modal Transportation
- Small City Transit Options

A Connected Network

Sturgis should maintain a connected street network as it grows, providing alternative routes for moving around the city. A truly unified town requires good connections among neighborhoods and to activity centers. Additionally, alternative local links that reduce dependence on Lazelle and Junction maintain access for local residents during the Rally and other peak events that stress the two crossroads corridors. The overall network should also encourage pedestrian and bicycle transportation, both maximizing the health benefits of active transportation and providing safe and comfortable alternatives to the car for short trips.

An official map defines the city's street network and establishes future corridors for new street construction to serve growth areas. Currently, classification conflicts exist between the South Dakota Department of Transportation's federal aid system map and the Major Street Plan adopted by the City of Sturgis in 2008. For clarity in both planning and implementation, these maps should be as consistent as possible. Figure 6.7, the Transportation Plan, proposes both an official map and a concordance of the state and city classification plans. Further, the Transportation Plan is intended to incorporate both motorized and non–motorized components.

Elements of Sturgis' transportation system include:

Interstate. Interstate 90 is, of course, Sturgis' principal link to the region and even the nation, and its two interchanges are the gateways that welcome most people to the city. Chapter 7 describes development concepts that take advantage of these gateways. Exit 32 was relocated and reconstructed in 2006, and additional work was completed on Exit 30 in 2010, and this plan does not anticipate additional major work on the main line or interchanges. However, safe functional performance and clear visitor orientation when travelers exit the Interstate are essential to traffic system operations.

Interstate 90 looking south. A leg of the northside loop, linking 8th and Main with the south and east sides of town would run at the base of the hill in the foreground. Moose Drive, a minor urban arterial that should provide a continuous direct link between US 14A and SD 79, parallels I–90 on the interstate's south frontage.

Principal Arterials. Principal arterials are the crossroads corridors of Sturgis: Lazelle Street (South Dakota 34) from I–90 east; Boulder Canyon Road (US 14A), the continuation of Lazelle Street west of I–90; and Junction Avenue/Vanocker Canyon Road (South Dakota 79) south of Lazelle Street. Priorities for Sturgis' principal arterials include improved access management, wayfinding, and corridor enhancement.

Minor Urban Arterials. While the Interstate and Principal Arterials connect Sturgis to the region and include the city's major cross–roads highways, Minor Urban Arterials distribute traffic around the city from these thoroughfares. These streets typically have moderate volumes and in Sturgis are typically two–lane facilities. Major street investments proposed by this plan reinforce the minor arterial system and provide alternative local through routes to Lazelle and Junction. Highlights of the proposed minor urban arterial system include:

- The existing "inner loop" system made up of Sherman Street, 5th Street, and Ball Park Road. This would continue through an improved intersection to align with Harmon Street to the east.

- A new northside loop that extends the existing 8th Street underpass under the DM&E to a new circulator road on the north side of I–90 to Ball Park Road/Dolan Creek Road.

- An upgraded east–west corridor that connects Avalanche Road, 14th Street, and Main Street east to Nellie Street. This corridor involves a significant street and redevelopment project that extends Main Street west and Avalanche Road east to a new signalized intersection with Lazelle at 14th Street.

- An eastside loop created by extending Harmon Street east and connecting it back to Anna Street.

- A continuous south corridor created by directly connecting Moose and Otter Drives between Boulder Canyon Road (US 14A) and Vanocker Canyon Road (South Dakota 79)

- A south loop to serve proposed growth centers south of I–90 by improving and connecting Dolan Creek and Short Track Roads.

- An improved connection of Vanocker Drive between Ball Park Road and Pineview Road.

- Existing Whitewood Service Road, providing a north access route to the industrial park.

This proposed network serves existing and future urbanized areas with interconnected loops that link to the principal arterials. As such, it provides the street connectivity that can help the Sturgis system function well under even exceptional circumstances and reduce the current reliance on principal arterials. In addition to improving access and convenience to residents and businesses, the system will also address a major factor that reduces the city's overall fire rating (see Chapter 4).

Collector system. The collector system augments the principal and minor arterial system by serving as access conduits through neighborhoods. They offer continuity for relatively short trips to destinations and higher order streets, and also are particularly well–suited for bicycle transportation. The Transportation Plan includes most of the collector system identified by the City in its 2008 Major Street Plan. Highlights of the collector system include:

- The existing collector system, which remains in place.

- Extension of a 1st Avenue alignment to serve major development areas on the south side of I–90 between Elk Road and Vanocker Canyon Road.

- Extension of Anna Street to Harmon Street, completing a loop serving eastside development areas and reducing "no outlet" streets.

- Local collectors in residential growth areas. An example is a connection in the Dolan Creek growth center between Dolan Creek Road, Pine Glen Road, and Moose Drive.

- Extension of Dudley Street to the community center, described in Chapter Seven as part of the Bear Butte Promenade concept.

- Connection of Industry Road between US 14A and Whitewood Service Road.

These links continue the concept of creating a circulation system that minimizes dead–ends and provides loops and connections and alternatives to the arterial system.

Problem Area Solutions

The earlier traffic analysis shows that the overall Sturgis system generally provides a high "level of service", except during exceptional times like the Rally. However, the network is not trouble–free by any means and Chapter Three's analysis indicates specific functional problems. This transportation plan focuses strategically on these problems, reviewed below with proposed solutions.

• *Southwest Connectivity.* This problem is addressed by a new inner loop that extends the 8th Street underpass at the railroad, continues south/southwest to Interstate 90, and follows the north edge of I–90 to Dolan Creek Road. The intersection of Dolan Creek and Ball Park Road would be redesigned to accommodate this new route. Several alignment alternatives exist for the 8th

Option for a Main Street/Avalanche Road link via 14th Street. This option realigns Avalanche Road to 14th Street near Silver Street, and extends Main Street to 14th south of Lazelle. Both roads connect via a signalized intersection at 14th and Lazelle.

Street extension, using both existing right–of–way and involving some property purchases.

• *West Main Connection/Avalanche Road connections to Lazelle Street.* Chapter 3 identifies two distinct problems – the poor connection of Main Street to Lazelle and functional problems and confusion created by the short distance between signal–ized I–90 ramps and the signalized Avalanche Road intersection. These problems can be both corrected and system continuity enhanced by creating a new intersection that links Avalanche and Main Street. Main would be extended northwest through existing parking lots and spaces between buildings to 14th Street on the south side. Avalanche in turn would be connected to or near existing Silver Street, continuing to 14th Street. Fourteenth Street would then link Main and Avalanche and would be signalized at Lazelle. The existing 14th to 15th Street segment of Avalanche, along with the existing Lazelle Street intersection would be closed. Several alignment alternatives exist for the Avalanche to Silver segment, with differing impact on the campground and mobile home park.

• *Junction Avenue intersections with Ball Park Road and Harmon Street.* A redesign of this intersection to align Ball Park Road and Harmon Street greatly improves safety and system conti–nuity. Because of commercial construction along Junction, this realignment, while possible, has complications. Options include realigning Ball Park north of the existing convenience store of the west side of Junction; or modifying current site plans to fit as connected Ball Park/Harmon alignment.

• *Collector access south of Interstate 90.* The plan proposes a continuous collector by linking Moose Drive, Otter Road, and Dickson Drive to the new Vanocker Canyon Road (SD 79). This can be accomplished through new development or redevelop–ment of existing sites to take full advantage of the new Exit 32.

• *Neighborhood short–cutting.* Undesirable use of residential streets can be discouraged by using a variety of traffic calming devices that still continue local, low–speed access. Traffic calming techniques include neck–downs, narrowing width of streets at intersection entrances; diverters and traffic circles; speed tables that slow traffic but are less extreme or difficult on snow plows as speed bumps; bike lanes; and other features.

• *Local connectivity in new development.* New developments should provide a web of local streets for well–distributed access. Subdivision standards should establish minimum required levels of street connectivity. One measure of connectivity is the ratio of street segments (stretches of street between intersections or endpoints) to nodes (intersections and street endpoints). Developments with good street connectivity generally display ratios of 1.4 or above. In addition, all new residential subdivisions must have alternative access routes, and avoid dependence on a single development entrance or a single arterial or collector route to its local entrances.

Enhanced Urban Corridors

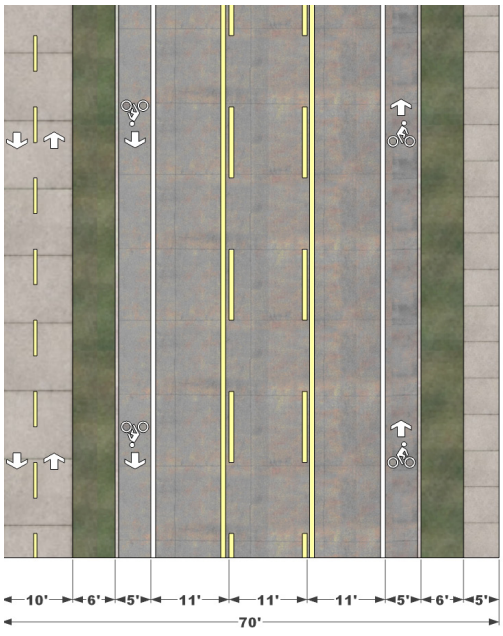
Sturgis should maintain good design quality along its major community corridors, allowing them to serve as attrac–tive gateways into the town and supporting the business and community environment. These corridors, most notably the Lazelle and Junction crossroads, present “front doors” to visitors and help define the image of the city to potential investors, businesses, and residents. General land use and development polices for the Lazelle and Junction Corridors are described in this chapter and in Chapter 7. Specific areas of enhancement include:

Street Standards

Sturgis should develop and enforce street standards that are both functionally appropriate and relate to the role of the street in the city. These standards should:

• *Protect life safety and public services by providing adequate emergency and service access, while not oversizing streets.* Overly wide streets encourage higher than appropriate speeds that also create safety problems. Parking controls and limitations to one side are tools that can help maintain emergency access that also control speeds.

• *Reflect the context and role of the street in the system.* Transportation standards often mandate specific width and design



Context–Sensitive Street Standards. Example of a three–lane complete street showing dimensional standards. This section might apply to a new corridor, such as the northside loop along Interstate 90, designed for all forms of transportation.

standards for different street classifications without regard to the specific urban context. However, an "arterial" like Ball Park Road is different from an "arterial" like Junction Avenue because of the differing nature of surrounding uses, traffic mix and performance, connections to other corridors, and frequency of vulnerable users like children, pedestrians, and bicyclists. Variables include street and lane width, parking, landscaping, and building lines. Finally, the design of streets should reflect desired performance. For example, wide streets in residential settings tend to increase traffic speeds and development costs.

• *Accommodate active transportation modes.* The city's transportation system should encourage alternative transportation modes for appropriate trips – short distances that do not require automobile travel, for example, or trips in good weather. Therefore, street standards should include reasonable accommodations for non–motorized users. The concept of "complete streets," multi–modal facilities that serve vehicular traffic, bicycles, and pedestrians in an attractive public environment, should be integrated into the transportation, park, and pathways networks of the city.

Balanced, Multi–Modal Transportation

Sturgis' neighborhoods, activity centers, civic districts, and major open spaces should be linked by a balanced transportation network that integrates motor vehicles, pedestrians, bicycles, motorized wheelchairs, and other low–speed "personal mobility vehicles." An active transportation network (including pedestrian, bicycle, and potentially public transportation) connected to land use and development, both increases mobility and helps create a sustainable and healthy city. From a development perspective, a system that encourages multi–modal transportation includes:

- Public infrastructure that connects neighborhoods and destinations;
- Elimination of barriers that discourage or obstruct pedestrians and cyclists; and
- Project designs that provide safe and pleasant passage from the public to private realm.

The success of pedestrian and bicycle transportation systems can be measured by five key criteria:

• *Directness*: The system should provide relatively direct routes to destinations without taking people far out of their way.

• *Integrity:* The system should connect to places and provide continuity, rather than leaving users in dead ends or uncomfortable places.

Multi–Purpose Trails. Top: The Bear Butte Creek Trail, both an important recreational and transportation facility. This segment, along SD34, connects the city to the High School and Fort Meade. Above: Public land along the eastside drainage canal is a valuable trail corridor, part of a system that links neighborhoods south of I–90 to the Bear Butte greenway.

• *Safety:* The system should be physically safe to its users and not present hazardous conditions.

• *Comfort:* The system should understand the various capabilities and comfort levels of its users. For example, senior citizens may take a relatively long time to cross a street, and some bicyclists are not comfortable riding in mixed traffic. The system should reflect these differences.

• *Experience:* The system should provide users with a pleasant and scenic experience.

The plan identifies the elements of an active transportation system that is closely tied to the city's future development pattern.

Sidepaths and Shared Routes Top: Sidepath along Moose Drive parallel to I–90. Above: Shared use lane marking (sharrow) on a narrow residential street. The sharrow increases motorist awareness of cyclists and helps cyclists position themselves clear of hazards such as car doors.

Additionally, these plans identify key crossings of Interstate 90 and connections to developing areas and the Black Hills. Active transportation improvements fall into several categories:

Multi–Purpose Trails. These facilities are physically separated from motor vehicle traffic, and are distinguished from roadside paths or sidepaths, by mostly operating independently of streets and road rights–of–way. Potential settings for multi–use trails in the three study areas include rivers and streams such as Bear Butte Creek, other drainageways, parks and greenways, public properties like schools, abandoned or active railroads, and utility rights–of–way and easements. Multi–purpose trails in the Sturgis transportation system include:

- The existing Bear Butte Creek Trail from Sturgis High School to Centennial Park. Proposed improvements to this facility include completing discontinuities, usually at street and park road crossings; and a bridge and trail spur to 4th and Lazelle.

- An eastside system from Dolan Creek Road and Moose Drive to south through a proposed park and trailhead on the current Game, Fish, and Parks Pineview property, and northeast along the eastside drainage corridor and canal, joining to the Bear Butte Trail at City Park. A segment along the canal would be pedestrian only, with bicycles using adjacent local streets.

- A Vanocker Canyon spur, beginning at the "Marcotte Property" south of I–90 on Vanocker Canyon Road and integrated into its redevelopment, crossing I–90 at Vanocker Drive, and joining the eastside system.

- A Fairgrounds Trail along the east side of the ballpark and fairgrounds complex from Colorado Drive and Ball Park Road to the 5th Street railroad underpass at the north end of the complex.

- A Pine Glen Trail, following a drainage swale and possible street connection between Pine Glen and Moose Drives. An extension could follow the drainage corridor under I–90, continue through the proposed "urban village" development, and connect to the Fairgrounds Trail at the railroad underpass.

- A westside trail, serving the proposed Northwest Growth Center, crossing I–90 with Bear Butte Creek, and serving the proposed research/business park and current Sturgis Industrial Park, with a link to the Boulder Creek pathway.

Sidepaths. Sidepaths are multi–purpose paths separated from but along the side of roads and streets, usually found within or immediately adjacent to the street rights–of–way. Most sidepaths provide two–way operation, and in theory accom–modate the same user groups as separated multi–use trails. Sidepaths, sometimes referred to as cycle tracks, are controver–sial. They are popular because they use existing street right–of–way, minimizing acquisition cost and property–owner opposition, and address the concerns of some bicyclists who are uncomfort–able with riding in mixed traffic. On the other hand, they present significant safety and operating dangers that require careful design solutions. Sidepaths are most appropriate along corridors that have a minimum number of driveway or cross–street inter–ruptions. Sidepaths in the proposed Sturgis system include:

- Existing facilities, including paths along US 14A, Dolan Creek Road, and Moose Drive.

- Extension of the Moose Drive Path to the east side system

Bicycle Boulevard. Traffic circle helps reduce traffic speed on a through street in a residential neighborhood.

and to Junction Avenue.

- A new sidepath along the proposed 8th Street/I–90 north inner loop from 8th and Main to Dolan Creek and Ball Park Roads.

Shared right–of–way. These facilities include a number of tech–niques to serve multiple modes, but usually involve sidewalks for pedestrians, bike lanes, pavement markings such as shared use lanes or "sharrows," and designs that encourage a consonance between posted and design speeds. One increasingly popular method is the "bicycle boulevard," using minor modifications to local streets that create through routes for cyclists, with pedes–trians served by sidewalks. Typically, bicycle boulevards are parts of the urban grids that parallel or connect destinations also served by higher order streets. Candidate streets include Pine Street and Fulton Street, offering continuity and access that parallels Junction Avenue, but with lower traffic and greater user comfort. The shared ROW system is focused primarily in the central part of the city.

Together, these elements provide an inter–connected network that serve most of Sturgis' major community destinations, and provide safe and reasonably direct access around the city.

Small City Transit Options

The Future Sturgis process suggested a significant community need for improved public transportation, and transit service was an important focus of the working group devoted to "Bridging the Economic and Social Gap." Current (2011) service is provided by Prairie Hills Transit. Service includes demand response service in Sturgis on Monday through Friday between 7:30 am and 4:00 pm; three scheduled round–trips between Sturgis and Fort Meade Monday through Friday; and three times a week demand response service during a four–hour mid–day window between

Public Transportation. Prairie Hills Transit provides both demand response service and regional scheduled service to Fort Meade.

Sturgis and Rapid City. In a city of Sturgis' size, most transit service will be used by transit dependent or limited mobility customers – seniors, people with disabilities, and potentially children. Several types of services exist in small communities:

- Demand response paratransit services, providing door–to–door services that requires advance (usually 24–hour) reservations.

- Route diversions, where a fixed route or service loop serves major community destinations, but buses divert from that loop to provide customized service.

- Timepoint service, where buses serve specific points, arriving and departing during a range of times, but changing routes depending on passenger demand for a particular trip.

- Regional services, analogous to PHT's Rapid City and Ft, Meade services, serving distant employment centers for commuters or regional medical and shopping destinations.

Defining the appropriate type of service for a market like Sturgis involves balancing demand, convenience, and cost. The city, in cooperation with Prairie Hills Transit and other regional commu–nities, should begin a process to look at service alternatives and define the type of service that fits Sturgis' specific needs best.

PARKS AND RECREATION: THE BLACK HILLS EXPERIENCE IN TOWN

Sturgis' residents enjoy access to a variety of park and recre–ation facilities, as well as beautiful natural environments. Parks and outdoor recreation are a vital component of community life for many Sturgis residents and visitors. Therefore, the city should expand its facilities as the community grows and provide improved access to regional amenities. The open space system can also distinguish itself by bringing the Black Hills experience to town, connecting the community with nature. A high level of park and recreational services boosts the city's competitive position for attracting both residents and visitors.

Chapter 3 presented a detailed assessment of Sturgis' existing park facilities and outlined improvement needs for each existing park. The plan's overall park and greenway system concept is based on the following overall policies:

- *Sturgis' park system should grow along with the city's physical and population growth.* This growth is based on offering an equitable level of service, measured by facilities and accessible park area per person, to all residents.

- *The system should be linked together into a green network that unites the community.* Multi–purpose trails should be developed that both offer recreational benefits and comple–ment the city's transportation system.

- *New recreation centers should be integrated into the greenway system and existing facilities receive better service where needed.*

- *Recreation facilities should be developed that meet community priorities, based on the needs of various age groups in the city.*

- *Neighborhood parks should be financed by an equitable system based on demand and benefits realized by new development.*

The following sections detail specific projects, programs, and financing for the evolving park and recreation network.

Park System Enhancements

Figure 6.8 illustrates Sturgis' Parks and Recreation Plan, addressing both existing facility improvements and long term system enhancements. Major recommendations for the system follow.

Existing Facility Enhancements

• *Establish a systematic park improvement program, with site rehabilitation projects scheduled on a regular basis through the capital improvements program.* Establish priorities based on criteria; examples of priority criteria include elimination of safety hazards, need to provide facilities for underserved geographic areas, and replacement or enhancement of features that receive intensive use.

• *Identify a permanent skate park location and develop the facility.*

• *Develop additional volleyball and basketball courts.*

• *Prepare a master plan for Sturgis Community Center site and the surrounding property.* Include development of an outdoor interactive water feature as a focus of the Community Center campus.

• *Upgrade older equipment at the Community Center.*

Interactive Water. Spray pads or pools have proven to be very popular with their intended audiences, children and their parents. An interactive spray pool, combined with a wading area and outdoor decks that appeal to older groups, could complement the Community Center's indoor pool at a fraction of the cost of a full outdoor facility.

Pineview Site. (Right) This land, owned by the Game, Fish, & Parks Department, could accommodate both a neighborhood park and a trailhead resort.

Long Term System Enhancements

• *Acquire the "Pineview" site from the South Dakota Game, Fish, and Parks Department (GF&P), and develop a portion of the site as a Southside Community Park to fill the service gap south of I–90 on part of the US Forest Service site.* Connect this park to the Sturgis pathway system by continuing the eastside/Dolan Creek trail, now under construction, to the proposed Southside Community Park and the Dolan Creek Road sidepath. The southern part of the site may be developed as a trailhead resort for trails through the Black Hills National Forest, becoming a "base camp" for the City Lakes and National Forest area. Chapter Seven examines these development concepts in greater detail.

• *Incorporate neighborhood parks and open spaces into the detailed design of new residential development areas.* For example, a "Village Square" in the proposed "urban village" growth center west of the ballpark and Fairgrounds complex would both serve neighborhood park needs and become a central feature of a new neighborhood.

• *Implement the trail and pathway system proposed above in the transportation element.* The pathway system has both recre–ation and transportation benefits, and incorporating physical activity into people's daily routine is an effective way of improving community wellness. Projects in the trail plan that are more specifically focused on recreation include:

- Improvements to the main Bear Butte Creek Trail between Centennial and Hill and Plains Park. Major improvements include continuous paved crossings of park roads and separating the trail from adjacent gravel roads; repairing or resurfacing trail segments as they wear; and including directional and mileage information for recreational walkers and runners, and to provide locating information for emergencies.

- Linkages from the Bear Butte greenway to neighbor–hoods and other complementary community features. The highest priority linkage is a bridge from the trail over the creek to the Sturgis Community Center campus. Other important connections include a spur of the eastside trail south from the Bear Butte system along the drainageway to Main Street.

- The Fairgrounds Trail along the east edge of the ballpark/ fairgrounds complex, connecting Sturgis Elementary School and recreational facilities to central residential areas.

- The eastside trail system identified above, connecting the Pineview site to the north side of the city and the Ballpark/ Fairgrounds complex via Dolan Creek Road.

Sidepaths and on–street routes have somewhat greater trans–portation than recreation impact. However, these segments promote active trips to recreational facilities, and should also be seen as part of the city's coordinated open space network.

• *Improve the Bear Butte Creek corridor* by improving stream banks, developing a Promenade on the south side of the creek, relocating or screening public storage areas, and using the corridor as a catalyst for both new recreational facilities and

additional residential development. Chapter 7 describes the Bear Butte Promenade concept in greater detail.

• *Open the scenic City Lakes to the public as a limited use natural area, paired with an outdoor–oriented trailhead resort of the GF&P Pineview property.* As part of this project, link the Centennial Trail through the Black Hills to the nearby City Lakes site. Chapter 7 presents these concepts in greater detail.

Neighborhood Park Policy

Sturgis should implement a neighborhood park acquisition policy and financing mechanism to fund park acquisition and ensure the reservation of well–located and appropriately sized open spaces. Without such a policy, neighborhood park requirements are often met by dedicating sites that cannot be used for other purposes, such as drainageways or steep slopes. Elements of a neighbor–hood park policy are:

• A menu of recreational facilities to be accommodated by the park. A potential facility menu may include:

- Drinking fountain.
- At least one acre of unstructured multi–purpose space, including a flat, unobstructed practice/play area.
- Picnic area with shelter.
- Toddler's and children's playgrounds.
- Informal ballfield. In very informal settings, a backstop at the edge of the multi–purpose space may suffice.
- Basketball or multi–purpose courts.
- Walking paths and sidewalk.
- Lighting.
- Tree planting and landscaping.
- Grading and seeding.
- Site furnishings.

• *Site criteria* that define minimum park size, street exposure, trail connections, limits on the amount of land that may be reserved for stormwater management, and location and access to the rest of the development.

• *A dedication and financing policy that defines the responsi–bility that developers have for implementing neighborhood parks and methods by which they can satisfy those responsibilities.* Generally, an equitable policy apportions cost in proportion to the impact that the project and its residents have on the city's park services. A neighborhood park development policy can use one of two approaches: dedication based on parkland need per person or as a percentage of the total development area.

Bear Butte Creek. The city's major parks are connected by the creek's greenway. Bank improvements, the promenade described in Chapter 7, and other enhancements could make the creek a greater recreational resource in the center of the city and catalyze new private development.

Approach I: Parkland per Person

Step 1. Determine persons per household averages, usually by dwelling type. In 2000, Sturgis had an overall average of 2.29 persons per household, with 2.49 persons per owner occupied unit and 1.94 per renter–occupied unit. In a system with contri–butions based on park impact, single–family units place greater demands on the system than multi–family units because they generally house more people per unit.

Step 2. Establish parkland acreage responsibility based on Sturgis' existing level of service per 1,000 population standard. Sturgis provides almost twenty acres per 1,000 people for all park land, but a standard that focuses only on neighborhood parks could be substantially smaller. Local policy could also change the park dedication responsibility. For example, the city may adopt a program based on a 50/50 private/public sector split.

Step 3. Use the adopted standard to calculate the probable popu–lation of the development and its park dedication responsibility. Two methods may be used:

1) Count actual lots in proposed subdivision/development, determine total population, and multiply by the parkland acres/1,000 people standard to determine required dedica–tion; or

2) Use the minimum lot size in the applicable zoning district to arrive at a project Net Density, determine total population, and multiply by Parkland Acre/1000 population standard to determine required dedication.

As an example, if Sturgis established a neighborhood park standard of 5 acres per 1,000 people, a subdivision with a probable population of 500 people would be required to dedicate 2.5 acres of park.

Approach II: Parkland as a Percentage of Development Area

Under this approach the city establishes the required amount of parkland as a percentage of the total development area, varying the percentage in accordance with the minimum lot area per unit. Figure 6.9 provides an example of this approach.

Figure 6.9: Parkland as a % of Development Area: Example

Average Lot Area (SF)	Parkland as % of Total Land Area
25,000 and over	3%
8,000–24,999	5%
2,500–7,999	10%

The "Benefit Fee" Concept

In relatively small cities like Sturgis, individual developments are typically relatively small. As a result, using a land dedication requirement to satisfy requirements for new neighborhood parks could produce a number of miniparks that are too small to be useful and increase maintenance costs for the city. Thus, a "benefit fee" system by which a development pays its proportionate share for acquisition and development of a new park produces more useful facilities.

In this concept, the city selects and purchases a site that serves a larger development area. Instead of dedicating land, each subsequent development contributes to the cost of acquiring and developing the site, based on their proportional benefit. For example, if the cost of acquiring and developing a five acre neighborhood park that serves 1,000 people is $400,000 (or $400 per capita), and that three people are determined to live on the average single–family lot, the average single–family lot would pay a park development fee of $1,200 (or $400 x 3) at the time of development. This is based on a 100% allocation of neighborhood park cost to the development; as discussed above, the city could establish a cost–sharing approach that would reduce this proportionate contribution.

Other Funding Alternatives

Other financing sources can contribute to the growth and improvement of Sturgis' park system, including:

• *General Obligation (GO) Bonds:* GO bonds obligate general tax revenues toward retirement, and represent the highest level of security to bondholders. Issuance of GO bonds requires voter approval. These bonds typically form the core of park financing mechanisms, with proceeds used for a variety of rehabilitation and development purposes.

• *Transportation Enhancements (TE):* TE funds are appropriated through federal transportation legislation (currently SAFETEA–LU) for trails, corridor beautification, and enhancement. This program is administered through the South Dakota Department of Transportation and provides 80% funding for approved projects. Matching funds are typically provided through general obligation park bonds. Projects funded by TE funds must have a demonstrable transportation function. The Recreational Trails Program (RTP) of the US Department of the Interior, can finance projects that have solely recreational uses.

• *Surface Transportation Program (STP):* This is the primary federal road financing program, also appropriated through SAFETEA–LU and successor programs. STP funds may be used for path facilities that are developed as part of a major transportation corridor, and unlike TE, can finance trails for motorized users.

• *Private Foundations and Contributions:* Foundations and private donors can be significant contributors to park development, especially for unique facilities or for major community quality of life features.

The Green Environment

Sturgis should also look at ways to extend the Black Hills experience beyond traditional park and recreation areas and into other community systems. This should include protection of natural resources and expansion of the urban forest.

Natural Resources Areas and Other Open Spaces

Sturgis should protect environmental resources like steep slopes and wetlands and incorporate stormwater management into its green network. Stormwater management cannot be limited to specific sites; controlling the impact of runoff on downstream environment minimizes ponding, flooding, and inflow and infiltration problems, and protects the quality of the Bear Butte Creek environment. "Best Management Practices" (BMPs) for stormwater provide amenities, control run–off volumes into area drainage corridors, and improve the quality of the water discharged into public waterways. Preservation of wetlands, steep slopes, and native prairie also add to a city's biodiversity and open space system. Site–specific features such as bioswales, porous pavements, and rain gardens have both practical benefits and

improve the city's environmental quality.

Urban Forestation

The city should work with residents to preserve and expand the city's existing street canopy. A good tree canopy provides aesthetic, economic, and environmental benefits to a community which appeal to future residents and businesses. Practical benefits include summer shade and winter wind breaks, lowering energy costs to residents. To improve the quality of its urban forest, Sturgis should:

- Inventory its existing tree canopy.
- Establish specific standards for new plantings, including preferred and prohibited species, placement of trees to avoid interfering with visibility at intersections, landscape requirements for new development, and planting techniques that minimize extraneous water use.
- Work with organizations, agencies, and civic groups to identify grants and other funding sources to plant street trees in residential areas.
- Incorporate tree plantings into corridor enhancement programs and redevelopment projects.

HOUSING POLICY

Providing a range of affordable housing settings supports economic development efforts and is a fundamental to the goal of 'bridging economic and social gaps" identified by Future Sturgis. Preservation of existing housing and construction of new housing to support growth are the twin facets of housing policy. Large–scale strategies, such as identifying growth areas and developing supporting transportation, community facilities, and utility infra–structure, are critical to housing development. Yet gaps exist in the current housing market in Sturgis and other communities that require special attention. This section's recommendations, when combined with existing programs, can help address major residential priorities.

The city's primary housing challenges are:

- Maintaining the structural integrity of older homes and the quality of Sturgis' existing housing supply.
- Developing an effective, multi–faceted neighborhood conservation and rehabilitation program.
- Increasing the quantity and quality of diverse housing choices, specifically rental housing, available to Sturgis' present and prospective residents.

An outline for a residential strategy that addresses these chal–lenges follows.

Neighborhood Conservation

Sturgis should implement neighborhood conservation programs, including rehabilitation programs to preserve the city's existing housing stock. The built housing supply is the city's largest single capital investment, and its preservation is essential to maintaining residential affordability. Neighborhood conservation strategies include:

• **Land Use Policies.** Sturgis should maintain zoning and land use policies that protect the integrity of its neighborhoods. New zoning proposals should be evaluated with a view toward their effect on surrounding neighborhoods. The zoning ordinance should encourage project design that reduces land use conflicts between residential and other uses; and should establish buffering and screening standards to minimize external effects on neighborhoods.

• **Rehabilitation.** Sturgis should develop rehabilitation programs (including the use of private loans leveraged by Community Development Block Grant and HOME funds) to promote the stabilization of housing stock that is in need of significant rehabilitation. These programs should emphasize the leveraging of private funds to extend the use of scarce public resources.

• **Infill Development.** Sturgis should encourage the development and redevelopment of vacant lots and underutilized sites within the existing city. Infill lots use existing infrastructure, reducing costs and using city services more efficiently than greenfield growth.

A Variety of Housing Types

Sturgis should provide a variety of housing for residents at all stages of their lives, including young adults and seniors. Housing variety should be integrated into new growth areas and the city's land development ordinances should provide adequate flexibility to accommodate innovative or economical designs within traditional town patterns. Some of these configurations include:

• *Conservation subdivisions.* In conservation design, the overall density of a single–family project, including open space, complies with the maximum density requirements of the zoning district. However, individual lots have smaller area and setback requirements. This technique can minimize infrastructure cost, protect environmental features, and produce neighborhood common space. Consequently, it is very appropriate to the context and topography of several of Sturgis' potential growth areas.

• *Single–Family Attached Development.* Attached single–family units comply with densities required of the zoning district, but have common walls. Typically, lots in single–family attached developments (sometimes referred to as "zero lot lines" although zero lot line structures can also be fully detached) are platted and conveyable by fee–simple title. The opposite, non–attached side yard is often larger than normal, providing a more useful yards. Common area and even exterior maintenance may be provided through a homeowners association.

• *Townhouses*. Townhouses, which are three or more attached units, may be developed as owner–occupied or rental housing. They provide construction and land use efficiencies, while maintaining the sense of a single–family neighborhood. This housing configuration may appeal to both younger households and older adults considering a move to the Black Hills region.

• *Multi–Family Development.* Multi–family development should be integrated into the structure of new neighborhoods, rather than developed as isolated "pods" on peripheral sites. Higher–density housing should have good access to other urban resources, and work well when integrated into mixed use areas. Design standards should provide a residential scale that prevent an "apartment complex" scale.

• *Small Lot Subdivisions.* Single–family attached and detached housing on smaller lots is gaining popularity across the country. This is occurring because of:

– Market preferences and economic necessities for more affordable, smaller homes.
– Aging baby boomers looking for smaller homes with more easily maintained yards.
– An emerging interest in traditional housing styles that provide a more urban feel and a sense of neighborhood.

Because of their higher density, smaller lots use urban services efficiently, reduce maintenance costs to homeowners, and may increase developers' returns. Zoning adjustments to maintain neighborhood scale include reduced front–yard setbacks, setback allowances for porches and other architectural features, garage setbacks behind the front façade wall of the house, and rear garage access from alleys.

Gateway Housing

From a competitive point of view, Sturgis can distinguish itself within its region by producing "gateway" housing – housing that encourages young households in the region to build equity in the city. Changing housing markets and tighter underwriting standards are causing a rebirth in rental housing demand and placing a greater emphasis on moderately–priced ownership settings. Physically, this demand is satisfied by some of the housing types discussed above.

Even rental housing may include an equity feature. Rent–to–own developments escrow a portion of rent payments into an equity account that, after several years, provides resources for a down–payment. These projects may use tax credit financing for the initial units. Any unit developed with tax credits must remain in eligible renter occupancy for 15 years. Rent–to–own developments can

be an especially effective form of "gateway housing" – providing young households an avenue for both settling and building equity in Sturgis.

Unfortunately, the private housing market does not effectively produce these needed housing products. Sturgis, in common with the rest of urban America, has produced very little market rate rental housing during the last decade. In addition, the construction of speculative, moderate–cost housing poses maximum uncer–tainty and minimum return to private homebuilders. Components of a delivery strategy to address these issues may include:

• *A local housing development corporation* that is capable of partnering with private developers and builders to deliver moder–ately–priced housing. Such corporations, the residential equiva–lent of economic development corporations, have preferential access to some financing tools, such as low–income housing tax credits, if organized as community housing development organi–zations (CHDO).

• *A financing consortium* to support affordable housing devel–opment, often through the use of construction financing funds and (increasingly with the possible demise of FNMA) permanent mortgage financing.

Senior Housing

Future Sturgis identified a need to expand senior housing options. The city should encourage the construction of both independent and assisted living residential development for seniors. Sturgis' many natural amenities, small town atmosphere, and access to both local and regional health services make the city a very attractive community for retirement age residents from the surrounding region and beyond. The city should work with the Sturgis Economic Development Corporation and private devel–opers, possibly with the assistance of a housing development corporation, to develop new senior housing.

Affordability problems are often most severe among fixed–income elderly. The city should continue to work closely with residents to identify programs and needs among the city's elderly population, and to investigate innovative approaches to developing afford–able senior housing. Under one concept, the housing develop–ment corporation could purchase the resident's existing house for rehabilitation and resale to a young household, and apply all or part of the purchase proceeds to rent or equity in the new senior setting.

A Range of Housing Types. From top: Small lot homes in the center of Bellevue, Iowa; affordable homes built through a nonprofit developer and a lenders' consortium in North Omaha, NE; townhomes near Saint Louis University.


HILLS

7

Concepts for Sturgis' Key Districts

For two weeks a year, Sturgis has one of America's busiest and most successful downtowns. Few cities of any size match it in number of visitors, amount of meals served in eating places, and retail sales per square foot (not to mention t–shirts sold). The Rally has given Sturgis an internationally recognized brand that causes people everywhere to nod knowingly when its name is mentioned. Main Street is the epicenter of that brand, which in turn creates unique possibilities and special challenges for business development and investment in the center of the city.

However, Main Street does not exist in isolation, and is one of several inter–related areas that should ultimately complement each other in strengthening the city's economy and improving its quality as a place to visit and live. This chapter presents concepts and tools that can help the center of Sturgis capi–talize on its status as the capital of the motorcycling community, expand its appeal to a more diverse customer base, and remain a lively and functional center of civic and commercial life for the immediate region. But it broadens these strategies to address the possibilities of other key districts that interact with the traditional business districts and together strengthen the entire community. These key districts are:

- **Central Sturgis,** including **Main Street** and the adjacent **Lazelle Street corridor.**
- **Junction Avenue,** connecting Lazelle and Interstate 90.
- **The Vanocker Interchange,** Exit 32 at Interstate 90, connecting Junction Avenue and Vanocker Canyon to the Interstate.

All of these key districts in one way or another connect Sturgis' built environment to the unique setting of the Black Hills region around them. The strategies presented here build on this unusual nexus of community fabric, an internationally known brand, and a superb natural environment. Any of these three components provide a sound foundation for economic and community devel–opment. Together, they provide truly exciting potentials for Sturgis and all those who know or care about the town.

CENTRAL STURGIS: CHALLENGES AND ISSUES

Central Sturgis operates in two modes – the Rally and the rest of the year. During the Rally, it plays host to over 100,000 daily guests, while maintaining a level of normal functionality to the city's permanent residents. For the year's other 50 weeks, it faces the problems of other small city centers, including market leakage

Main Street before and during the Rally. Opportunity lies in bringing the street to life twelve months a year.

to larger centers (in Sturgis' case, Rapid City and Spearfish) and attraction of new business. But these two modes interact to create unusual problems that produce both high land values and disincentives to year–round use of property. We must understand these challenges in order to plan successfully for opportunities. Development concepts and policies for central Sturgis should address the following issues:

• *Main Street vacancy and the economics of the Rally.* During the Rally, retail sales per square foot in Sturgis are incredibly high, in many cases providing a year's worth of value compressed into a few weeks. During the rest of the year, downtown struggles with the problems of other small cities – a relatively large building inventory given local commercial demand and relatively low sales per square foot. In addition, the types of mainstay busi–nesses during the Rally– t–shirts, souvenirs, food and drink, and motorcycle–related products and services – are different from those that serve the permanent local and regional market. This creates two problems:

1. A number of retail businesses and services, which earn their annual revenue targets during the Rally and may struggle to break even during the other eleven months, have no reason to stay open for most of the year.

2. Businesses that serve local market needs close or are displaced by tourist–related businesses during the peak Rally month, discouraging them from locating on Main Street.
This situation is analogous to that faced by resort commu–nities whose tourist–oriented businesses close during the off–season. However, the very short "peak season" and the extremely high retail spike are unique to Sturgis.

• *Land vacancy on Main and Lazelle Streets.* Land and retail economics combine with assessment policy to create incentives to keep land vacant for vendors during Rally month. Very high sales during Rally month for vendors housed in tents or temporary structures support high revenue for landowners. These revenues are produced by vacant land, with lower assessments than land improved with permanent structures. Consequently, some lots on Main Street and large, highly visible sites on the Lazelle Street corridor, one block north, are underused during much of the year.

The Sturgis Brand: the gap between expectation and reality. Sturgis during the Rally is truly a special place. The intensity and atmosphere of this experience creates a set of expectations – a brand that compels people, whether bikers, fans, or simply the curious, to exit Interstate 90 and be part of the magic of the place. However, during most of the year, visitors do not experi–ence the magic of the legendary Rally on either Main or Lazelle Street. The city should capitalize on its brand and provide a memorable experience for visitors beyond two weeks in August.

• *Regional retailing.* Sturgis is surrounded by significant regional retail centers – Rapid City only 30 minutes to the east, and Spearfish less than 20 minutes to the west. These centers attract a significant share of the local market, and their convenient access to Sturgis makes it very difficult for the city to attract the same large format retailers.

• *Interstate 90 connection.* I–90 is the "main street" of the Black Hills region, its primary visitor corridor and the link that binds its cities together. The importance of I–90, and Main Street's location off the interstate, makes the appearance, character, and vitality of the two connecting corridors – Lazelle Street from the west and Junction Avenue from the south and east – particularly important. Reinforcing the quality of the connection of Downtown to I–90 through information, aesthetic

enhancement, and surrounding land use will improve the central district's economic environment.

• *Capitalizing on regional features.* While the Rally is vitally important and establishes the Sturgis brand, it is not the city's only resource. Some of these, like Bear Butte, the Centennial Trail, Black Hills National Forest, and Fort Meade, are relatively well–known. Others, like Bear Butte Creek and the City Lakes, are largely undeveloped. Additionally, Sturgis is part of a regional visitor network that includes Deadwood, Lead, the Mickelson Trail, and the entire region. Improving undeveloped assets and taking advantage of other regional features extends the attraction of Sturgis and makes it appealing to more people.

The Three Corridors of Central Sturgis

The quality and economic potential of central Sturgis are clearly important to the community and Future Sturgis rightly identified central district development as a key priority. What is less clear is the role of the district: will it be a tourist attraction, a thematic district, the civic and commercial nucleus of the local community, or some combination of all of these. The critical goal is to create an environment that encourages permanent, longer–term investment in businesses and properties by expanding the magic and activity of the Rally well beyond its two week peak. Sturgis has attracted special events, such as the Cushman and Mustang Rallies during 2010, to expand its reach and season. These events are excellent steps, but they remain highly focused activities that do not encourage businesses and services to expand their seasons, or property owners to improve properties beyond paving their vacant lots.

The Faces of the Region. Above: The mysticism and spirituality of Bear Butte. Below: The very different and historic atmosphere of Deadwood.

A solution lies in the physical, functional, and economic environments, and understanding the roles and possibilities inherent in three parallel east–west corridors: Main Street, Lazelle Street, and Bear Butte Creek. The central district's two primary east–west street corridors have different personalities: Main Street is at its heart a traditional, pedestrian–oriented town center, while Lazelle Street is a motor–oriented commercial arterial. The third corridor, Bear Butte Creek, reflects the natural environment and the seam between the business corridors and the surrounding landscape. While the Bear Butte Bicycle Trail and major city parks follow the creek, this natural corridor is a largely undeveloped asset in the central district and in some places is actually a blighting influence. The interaction of these three corridors suggests solutions that can combine the thematic with the functional, and create an area that meets the following fundamental strategic objectives.

Corridor 1: Main Street

Main Street Roles

The traditional Main Street corridor should be:

- A special retail and service district that carries the Sturgis legend for visitors and local citizens.
- The civic and financial nucleus of Sturgis.
- A mixed use district uniquely integrates art, culture, history, and community character.

Main Street Strategies

The strategies that will help Main Street achieve these roles include:

• *Establishing and reinforcing Main Street as a specialized business district.* As the heart of the Rally, Main Street should express the themes that make Sturgis a household name, while hosting a variety of businesses that serve customers 52 weeks a year. It also serves a key role as the city's civic and cultural focus. The Main Street environment will be most hospitable to local service businesses that also prosper during the Rally, when normal community access is restricted.

• *Capitalizing on the Sturgis Brand.* Some people in Sturgis understandably want to diversify the city's associations beyond

motorcycles and the Rally, and sometimes rankle at this stereo–typing. Yet, the image is too strong and productive to be ignored, and reflect the "Sturgis legend." The best strategy will be to play to the image, while using it as a gateway that can introduce other features of the city and its environment . When people visit Sturgis, they want to participate in the magic of the Rally – but can also be surprised by the city's other dimensions.

• *Improving Main Street functionally and aesthetically.* Investments in a public environment provide a better place for users of the district, and can encourage private owners to reinvest in their properties. Sturgis has made some significant enhancements along Main Street, including thematic lighting and the innova–tive public art program in 2010, locating sculptures on removable pedestals. However, other features that add color, shade, and customer accommodations would benefit both customers and property owners. Design of the Main Street environment is espe–cially challenging because it faces multiple challenges. It must serve both the needs of thousands of visitors during the Rally and individual customers at other times of the year. It should not only provide comfort during the hot months of summer, but also be easily maintained during the winter. And it should reflect the character and spirit of the city during all times of the year.

• *Providing better public accommodations and spaces.* Main Street, in common with many linear business districts, lacks the public space common in downtowns built around a courthouse square or public green space. Yet, even small public spaces are often important anchor features in downtowns, providing a space for special events that help bring customers to a district.

• *Providing incentives for reinvestment.* Currently, economics tend to favor property owners and businesses who can realize a year's worth of revenue in two weeks with relatively little risk. Fortunately, the district retains enough year–round enter–prise to maintain some vitality. But positive incentives, like the existing facade improvement program are needed to balance the economic deck, and encourage private investment in work and capital.

Main Street Directions and Concepts

Components of a Main Street program that implements these strategies include:

- **A RENEWED STREET ENVIRONMENT** that expresses community themes and extends the experience beyond Rally week.

- **COMPLEMENTARY ATTRACTIONS AND BUSINESSES** to extend length of the visitor season.

A Renewed Street Environment

The Central Sturgis concept begins with Main Street, whose iconic photographs during the Rally help establish the city's worldwide image. The streetscape should provide its users year–round, residents and visitors alike, with a unified, comfortable, and vibrant public environment, featuring elements that meet both functional and aesthetic needs. But the street concept should also evoke the spirit and magic of the Rally into the rest of the year.

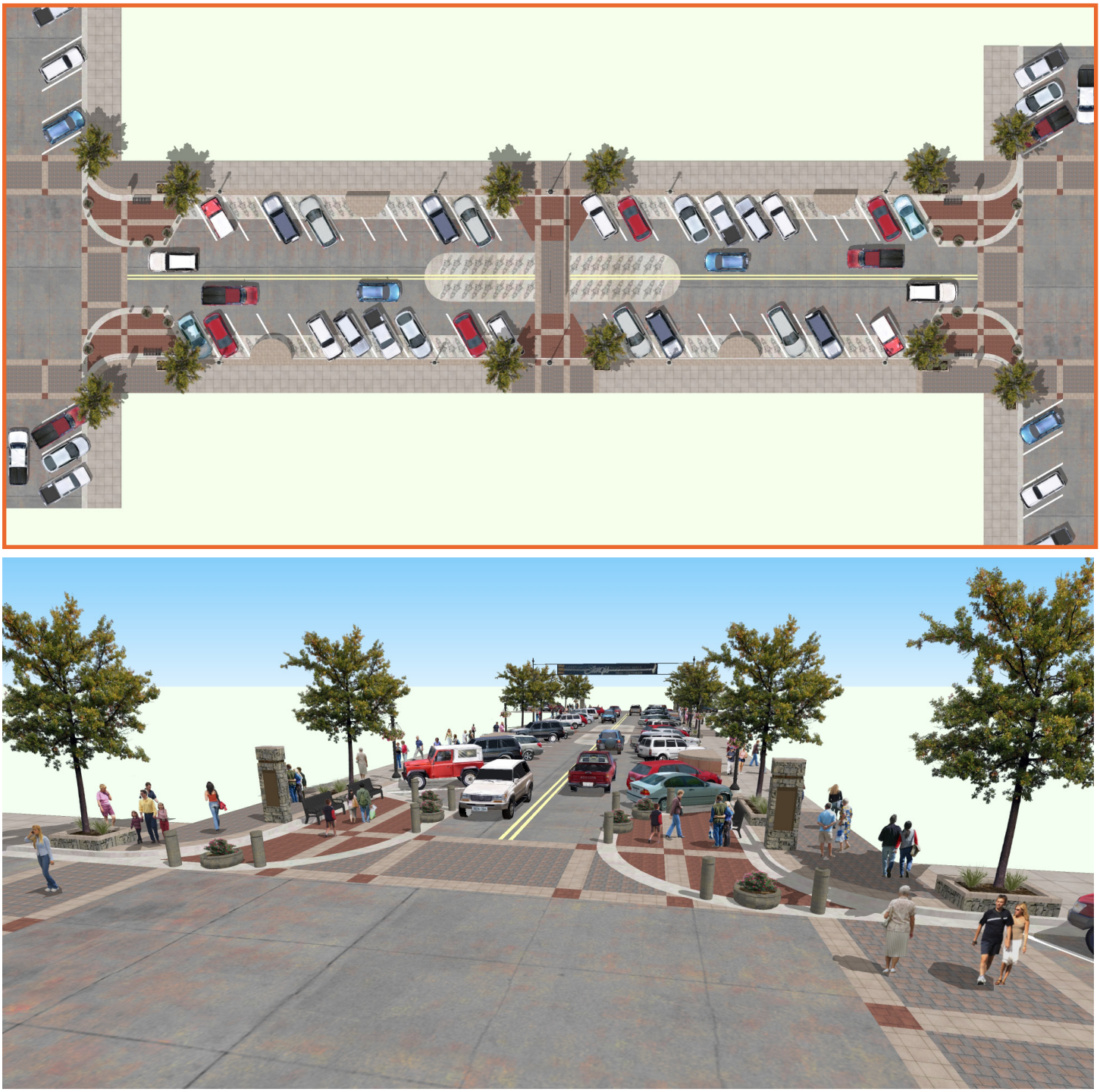
Figure 7.1 illustrates a streetscape concept designed around these priorities, using the Junction Avenue to First Street block as an illustration. Main Street's curb–to–curb width is 54 feet within a 75–foot typical right–of–way, relatively narrow for a two–way street with diagonal parking on both sides. This streetscape concept assumes that this curb line will remain in place, but creates an affordable retrofit that expands the public space, creates greater customer comfort, and incorporates Sturgis' distinctive themes. Its features include:

• *A Convertible Street.* Within its right–of–way, Main Street should provide comfort and amenities for its patrons and maintain abundant on–street parking. It should also be easy to maintain during winter, when ease of plowing snow is a much higher priority than public outdoor places. The concept of a "convert–ible" street, changing its personality and function with seasonal requirements, provides an answer.

Corner nodes, created by sidewalk and curb extensions at inter–sections, provide ideal places for seating, landscaping, and other features such as public art. They also protect diagonal parking areas, reduce pedestrian crossing distances, and calm traffic. In the Main Street concept, these nodes would be slightly elevated above the street surface and defined by an asphalt surfacing technique such as Integrated Paving's "Streetprint" process, which provides a wide range of durable surfaces and colors. Nodes would be defined by removable bollards, and populated by removable benches, planters, and public art pieces. During the winter off–season, these features would be removed and stored, allowing easy snow removal. A similar node treatment would also be used at mid–block locations.

Crosswalks at intersections and at mid–block would also be defined using the asphalt stamping technique. A mid–block crosswalk, combined with a surface median, encourages two–sided shopping on the long blocks east and west of Junction Avenue.

• *Shadow Motorcycles in the Parking Lane.* During most of the year, Main Street provides diagonal parking for cars. But during the Rally, the street's personality famously changes, with



motorcycles parked diagonally along the curbs and in a double row down the middle of the street. Main Street can use the "Streetprint" technique to imprint the footprints of motorcycles in these places, both demarcating the parking lanes and adding a bit of thematic distinction to the street itself. In addition to curbside "virtual parking," a surface median at the mid–block pedestrian crossing on the 100 block can also suggest the Rally's parked motorcycles.

Figure 7.1: Main Street Streetscape Concept.
Top: Streetscape plan illustrating Junction Avenue to First Street block of Main Street; Above: Perspective illustrating improvements to the street and public environment.

• *Street Trees and Furnishings.* Permanent street trees may be planted at corner and mid–block areas, above the permanent curb, while removable planters, seating, and trash receptacles may be located in the convertible nodes. In Sturgis, non–motorized "bikes" also provide a useful means of transportation, and bicycle parking should be available in convenient and visible locations that do not obstruct pedestrian flow or Rally functions. Simple facilities such as individual inverted U's or "hitching posts" are relatively inexpensive, unobtrusive, and secure.

• *Thematic Features.* The expression of the Sturgis experience proposed by street paving treatments can be strengthened by an overall thematic approach that relates the primary "Sturgis brand" to features of the year–round community. One concept is relating the history of motorcycle design to the history of Sturgis, assigning interpretation of a specific decade to each Main Street blockface. A variety of interpretive features can be used, and should be developed as part of the detailed streetscape design. Some of these include:

– Graphic banners or medallions mounted to street lights. Enamelized metal graphic panels, used along Sheridan Avenue in Shenandoah, Iowa, have proven very durable in long–term streetscape installations.

Thematic features. Streetscape graphics and interpretation could relate images illustrating decades of Harley–Davidson design with decades of city development. Each block would be themed around a ten–year period. Above: a 1938 Harley design and Main Street in the late 1930s.

Interpretive streetscape features. Left: Enamelized metal panels on Sheridan Avenue in downtown Shenandoah, Iowa (RDG Planning & Design); Top: Light boxes at Interstate 35 rest stop near Ames, Iowa (RDG Dahlquist Art Studio)

– Interactive art or photo opportunities. Backdrop murals of the Sturgis Rally, possibly reflecting different historical eras, could be installed on one or more buildings with a period motorcycle sculpture in front, combining art with visitor photo opportunities.

–Interpretive graphic panels or monuments.

–Inlaid tiles. Ceramic tiles inlaid in sidewalks could further reinforce the themes of related bike design and community history.

• *Public Art.* The controversy and ultimate success of Sturgis' public sculpture program during 2010 demonstrates the effec–tiveness of public art programs. This program, mounting large, very high–quality sculptures on removable pedestals, should be continued and accommodated by the new Main Street design. Other thematic art elements, including those mentioned earlier, should also be an integral part of the street design.

Complementary Attractions and Businesses

New attractions, including a destination feature, and more busi–nesses give people more reasons to visit Main Street, and extend the city's visitor season beyond the Rally. The following Lazelle corridor section describes a concept for a destination attraction

Public art on Main Street. The sometimes controversial but always superb quality installation in 2010, eloquently demon–strated the attraction of public art in an iconic business district.

that makes the experience of Sturgis more accessible to everyone. However, Main Street itself should support the expansion of existing attractions and encourage investment in compatible new enterprises. Concepts for attraction and business development include:

• *Motorcycle Museum Expansion.* The Sturgis Motorcycle Museum, on the northeast corner of Junction and Main, plans a substantial expansion that will improve this attraction's facility and exhibits. Additional measures that could support this project include possible development of a small public space on the site; and implementation of a community–wide wayfinding system that directs visitors to the museum from gateway points.

• *Private Reinvestment and Façade Improvements.* Reinvestment in the public realm often encourages private property owners to respond with improvements to their buildings. However, most owners must conclude that it is in their economic self–interest to upgrade their properties. This threshold can be reached through incentives such as a low–interest façade or signage improve–ment program. This may include direct matching loans up to a specified ceiling, or combining program funds with a loan pool from participating local and regional lenders. The City or a business association (see below) should develop design guide–lines to guide private projects and establish parameters for an incentive program.

• *Main Street Organization and Recruitment Program.* Main Street businesses should form a business association to maintain communication and reinforce the district's status of a cooperative, twelve–month retail area. This association may be a precedent to a business improvement district or main street organization. One of its primary initial functions, though, should be a business recruitment program, developed along with the Chamber of Commerce and built upon the efforts of Future Sturgis. This program should:

–Identify retail and service recruitment targets for the downtown.
– Work with Rally–oriented businesses and property owners to encourage them to extend their seasons.
– Continue to contact target business types, including appro–priate retailers who are active in the Black Hills region but are not currently located in Sturgis.
– Help assemble financing assistance packages and building development incentives to encourage business openings in the district.

Corridor 2: Lazelle Street

Lazelle Street Roles

The Lazelle Street corridor serves as:

- Sturgis' primary auto–oriented commercial corridor for local residents.
- A major visitor gateway to the city from Interstate 90, with a concentration of visitor–related services at Exit 30. This role is reinforced by US 14's (Lazelle) role as the primary connection between Sturgis, I–90, and Deadwood/Lead.
- The connection between the city, the creek, hill environments to the north, and an important civic and recreational corridor for residents and visitors. In this way, Lazelle is intertwined with the natural corridor of Bear Butte Creek, and is directly connected to it in several key locations.
- The "strip" of the Sturgis Rally, contrasting with the more stationary, pedestrian scene of Main Street.

Lazelle Street Strategies

The strategies that will help Lazelle Street achieve these roles include:

• *Improving the visual quality of the street.* During most of the year, Lazelle is Sturgis' principal commercial corridor and an important community gateway. An improved streetscape minimizes the impact of lots left open for vendor rentals during the Rally, upgrades community quality from a visitor perspective, and can improve the pedestrian scale and quality of the street, providing a generally better business environment.

• *Using land on the Lazelle corridor efficiently.* Along most primary commercial strips, land values move owners to develop their property. Along Lazelle, owners can realize a substantial return by keeping land open and leasing it to vendors during the Rally. Yet, even temporary event occupants do not need all the open land along Lazelle Street. Efficiently designed parking lots and planned temporary uses opens some sites for more permanent

development, providing better street definition and even better revenues for the city and property owners.

• *Providing secondary circulation.* Local street and pedestrian connectivity along the Lazelle corridor provides alternative local access for local customers when events clog the main corridor and improves traffic movement and safety by providing an alter–native to Lazelle Street. It also helps open the Bear Butte Creek environmental corridor to possible redevelopment.

• *Create a signature thematic feature on a visible site along Lazelle.* The gateway aspect of the Lazelle corridor, together with the availability of land, makes it an ideal site for a major community and visitor attraction that can be a thematic element for the city.

Lazelle Street Directions and Concepts

Components of a Lazelle Street program that implements these strategies include:

- **LAZELLE LANDSCAPE:** upgrading the visual and pedestrian quality of the street to reduce the impact of open land and provide a better environment for both seasonal visitors and year–round residents.

- **LOCAL ACCESS FRAMEWORK:** providing local circulation to complement Lazelle Street and encourage more productive land use.

- **PARKING LOT REDESIGN AND NEW DEVELOPMENT:** using land more efficiently to accommodate both Rally needs and take advantage of potential development sites along Lazelle.

- **STURGIS EXPERIENCE ATTRACTION:** proposing a signature development project at a visible location along Lazelle Street.

- **NORTH JUNCTION PARKWAY:** connecting the urban envi–ronment of Lazelle Street with the natural setting of Bear Butte Creek and the hills beyond.

- **STURGIS COMMUNITY CENTER:** master planning for the complete indoor and outdoor use of this community anchor on Lazelle, as proposed in Chapter Six.

- **EXIT 30:** re–planning key elements of this critical community gateway.

Several of these concepts are also referenced in Chapter 6, relating to their land use, transportation, or recreational implications.

Lazelle Landscape

Despite policies that encourage permanent development on open lots, a substantial amount of land on Lazelle will always remain open to accommodate Rally exhibits, shows, and vendors. An improved, landscaped edge and sidewalk will create both a more appealing driving corridor and an attractive pedestrian path along the street, reducing the impact of open land and parking lots. The Lazelle Landscape concept focuses on the north side of the street between Junction Avenue and 6th Street, and provides a double row of trees on either side of a wide sidewalk. Three of these blocks (1st to 3rd, and 4th to 5th) already have a row of street trees. A second row would be planted behind the new sidewalk. On the more constrained south side of Lazelle, a continuous sidewalk should also be developed, with street tree plantings when possible.

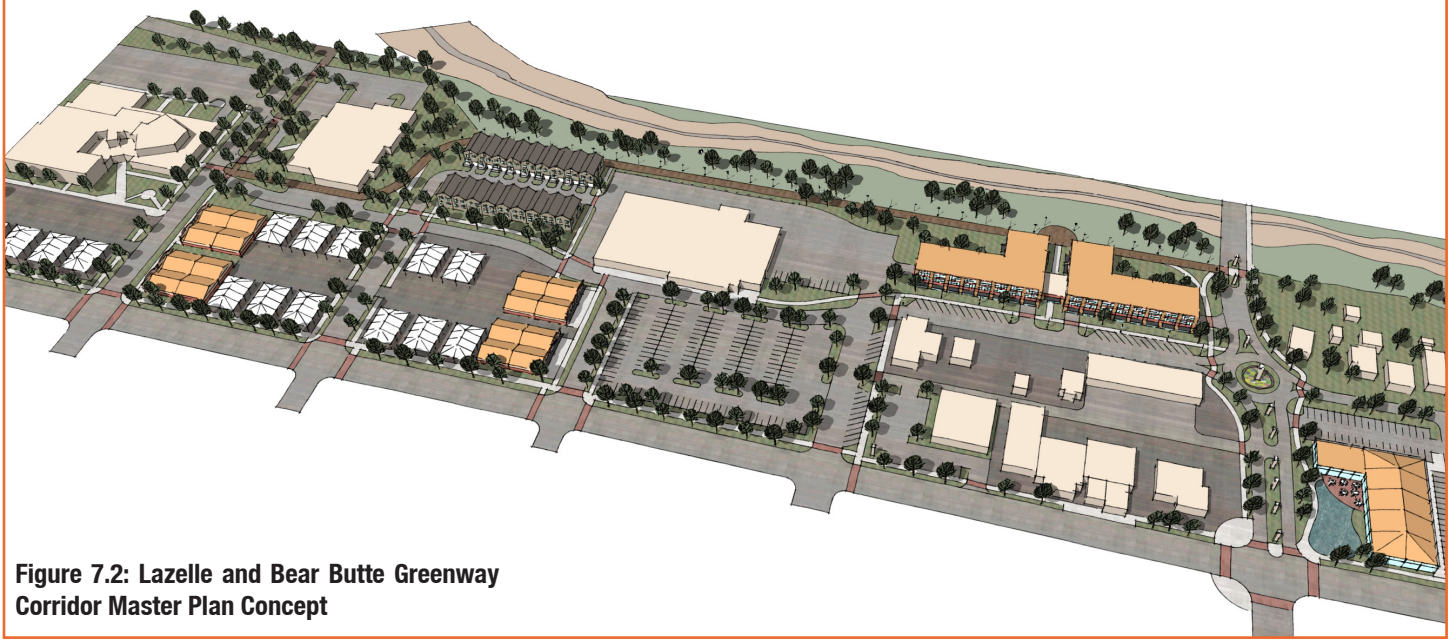
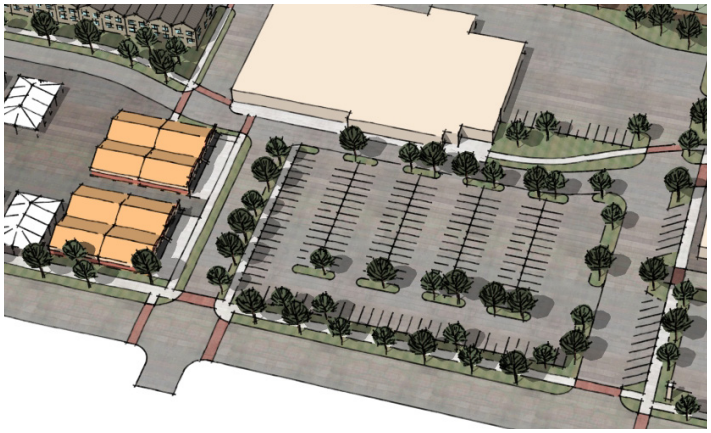
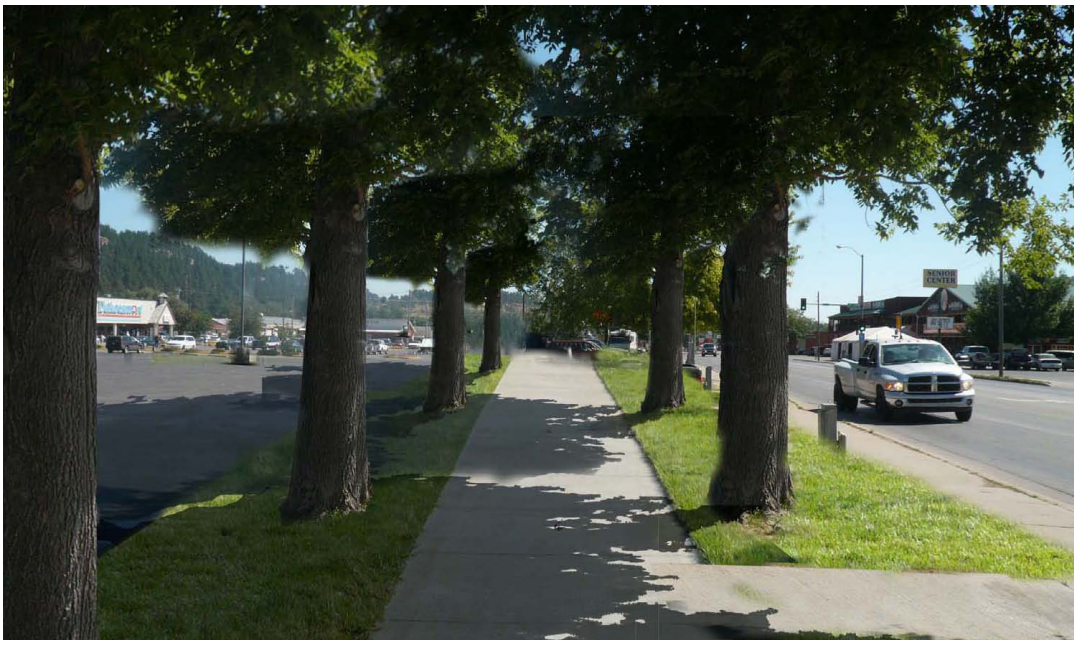


Figure 7.2: Lazelle and Bear Butte Greenway Corridor Master Plan Concept





Lazelle Landscape. Images to the left compare the existing and proposed corridor, illustrating how an additional row of trees and a generous sidewalk both hide open lots along Lazelle and provide a safe and pleasant pedestrian path.

Local Access Framework
- Dudley Extension
- 2nd Street
- Pedestrian System

Parking Lot Redesign
- **1** Grocery Parking
- **2** Commercial Pavilions
- **3** Conceptual Vendor Arrangement

Local Access Framework

Circulation to large retail and community destinations on the north side of the corridor depends on access from Lazelle. During the Rally and other similar events, visitor traffic on the highway complicates local access to these major community facilities. Continuous local circulation allows people to travel between destinations without using the highway, provides a local alter–native to the major street, promotes safety by separating local and regional traffic streams, and improves pedestrian and bicycle access. It also serves significant redevelopment sites that also front on the Bear Butte Creek environmental corridor. The local access framework is achieved by:

• *Extending Dudley Street from Junction Avenue to the Sturgis Community Center at 4th Street.* This street would connect a redevelopment project on the current Sturgis public works site, Lynn's DakotaMart grocery site, another potential development site west of Lynn's, the Post Office, and Sturgis Community Center. The extended Dudley Street would also include a contin–uous sidewalk and some street landscaping. It incorporates the existing service drives for Lynn's and the Post Office, with smooth transitions provided by adjusting alignments.

• *Upgrading 2nd Street between Lazelle and the Dudley extension as a full street with sidewalks.* The 2nd and Lazelle intersection is currently signalized, and the street concept vastly improves access to Lynn's for pedestrians, cyclists, and people using scooters or other personal mobility vehicles.

Parking Lot Redesign and New Development

Rally–related vendors and features use a good deal of the open land and parking area along Lazelle Street, but do not use all of it. Improved year–round parking lot design, coordinated with the Local Access Framework, combined with a more efficient layout of tents and vendors create sites for permanent dual–use "pavilion" structures that can house both year–round commercial uses and seasonal vendors. The illustrated plan concept envisions:

• *A minor redesign and landscaping of the Lynn's parking lot,* as part of improved definition of 1st and 2nd Streets as local connections to the continuous Dudley Street.

• *Commercial "pavilion" sites along the west side of the redefined 2nd Street and east side of 4th Street.* These buildings are proposed as convertible structures, using overhead doors that can be opened to serve Rally participants and vendors. The sites could also be multi–story or mixed use structures, with a lower level devoted to commercial and vendor use. This siting maintains large and flexible open lots for event purposes, while minimizing the underutilized look of Lazelle Street during the rest of the year. These sites could also house the "Sturgis Experience" concept described below.

The "Sturgis Experience"

As one of the city's front doors, Lazelle should present a welcoming attraction to visitors that capitalizes on the legend. A possibility is a "Sturgis Experience" attraction, a building with a major inter–active exhibit that gives people of all ages and at all times of the year the opportunity to participate in the Rally. This concept is inspired by the superb Harley–Davidson Museum in Milwaukee, which provides an exhibit that allows people to mount motorcycles of a number of periods in front of a screen that displays an open road. The primary emphasis of the wonderful Milwaukee museum is on the evolving design and technology of the Harley, and the evolution of the Harley–Davidson Company. A Sturgis concept would be more experiential, allowing people to "attend" the Rally and "ride" through the Black Hills. An interactive feature would simulate the adventure of riding a Harley throughout the Black Hills region: to Devil's Tower, the Badlands, Mount Rushmore; and other famous routes around Sturgis. Other features could

replicate the fun and pageantry of the Rally, with attractions for both kids and adults. The project should be developed with the assistance of corporate sponsors, whose products could be part of the experience. The directions that such a thematic feature could move in, combining technology with memorable experience, are truly exciting. The "Sturgis Experience" concept is intended to complement, not compete with, the Motorcycle Museum, and may be operated as part of the museum.

Depending on exhibit design and funding, a "Sturgis Experience" building could accommodate other uses as well. An open event space could host programs during the year, and provide flexible vendor or food service space during the peak months. Permanent commercial uses could also be incorporated into the project.

The project could be located in a number of places along the Lazelle and Main Street corridors, including:

– Adjacent to the Motorcycle Museum as part of its future expansion.
– As one of the Pavilion buildings described earlier, west of 2nd along Lazelle.
– At the city–owned National Guard site at Exit 30, after the proposed relocation of the Guard.
– Along the Bear Butte Promenade described later.
– At other open sites along Lazelle Street.

North Junction Parkway

Junction Avenue north of Lazelle continues up Sly Hill and connects urban Sturgis to the surrounding hills, and even provides a backroads alternative to Bear Butte. Within the city, it directly connects two of the "central corridors" – Lazelle Street and Bear Butte Creek. To link the Bear Butte greenway to the urbanized Lazelle and Main Street corridors, Junction Avenue north of Lazelle should be upgraded as a parkway with land–scaped median, special features, and well–developed sidewalks and street trees. This treatment draws the Creek and the Sly Hill landscape into the center of the city, and creates a gateway to the hills. The offset intersection with the extended Dudley Street would be resolved by a roundabout, with a vertical feature at its center. The parkway connects to the Bear Butte Promenade, proposed later, and the existing creekside multi–use trail.

A landscaped plaza or welcome feature should also be incor–porated into the design of future development at Lazelle and Junction. Landscaping and other features might be included and would provide a welcome space for summer visitors. This would reinforce the intersection's role as a gateway to both the city and the natural environment.

Milwaukee's Harley Museum. This superb museum includes exhibits tracing the history, design, and technology of the Harley–Davidson motorcycle, and provides interactive exhibits. The Sturgis Experience concept would expand on the concept of simulated rides through the Black Hills and give off–season visitors the opportunity to attend the Rally vicariously.

On the Road. US 14A between Sturgis and Deadwood.

North Junction Parkway. Left: Conceptual plan from the south. Above: Looking north to Sly Hill from Lazelle Street.

Sturgis Community Center

The Community Center, on Lazelle between 4th and 6th, is a vital anchor along Lazelle Street. The park and recreation analysis in Chapter Three and plan in Chapter Six discussed community center needs and recommended a campus master plan that would include interactive water play. From a facility and site development perspective, the center's parcel extends north to Williams Street, which in turn is adjacent to Bear Butte Creek, and has a substantial amount of open space south of the tennis courts. Existing access from the Bear Butte Creek Trail is indirect, requiring a cyclist or pedestrian to cross the creek at 6th Street and to negotiate a three–way intersection. A site and access enhancement program for the community center site, consistent with its importance to planning for the center of Sturgis, includes:

• *Connecting the Dudley Street sidewalk and the Bear Butte Promenade,* (described below) to community center entrances.

• *Completing a master site plan for the community center property,* as previously discussed in this plan. The site plan should include an interactive water feature or spray pool, complementing the center's indoor pool and designed as an outdoor water facility for children and a summer space for all ages.

• *A new trail bridge over Bear Butte Creek to the community center near or on the alignment of 5th Street.* This trail connection should include a well–defined crosswalk on a slightly elevated speed table on Williams Street.

Exit 30

Exit 30, the Lazelle Street interchange with I–90, is an important community entrance and commercial cluster. Improvements to this intersection and land around it could improve the function, appearance, and development yield of this important intersection. Recommended changes include:

• *Redevelopment of the National Guard site.* This important site, on the southwest corner of 14th and Lazelle, is owned by the City of Sturgis. Ultimately, the National Guard plans to relocate to Fort Meade, but this move is currently not in the Guard's budget. In the meantime, the City should work with the Guard to relocate to a more accessible, less congested site, possibly at the Sturgis Industrial Park. The City or SEDC could build metal structures, designed for future industrial use after a Fort Meade relocation takes place. This opens the 14th and Lazelle site for commer–cial development. Tax increment financing could be used to help finance the Guard relocation with added revenues generated by new commercial development. Design guidelines for quality landscaping, site planning, pedestrian access, and building construction, should govern new construction.

• *Intersection redesign.* The current Avalanche Road and 14th Street intersections along Lazelle are confusing and do not allow

Sturgis Community Center Site. Top: View of the north side of the site from Bear Butte Creek. Above: The site in use during the Rally.

direct access to Main Street. Chapter Six's Transportation Plan presents a possible redesign of this intersection connecting Main Street to Lazelle via 14th Street; and redirect Avalanche to 14th Street near Silver Street. The revised 14th and Lazelle inter–section would be signalized, improving safety and signal spacing by replacing the existing Avalanche and Lazelle intersection. This change improves safety and traffic operations, provides Avalanche to Main Street continuity, and creates a new commer–cial redevelopment site at the interchange.

• *Trail alignment.* The Bear Butte Creek Trail connects motels and visitor facilities on US 14A west of I–90 to the Bear Butte Creek greenway and, indirectly, to the Lazelle corridor. However, the trail connection is unclear between 14th and Lazelle St. and 15th and Silver St. Revision of this area's traffic pattern should include a clearer pedestrian/bicycle connection between these two points. This could be incorporated into the design of the new 14th Street connection between Avalanche and Main.

• *Entrance feature.* Wayfinding signage and a gateway feature should be incorporated into development of the National Guard site.

Corridor 3: Bear Butte Creek Greenway

Bear Butte Creek Roles

The Bear Butte Creek Greenway will serve as:

- Sturgis' principal east–west environmental corridor, linking the central district with Sturgis' principal open space resources – City Park, Woodland Park, Lions Park, Fort Meade, the Centennial Trail, and Sturgis' Brown High School.
- The scenic seam marking the boundary between Sturgis' built and natural environments.
- The city's principal multi–use trail corridor.
- A public processional space and linear park with the central district.
- A catalyst for new mixed use and residential development taking advantage of its unique blend of urban and natural environment.

Bear Butte Creek Strategies

The strategies that will help the creek greenway achieve these roles include:

• *Upgrading the creek's visual appearance.* While Bear Butte Creek is an attractive, free–running stream east of the canal confluence, the creekbed is relatively unsightly through the central district. Improving the character and maintenance of the creek and banks is an important part of a corridor enhancement program.

• *Re–imagining the creek's south bank in the central corridor as a major community resource.* The greenway is the natural complement to the busy vehicular and commercial Lazelle corridor and serves many of the same properties. It is a logical and potentially wonderful promenade – a link between the natural and the human–made – that is a great place to walk during different seasons.

• *Redeveloping underutilized sites along the creek.* Adjacent properties along the central part of the greenway do not take advantage of its potential. City–owned sites along the creek, including the rear side of the public works yard and the storage area for Rally equipment, further detract from the stream's character, while other areas are undeveloped or used periodically for trailer storage. The creek greenway as a public environment can generate substantial private development, which in turn reinforces it as a place that people want to visit.

Bear Butte Creek Greenway Directions and Concepts
Components of a Bear Butte Creek program that implements these strategies include:

- **STREAMBED CLEANUP:** improving the physical quality of the creek and its banks.

- **BEAR BUTTE PROMENADE:** a lighted walkway that connects Junction Avenue and the Bear Butte Trail with the Sturgis Community Center.

- **RESIDENTIAL REDEVELOPMENT:** using the Promenade and the beauty of Sly Hill and other natural areas to the north to create settings for new housing.

- **TRAIL EXTENSION:** continuing the trail west along Bear Butte Creek to the west side of I–90 and continuing along US 14A to Boulder Canyon and Deadwood.

Streambed Cleanup
A streambed cleanup is a quick and low–capital way to begin reclaiming the central section of Bear Butte Creek for expanded public use and enjoyment. This effort should include:

• *Cleaning and upgrading the stream basin itself.* The stream in this area has intermittent flows and its basin should look natural, even at low water levels. The basin should be cleared of debris and may be lined with rocks of various types and sizes.

• *Native plantings on the basin slopes.* Prairie grasses and wild–flowers, once established, make an attractive, stable, and easily maintained bank planting.

• *Volunteer maintenance.* Organizing a local volunteer group to maintain the channel, especially during its early years, can build a level of community stewardship and appreciation for the ecology of the waterway.

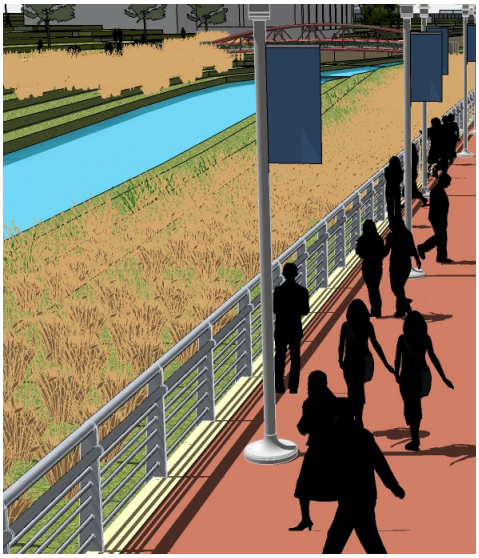
Bear Butte Promenade
Great promenades around the world often form a well–defined edge between an urban and natural environment that allows people to enjoy both settings at the same time. Beachfront and riverfront boardwalks, for example, derive some of their special quality of touching the natural and wild without losing a comfort–able connection with the urban. A promenade on the south bank of Bear Butte Creek can provide the same quality that inexorably draws people to it. This Bear Butte Promenade should be wide and inviting, provide human–scaled lighting for evening walks, and include subtle railings and graphics that help separate the human from the natural, the city and the hills. Different surfaces may be used, from a natural or "synthetic" wood boardwalk to colored concrete that incorporates thematic patterns. It would extend from the proposed Junction Avenue parkway to the new trail bridge described above. A branch of the Promenade would also loop south and become part of the walkway at the front door of the Post Office, continuing across 4th Street to the community center.

In addition to its recreational uses, the Promenade would also provide a catalyst for adjacent redevelopment projects. These projects, described below, add further activity, making the public space more successful.

Residential Redevelopment
The rehabilitated creek and Promenade together enhance adjacent sites for residential development. These sites, with scenic views to the north and city conveniences to the south, include:

• *The City public works yard.* This outdated facility should be relocated to provide a better base of operations and open its creekside site for redevelopment. A possible relocation site might be available land within the industrial park. A probable

Figure 7.3
Bear Butte Promenade Master Plan
1 Dudley Roundabout
2 Promenade Entrance
3 Residential over parking at Floodplain Level (Public Works Yard Site)
4 Lynn's DakotaMart
5 Townhomes or Live/Work Homes
6 US Post Office
7 Sturgis Community Center



reuse option is two to three stories of apartments over parking at ground level. Parking can provide dual use during the Rally and takes housing out of portions of the site within a 100–year flood plain. Some commercial uses could also be incorporated into the promenade level. The buildings would front along the Dudley Street extension, with rear access and balconies along the greenway.

- *The open site between DakotaMart and the Post Office.* The conceptual plan suggests a double row of townhomes with a central access drive serving garages. The north row is oriented to the Promenade, while the street–oriented front row faces the extended Dudley Street.

Central Sturgis Financing Programs

The ambitious private and public development program for Central Sturgis will pay major dividends to the community and the people who live in and visit it. However, incentives and funding sources will be necessary to provide the necessary front–end momentum. These sources fall within two basic categories:

- **FINANCING AND REGULATORY INCENTIVES** to encourage investment, upper level reuse, and extended occupancy.

- **AN INCREASED RALLY REVENUE STREAM** for reinvestment in Main Street enhancement and product improvement.

In addition, design guidelines should be applied to projects that benefit from funding assistance or infrastructure investments. These guidelines would be enforced through specific development agreements for projects receiving funding assistance through tax increment financing (TIF) or enterprise funds.

Financing and Regulatory Incentives

Because Rally economics tend to reward property owners and business operators for taking the low–risk route of maintaining a very short season, financing incentives and removal of obstacles may be necessary to encourage desirable investment in buildings and businesses. Such a program should be coordinated with the business recruitment efforts described above, and include the following approaches:

• *Using tax increment financing (TIF) to assist targeted development projects.* Uses of funds should include acquisition and redevelopment of vacant sites and rehabilitation and adaptive reuse of existing buildings. TIF uses the added value created by a redevelopment project to finance project costs. Especially appropriate uses include adaptive reuse of upper levels of buildings for residential or office uses; façade rehabilitation; and new development unless a new project causes demolition of a National Register–listed or eligible property.

• *Developing a targeted business enterprise fund.* While enterprise funds, which typically provide initial capitalization assistance to new businesses, can entail significant risk, such a program could complement business recruitment efforts. Capitalization of a fund could be derived from permit fees or business assessments on vacant lands or buildings occupied only during the Rally. This fund would provide short–term capitalization during the first years of operation, and would require repayment with interest or revenue participation to replenish capital.

• *Creating a downtown development authority (DDA) with the ability to acquire and reuse properties.* Such a corporation could buy properties on a voluntary basis, redevelop them for subsequent use, or convey them for private redevelopment. A DDA could continue to own and/or operate certain kinds of projects, such as a multi–tenant retail incubator or art exhibition/sales space.

• *Recalibrating property tax assessment policies.* Assessment policies based on land and improvement value rather than revenues further discourages owners from improving their properties for year–round operation.

• *Reviewing existing city ordinances for obstacles to desirable development.* City statutes should not unnecessarily obstruct desirable change or development. Yet, laws from another era can discourage such desirable outcomes as upper level building reuse and outdoor dining. Sturgis should complete an audit of existing legislation, and remove legislative obstacles to desirable Main Street development without compromising public health or safety.

Increased Rally Revenue Stream

The Sturgis Rally generates incredible economic activity in the city. While Sturgis realizes revenues from sales taxes and permit fees, most proceeds are used for the costs of the event itself – security, visitor accommodations, utilities, print material, and organization. The city's net revenue appears to be very small, estimated in the range of $300,000. This leaves little funding for either enhancing the product that Sturgis offers Rally visitors, or for the annual impacts on the city such as vacant property, or excess infrastructure capacity.

In order to fund community enhancements that specifically benefit Rally participants and other visitors, Sturgis should establish a time–limited funding source, possibly based on vendor permit fees, a sales tax surcharge, or property assessment policy to generate at least $1 million annually to devote to central district improvements, including the capital projects and enterprise funds identified by this plan. These additional costs would be relatively inconsequential to Rally businesses and visitors, but would produce highly visible benefits to both that would further increase the popularity of this great event and improve the ability of Sturgis to attract other programs.

Design Guidelines

Specific design guidelines should be created to guide development assisted by public infrastructure or project financing. These guidelines should address such issues as:

• *Main Street building setbacks.* Generally, guidelines in Main Street districts include mandatory build–to lines, requiring new structures to be built to the street right–of–way line. However,

the extraordinary crowds during the Sturgis Rally and the street's relatively narrow width and tight sidewalks suggest that setbacks are permissible and even desirable, provided that the space in front of the building is used for pedestrian areas, seating, or other public open space; and that the building design in some way maintains the suggestion of the property line. This could be done through seating walls, open facades, railings separating an outdoor eating area or plaza from the main sidewalk, or other techniques.

• *Building Façades.* The Main Street public realm, while important, is the foreground for Main Street structures. Generally, façade upgrades should restore windows similar in character to original features; replace inappropriate storefronts with features that reflect original design; and include awnings, doors, and other features that add scale. New construction should maintain some of the rhythms and dimensions of traditional Sturgis architecture. However, diversity and large statements, particularly in Sturgis, are also appropriate and a uniform look is neither necessary nor even desirable along this street.

• *Signs.* A majority of business signs are flat, wall mounted signs, although some canopy and projecting signs are present. Well–designed projecting signs can be very attractive in a main street setting, but back lighted, projecting box signs should be avoided and replaced. Signs should not obscure large areas or major design features of building facades. The artistic use of materials such as neon or LED's is also encouraged in the downtown core.

Buildings on Main Street Sturgis. Many of the street's buildings have been substantially changed by renovations and "modern–ized" facades over time. A Deadwood–style historic restoration is not necessary or fully appropriate for Sturgis, but a well–designed enhancement program would improve the district's business and aesthetic environment.

Design Guidelines for a Main Street Community. These guidelines, from the downtown plan for Belle Plaine, Iowa, provide key recommenda–tions for each building in a historic town on the Lincoln Highway. A similar process could apply to Sturgis.

JUNCTION AVENUE

Junction Avenue is the second of the key districts referenced in this plan. Within the rubric of the key district concept, Junction Avenue takes on a number of different roles, including:

- Between I–90 (Exit 32) and Harmon Street, a major visitor gateway and commercial corridor.
- North of Harmon Street, a residentially scaled, mixed use urban corridor serving local commercial needs north of Harmon Street.
- An approach route and crossing street in the traditional "main street" district between Sherman and Lazelle Streets.
- A north–south link through Sturgis, connecting the natural environment of Sly Hill and the Bear Butte region on the north to Vanocker Canyon and Black Hills Natural Forest to the south.

Policies and actions addressing the Junction Avenue corridor are described more fully in Chapter Six, and include:

• *Urban Corridor mixed use zoning north of Harmon Street.* Applying a new Urban Corridor mixed use zoning district to the area between Sherman and Harmon Streets. This zoning district will permit introduction of low–impact retail and service uses, provided that residential scale is maintained, houses adjacent to and along the street are not negatively affected by new uses, front yard parking and signage are strictly limited, and other measures are adopted that preserve the existing scale and character of the street.

• *Access management and enhancement.* In the commercial corridor between I–90 and Harmon, the city should apply new landscape standards, improve pedestrian access, and implement part of a community–wide wayfinding system. An access management program should also be adopted along this segment of Junction Avenue, to redesign parking lots and driveway accesses to minimize the possibility of center turn–lane conflicts.

• *Spot redevelopment along the southern part of Junction Avenue.* Special emphasis should be placed on the west side of the street between the Vanocker Canyon Road intersection and the canal.

• *Transportation system improvements.* In addition to improved access management, Ball Park Road and Harmon Street should be aligned as well as possible at a reconstructed, signalized intersection. This removes an additional offset conflict point and significantly improves east–west community connectivity.

The environments of Junction Avenue. Top row, auto–scaled uses and development between I–90 and Harmon. Middle row, urban–scaled mixed uses north of Harmon. Above: Approaching Main Street with Sly Hill in the background.

EXIT 32 AND VANOCKER CANYON/CITY LAKES

Exit 32, the junction of Junction Avenue/Vanocker Canyon Road with Interstate 90, is a major area of opportunity for Sturgis, which the city considers to be a potential regional retail center. In addition to serving sites near the interchange, Vanocker Canyon Road is the gateway to another unique but little–known resource: a chain of five small, crystalline lakes that were once reservoirs for the city's water supply. This unusual coincidence of a point of maximum highway access and a public place of sublime and remote beauty can be:

- A focus for iconic, large–scale businesses and attractions that combine the Sturgis brand and outdoor life.
- A gateway to Sturgis and the Black Hills.
- A unique resort and scenic resource within minutes of the center of Sturgis, capitalizing on Vanocker Canyon and the currently closed City Lakes.

Strategies that will help achieve these potential roles include:

• *Unique retail targets.* Conventional large format retailers located in Rapid City and Spearfish already serve the Sturgis area, and are very unlikely to open another location at Exit 32. Consequently, the most likely targets are large specialty retailers who can benefit from the Sturgis brand, an I–90 location at a gateway to the Black Hills, and nearby local outdoor resources. Logical possibilities include large scale outdoor goods stores, a signature motorcycle dealership, and other regional and visitor–oriented retailers.

• *Site development.* Sites that have the size, access, and features to accommodate these uses must be available. In some cases, this involves replats, new streets or realignments of existing streets, supporting infrastructure, and site amenities.

• *Outdoor attractions consistent with the carrying capacity of land.* City Lakes offers serenity and beauty to its visitors, but simply does not have the capacity or infrastructure to support a large development. On the other hand, city services are readily available to a 50–acre site adjacent to Black Hills National Forest and currently owned by the South Dakota Game, Fish, and Parks Department west of Elk Road. The GF&P site, in tandem with City Lakes, can provide a unique visitor experience that supports retail ambitions and responsibly uses these incredible environmental features.

Components of a program to implement these strategies include:

City Lakes. Top, one of the string of five lakes that define this unique, city–owned resource. The Centennial Trail (above, left) runs near the city site and connects to Fort Meade (above, right) and Bear Butte State Park.

- **SITE CONFIGURATION:** establishing major sites that are attractive to retail targets and provide excellent regional and local access.
- **GF&P SITE:** securing this parcel to meet neighborhood park needs and regional resort opportunities.
- **STURGIS LAKES PRESERVE:** a low impact use of the Sturgis Lakes area that complements the acquisition and develop–ment of the Elk Road property.
- **TRAMS AND TRAILS:** implementing a green transportation system to link the resort and passive use components of the Vanocker Canyon program.

Commercial Site Configuration

Public action, in cooperation with private owners, can create three significant sites with the ability to accommodate desired commercial uses:

• *Site 1, north of I–90 and east of Junction Avenue.* This site is formed by curving Anna Street north to Glover Street, and south to Malibu Loop. The concept provides an additional access for the Hillside Subdivision to the east of this site.

• *Site 2, south of I–90 and west of Junction Avenue.* This site is improved by connecting Moose Drive into the Otter Drive alignment, providing continuous collector access along the south side of I–90 between US 14 and Junction Avenue. First Avenue can also be extended between Junction Avenue and Vanocker Canyon Road. These sites, between the railroad and extended 1st Avenue, can accommodate office and small format commercial development.

• *Site 3, southwest of Vanocker Canyon Road and Junction Ave.* This sign, referred to as the Marcotte Property, provides a major opportunity for mixed use development, including a signature retail project. The concept for the Marcotte site south of Pineview calls for a major regional or national retailer with a plan enhanced to provide exemplary stormwater performance and a unique setting.

Property north of Pineview would provide for mixed uses, including commercial along Junction Avenue, residential development to the west along Vanocker Canyon, and office and smaller–scale commercial along an extended 1st Street.

Game, Fish, and Parks Site

The city should acquire the Elk Road site from the Department, using the northeast corner as a neighborhood park to serve the needs of the south part of the city. The proposed trail system serves this park and connects it to Sturgis north of I–90. The southwestern two–thirds of the site, at the foot of the National Forest, would be developed as a major resort with conference center, using the existing "Moose Drive" as primary access. This resort would also be a major trailhead, providing a base for trails that radiate up into the Hills.

The elements for Vanocker Canyon and the Lakes area are iden–tified in Figure 7.5 include:

Trailhead Resort (1). Acquisition and reuse of available GF&P property as a resort and major trailhead to the south, with a neighborhood park serving the south part of Sturgis along an urban trail extension.

National Forest Trails (2). Multi–use trails (including possible motorized use) radiating on approved paths from the trailhead.

Moose Drive Extension (3). The new alignment of Moose Drive,proposed in the Transportation Plan, provides direct access to Vanocker Canyon Road and Exit 32.

Tram Route (4). A tram connecting Trailhead Resort to major new retail and office development, Vanocker Canyon, and the Sturgis Lakes Preserve.

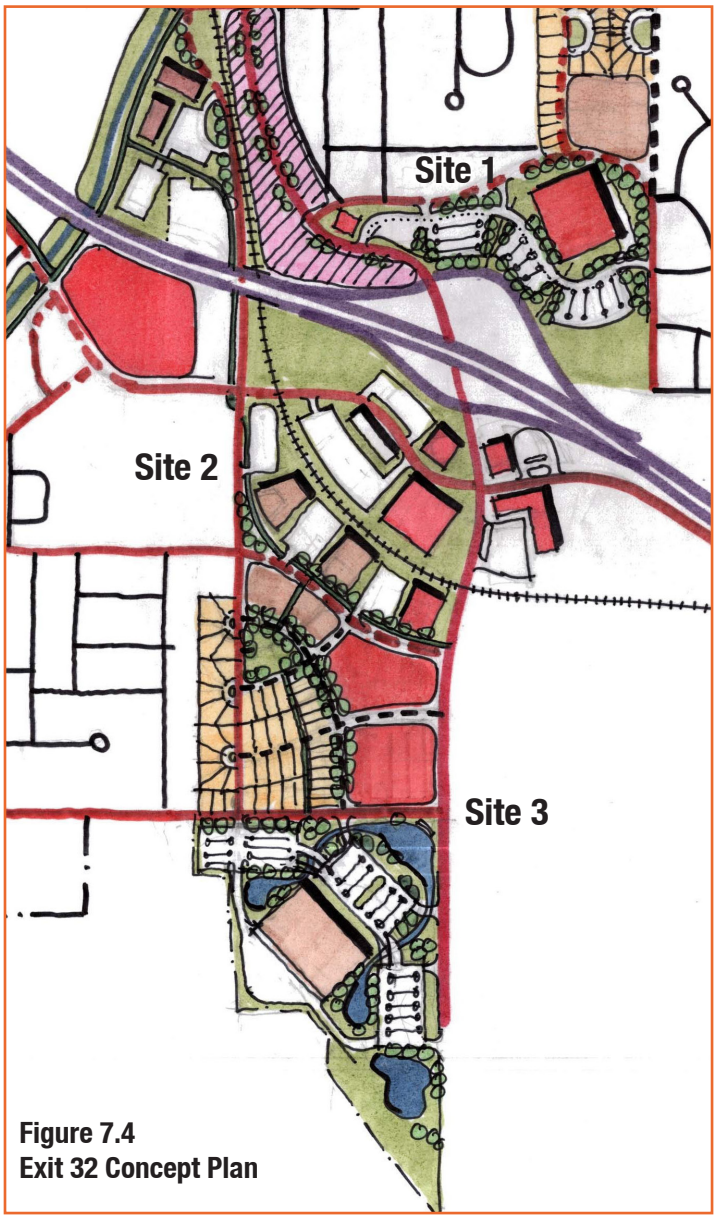


Figure 7.4
Exit 32 Concept Plan

Major Redevelopment (5). An option to acquire Vanocker Canyon Road site south of Exit 32, and implement a major mixed use redevelopment, including signature outdoor retailing.

Sturgis Lake Preserve (6). Use of the unique chain of lakes for low–impact retreat, hiking, and passive natural uses.

Retreat Cluster(7). Enhancement or replacement of existing cabin cluster as a retreat center, with an emphasis on sustainable practices and minimum environmental impact. Access is provided by tram along the existing access road.

8. Centennial Trail. A major hiking trail to National Cemetery and Fort Meade and an extension to Sturgis Lakes Preserve.

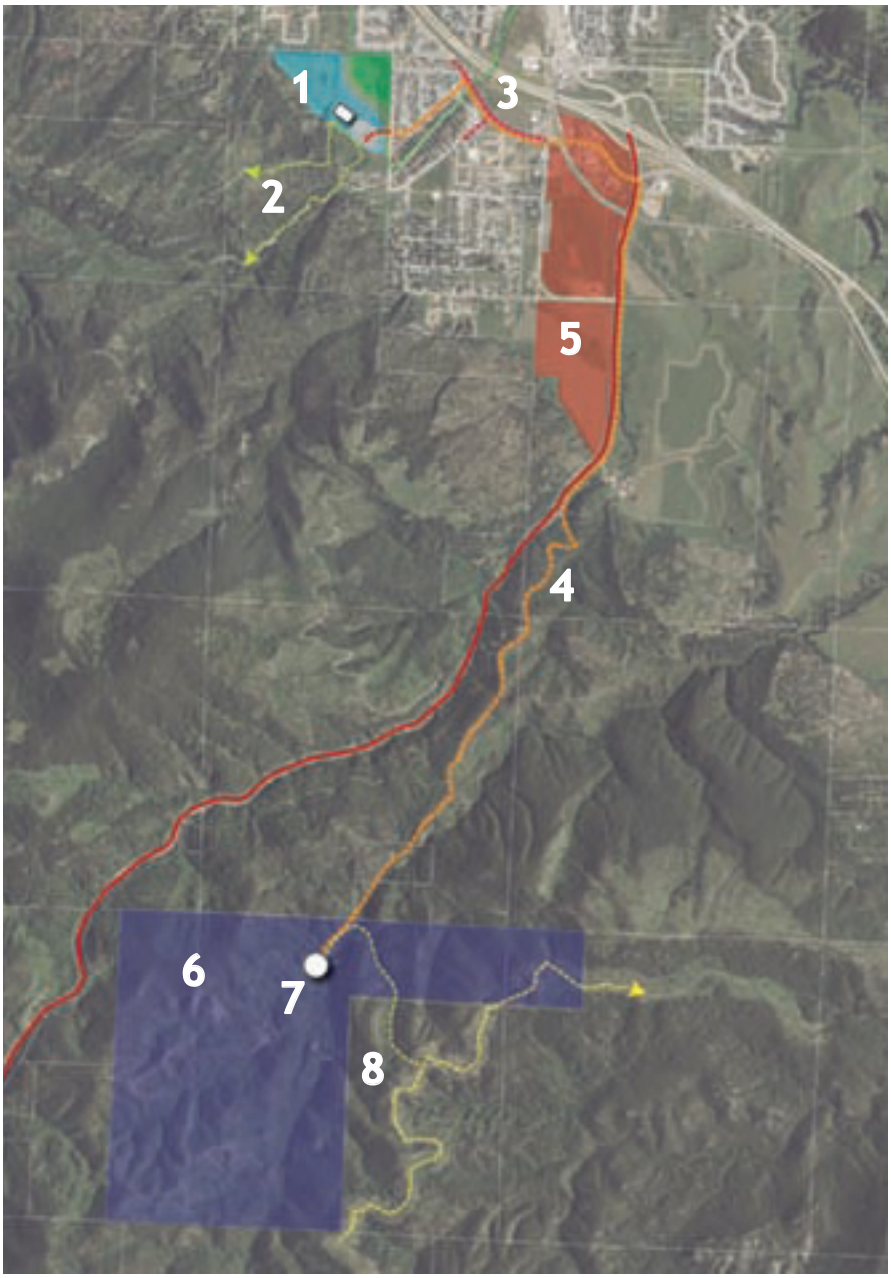


Figure 7.5
City Lakes/Vanocker Canyon Resort Concept

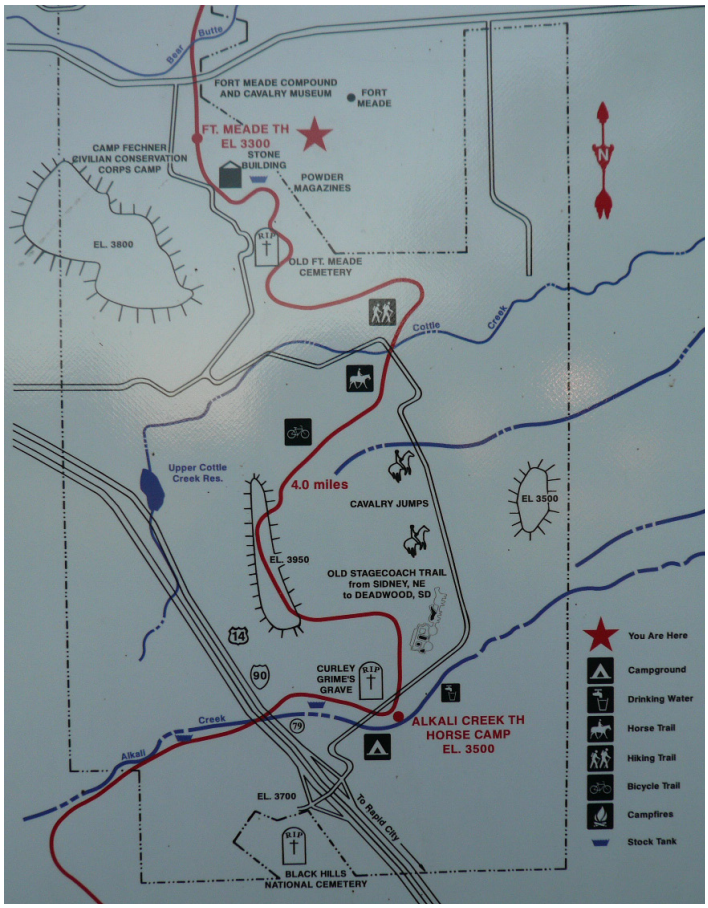
Sturgis Lakes Preserve

The City Lakes area will be utilized as a low–impact, controlled access preserve, providing both public use and working in concert with the resort on the Elk Road site. These facilities could be operated as two faces of a unified operation – major resort and conference functions below with more passive uses such as hiking and canoeing above. The lakes may also include conces–sions, including a place to try goods sold by the proposed outdoor retailer.

The Lakes Preserve could be enhanced or replaced as a retreat center, with an emphasis on sustainable practices and minimum environmental impact.

Tram and Trails

While a road leads to the Sturgis Lakes Preserve, public access by automobile would not be allowed. Primary access would be provided by tram from the Elk Drive resort to the Preserve along this road, with a stop at the major retailer on the Vanocker Canyon Road site. Overland access by mountain bike and hiking trail would also be permitted, with an extension into the Preserve constructed from the nearby Centennial Trail. This system would connect the Preserve to Fort Meade and the National Cemetery.



Centennial Trail. Map shows area from Fort Meade to near City Lakes.

8

Implementing the Sturgis Plan

Sturgis should implement the visions and actions presented by the plan through a realistic program that is in step with the resources of the community. The previous chapters, with their narratives and maps, are the core of the Sturgis Plan. This section addresses the scheduling of plan implementation by both public agencies and private decision–makers.

This final chapter discusses:

- **Development Policies and Actions.** This section summa–rizes the policies and actions proposed in the Sturgis Plan, and presents projected time frames for the implementation of these recommendations.
- **Annexation Policies**. This section outlines policies for eval–uating areas for annexation
- **Plan Maintenance.** This section outlines a process for maintaining the plan and evaluating progress in meeting the plan's goals.

Development Policies and Actions

Figure 8.1, the Implementation Schedule, present a concise summary of the recommendations of the Sturgis Plan. These recommendations include various types of efforts:

- **Policies:** continuing efforts over a long period to implement the plan. In some cases, policies include specific regulatory or administrative actions.
- **Action Items:** Specific efforts or accomplishments by the community.
- **Capital Investments:** Public capital projects that will implement features of the Sturgis Plan.

Each recommendation in the plan is associated with a time frame for implementing recommendations. Some recommendations require ongoing implementation. Short–term recommendations indicate implementation within five years, medium–term within five to ten years, and long–term within ten to twenty years.

Figure 8.1: Implementation Schedule

	Type	On– going	Short	Medium	Long
Balanced Residential Neighborhoods Sturgis' new residential development should be focused in growth centers that are contiguous to and connected with the established city and are feasibly served by urban infrastructure.	Policy	X			
– Sturgis should provide mixed residential styles and densities to accommodate a range of housing preferences and needs.	Policy Action	X			
– Sturgis should incorporate neighborhood greenways into the city–wide trail and greenway system.	Policy				
– Sturgis should provide an interconnected street system between neighborhoods that is designed to accommodate all modes of trans–portation and creates a strong neighborhood feel.	Capital	X		X	
– Sturgis should develop an arterial and collector street system on the south side of I–90 that includes Short Track Road, Dolan Creek Road, Otter Drive, and Moose Drive.	Capital			X	
– Integrate stormwater retention facilities into greenway systems and project design to reduce stress on the city's surface drainageways.	Policy	X			
Commercial and Industrial Growth Commercial development should occur in areas that serve the present and future population of Sturgis effectively and conveniently and capitalize on access and natural assets. Industrial growth should occur in areas that logically continue existing patterns, and have good transportation and infrastructure service.	Policy	X			
– Mix uses along significant community corridors and within planned projects to create more efficient and diverse urban settings, and to integrate residential areas with local commercial and office services.	Policy	X			
– Establish standards for parking, project appearance, pedestrian access, and relationship between residential and non–residential land uses.	Action		X		
– Encourage business park development that accommodate high–quality office, research, and limited industrial uses in marketable settings.	Policy	X			
– Include adequate landscaping and, where necessary, buffering for new development, especially along high visibility corridors. High impact uses should be buffered from surrounding lower intensity uses.	Policy Action	X	X		
– Provide transitions between natural environments and Sturgis' urbanized edge.	Policy Action	X	X		
Transportation Connectivity Sturgis' future transportation system should be the basic structure on which the city grows.	Policy	X			

Figure 8.1: Implementation Schedule

	Type	On– going	Short	Medium	Long
Transportation Connectivity (cont.)					
– Sturgis' future streets should be designated ahead of development and dedicated as growth occurs.	Policy	X			
– Each development project should be evaluated in relation to the broader land use plan and transportation system.	Policy	X			
– New developments should provide connections to the collector and arterial system but also to adjoining developments along local streets, avoiding isolated enclaves.	Policy	X			
– Future streets should have multi–modal features including sidewalks, trails, and bike lanes as appropriate to the street's design.	Policy Capital	X			
– Future street sections should have a scale that is appropriate to the surrounding land uses and sense of place that residents want to create.	Policy	X			
Recreation Amenities					
Development of a strong parks and trails system should be an extension of the Black Hills experience. To do this the city will need to develop a green web within the community, connecting recreation features, neighborhoods, and community destinations.	Capital		X	X	
– Offer neighborhood park services within a comfortable walking distance of approximately 0.5 miles for all Sturgis residents.	Policy Capital	X	X		
– Preserve environmentally sensitive areas including drainage swales, steep slopes, native prairie, and wetlands.	Policy	X			
– Permeate the city with the greenways, connecting relatively separated neighborhoods with each other and major features including new commercial development south of I–90.	Capital		X	X	
– Identify and market the Sturgis park and recreation system as a signature feature for the community.	Policy	X			
– Secure public access to trails and pathways through easements and charitable donations rather than outright property purchases to the greatest degree possible.	Policy Capital	X			
– Connect the city's trail and pathway system to the Black Hills, including the Centennial Trail and National Forest.	Capital		X		
– Provide clear wayfinding graphics and trail makers.	Capital		X		
–Provide equivalent quality park services to new growth areas, including areas north and south of Interstate 90.	Capital			X	X
–Develop specific plans for the responsible development of the former City Reservoirs and the Pineview property currently owned by the South Dakota Game, Fish, and Parks Department but potentially available to the city.	Capital			X	

Figure 8.1: Implementation Schedule

	Type	On– going	Short	Medium	Long
A Strong Core					
Revitalization efforts should create a rejuvenated image center and regional destination.	Policy	X			
– Incorporate features into the core that extend the legend and expe–rience of Sturgis beyond the two–week period surrounding the Rally.	Action		X		
– Improve the function, safety, and appearance of the Main Street district.	Capital			X	
– Integrate the key corridors of Sturgis – Main Street, Lazelle Street, Bear Butte Creek, and Junction Avenue – that form the fabric of the city core.	Action		X		
– Establish development design guidelines consistent with the scale and proportions of the core district.	Action		X		
– Provide incentives and policies that lead to more intensive use of buildings and sites in the core.	Action		X		
– Increase the number of people living in and around the core.	Action				X
Junction Avenue Corridor					
Junction Avenue should present a strong first impression to visitors. Strategies and policies should include:	Action				
– Improved landscaping, wayfinding, and traffic management between the canal and interchange.	Capital			X	
– A new urban corridor zoning district permitting specific types of office and commercial uses, while ensuring residential scale and character.	Action		X		
– Development of a parkway link connecting the three parallel "central district" corridors: Main, Lazelle, and Bear Butte Creek.	Capital			X	X
– Encouraging rehabilitation or adaptive reuse of existing structures.	Policy	X			
Junction Avenue: Harmon To Main		All Policies	Develop–		
– Additional Land Uses. Permitted uses should include residential, office, and low impact retail uses.	Policy	are	ment of		
– Prohibition of parking as a principal use. Parking and open lots are permitted only as accessories uses to a permanent, primary commer–cial, office, or residential use.	Policy	On–going	necessary		
– Building scale. Maximum footprint of any building shall not exceed 3,000 square feet. Residential details and pitched roofs should be incorporated into the design of new buildings.	Policy		regulations		
– Parking along Junction Avenue. No more than 40% of the frontage of a property along Junction Avenue may have adjacent off–street parking.	Policy				
– Landscaping. Any parking adjacent to Junction Avenue must have a landscaped setback of at least 20 feet.	Policy				

Figure 8.1: Implementation Schedule

	Type	On– going	Short	Medium	Long
Junction Avenue: Harmon To Main (con't.)					
– Signage. All new signs must be monument or ground signs. Total signage area (Square Feet) shall be no more than 50% of the street frontage (Lineal Foot) along Junction Avenue.	Policy				
– Project Review. All new development projects must be reviewed and approved by the Planning Commission.	Policy				
Junction Avenue: South of Harmon					
– Site landscaping. All new projects should be required to have a minimum amount of landscaping.	Policies	X	Necessary regulations		
– Access Management. To improve traffic movements along the corridor parking lots should be redesigned for greater efficiency, access points should be consolidated, and driveway alignments should be directly opposite each other wherever possible.					
– Traffic Control. To improve street linkages and safety the Ball Park Drive/Harmon Street intersections should be aligned and signalized.	Capital			X	
– Redevelopment. The city should encourage redevelopment of underused sites. This may include the use of incentive programs such as TIF.	Policy Action				X
Park System Enhancements					
Improvements to Sturgis' Park and Recreation system should include both existing facility improvements and long term system enhancements	Capital	X			
Existing Park Facility Enhancements					
– Establish a systematic park improvement program with additional staff for implementation.	Policy Capital	X	X		
– Identify a skate park location and develop the facility.	Capital			X	
– Develop additional volleyball and basketball courts.					
– Prepare a campus master plan for Sturgis Community Center and the surrounding property. Include development of an outdoor interactive water feature as a focus of the Community Center campus.	Capital		X		
– Upgrade older equipment at the Community Center.	Capital		X		

Figure 8.1: Implementation Schedule

	Type	On– going	Short	Medium	Long
Long Term System Enhancements					
– Development of the "Pineview" site linked to other parks by the city trail and pathway network.	Capital			X	
– Development of a Village Square as part of the proposed "urban village" west of the ballpark complex.	Policy				X
– Incorporation of neighborhood parks and open spaces into new residential development areas.	Policy Capital			X	X
– Continuation of the southwest trail, now under construction, to the proposed Southside Community Park along the drainageway and linking to the Dolan Creek Road sidepath.	Capital		X		
– Develop offshoot trails from the main Bear Butte Creek pathway, including a linkage to the Community Center.	Capital			X	X
– Develop continuous sidepaths along the extended Moose Drive, Inner Ring, and US 14 corridors. Establish design standards that increase intersection safety and retrofit existing sidepaths to these standards.	Capital			X	X
– Develop a pathway along the east edge of the ballpark/fairgrounds complex, connecting schools and recreational facilities to central resi–dential areas.	Capital		X		
– Create a grid of "bicycle boulevards" on continuous local streets parallel to arterials. Provide sidewalk continuity on all part of the grid.	Capital		X	X	
Sturgis' Green Environment Sturgis should also look at ways to extend the Black Hills experience beyond traditional park and recreation areas and into other community systems.	Policy	X			
Natural Resource Areas and Other Open Spaces Sturgis should protect environmental resources like steep slopes and wetlands and address stormwater management issues that can be incor–porated into the city's green network.	Policy Capital	X			
Urban Forestation The city should work with residents to preserve and expand the city's existing street canopy.	Policy Capital	X			
Transportation: Access for All The transportation program for Sturgis should meet current and future mobility needs while enhancing the character of the city's environment	Policy	X			

Figure 8.1: Implementation Schedule

	Type	On– going	Short	Medium	Long
Street Connectivity As Sturgis grows, it should maintain a connected street network, providing alternative routes for moving around the city.	Policy	X			
– Interstate. Adequate linkages and signage in these areas will be essential to properly move traffic through developing areas.	Policy Capital		X		
– Principal Arterials. Priorities for Sturgis' principal arterials include improved access management, wayfinding, and corridor enhancement.	Action Capital			X	
– Collector system. A continuous collector system should be developed to assure that the city's neighborhoods remain connected to each other.	Policy	X			
– Complete streets and parkways. The "complete street" concept applies to both arterial and collector streets and should be integrated into the transportation, park and pathways networks of the city.	Policy Capital	X			
– Local street networks. Developments should provide a web of local streets for well–distributed access. Subdivision standards should establish minimum required levels of street connectivity.	Policy	X			
– Pedestrian and bicycle links to activity centers. Sturgis' pedestrian and trail system should be functional as well as recreational, providing access to major centers of activity.	Policy	X			
– A system of interconnected sidewalks should be constructed along designated routes providing safer pedestrian access for all residents.	Capital			X	
– Context sensitivity. Street design should relate to the specific urban context of the street.	Policy	X			
– Minor Urban Arterials. Major street investments should reinforce the minor arterial system and provide alternative local through routes to Lazelle and Junction.	Capital				X
Problem Areas – Southwest Connectivity. This problem is addressed by a new inner loop that extends the 8th Street underpass at the railroad, continues south/southwest to Interstate 90, and follows the north edge of I–90 to Dolan Creek Road.	All will require Capital funding	X		Timing will depend on funding and demand	
–West Main Connection/Avalanche Road connections to Lazelle Street.					
– Junction Avenue intersections with Ball Park Road and Harmon Street. A redesign of this intersection to align Ball Park Road and Harmon Street.					
– Collector access south of Interstate 90. The plan proposes a contin–uous collector by linking Moose Drive, Otter Road, and Dickson Drive to the new Vanocker Canyon Road (SD 79).					
– Neighborhood short–cutting. Undesirable use of residential streets can be discouraged by using a variety of traffic calming devices that still continue local, low–speed access.					
– Local connectivity in new development. New developments should provide a web of local streets for well–distributed access. Subdivision standards should establish minimum required levels of street connectivity.	Policy				

Figure 8.1: Implementation Schedule

	Type	On– going	Short	Medium	Long
Balanced Transportation Sturgis's neighborhoods, activity centers, civic districts, and major open spaces should be linked by a balanced transportation network that integrates motor vehicles, pedestrians, bicycles, motorized wheelchairs, and other low–speed "personal mobility vehicles."	Policy	X			
Transit For a Small City The city should work with Prairie Hills Transit to establish a flexible local transit loop that serves key community destinations, provides schedule flexibility that serves specific needs at specific times, and has route diversion capabilities.	Action		X		
Housing for All The city should preserve existing housing and develop new housing to support new growth and community development strategies.	Policy	X			
Neighborhood Conservation Sturgis should implement neighborhood conservation programs, including rehabilitation programs to preserve the city's oldest housing stock.	Action		X		
– Land Use Policies. Sturgis should maintain zoning and land use policies that protect the integrity of its neighborhoods.	Policy	X			
– Rehabilitation. Sturgis should develop rehabilitation programs (including the use of private loans leveraged by Community Development Block Grant and HOME funds) to promote the stabilization of housing stock that is in need of significant rehabilitation.	Policy Capital		X		
– Infill Development. Sturgis should encourage the development and redevelopment of vacant and under used lots within the existing city.	Action Capital		X		
A Variety of Housing Types Sturgis should provide a variety of housing for residents at all stages of their lives, including young adults and seniors.	Policy Action	X			
Senior Housing The city should encourage the construction of both independent and assisted living residential development for seniors.	Action Capital		X		
Gateway Housing Sturgis should encourage the development of entry level housing that helps young families build equity in a community.	Action		X		

Figure 8.1: Implementation Schedule

	Type	On– going	Short	Medium	Long
Main Street Strategies					
– Establishing and reinforcing Main Street as a specialized business district.	Policy Action		X		
– Capitalizing on the Sturgis Brand	Capital	X			
– Improving Main Street functionally and aesthetically.	Capital		X		
– Providing better public accommodations and spaces.	Capital		X		
– Providing incentives for reinvestment.	Capital		X		
– A renewed street environment that expresses community themes and extends the experience beyond Rally week.	Policy	X			
– Development of complementary attraction and businesses to extend length of the visitor season.					
Lazelle Street Strategies					
– Improving the visual quality of the street.	Capital		X	X	
– Using land on the Lazelle corridor efficiently.	Policy				
– Providing secondary circulation.	Capital	X			
– Create a signature thematic feature at or near Lazelle and Junction.	Capital				X
– Lazelle landscape. Upgrading the visual and pedestrian quality of the street to reduce the impact of open land and provide a better environ–ment for both seasonal visitors and year–round residents.	Capital		X		
– Local access framework. Providing local circulation to complement Lazelle Street and encourage more productive land use.	Capital			X	
– Parking lot redesign and new development. Using land more effi–ciently to accommodate both Rally needs and take advantage of potential development sites along Lazelle.					
– Lazelle and Junction. Proposing a signature development project at this crossroads.	Action		X		
– Junction Parkway. Connecting the urban environment of Lazelle Street with the natural setting of Bear Butte Creek and the hills beyond.	Capital			X	
– Sturgis Community Center. Master planning for the complete indoor and outdoor use of this community anchor on Lazelle.	Capital		X		
– Exit 30. re–planning key elements of this critical community gateway.	Policy		X		

Figure 8.1: Implementation Schedule

	Type	On– going	Short	Medium	Long
Bear Butte Creek Greenway					
– Streambed cleanup, improving the physical quality of the creek and its banks.	Capital		X		
– Bear Butte Promenade, a lighted walkway that connects Junction Avenue and the Bear Butte Trail with the Sturgis Community Center.	Capital			X	
– Residential redevelopment, using the Promenade and the beauty of Sly Hill and other natural areas to the north to create settings for new housing.	Action			X	
–Trail extension, continuing the trail west along Box Butte Creek to the west side of I–90 and continuing along US 14 to Boulder Canyon and Deadwood.	Capital		X		
Central Sturgis Financing Programs	Policies Actions	X	X		
– Financing and regulatory incentives to encourage investment, upper level reuse, and extended occupancy.					
– An increased rally revenue stream for reinvestment in Main Street enhancement and product improvement.					
– Using tax increment financing (TIF) to assist targeted development projects.					
– Developing a targeted business enterprise fund.					
– Creating a downtown development authority (DDA) with the ability to acquire and reuse properties.					
– Reconsidering property tax assessment policies.					
– Reviewing existing city ordinances for obstacles to desirable development.					
Design Guidelines					
Specific design guidelines should be developed to guide development assisted by public infrastructure or project financing.	Policy		X		
Exit 32 and Vanocker Canyon/City Lakes Area					
–Site configuration, establishing major sites that are attractive to retail targets and provide excellent regional and local access.	Action		X		
–Forest service site, securing the Elk Road site to meet neighborhood park needs and regional resort opportunities.	Capital		X	X	
–Sturgis Lake Preserve. A low impact use of the Sturgis Lakes area that complements the acquisition and development of the Elk Road property.	Capital			X	
–Trams and trails. Implementing a green transportation system to link the resort and passive use components of the Vanocker Canyon program.	Capital		X	X	

Figure 8.1: Implementation Schedule

	Type	On– going	Short	Medium	Long
Public Facility Priorities					
– Review and evaluate space needs for City Hall and the Library.	All Capital		X		
– Identify additional police storage.			X		
– Identify an east side first responders sub–station during the rally.			X		
– Complete a long–term master plan for the Community Center, including an outdoor water feature.			X		
– Relocate the Public Works Department out of the downtown to a more appropriate location.				X	
– Extend the airport runway.					X
Water and Sanitary Sewer					
– Complete wastewater treatment facilities assessment.	Capital		X		
– Establish a long term (10 – 20 years) water system improvement plan, including schedule and funding.			X		
– In conjunction with any street improvement project the city should upgrade aging water, sewer, and storm sewer infrastructure.		X			
Stormwater Recommendations					
– Implement and complete the goals adopted by the city's Stormwater Management Program.	Capital Action				X
– Establish a no net flow rate increase standard for major new devel–opments to prevent overloading existing drainage corridors.	Policy	X	X		
– Remove trash and sediment from storm sewers and Bear Butte Creek.	Action		X		
– Improve the environmental and visual quality of the Bear Butte Creek corridor, particularly west of Junction Avenue.	Capital Action			X	
– Develop uplands open spaces on key properties to reduce flows into the city basin.	Action			X	
– Develop detailed system maps for utilization by the city and developers.	Action		X		
Park Project Priorities					
– Establish Park Improvement Program & additional staff for implementation.	Capital		X		
– Identify a new location for skate park and additional volleyball & basketball courts.					X
– Identify location for outdoor water feature/splash park.			X		
– Upgrades of older equipment in the Community Center.			X		

Annexation Policy

Sturgis should implement an annexation policy that incorporates future development areas and meets state statutory require–ments. The city should work closely with Meade and Lawrence Counties to ensure consistent development patterns.

The Development Concept for Sturgis is predicated on continued community growth, generated by a sound economy and greater success at community marketing. The development concept calls for urban development on sites that are currently beyond the corporate limits. As a result, sound community growth will require annexation to accommodate land needs during the planning period.

Voluntary annexation of developments should occur before extension of city services. Sturgis should also adopt an annexa–tion policy that establishes objective criteria for annexation and identifies candidate areas for incorporation into the city. Areas considered for annexation should meet at least one of the following criteria:

- *Areas with Significant pre–existing development.* Areas outside the city that already have substantial commercial, office, or industrial development are logical candidates for annexation. In addition, existing residential areas developed to urban densities (generally higher than 2 units per acre) should be considered for potential annexation.

- *Protection of Future Growth Areas.* In order to allow the city to guide its growth and development more effectively, future growth areas will need to be managed through annexation and annexation agreements with surrounding communities. Annexation will allow the city to extend its zoning jurisdiction to adjacent areas, thus guiding development in a direction that will provide safe and healthy environments.

Public Services. In many cases, public service issues can provide compelling reasons for annexation. Areas for consideration should include:

- Parcels that are surrounded by the city but remain outside of its corporate limits. In these situations, city services may provide enhanced public safety with improved emergency response times.
- Areas that are served by municipal infrastructure. Sturgis' existing sewer and water system is adjacent to and extends to areas outside the city.

Areas to be served in the short–term by planned improvements, including trunk sewer lines and lift stations.

- *Community Unification.* While difficult to quantify, a split between people who live inside and outside the corporate limits can be harmful to the town's critical sense of community and identity. Establishing unified transporta–tion and open space systems and maintaining a common commitment to the city's future can be important factors in considering annexation.

- *A Positive Cost Benefit Analysis*. The economic benefits of annexation, including projected tax revenues, should compensate for the additional cost of extending services to newly annexed areas. The city's review policy for annexation should include the following information:

  - Estimated cost impact and timetable for providing municipal services.
  - The method by which the city plans to finance the extension and maintenance of municipal services.
  - Identification of tax revenues from existing and probable future development in areas considered for annexation.
  - Calculation of the added annual operating costs for urban services, including public safety, recreation, and utility services, offered within newly annexed areas.

Plan Maintenance and Support

Because the scope of the Sturgis Plan is both ambitious and long–range, its recommendations may appear daunting. Thus, the City should implement an ongoing planning process that uses the Plan to develop year–by–year improvement programs. In addition, this process should evaluate the plan on an annual basis in consideration of the development events of that particular year. Such a process should include the following features:

Annual Action And Capital Improvement Program

A key feature of this process is an annual action and capital improvement program. In such a program, the Planning and Zoning Commission and City Council use the Plan to define annual strategic work programs of policies, actions, and capital investments. This program should be coordinated with Sturgis' existing capital improvement planning and budgeting process, even though many of the Plan's recommendations are not capital items. This annual process should be completed before the beginning of each budget year and should include:

• *A specific work program for the upcoming year.* This program should be specific and related to the City's financial resources. The work program will establish the specific plan recommenda–tions that the City will accomplish during that year.

• *A three year strategic program.* This component provides for a multi–year perspective, aiding the preparation of the annual work program. It provides a middle–term implementation plan for the City.

• *A six year capital improvement program.* This becomes part of Sturgis' capital budget process.

Annual Evaluation

In addition, this process should include an annual evaluation of the Comprehensive Plan. This evaluation should occur at the end of each calendar year. Desirably, this evaluation should include a written report that:

• Summarizes key land use developments and decisions during the past year and relate them to the Comprehensive Plan.

• Review actions taken by the City during the past year to implement Plan recommendations.

• Defines any changes that should be made in the Comprehensive Plan.