

NEVADA  
COMPREHENSIVE PLAN UPDATE  
1984

OCHSNER - Hare & Hare  
Planning Consultants

# Nevada Comprehensive Plan Update

## 1984

**Ochsner • Hare & Hare**

PLANNING CONSULTANTS

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## ACKNOWLEDGEMENTS

This 1984 Comprehensive City Plan is an update of the previous comprehensive plans prepared for the City of Nevada. These include the 1975 plan prepared by Ochsner, Hare & Hare, and the 1965 plan prepared by Hare & Hare.

The 1984 Comprehensive City Plan has been completed with significant involvement by the citizens of Nevada. Citizens and city staff have participated in extensive workshops designed to identify the major issues facing the city in the coming years. Special committees have contributed to both the formation of the plan components and the strategies required for their implementation. The reports of these committees are quoted directly in portions of this document.

The contributions of Nevada citizens and city staff participating in the planning process are gratefully acknowledged.

Dedicated to the memory of Nick Milosevich, Planning Commission Chairman from August 1980 to August 1981.

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## CHAPTER I: FACTORS AFFECTING DEVELOPMENT

### Quality of Life

As Nevada has grown and developed a concern for the "quality of life" has become increasingly important. Citizens have begun to look at economic, social, environmental and political factors in terms of the ways that these forces affect the general quality of life in Nevada and the well being of its residents.

Quality of life is particularly important to Nevada residents. They have expressed their wishes for the city to maintain a quality that might be described as environmentally pleasant, peaceful, and at the same time maintains a level of urban vitality. These two goals are not mutually exclusive. To the contrary, both qualities are essential in achieving a desired city environment for Nevada.

Quality of life does not involve returning to life styles from past days. Even if a city could return to its past, the results would prove undesirable. A community must change, grow and use the technology of the day to maintain and promote the healthy functioning of the city and to continue to provide physical, social and creative satisfaction to its residents into the future.

### Nevada Needs Workshop

Population growth in Nevada should be promoted in conjunction with essential and appropriate planning for environmental amenities. This major goal was identified by numerous Nevada residents and city staff who participated in a three day workshop designed to identify goals and issues facing the city in the coming decade. Without continued growth, the city is expected to stagnate and decline. Without a thoughtful plan for providing urban and environmental amenities, quality of life in Nevada may be expected to decrease.

Citizen attitude is of primary importance in facing the challenges of the city's future. Workshop participants agreed that the city should address the challenges of what they outlined as an ideal future for Nevada. They indicated such goals as population growth to 15,000 by the year 1994, the addition of new industries not harmful to the environment, improved public facilities, housing rehabilitation and construction, commercial revitalization, updated communications and transportation systems, and expanded educational and cultural opportunities.

The ideal future will not be brought about without change. Citizens and public institutions must succeed in achieving a balance between community stability and the turbulence that is required by change and opportunity. Nevada's past is a history of such adaptation.

### Historical Background

The city has experienced numerous and significant changes since Nevada City was founded as the county seat of Vernon County in 1855. After the destruction of the Civil War and the subsequent rebuilding, the county court house was constructed in 1868 and the city became officially incorporated as the City of Nevada in 1869.

During the late 19th century and early 20th century, the city successfully adapted to new industrial and commercial technology. By utilizing these and the advantageously located railroads, the city grew and prospered. Evidence of this period exists in Nevada today in the form of its many architecturally significant and historic homes and commercial buildings.

The industrial and commercial development of the city has also complemented the growth of social, educational and cultural life in the city. Cottey College and the state hospital located in Nevada. The public school system, churches and numerous other institutions grew and developed.

As the role of agriculture decreased during the middle 1900's, (agricultural employment declined 63 percent between 1950 and 1970), new industries were recruited to Nevada and population maintained its moderate yet stable upward momentum. The role of transportation also changed during this time period. Railroad passenger service was discontinued although freight service remained and still remains important to Nevada's industries and commercial establishments. During the past few years new industries have not located in Nevada. This has become of particular concern to Nevada residents.

The nature of transportation to and from Nevada has changed dramatically over the last 121 years. Recently Nevada has become increasingly dependent upon the highway system, automobiles, trucking and intracity bus services. However, there is already growing interest in expanding air and railroad service connecting the city to its ever-expanding surrounding community.

### Regional Setting

Nevada is located in west-central Missouri on the two major highways of U.S. 71 and U.S. 54. These highways link

the City of Nevada with the surrounding communities of Eldorado Springs, Butler and Carthage on the Missouri side, and Ft. Scott and Pittsburg on the Kansas side. These towns are all located within the 50-mile radius of Nevada and form the boundaries of its immediate regional boundaries. This seven county area is also referred to in this report as Nevada's market area where regional markets for goods and services are shared. Nevada's development is extensively affected not only by this immediate market area but also by numerous other external factors.

Nevada is impacted by multi-levels of government. In addition to township, city, and county governmental units, the city is affected by numerous departments of the state and federal government. The effects of this multi-level government structure are experienced locally in many forms: taxation of individuals, business and industry; the regulation of education, agriculture building construction, social service program implementation, and lending practices; and the provision of information, programs and services. It is necessary for the city to affect these external influences in such a manner as to promote efficiency, cooperation and the effective serving of the public.

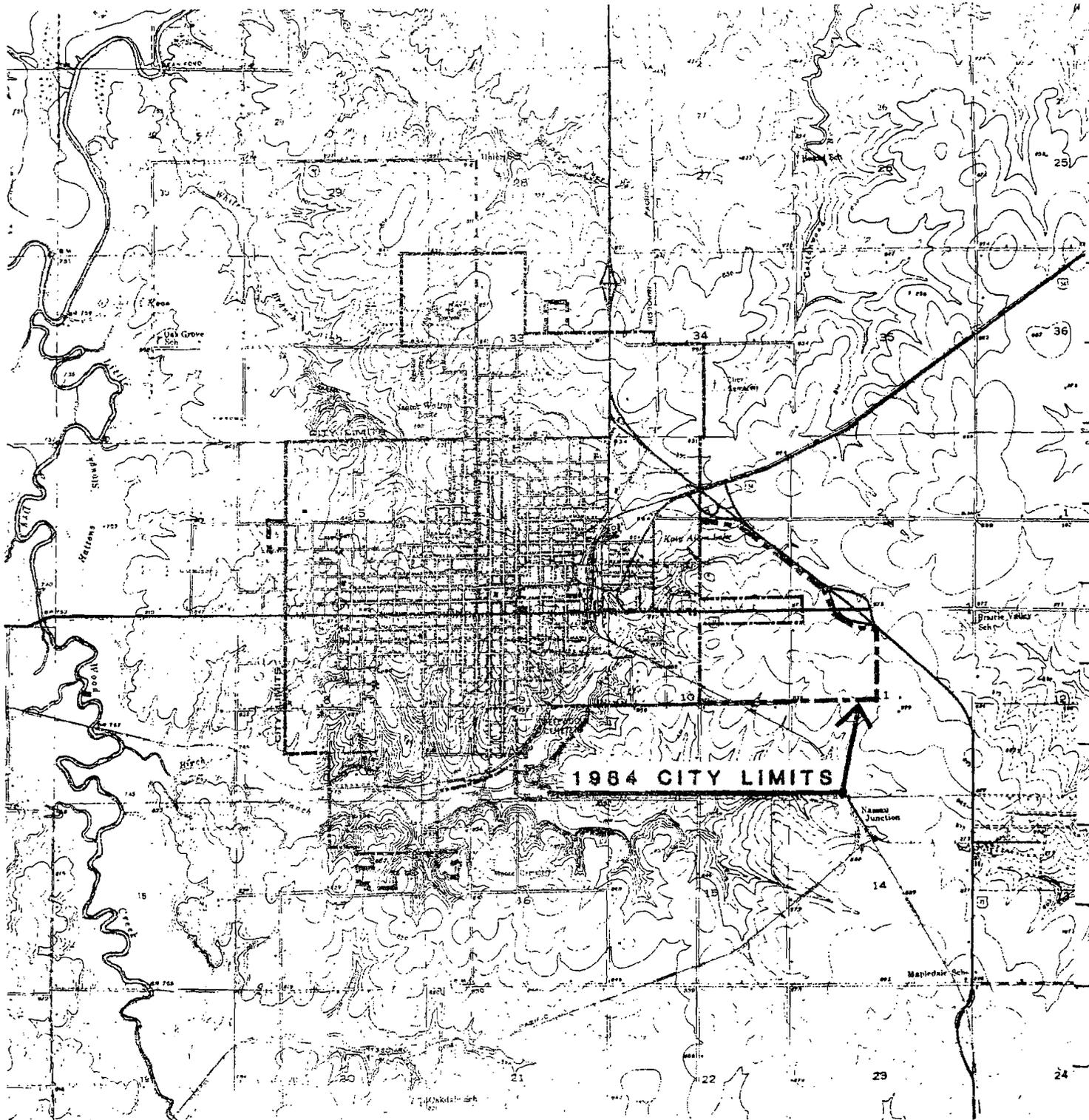
### The Physical Environment

The physical features of a given area exert effects on both the growth pattern of the city and on the liveability of that development. The effects on the pattern of growth influence a city's land use plan as well as the cost of building and road construction. In addition, the topographical and climatic features effect both the aesthetic appeal and comfort of the environment.

#### Topographical Features

Nevada is situated on a knoll at an elevation of 880 feet, and is surrounded by both gently rolling hills and small steep valleys. In some areas the grade of some of the steep slopes prohibits certain types of development. However, those environments often provide interesting visual land forms for the enjoyment of residents. Numerous opportunities for appropriate residential development exist within the city limits. The topographic features of Nevada are illustrated on Figure 1.

Nevada's drainage basins, illustrated on Figure 2, affect development by determining the required design of the city's sanitary sewer service. These basins with their various topographic features provide limits to gravity flow sewerage systems. They also indicate the areas prone to flooding. Appropriate future planning will take these factors into serious consideration.

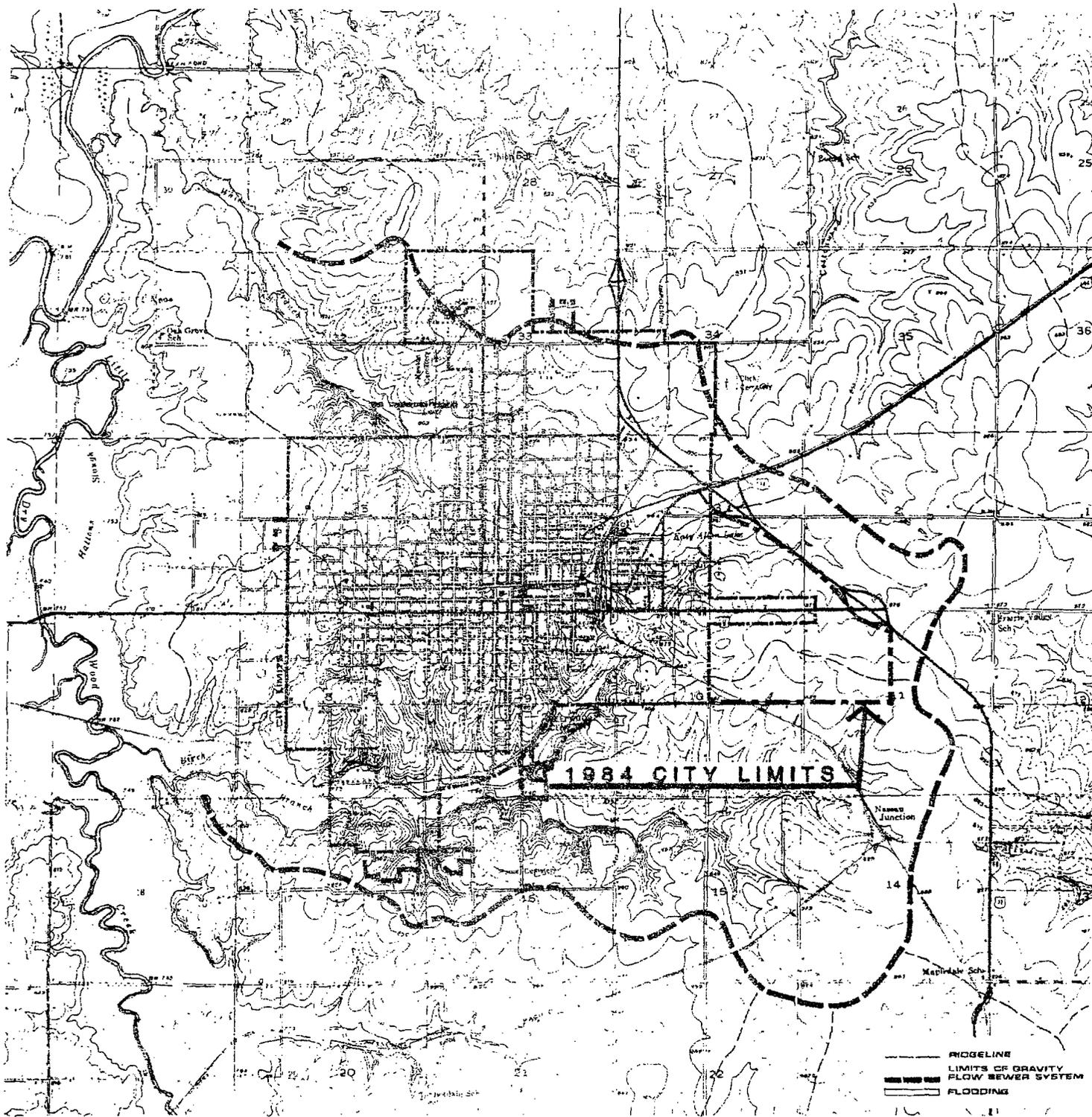


TOPOGRAPHIC FEATURES

NEVADA, MISSOURI

OCHNER, HARE & HARE  
GENERAL PLANNING CONSULTANTS  
HANNAS CITY MISSOURI

FIGURE



——— FLOODLINE  
 - - - - - LIMITS OF GRAVITY FLOW SEWER SYSTEM  
 ——— FLOODING



PHYSICAL FACTORS AFFECTING DEVELOPMENT

NEVADA, MISSOURI

OCHSNER, HARE & HARE  
 GENERAL PLANNING CONSULTANTS  
 KANSAS CITY, MISSOURI

FIGURE

## Climate

Climate affects the quality of life in a city in many ways. Not only does it significantly affect agriculture and numerous business practices but it also affects the environment in which Nevadans work and play. Climate affects the comfort of residents as well as the city's ability to attract tourists.

The variations in climate during the year in Nevada are primarily caused by the competition among the warm, moist air currents from the Gulf of Mexico; winds from the semi-arid region of the southwest; and cold polar continental currents. January and July most often represent the coldest and warmest months respectively. The mean temperature in January is 33.7 degrees and the mean temperature in July is 79.9 degrees.

The majority of days (65 percent) during the year are clear and most days during spring, summer and fall are comfortable and conducive to outdoor activities.

In terms of agriculture, over 63 percent of the annual precipitation occurs during the vegetal period or growing season. Mean precipitation per year averages 39.29 inches. The first frost of the year in Nevada usually takes place in late October, while the last frost usually occurs in early April.

## Socio-Economic Factors

Social factors also affect quality of life. The size of the population of a city, for example, often determines the level of population diversity. Usually, as a city grows in size, the population becomes increasingly heterogeneous. A large diverse population can present new challenges for government in terms of providing needed service and community facilities. Such a population can also provide numerous opportunities for expanded cultural and educational awareness in the city.

## Population

In 1980 the population of Nevada was 9,044. This represents a loss of 861 individuals between 1970 and 1980. However, the population decline is principally caused by reductions in the operation of the state hospital. During the same time period, the population of the seven county market area has increased 5.4 percent. (Table 1. See page 7).

The racial composition of Nevada (Table 2, see page 7) is 98.1 percent White, 0.4 percent Black and 1.5 percent other racial groups. As is true in most American cities, the percentage of "Other Racial" groups is now increasing more rapidly than the increase in Black residents.

TABLE 1  
POPULATION AND PERCENT CHANGE  
NEVADA, MISSOURI AND SEVEN COUNTY AREA, 1970-1980

	1970	1980	Change	
			Number	Percent
Nevada	9,736	9,044	692	- 7.1
Barton	10,431	11,292	861	8.3
Bates	15,468	15,873	405	2.6
Cedar	9,424	11,894	2,470	26.2
St. Clair	7,667	8,622	955	12.5
Vernon	19,065	19,806	741	3.9
Bourbon	15,215	15,969	754	5.0
Crawford	<u>37,850</u>	<u>37,916</u>	<u>66</u>	<u>.2</u>
Total Seven County Area	115,120	121,372	6,252	5.4

Source: Bureau of Census, 1980. Advance Estimates of Social, Economic, and Housing Characteristics; 1970, General Population Characteristics. Ochsner, Hare & Hare.

TABLE 2  
RACIAL COMPOSITION

	1970		1980		Percent Change 1970-80
	Number	Percent	Number	Percent	
White	9,661	99.2	8,879	98.1	- 8.0
Black	23	.2	33	.4	+ 43.5
Other	<u>52</u>	<u>.5</u>	<u>132</u>	<u>1.5</u>	<u>+153.8</u>
Total	9,736		9,044		- 7.1

## Household Characteristics

The household characteristics of the city reflect the life styles of its residents. As is illustrated in Table 3, page 9, more and more residents in Nevada live in smaller households. Since 1970 the number of one person households in Nevada increased 50.7 percent. This was due primarily to the decrease in average household size from 2.6 per household in 1970, to 2.3 in 1980. The effects of decreases in household size range from increased demand for more smaller housing units to more isolated and self-sufficient life styles.

## Age Composition

The age composition of a city's population indicates the predominant life styles and life-cycle stages being experienced in the city. In Table 4, page 10, "Age Composition", the age distribution of Nevada residents has been illustrated in "life-cycle" categories: pre-school age, grade school, junior and high school age, college age, primary working age, and older or retirement age.

The largest portion of the population (48.1%) is of primary working age (22-64 years). Between 1970 and 1980, the age distribution has remained very much the same. Overall, however, there has been some increase in the number of pre-school age children (0-5 years) and of college age individuals (18-21 years). The decreases have occurred primarily in grade school age children (6-13 years) and older adults (65 years +).

## Income Characteristics

Economic factors are also used as quality of life indicators. The economic well being of the individual can be measured by both income and wealth. Table 5, page 11, "Median Family Income-Nevada and State of Missouri", illustrates the changes in median family income between 1970 and 1980. For both Nevada and the State of Missouri as a whole, median income has increased approximately 110 percent. However, high inflation rates during the last decade (retail price levels increased 117 percent between 1970 and 1980) have erased real gains in median family income.

Individual wealth can be indicated by the housing values. Table 6, page 11, "Housing Value Comparison", illustrates that housing values in Nevada have increased 153.2 percent, a rate greater than median family income.

TABLE 3  
HOUSEHOLD DATA

	1970		1980		Change	
	Number	Percent	Number	Percent	1970	1980
<u>Total Households:</u>	<u>3020</u>		<u>3514</u>		<u>494</u>	<u>+ 16.4</u>
One Person Households	828		1248		420	+ 50.7
Husband-Wife Households	1847		1982		135	+ 7.3
Female Head of Household	275		284		5	+ 3.2

Source: 1970 Census of Population  
1980 Census of Population  
Ochsner, Hare & Hare

TABLE 4  
AGE COMPOSITION

	1970		1980		Percent Change 1970-80
	Number	Percent	Number	Percent	
Preschool (0 - 5 yrs)	708	7.2	755	8.3	+ 6.6
Grade School (6 - 13 yrs)	1096	11.3	876	9.7	- 20.0
Jr. and High School (14 - 17 yrs)	653	6.7	619	6.8	- 5.2
College Age (18 - 21 yrs)	546	5.6	614	6.8	+ 12.5
Primary Working Age (22 - 64 yrs)	4658	47.8	4354	48.1	- 6.5
Older Adults (65 yrs +)	2075	21.3	1826	20.2	- 12.0
	<u>9736</u>		<u>9044</u>		

Source: 1970 Census of Population  
1980 Census of Population  
Ochsner, Hare & Hare

TABLE 5  
 MEDIAN FAMILY INCOME-  
 NEVADA AND STATE OF MISSOURI

	1970	1980	Percent Change	
			1970	1980
Nevada	7,346	15,385	+109.4	
Missouri	8,914	18,784	+110.7	

Source: U. S. Census, Social and Economic Characteristics, 1970 and 1980, and Ochsner, Hare & Hare.

TABLE 6  
 HOUSING VALUE AND CONTRACT  
 RENT COMPARISON-NEVADA AND STATE OF MISSOURI

	1970	1980	Percent Change	
			1970	1980
Nevada				
Median Housing Value	\$ 9,200	\$23,300	+153.2%	
Contract Mo. Rent	\$ 52	\$ 110	+111.5%	
Missouri				
Median Housing Value	14,400	36,700	+154.8	
Contract Mo Rent	74	153	+106.7	

Source: U. S. Census, Housing Characteristics, 1970 and 1980, and Ochsner, Hare & Hare.

## The Area Economy

The economic vitality of both the City of Nevada and its surrounding market area have marked effects upon the present and future livelihoods of Nevada's residents. A community's economic health can be measured by such factors as employment, economic development efforts, labor productivity and industrial diversification. In this section, an overview of economic activity in various sectors is provided (retail trade, manufacturing, wholesale trade, service and agriculture). That overview is then summarized in an economic base analysis.

### Economic Sector Characteristics

Retail Trade -- In the seven county market area, retail sales decreased .5 percent between 1972 and 1977. (See Table 7, page 13, "Retail Establishments and Sales"). In the City of Nevada, sales decreased 1.6 percent during the same period. In both Nevada and the overall market area, the number of retail establishments decreased by approximately ten percent.

Nevada's percentage of Vernon County's establishments and sales has increased slightly while Nevada's percentage of the seven county area number of establishments and sales has decreased slightly.

Manufacturing -- The Missouri Directory of Manufacturing, Mining, Industrial Services and Industrial Supplies 1982 lists 13 firms in the City of Nevada. This is a decrease of one manufacturing firm (Southern States Asphalt) since the previous year.

The number of employees listed for 1982 was 777, a decrease of 147 from the previous year. Minnesota Mining is the largest manufacturing employer, employing 45.0 percent of all manufacturing employees.

Within the market area, 10.9 percent of the number of manufacturing establishments are located in Vernon County. 12.5 percent of persons employed in manufacturing in the seven county area are employed in Vernon County. In addition, Vernon County was responsible for 21.8 percent of the value added by manufacturing in the seven county area in 1977. (See Table 8, page 15, "County Manufacturing Statistics").

Fifteen different products are produced in Nevada. Sixty-seven percent are in (S.I.C.) Standard Industrial Classification of (3) printing, publishing, and allied industries, (3) professional, scientific and controlling

TABLE 7

RETAIL ESTABLISHMENTS AND SALES  
CITY OF NEVADA, REMAINDER OF VERNON COUNTY, AND SEVEN-COUNTY AREA  
1972-1977

	<u>City of Nevada</u>			<u>Remainder of Vernon Co.</u>			<u>Seven County Area</u>			<u>Nevada % of</u>		<u>Nevada % of</u>	
	1972	1972 Inflated	1977	1972	1972 Inflated	1977	1972	1972 Inflated	1977	Vernon Co. 1972	1977	Seven Co. Area 1972	1977
<u>All establishments</u>													
Number	179		161	54		41	1,523		1,376	76.8	79.7	11.8	11.7
Sales (\$000)	31,397	48,380	47,604	2,641	4,070	3,139	213,531	329,030	330,741	92.2	93.8	14.7	14.4
Payroll Number	130		118	19		15	928		832	67.2	88.7	14.0	14.2
<u>Bldg. Materials, Hardware, Garden Supply, Mobile Homes</u>													
Number	13		10	2		1	94		96	86.6	90.9	13.8	10.4
Sales (\$000)	D		D	D		D	12,339*	19,013	7,375*				
<u>Gen. Merchandise</u>													
Number	7		7	2		3	61		56	77.8	70.0	11.5	12.5
Sales	D		6,561	D		92	18,635*	28,715	26,558*	62.5	98.6	24.7	
<u>Food</u>													
Number	10		9	6		6	176		132	62.5	60.0	5.7	6.0
Sales (\$000)	6,325	9,746	9,543	294	453	654	46,538	71,710	72,953	95.6	93.6	13.6	13.1
<u>Auto Dealers</u>													
Number	14		21	2		3	131		146	87.5	87.5	10.7	14.4
Sales (\$000)	D		13,062	D		140	44,795*	69,025	77,220*	98.9	98.9		16.9
<u>Gasoline Ser. Sta.</u>													
Number	29		18	13		7	224		149	69.0	72.0	12.9	12.0
Sales (\$000)	2,379	3,665	3,501	668	1,029	898	19,414	29,915	24,982	78.0	79.6	12.3	14.0
<u>Apparel, Access- ories</u>													
Number	14		11	1		1	78		89	93.3	91.7	17.7	12.4
Sales (\$000)	D		D	D		D	5,650*	8,706	9,112*	90.9			

TABLE 7. (Con't)

	<u>City of Nevada</u>			<u>Remainder of Vernon Co.</u>			<u>Seven-County Area</u>			<u>Nevada % of</u>		<u>Nevada % of</u>	
	1972	1972 Inflated	1977	1972	1972 Inflated	1977	1972	1972 Inflated	1977	Vernon Co. 1972	1977	Seven-Co. Area 1972	1977
<u>Furniture/Furnishings/App.</u>													
Number	10		14	1		1	74		96	93.3		13.5	14.6
Sales (\$000)	D		D	D		D	7,296	11,242	10,656*				
<u>Eating &amp; Drinking</u>													
Number	30		29	14		10	269		233	68.1	74.3	11.2	12.4
Sales (\$000)	1,513	2,331	3,939	316	487	293	13,533	20,853	23,577	82.7	93.1	11.2	16.7
<u>Drug &amp; Proprietary</u>													
Number	7		3	-		-	41		33	100.0	100.0	17.0	9.0
Sales (\$000)	1,074	1,655	970	-		-	6,930	10,678	3,568*	100.0	100.0	15.5	27.2
<u>Misc. Retail Stores</u>													
Number	45		39	13		9	373		346	77.6	81.3	12.1	11.3
Sales (\$000)	1,953	3,009	2,312	756	1,165	682	15,254	23,505	23,554*	72.0	97.1	12.8	9.8

Source: Census of Retail Trade: 1972 and 1977, Ochsner, Hare & Hare

<sup>D</sup>Information withheld to avoid disclosing data for individual companies

\*Some sales data was suppressed.

TABLE 8  
COUNTY MANUFACTURING STATISTICS  
(1977)

	Bourbon	Crawford	Barton	Bates	Cedar	St. Clair	Vernon	7-Co. Total
<b>All Establishments</b>								
Number	27	69	20	22	21	4	20	183
With 20 employees or more (number)	11	22	3	3	8	-	8	55
All Employees 72	.8	2.8	.7	.5	.8	2 <sup>1</sup>	.8	6.4
Number (1000) 77	.8	3.3	.8	.4	.8	2 <sup>1</sup>	.9	7.0
Payroll (\$000,000)	7.5	40.2	7.2	2.4	5.9	.1	9.2	72.5
<b>Value Added by Manufactur- ing (\$000,000)</b>								
1972	9.9	37.3	9.6	2.9	11.1	N/A	10.9	81.7
1972 inflated	15.3	57.5	14.9	4.5	17.1		16.8	125.9
1977	14.0	76.4	15.7	6.1	10.3	.3	34.2	157.0

Source: Census of Manufacturing 1972-1977

<sup>1</sup>Less than \$50,000 or less than 50 employees

instruments . . . , (2) apparel and other finished products made from fabrics and similar materials, and (2) stone, clay, and glass products manufacturing. (See Table 9, page 17, "Major Industry Groupings by S.I.C. Classification Code").

Wholesale -- Although the number of wholesale establishments decreased between 1972 and 1977 in Nevada, Vernon County, and the market area, total sales were on the increase. In Nevada, even using inflated dollars, the increase in sales was 34.9 percent. (See Table 10, page 18, "Wholesale Trade Establishments").

Service Sector -- Between 1972 and 1977, the number of service establishments in Nevada increased 13.3 percent, to 136 establishments. During the same time period, sales decreased by 12.9 percent, using 1972 inflated dollars. (See Table 11, page 19, "Service Establishments and Sales").

In Vernon County, the number of establishments increased by 24.8 percent, while sales decreased by 7.9 percent.

Agriculture -- The market value of agricultural products sold in Vernon County was \$34,151,000 in 1978. This was a 32 percent increase from 1974, even using inflated dollars. This increase was just slightly slower than the average increase in the State of Missouri, 34.5 percent. In the seven county market area, Vernon County ranked third in the dollar amount of products sold, and ranked second in the percent increase from 1974. See Table 12, page 20, "Market Value of Products Sold").

Unfortunately, published data on local economic sectors relies heavily on five year censuses, the publication of which lags considerably. The sector discussions, above, reflect the most current data which in a number of cases is 1977, the 1982 data not having been released. Nevertheless, the data indicate a relatively flat economy--decreases in retail trade and manufacturing, increases in wholesale trade, service establishments and agriculture. For planning purposes, a more useful analysis is to identify basic employment, regardless of the sector in which it occurs.

#### Economic Base

Urban growth is closely related to the city's ability to export goods and materials. Export activities (the Basic Economy) bring money from outside the city into the local economy. Other activities (the Service Economy) consist of the provision of goods and services which are purchased and consumed locally. When an additional individual can be hired by a basic industry, then positions in the service economy are created to serve the local consumption needs of the added worker.

TABLE 9

MAJOR INDUSTRY GROUPINGS BY  
STANDARD INDUSTRIAL CLASSI-  
FICATION CODE (SIC) 1982

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SIC	GROUPING
20	Food and kindred products (1)
23	Apparel and other finished products made from fabrics and similar materials (2)
24	Lumber and wood products (except furniture)-manufacturing (1)
26	Paper and allied products-manufacturing (1)
27	Printing, publishing, and allied industries (3)
32	Stone, clay, and glass products-manufacturing (2)
34	Fabricated metal products-manufacturing (1)
35	Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks - manufacturing (3)
39	Miscellaneous manufacturing, (NEC.) (1)

---

Source: Missouri Directory of Manufacturing, Mining, Industrial Services and Industrial Supplies, 1982, Ochsner, Hare & Hare.

TABLE 10

WHOLESALE TRADE ESTABLISHMENTS  
NEVADA, VERNON COUNTY, AND SEVEN COUNTY AREA

<u>Activity</u>	<u>City of Nevada</u>			<u>Vernon County</u>			<u>Seven County Area</u>		
	1972	Inflated	1977	1972	Inflated	1977	1972	Inflated	1977
Total establishments	36		33	49		47	279		253
Merchant wholesalers	27		28	38		41	216		220
Other	9		5	11		6	63		33
Sales	18,557	28,594	38,620	24,759	38,151	54,576	172,828	266,311	309,412

Source: Census of Wholesale Trade, 1972 and 1977, Ochsner, Hare & Hare

TABLE 11

SERVICE ESTABLISHMENTS  
NEVADA, VERNON COUNTY AND SEVEN COUNTY AREA

	City of Nevada	Vernon County	Seven Co. Area	Nevada % Vernon Co.	Nevada % Total
<b>1972:</b>					
Number	120	145	1,027	82.8	11.7
Sales (\$000)	2,990	3,238	23,406	92.3	12.8
1972 inflated	4,607	4,989	36,066		
<b>1977:</b>					
Number	136	181	1,110	75.1	12.3
Sales (\$000)	4,009	4,594	38,990	87.3	10.3

Source: Census of Service Industries, 1972, 1977, Ochsner, Hare & Hare

TABLE 12

AGRICULTURE: MARKET VALUE OF  
 PRODUCTS SOLD (\$000) - SEVEN COUNTY  
 AREA AND STATE OF MISSOURI<sup>a</sup>

	1974	1974 Inflated	1978	% Change
Barton	30,019	32,835	37,277	13.5
Bates	36,031	39,411	49,140	24.7
Cedar	7,590	8,302	13,327	60.5
St. Clair	14,095	15,417	19,184	24.4
Vernon	23,647	25,869	34,151	32.0
Bourbon	18,074	19,769	25,143	27.2
Crawford	19,089	20,874	24,553	17.6
	<u>148,545</u>	<u>162,477</u>	<u>202,777</u>	<u>24.8%</u>
State of Missouri	2,261,527	2,473,658	3,328,741	34.5%

<sup>a</sup>Includes farms with sales of \$2,500 or more.

SOURCE: Census of Agriculture 1974 and 1978, Ochsner, Hare & Hare

Table 13, page 22, "Economic Base Study", illustrates the estimated number of individuals in Nevada who are employed in the basic economy. The table indicates the primary exporters of goods and services. These are primarily in manufacturing, health services, education, and finance-insurance-real estate.

Based on Table 13, the ratios of Basic Employment to Total Employment, and Basic Employment to Total Population are:

	1980
Basic Employment to Total Employment	1:2.7
Basic Employment to Total Population	1:6.1

The analysis indicates that for the city to increase its population to 15,000 (a previously established goal) during the coming decade it will be necessary to create approximately 81 new jobs each year in the basic sector. To accomplish this task the city must develop a comprehensive strategy to bring new basic employment to Nevada.

TABLE 13  
ECONOMIC BASE STUDY

	U.S. % of Total	Nevada, Missouri	Nevada % of Total	Nevada Surplus % Over U. S. %	Surplus Basic Employment
Agriculture, Forestry & Fisheries	40.0	25.0	.6	-	
Mining	1.5	7.0	.2	-	
Construction	6.1	121.0	3.0	-	
Manufacturing	21.1	993.0	24.8	3.7	
Food & Kindred Products	1.5	6.0	.2	-	
Tobacco Manufacturing	.1	-	0.0	-	
Textile Mill Products	.8	-	0.0	-	
Apparel & Other Textile Products	1.3	111.0	2.8	1.5	60.0
Lumber & Wood Products	.7	15.0	.4	-	
Furniture & Fixtures	.5	-	0.0	-	
Paper & Allied Products	.7	350.0	8.8	8.1	323.0
Printing & Publishing	1.3	97.0	2.4	1.1	44.0
Chemicals & Allied Prod.	.9	-	0.0	-	
Petroleum & Coal Prod.	.3	-	0.0	-	
Rubber & Misc. Plastic Products	.7	-	0.0	-	
Leather & Leather Prod.	.2	-	0.0	-	
Stone, Clay & Glass Prod.	.6	142.0	3.6	3.0	120.0
Primary Metal Industries	1.1	-	0.0	-	
Fabricated Metal Prod.	1.6	-	0.0	-	
Machinery, Except Elect- rical	2.5	195.0	4.9	2.4	96.0
Electric & Electronic Equipment	2.0	-	0.0	-	
Transportation Equipment	1.8	-	0.0	-	
Instruments	.7	-	0.0	-	
Misc. Manu. Industries	.4	77.0	1.9	1.5	60.0
Admin. & Auxiliary	1.4	-	0.0	-	
Transportation	4.3	125.0	3.1	-	
Communications & Other					
Public Utilities	2.9	47.0	1.2	-	
Wholesale Trade	4.3	94.0	2.4	-	
Retail Trade	16.2	453.0	11.4	-	
Finance, Insurance & R.E.	5.9	271.0	6.8	.9	36.0
Business & Repair Service	4.2	87.0	2.2	-	
Personal Entertainment and Recreational Services	4.2	158.0	4.0	-	

TABLE 13 (CONTINUED)

	U. S. % of Total	Nevada, Missouri	Nevada % of Total	Nevada Surplus % Over U. S. &	Surplus Basic Employ- ment
Professional & Related Service	20.2	1421.0	35.6	15.4	
Health	7.4	686.0	22.2	14.8	590.0
Education	8.6	495.0	12.4	3.8	152
Other	4.2	40.0	1.0	-	
Public Administration	5.4	189.0	4.7	-	
	100.0	3991.0	100.0		1481.0
		1481	BE:SE	1:1.7	
Basic Service		2510	BE:TE	1:2.7	
Population		9044	BE:TP	1:6.1	

SOURCE:

Mining/U.S.: County Business Patterns, United States Summary 1981

Manufacturing/U.S.: County Business Patterns, United States Summary 1981  
/Nevada: The Directory of Mining, Manufacturing, Industrial  
Supplies 1981

Source: 1980 U. S. Census, Civilian Labor Force 16 and Over.  
Ochsner, Hare & Hare

## Housing

The condition of individual housing units and the overall housing market is important to the future growth and development of the city, as well as to the overall physical environment. The city needs a diverse and adequate supply of housing to provide for the needs of Nevada residents and to promote new growth.

### Existing Housing Quality

The effects of good housing conditions on positive citizen attitude and satisfaction has been described in the 1980 Housing Survey (Ochsner, Hare & Hare). The survey documents housing conditions in Nevada which have remained high in the recent past. However, some of the conditions that have been responsible for good housing conditions in Nevada may not be available in the future without a concerted effort. Twenty years ago a strong economy was responsible for improvements in housing quality. During the seventies and early eighties, Community Development and Housing Authority programs were of significant benefit in maintaining the existing housing stock. As Community Development funds are now rapidly declining, new incentives need to be put into place.

### Housing Conditions by Block

A field study done as part of the 1980 Housing Survey rated housing conditions by assigning penalty points for the existence of particular deteriorating features on the exteriors of each residential unit. After the penalty points were totaled, each structure was assigned to one of the following four condition categories:

TABLE 14

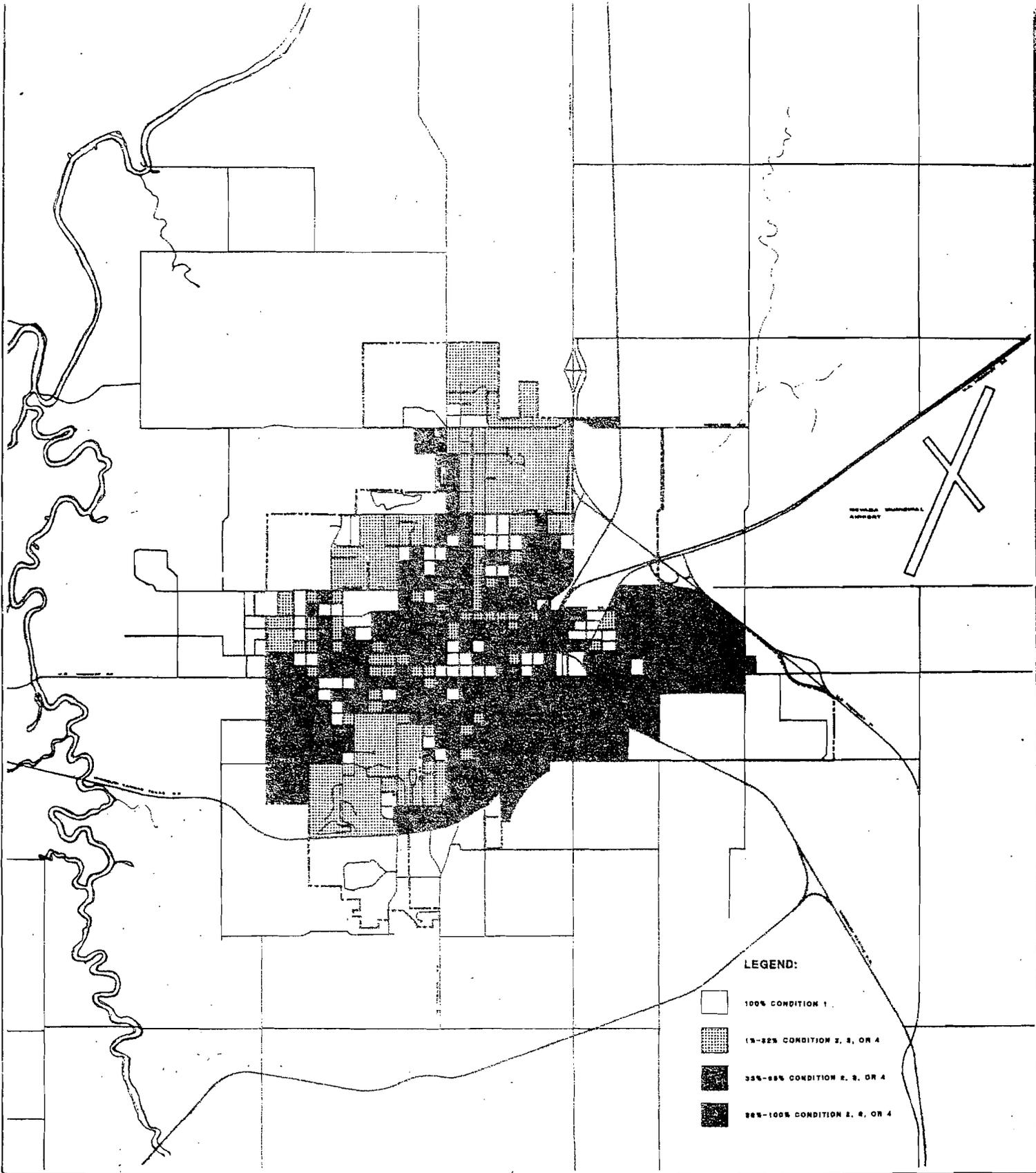
#### HOUSING CONDITION CATEGORIES

Condition	Probable Treatment	Total Penalty Points
1. Sound	Ordinary Maintenance	0 - 2
2. Minor Deficiencies	Code Enforcement	2½-6½
3. Deteriorating	Rehabilitation	7-17½
4. Dilapidated	Clearance	18 & Over

Figure 3, "Housing Conditions by Blocks", illustrates the blocks that are in stable condition, and those with varying degrees of deterioration. The blocks where the "best" housing exists, in terms of exterior housing condition, are those where every unit is in Condition 1. These are blocks where construction quality and housing value may or may not be high, but housing maintenance and soundness of exterior conditions are the best in the city.

As the number of houses in Condition 2, 3, or 4 increase on a block, not only does the general image or quality of the block begin to suffer, but intervention becomes necessary. Depending on the degree of deterioration, intervention will range from code enforcement to rehabilitation grants and below market rate rehabilitation loans.

A complete description of housing conditions by individual city blocks and enumeration districts is located in the Appendices, Figure A-1, "Enumeration District and Block Number Map", and Table A-1, "Housing Condition Survey".



**HOUBING CONDITIONS BY BLOCK**



**NEVADA, MISSOURI**



**COMPREHENSIVE  
PLAN UPDATE**

**FIGURE 3**

## New Housing

Desirable growth and development in Nevada will include not only the rehabilitation and maintenance of existing residential units. New housing opportunities must also be created within the city limits for new homes, condominiums, multi-family units and housing for the elderly. Various incentives available to stimulate new housing construction in the city should be utilized. They include such tools as below market rate financing, tax advantages for investors, subsidies, and uses of the city's power of eminent domain.

## Existing Development

A guide to future growth in Nevada must result from a careful study of the existing developments in the city. These include the land use pattern, the use of the city's core area, the existing community facilities, streets and sidewalks, and utility services.

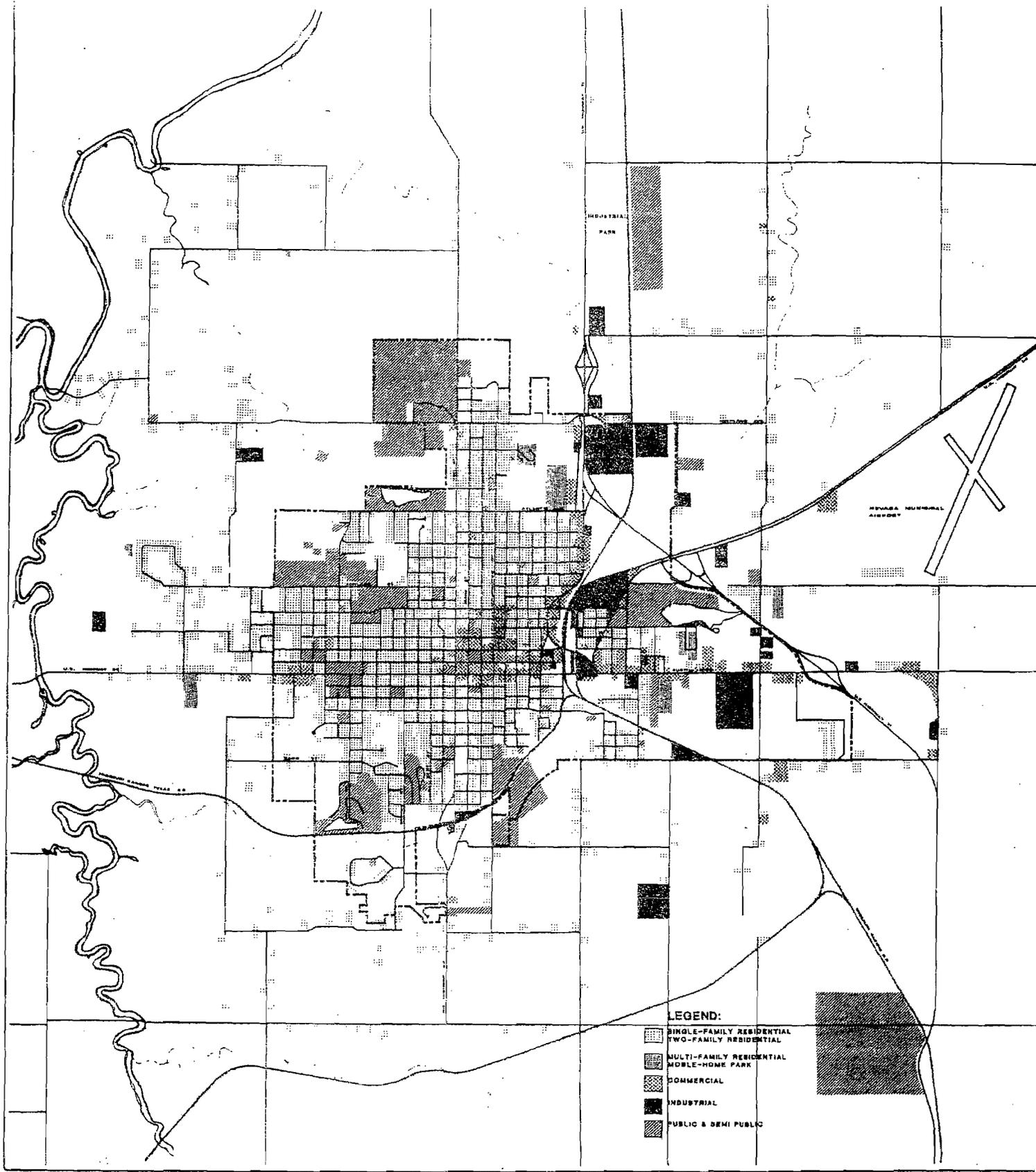
## Land Use

Appropriate uses of land in an urban area provide the community with a rational pattern of urban development. A land use plan should promote compatible relationships among the various land uses: residential, commercial, industrial, agricultural and public or semi-public. The uses of land must respond to the present and future needs of the city and the residents to accommodate and provide opportunities for population growth, utilities, streets and thoroughfares, housing and public facilities.

Knowledge of the existence and location of the various uses of land in a city is instrumental in understanding land use trends. Such information provides a current basis upon which the land use plan is updated. Figure 4, "Existing Land Use", illustrates the land use area in and surrounding the Nevada city limits. The information in this study was obtained during a field survey that took place in June, 1983.

The land uses in Nevada and the surrounding area are diversified. Commercial and industrial activity continue to develop primarily in a linear pattern to the north on Highway 71, and to the east on Austin Boulevard. New industrial uses are primarily warehouse facilities. Since 1980 the newest commercial establishments include a mail order store, convenience store, two fast food stores, a barber shop and body shop. New public and semi-public uses include the new sanitary landfill, three churches, power station, a water tower and golf course.

Industrial Land Use Changes -- Since the adoption of the 1975 Comprehensive Plan, existing industrial land use plans in Nevada have changed. During this interval an industrial park site has been located in the northern sector of the city, outside of the industrial land use area proposed in the 1975 Land Use Plan. The deviation is the result of approximately 180 acres of land being transferred to the city by the State of Missouri at Highway 71 and the Highland interchange. This parcel provides opportunities for both the sanitary landfill operation and a proposed industrial park. However, this change in existing development requires a revision in plans for providing roads, public facilities and complementary adjacent land uses.



**EXISTING LAND USE**

**NEVADA, MISSOURI**

**OCHSNER, HARE & HARE**  
KANSAS CITY MISSOURI

**COMPREHENSIVE  
PLAN UPDATE**

**FIGURE 4**

Residential Growth Patterns -- The residential community continues to expand toward and beyond the perimeters of the city limits. In 1974 there were 3,349 housing units within the city limits and in 1983 there were 3,593 units. This represents an increase of 344 housing units or 10.2 percent. During the same time period approximately 127 housing units have been constructed within the two mile area surrounding the city limits.

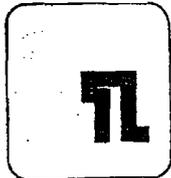
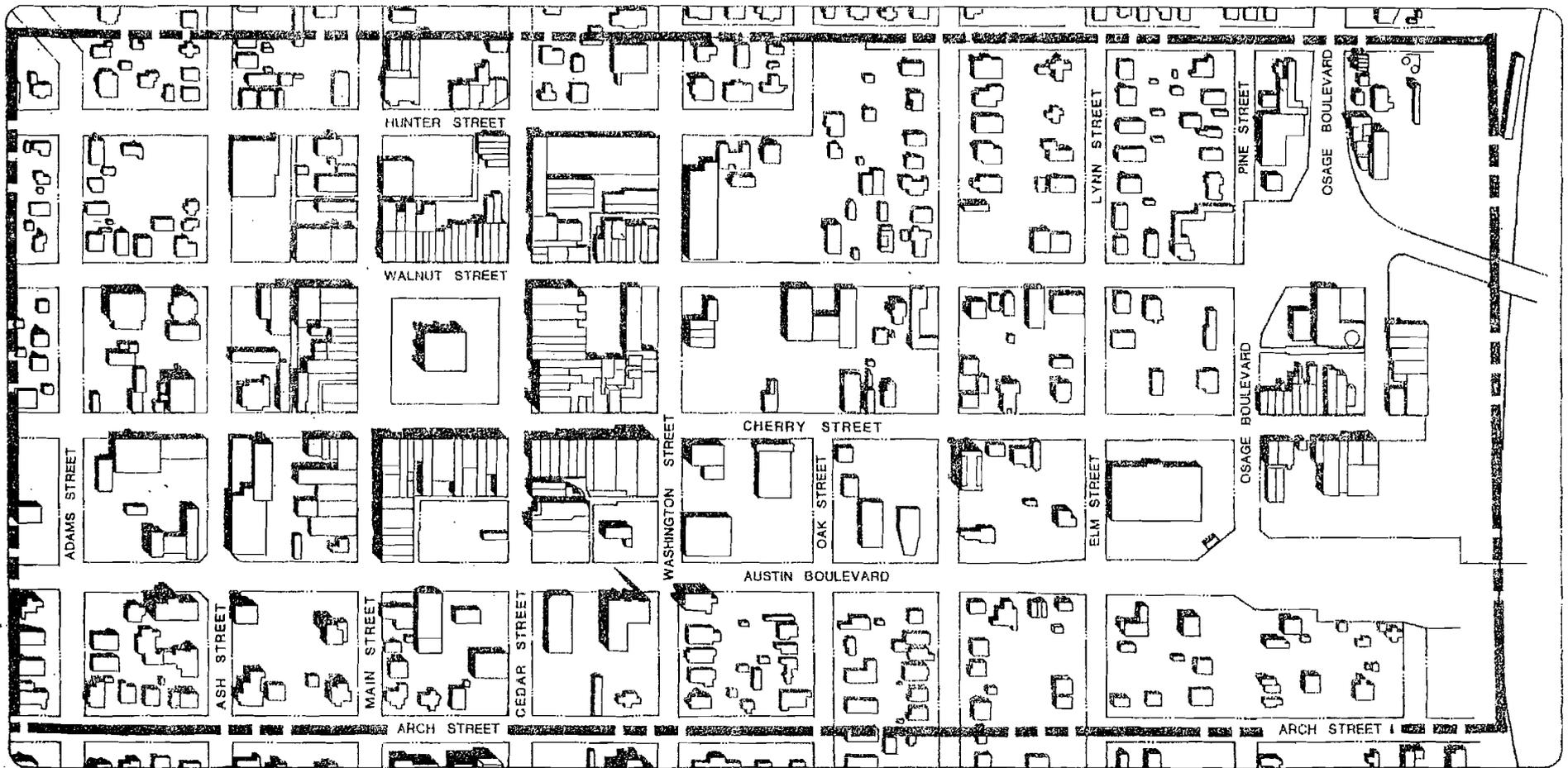
The continued development beyond the city limits of Nevada presents land use planning problems in the urban area. Since the city currently has no planning authority on this extra-territorial land, no rational land use plan has been implemented. Planning in the peripheral area surrounding the city limits is necessary to assure that required amenities (roads, utilities, and other public facilities) will be available in the future.

Within the city limits, the land use plan and subsequent zoning ordinances should assure that ample opportunities exist for the development of various types of housing for the diverse needs of city residents.

Commercial Development -- Although much of Nevada's recent commercial development has taken place along major thoroughfares in a strip development pattern, the historic town center still serves as a hub of civic and commercial activity. At a time when Nevada is particularly interested in improving the quality of life, and highlighting unique attractions in the city, the preservation of Nevada's historic center becomes increasingly important. (The city's core area is addressed in detail in the next section). Numerous financing tools are currently available to assist in the efficient preservation of the city's historic commercial and residential structures.

#### The Core Area

Nevada's core area consists of its central business district, the square and the adjacent area. Figure 5 illustrates the core area boundaries. This particular area is identified as an essential land use area because it serves numerous and important functions. It contains the town center or square which historically has served as the hub of the city. The core area includes the physical structures that house most of Nevada Civic activities including: city government, police, fire, city council, city/county library and others. The most dense concentration of commercial life in Nevada takes place in the core area, where 97 retail trade activities and 115 service establishments are located. The core area also serves as a residential community of approximately 233 housing units including both residential hotel facilities and transient lodging. Table 15 categorizes each land use in the core area into the Standard Industrial Classification (S.I.C.)



THE CORE AREA

NEVADA, MISSOURI

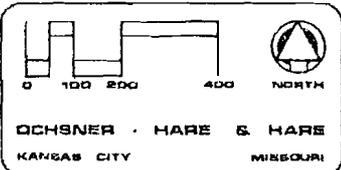


FIGURE 5

TABLE 15  
CORE AREA LAND USE

Land Use (By S. I. C.)	Number
<b>Residential</b>	
(11) Household units	203
(12) Group quarters	-
(13) Residential hotel	20 units
(15) Transient lodging	<u>10 (approx.)</u>
<b>Manufacturing</b>	
(2 & 3) Includes 2 newspapers	7
Transportation, Communications and	32
<b>Retail Trade</b>	
(5.1) Wholesale and storage	6
(5.2) Building materials	1
(5.3) General merchandise	12
(5.4) Food	6
(5.5) Automotive, marine craft, etc.	12
(5.6) Apparel and accessories	21
(5.7) Furniture, home furnishings and equipment	12
(5.8) Eating and drinking establishments	10
(5.9) Other retail trade	17
<b>Services</b>	
(6.1) Finance, insurance and real estate	26
(6.2) Personal services	30
(6.3) Business services	5
(6.4) Repair services	8
(6.5) Professional services	15
(6.6) Contract construction services	2
(6.7) Government services	11
(6.8) Educational services	-
(6.9) Other services	18
<b>Cultural and Entertainment</b>	
(7.1) Cultural activities and nature exhibitions	4
(7.2) Public assembly	1
(7.3) Amusements	3
(7.4) Recreational activities	2
(7.5) Resorts and group camps	-
(7.6) Parks	1
<b>Undeveloped Land</b>	
(9.4) Vacant floor area (vacant commercial storefronts or buildings)	30

By addressing the needs of the larger core area, as opposed to the city square or central business district, it is possible to create a revitalization strategy of greater magnitude and impact. This should be done in response to the expressed need of Nevada residents for a more innovative strategy for center city revitalization. Residents participating in the Comprehensive Plan Update set as a goal the development of one of the most unique and outstanding center city's in America.

### Community Facilities

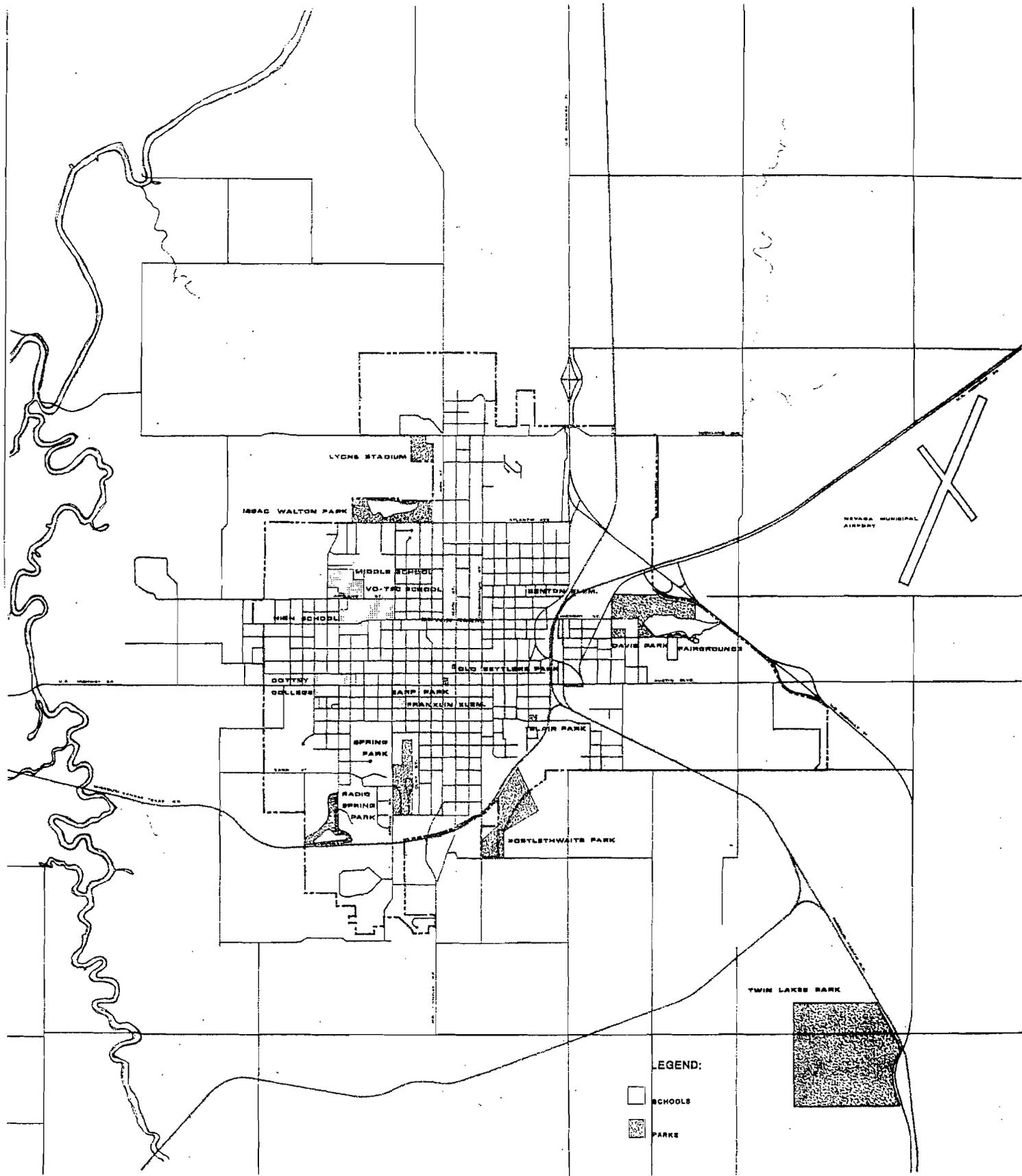
The provision and proper maintenance of public facilities is one of the public sector's most important functions. This section inventories the existing community facilities for education, police and fire protection, public buildings, the airport, medical facilities, the land fill and city parks.

The effectiveness with which community facilities can be provided is of great importance to the city and its future. A map of "Existing Public Facilities", Figure 6, illustrates the locations of Nevada's educational institutions, parks, and city airport.

Educational Facilities--An important activity that takes place in a city is the provision of a wide range of educational opportunities. Preferably a city will offer a complete public school system, well planned child care, private educational facilities, higher education programs and continuing education for adults including technical training to complement local industry needs.

Public School Facilities--The major providers of education for Nevada children and young adults are the public schools of the Nevada School District. The school district operates three elementary schools, Bryan, Benton and Franklin Schools. Although the school district owns the Jefferson elementary school building, it no longer operates an elementary education program there. Enrollment in the three elementary schools increased a total 3.5 percent in the last five years, while the Nevada middle school enrollment decreased 11.0 percent. The public school enrollment in Nevada for 1982/83 was 2,649. This represents a 4 percent decrease from the previous five years. Table 16, page 35, "Public School Enrollment", illustrates the change in enrollment for each school during the last five years.

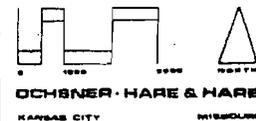
The vocational training school teaches grades 11 and 12 plus some students in grades 9 and 10 (in Vocational Agriculture). The enrollment has remained steady during the last five years. Besides training Nevada high school students,



EXISTING PUBLIC FACILITIES



NEVADA, MISSOURI



COMPREHENSIVE  
PLAN UPDATE

FIGURE 6

TABLE 16  
PUBLIC SCHOOL ENROLLMENT

	1978/79	1982/83	% Change/Capacity		Grades Taught
Bryan	322	374	+16.1	375	Kdgn., 1
Benton	230	237	+ 3.0	325	2, Pt. 3
Franklin	246	255	+ 3.5	325	Pt. 3, 4
Nevada Middle School	775	689	-11.1	950	5,6,7, 8
Vocational, Technical School <sup>1</sup>	363	363	0.0	350	Pt.9, Pt.10 Pt.11, Pt.12
Nevada High School	<u>834</u>	<u>731</u>	<u>-12.4</u>	800-1000	9,10,11,12
Total	2770	2649	- 4.4		

<sup>1</sup>During the last five years, enrollment averaged 350 to 375 each year.

Source: Nevada School District; Ochsner, Hare & Hare

the vocational training program also serves the students of seven near-by cities. High school enrollment has decreased since 1978, by 12.4 percent.

The student/teacher ratio in Nevada schools is 25 students to one teacher (25/1) except for the Nevada Vocational Training School where the ratio is 16/1.

Child-Care -- Also related to educational opportunities is the need for high quality child care. As an increasing number of parents join the labor force, child care facilities become needed to provide not only supervision but also early childhood and special education.

Higher Education -- Cottey College is a major source of higher education in Nevada and an important city institution. The college, centered at 1000 West Austin, and encompassing eight city blocks, educates 360 students per year from all over the country. During the last five years enrollment has increased 2.5 percent.

The Wentworth Junior College Extension Program also operates out of Nevada. This program serves between forty and fifty students each term, and offers an Associate in Arts degree. The program of primarily evening classes is held in the Nevada High School building.

Continuing Education -- The form of continuing education opportunities can range from very informal classes of personal interest taught by volunteers to highly technical skill training programs directed toward the needs of the work force. Currently the primary source of adult education classes is offered through the Parks and Recreation Department. The city should look toward creating new opportunities for both continuing and higher education in the future.

Police -- The Nevada Police Department patrols an area within the city limits approximately six square miles. It also offers services outside the city limits, to the Nevada airport, Nevada Golf Course, Parks and Sewer Department, Animal Control Shelter and Central States Press, Inc. The department's personnel includes seventeen commissioned officers and nine civilians. To maintain quality police protection in the area, the purchase of equipment, vehicles and facilities improvements will be needed in the coming years.

Ten special programs are now offered to the public. They include a property I.D. program, bicycle licensing, talks at schools and civic clubs, neighborhood watch program, crime

prevention for the public and businesses, a safety program, children fingerprint program, a report drunk driver's program, and a Nevada cadet program.

Fire Station -- The Nevada Fire Department operates out of one fire station built in 1956. It serves the city as well as a rural response area that is twenty three (23) square miles. During the last six years the department responded to an average of 270 alarms. Their primary equipment includes four pumpers and a mini-pumper truck (4 wheel drive).

The present fire station will not house all of the department's equipment. In addition it does not have adequate space for a training area, or room to test, repair or clean equipment. Response time is delayed by heavy traffic near fire station exits at Highway 54 and Austin. The fire department has identified a need for a new fire station facility. This need will become particularly acute as the city grows larger and as additional industries locate in the city.

City Hall -- The Nevada City Hall is now housed in the newly renovated Loving Building at Ash and Cherry. The renovated structure is a beneficial addition to the city's core area. Additional space is available within the building for other public uses and the city has made previous plans to convert the space into a public auditorium.

Airport -- The city's air service needs are served by the Nevada airport, located east of the city limits. Within the last six years a main runway has been constructed, and the administration building remodeled. An air taxi service provides the only transportation to the Kansas City International Airport. No regular connecting service currently exists.

City/County Community Building -- The community building is a well used facility in Nevada. In 1979 a new north wing was constructed to accommodate the increasing demand for space. To maintain the existing operation of the center, additional capital improvements have been proposed before 1987. By the end of the next ten years it is believed that the community center will have needs in excess of its existing capacity.

The Nevada City Hospital -- The Nevada City Hospital is a 99 bed facility. There are no current plans to expand the bed capacity. However, the following changes are anticipated in the next five years:

Remodeling of the existing structure.

Structural changes in the obstetrics department and operating room.

Remodeling of general office space.

In addition, a physician's office building is proposed for location at the northwest corner of the hospital, and an off-site storage building (1500 sq. ft.) is proposed on the north corner of the hospital parking lot.

The Moore-Few Nursing Home -- The need for facilities for the elderly in Nevada is increasing. A new nursing home, adult boarding facility and elderly day care facility have all been identified as growing needs within the community.

Two strategies have been previously proposed to expand the facilities of the Moore-Few Nursing Home. One alternative is to construct a new 80-100 bed facility, located south of the existing structure. The second alternative is the renovation of the existing facility to improve adequacy and to meet existing and future fire safety and Division of Health codes.

Library Facilities and Services -- The Nevada Library was built in 1916 and now houses 21,000 items. The building has 20,528 square feet of collection space.

In 1980, a Facilities Analysis was developed by Devore and Associates. They found that even though the building is in sound condition, improvements are in order to correct the following conditions:

- Multitude of stairs makes the building difficult to use.
- Lack of stack space.
- Lack of staff space.
- Lack of public restrooms.
- Lack of space for public services.
- Inadequate heating/cooling.
- Roof deterioration.
- Deterioration of electrical service.

Devore and Associates also found a space deficiency of 2,380 square feet and recommended the construction of a new building addition of not less than 12,000 square feet. Citizens and library staff believe that the major current library priorities are to improve accessibility to the building, and to reassess the need for building expansion within the next ten years.

Other Public Building and Facilities -- Plans are now being completed for construction of a City Service Center to be built in 1984. The Center would house the Street, Park and Water Department.

The Nevada Landfill -- Nevada's sanitary landfill includes 40 acres of land currently licensed for landfill operations. The facility has the capacity to expand to an additional 140 acres.

The landfill is located north of the urbanized part of the city on Highway 71 and the Highland interchange.

Parks -- Since 1975 there have been changes in the nine park facilities consisting of increases and decreases of various facilities and equipment within the parks. However, there is one additional facility: Twin Lakes Park. The following is a list of the current Nevada Parks and a description of their respective facilities.

1. Spring Street Park:

Changes - The spray pool, eleven picnic tables and giant turtle have been removed.

Equipment and Current Facilities

Shelters (2)	Jungle Jim (1)
Comfort Station (1)	Park Benches (3)
Swing Sets (3)	Sand Box (1)
Picnic Tables (16)	Water Fountains (4)
Teeter Totters (2)	Bar B. Q's (9)
Slides (2)	

Acreage: 12

2. Radio Springs Park:

This park has undergone improvement since 1975 including pavilion remodeling, road repair and widening, a new shelter and additional playground area. One swimming pool was removed.

Equipment and Current Facilities

Picnic Tables (10)	Swing Set (3)
Park Benches (8)	Spring Ride Animals (3)
Bar B. Q. Fireplaces (4)	Slides (2)
Shelters (2)	Bee with three seats (1)
Comfort Station (1)	Round Jungle Jim (1)
7 Acre lake	Merry-G-Round (1)
Dinosaur (1)	

Acreage: 15

3. Davis Park:

Changes in park equipment at Davis Park include the loss of a metal Bar B. Q., a picnic table, one slide and one sand box.

Equipment and Current Facilities

Metal Bar B. Q's (12)	Merry-Go-Round (1)
Picnic Tables (8)	Slides (2)
Park Benches (2)	Water Fountain (1)
Swing Sets (2)	Shelter (1)
Teeter Totters (2)	Comfort Station (1)

Acreage: 2

4. Earp Park:

There have been no apparent changes in the Earp Park facilities since 1975.

Equipment and Current Facilities

Picnic Table (1)
Drinking Fountain (1)
Water Fountain-View type with Lights (1)
Shelter (1)
Comfort Station (1)

Acreage: 1/2

5. Blair Park:

This park is actually owned by the Nevada School District although used by the city. A new tennis court now replaces the basketball goal.

Picnic Tables (3)	Swing Set (1)
Benches (3)	Slides (2)
Drinking Fountain (1)	Set of Bars (1)

Acreage: 3/5

6. Old Settlers Park:

Old Settlers Park near the Nevada square no longer has either benches or horseshoe courts.

Equipment and Current Facilities

Drinking Fountain (1)	Small Shelter (4)
Tables (4)	Shuffleboard Court (1)

Acreage: 1/10

7. Issac Walton Park:

Before 1975, the Issac Walton Park included a ten acre lake with fishing docks, and a four room house. Numerous developments have been made. They are included in the list below:

Equipment and Current Facilities

Ten Acre Lake	Glider (1)
Float Dock (1)	Swing Set (2)
Pier (1)	Play Bridge (1)
50 Meter Pool (1)	Slides (2)
Jogging Trail (1)	Covered Tables (1)
Spring Ride Animals (3)	Drinking Fountain (1)
Tables (10)	Restroom (1)
Benches (5)	

Acreage: 40

8. Postlewaithe Park:

This 40 acre park serves as Nevada's Nature Area and the land is undeveloped. Recently a nature trail has been cleared.

9. Lyons Stadium:

This is a major playfield in Nevada which recently acquired its second lighted baseball diamond and playground facilities.

Equipment and Current Facilities

Lighted ball diamond (2)	Slide
Permanent seating for 500	Tire swing
Portable seating for 100	Set of monkey bars
Concession stand with restrooms	

10. Twin Lakes Park:

This is Nevada's newest park, located to the southeast of the city.

Equipment and Current Facilities

The Frank Peters Memorial 9-Hole Golf Course  
Unlighted softball fields (2)  
Driving Range  
Cartshed (Capacity: 24)

## Streets and Sidewalks

Nevada's street system is based upon a grid pattern of minor roads, collector streets, thoroughfares and freeways. Streets in the city are in various states of repair and of varying quality as indicated on Figure 7, "Street Conditions". Street improvements are on-going capital improvement activities and a major responsibility of city government. It is important that street improvements be of adequate quality to assure safety and durability.

Most older neighborhoods in Nevada have residential sidewalks. The quality of maintenance varies from block to block while many of the newer subdivisions are without sidewalks. Sidewalk systems are particularly important in areas of high pedestrian traffic including school areas and other areas of major public use.

## Utilities

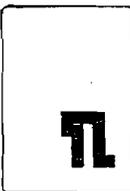
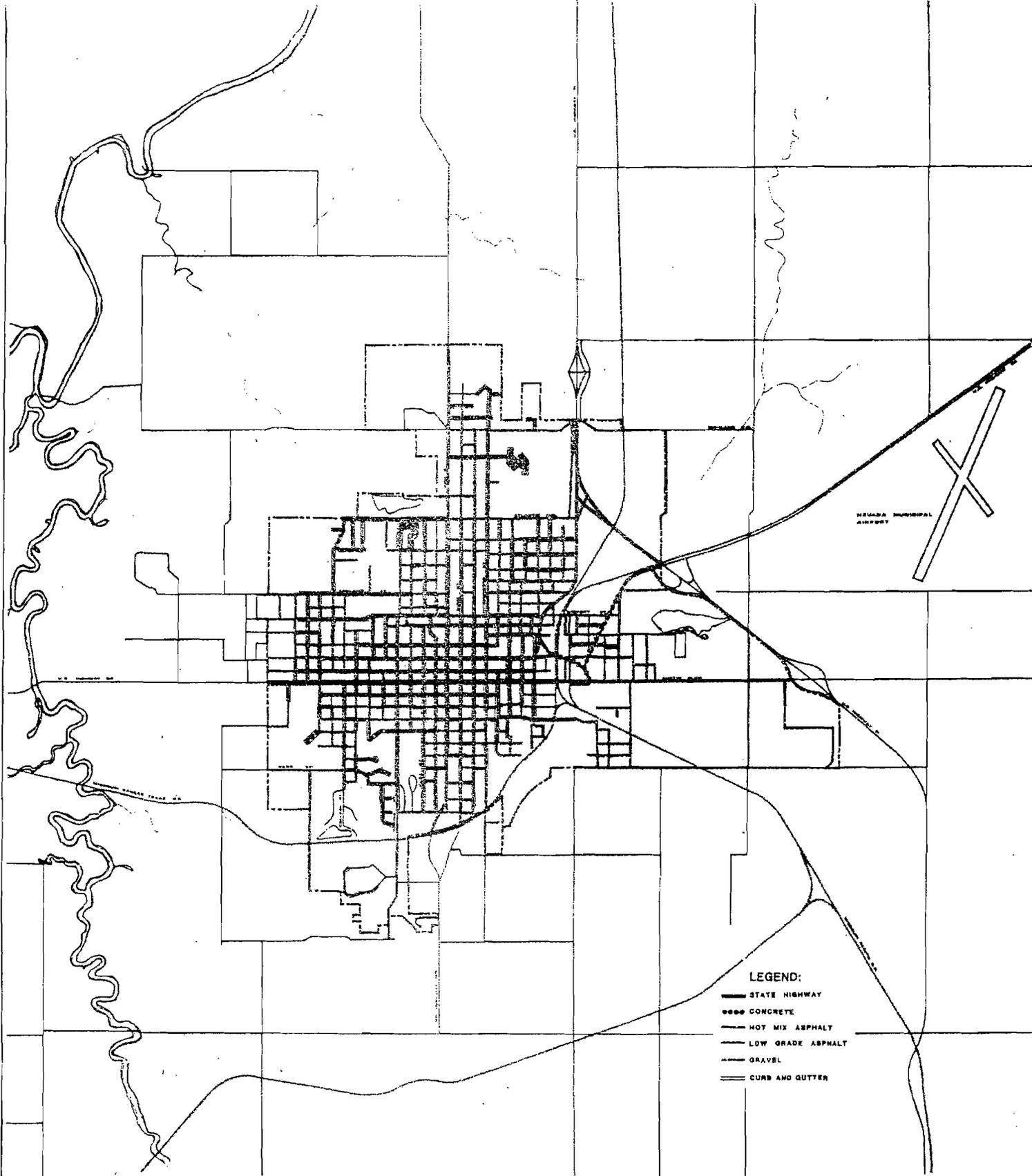
The utilities serving the city must not only be continually maintained but they must also be improved and expanded as the city grows and develops. Nevada is served by the following utility systems:

The Water Distribution System -- The Nevada water system has been problematic due to objectionable taste, harm to appliances and plumbing fixtures, as well as excluding certain industries from locating in Nevada. These problems have been caused by the existence of large percentages of minerals, particularly hydrogen sulphide in the water supply. The city is currently in the process of constructing a water treatment plant to correct these problems which have long affected the water supply.

In addition to the water treatment plant, various other needs have been identified by Larkin and Associates in their 1980 Master Plan Report Nevada's Water Distribution System. Their recommendations for improvements before the year 2000 include improved fire fighting capacity by the addition of larger water pipes and main; new valves and a 500,000 gallon water tank.

Storm Water Drainage -- The city has continued to improve its storm water drainage system by constructing enclosed storm sewers to correct open drainage problems. The major areas in need of future improvement include the Washington to Main storm sewer, the street sewers on the north side of the square and on Missouri Avenue.

Sanitary Sewers -- A network of city sanitary sewers connects most areas of the city to a waste treatment plant located west of the Nevada city limits. Some areas, however,



**STREET CONDITIONS**

**NEVADA, MISSOURI**

**OCHSNER-HARE & HARE**
  
 KANSAS CITY MISSOURI

**COMPREHENSIVE  
PLAN UPDATI**

**FIGURE 7**

are served by private sewers, many of which are in poor condition. Four such areas have been identified located south of Cottey College in the Methodist Church area and to the immediate north and east of the central business district.

Major areas requiring city sanitary sewers are the East-view Heights area, east of the city, and the Industrial Park to the north. In 1982, George Butler Associates developed the Preliminary Design Report, Sanitary Sewers for Nevada's Industrial Park. They concluded that the provision of adequate service for the Industrial Park and adjacent area requires the construction of a gravity sewer and force main sewer. This system would primarily connect the Industrial Park site to the existing system, north of Atlantic and Commercial Streets. Their estimated cost totaled \$1,308,300.

Electric and Natural Gas Systems -- The Missouri Public Service company provides both electric and natural gas service to Nevada. Electric service in the future is expected to be adequate. At present all natural gas is provided by only one transmission line. An additional line may be needed in the future to assure uninterrupted service.

Communications -- Communications resources are essential to the city, although they are not primarily publicly owned. The city now relies on two publications--The Nevada News and the Daily Mail, a radio station, and cable television service. A diverse media becomes increasingly important as a city grows and develops. In the future more information will need to be communicated by a greater variety of modes. As communication technology advances, the city will need to respond to the opportunities created.

## Government

The city government of Nevada is responsible for adopting and administrating a wide variety of city policies, revenue raising activities, capital improvement programs, and public services. The planning process and the development of the Comprehensive Plan presented in Chapter II is a means of identifying the changing needs of the city and responding with appropriate implementation strategies. The plans and strategies largely become the agenda for city government activity in the coming years. In addition, the city must keep pace with expanding needs by continually developing adequate revenue sources.

As discussed previously in this report, Nevada is affected not only by its own city government but by various other levels of government. In addition to its regular responsibilities the city government must work to promote cooperation between these other governmental units. This cooperation is particularly important in such areas as planning in the urban/rural fringe

(where development has spread beyond the city limits), and developing effective use of joint facilities and services, (the city/county library, and community center). Various opportunities exist where cooperation between governmental units could be of benefit to area wide residents.

### Summary and Conclusions

Discussed in this chapter have been a number of factors which affect the future development of Nevada. Therefore, those effects must be reflected in the process of crafting a plan to guide such development.

A number of factors simply serve as a starting point. The city's history, its location in the region, the physical characteristics of the land upon which it is built, the socio-economic characteristics of its inhabitants, and the existing pattern of land use and public facilities are such factors. They represent the current reality of Nevada. Each presents both constraints and unique opportunities to be recognized in a comprehensive plan.

Beyond the reality of existing conditions lies the basic hopes and aspirations for the future. Those hopes and aspirations expressed by Nevada residents in this comprehensive plan update may be summed up in one phrase--quality of life.

The concern for preservation and enhancement of the quality of life of Nevada residents leads directly to a number of proposals embodied in the Comprehensive Plan set forth in Chapter II. The concern underlies the proposals for industrial recruitment and economic development, a range of public improvements, expanded services, and improvement of the community's housing opportunities.

## CHAPTER II : THE COMPREHENSIVE PLAN

### Element One: General Provisions

#### Article 1: Elements of the Comprehensive Plan

The Comprehensive Plan is the culmination of the analysis of existing conditions and projections of future growth. The plan represents the city's overall development policy and consists of four basic components: the Land Use Plan, the Transportation Plan, the Community Facilities Plan and the Plan for Economic Development. The goals, objectives, policies, and standards of each are set forth hereunder.

##### Section 1. Comprehensive Plan Defined

The Comprehensive Plan is the official statement of comprehensive policies, programs and plans, in graphic and written form, for (a) guidance and direction of the physical development of the community and (b) projects to be carried out pursuant thereto; from the enactment date of the Comprehensive Plan to the year 1994.

##### Section 2. Terms Defined

- A. Goal - A general statement of community decisions and aspirations indicating a broad social, economic, or physical state or condition which the community officially agrees to strive to achieve in various ways, including among others, through the implementation of the Comprehensive Plan.
- B. Objective - A more limited and precise aim, purpose, or condition than a goal, which is officially adopted and is intended to be realized in various ways, including among others, through the implementation of the Comprehensive Plan.
- C. Policy - An officially adopted course or method of action intended to be followed.
- D. Standard - A definite rule providing qualitative and quantitative measurement which is to be used as the basis for design or course of action.

#### Article 2: General Goals of the Comprehensive Plan

##### Section 1. Nature of General Goals

It is the general goal of the citizens of Nevada to create a community characterized by quality of life. It is desired

that Nevada seeks to preserve its unique qualities while remaining open to the changes brought about by growth. It is a general goal of Nevada to strengthen its identity as a physical environment of order and beauty in which private and public uses are carefully integrated and are mutually supporting and in which the quality of public buildings, courts, open spaces, and other facilities give inspiration and confidence to private citizens to invest their time, energies, and monetary wealth in the future of the city. Additionally, the orientation of the physical design of the community and provision of public and private facilities and uses is intended to give diversity and freedom of choice.

The general goals set forth below are not to be considered as a comprehensive and complete statement of the total goals and aspirations of the people of Nevada relating to future development, but rather are intended to represent those particular social, economic and physical environmental goals which directly relate to the physical development of the city and for which the City Council has a primary responsibility.

#### Section 2. Social Goals

- A. To constantly seek ways to enlarge the participation of citizens, individually and through institutional processes, in both the planning and implementing of community development programs.
- B. To use the methods of planning and analysis as well as those of conventional wisdom to ascertain the basic problems of all segments of the community.
- C. To aid where possible through local public policy the provision of needful and satisfying work, maximum educational opportunities, and a variety of recreation alternatives.

#### Section 3. Economic Goals

- A. To direct community economic efforts toward expanding employment opportunities for citizens, and to improve economic stability through diversification of the economic base.
- B. To work continuously for improved efficiency and economy in the fiscal affairs of local government, without compromising the safety, utility, and quality of facilities and services.
- C. To maximize opportunity for attracting investment capital to the community through providing high quality public facilities and services which are established to support private development.

- D. To concentrate public efforts to stimulate economic growth on those areas for which the Nevada labor force, geographic location, and other resources are uniquely equipped.

#### Section 4. Physical Environment Goals

- A. To base use of the natural environment on sound principles that will permit an appropriate level of utilization of the natural resources of the community. Land in the form of productive soils and as sites for different uses is to be treated as a resource to be carefully preserved.
- B. To promote visual quality through sensitive design of private and public uses which reflect the topography of the area, protect the soil from erosion, and preserve major trees and unique natural features. The preservation of open space for recreation, conservation, drainage, and other purposes is a primary consideration in the design of each element.

### Article 3: General Policies of the Comprehensive Plan

#### Section 1. The Comprehensive Plan as the Fundamental Policy Guide

The policies for the development of Nevada are set forth in this Comprehensive Plan and in the Zoning Ordinance, Housing Code, Building Code, Subdivision Regulations, and other codes and ordinances relating to the basic and fundamental development policy of the community. All other plans, codes and ordinances, and amendments thereto, shall be in conformity with the intent of policies both explicitly and implicitly expressed in the Comprehensive Plan. It is intended that studies, public hearings, and official changes in the Comprehensive Plan shall be completed before the Planning Commission reviews and recommends action to the Council on plans, ordinances, and amendments thereto which cause Plan changes to be initiated.

The plans for the use of land and community facilities are set forth in Figure 8, Comprehensive Plan Map; and for transportation facilities in Figure 9, Major Street Plan. All of the written material contained in the Comprehensive Plan shall be considered as further explaining and defining the material set forth on these maps.

## Section 2. Review of Plans and Policies

The plans and policies expressed herein shall be reviewed annually by the Planning Commission. The Commission shall review, among other things, the growth and change in population and land use, changes in social and economic conditions and other factors which may influence the physical environment, and the plans and policies relating thereto. The Commission shall file a report with the City Council of such findings including recommended changes in the Comprehensive Plan. This annual plan review report shall be filed at the first council meeting of each year. A more comprehensive review of all goals, assumptions, and policies for community development shall be made at least once every five years by the Planning Commission. In general, this review shall be carried out within two years following the publication of the federal decennial census, and again approximately five years thereafter, or as otherwise requested by the Council or initiated by the Planning Commission.

## Section 3. Citizen Participation

The public policies contained herein are established for the purposes of (1) providing public facilities and services and (2) guiding private development and uses of land. They are intended to protect and serve the citizens of Nevada and will be effective for this purpose only when they represent a strong public consensus and are thereby supported. Types of policies vary widely and not all affect or interest citizens equally. In the process of public policy-making, it is intended that citizens who will be significantly affected by a proposed policy or who may have a special interest or expertise in the area of concern shall be identified and given opportunity to contribute to the policy-making process through public hearings, study sessions, informal discussion, committee participation, and consultation with public officials, and that careful deliberation shall prevail on the study of proposals and possible consequences.

## Section 4. Assumptions

Planning for Nevada has a dual focus. It must provide for eventualities that are not or cannot be foreseen. This is to be accomplished through the adoption of policies and standards to be applied under different types of circumstances. Planning also forecasts the need for services by indicating both quantity and time increments involved. Assumptions concerning future population density, distribution, and numerical totals therefore become policies on which are based predictions of future housing, utilities, transportation facilities, and other private and public demands. These assumptions are to be periodically reviewed and modified as new information on demands becomes available. The analysis of existing conditions and factors relating to the future of Nevada has been provided in Chapter I, Factors Affecting Development.

## Element Two: The Land Use Plan

### Article 1: Nature and Purpose

The Land Use Plan is intended to provide the official policies for the physical development of Nevada. The policies which are expressed graphically on the official Land Use Plan and in written form include policies for guiding and coordinating the development and use of privately-owned land, buildings, and facilities.

### Article 2: General Policy

It is the policy of the Land Use Plan to utilize land areas in Nevada in the most appropriate, efficient and environmentally sound manner.

### Article 3: Goals and Policies for the Use of Private Property: Residential, Commercial and Industrial Uses

#### Section 1. Residential Uses

- 1.1 Goals - All of the people of Nevada should be provided with housing of good quality and design, a diversity of choice of housing types, and of sufficient size to produce a healthy and satisfying living environment. Housing is to be located in quiet, safe and attractive neighborhoods that provide each dwelling unit with convenient and safe pedestrian and vehicular access to an elementary school, churches, and recreation areas located within the neighborhood unit. Each residential area is to be located within convenient travel time and distance of work centers, shopping areas, and community recreational, educational, and cultural facilities.
- 1.2 Map Interpretation - Residential areas have been designated on the Land Use Plan. (See Figure 8).
- 1.3 General Policies -
  - A. The Neighborhood Unit--Whenever possible, residential development should be designed according to the Neighborhood Unit concept. A Neighborhood Unit is an area planned as a unit and used principally for residential purposes, but which contains recreational, religious, educational, and retail shopping facilities needed to serve the residents of the neighborhood. Each of

**MAJOR THOROUGHFARE PLAN**

- FREEWAY
- PRIMARY THOROUGHFARE
- SECONDARY ARTERIAL
- COLLECTOR
- LOCAL
- PARKWAY

**RAILROADS**

- EXISTING RAILS

**AIRPORT**

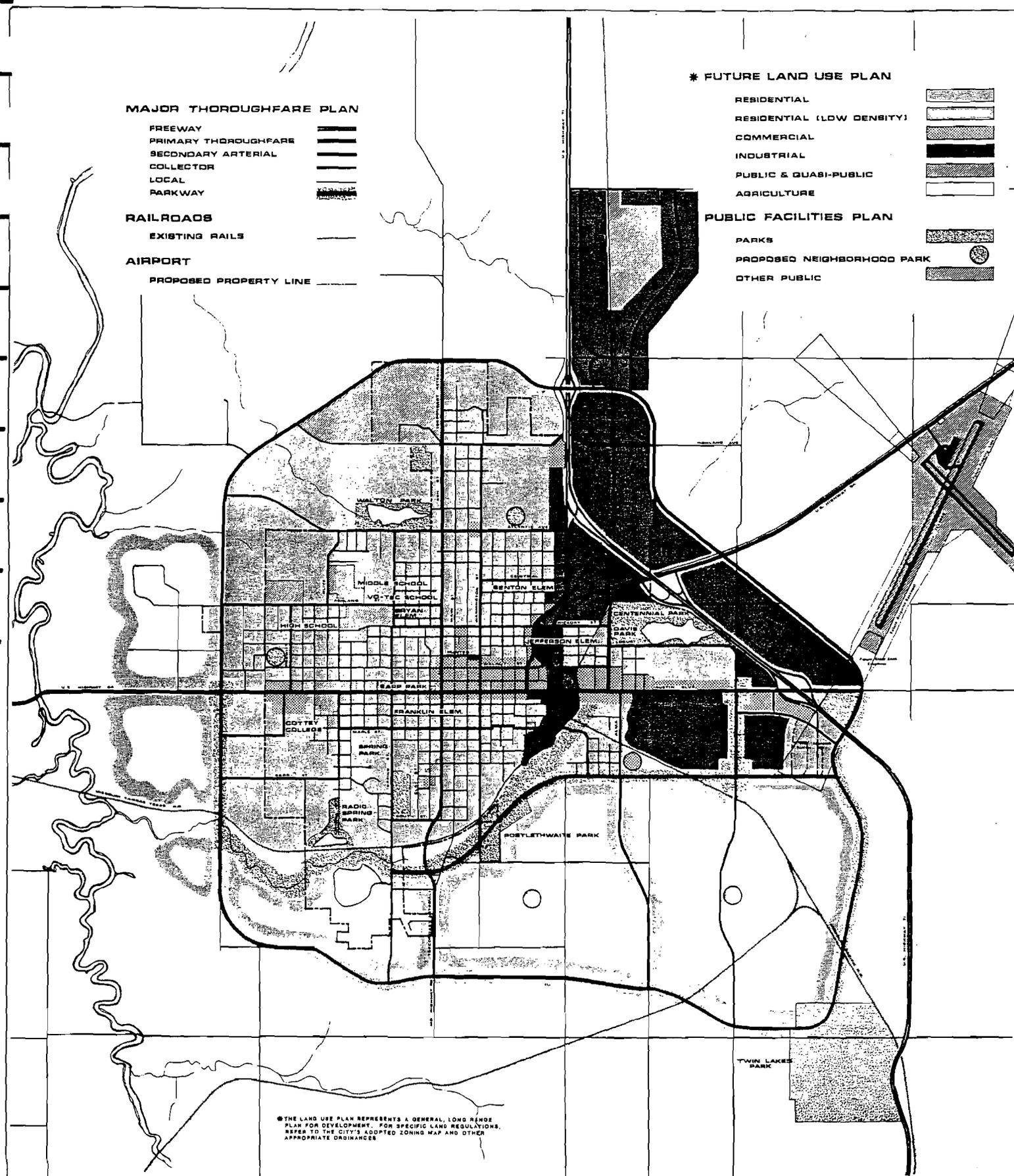
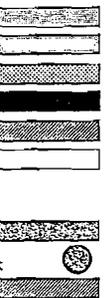
- PROPOSED PROPERTY LINE

**\* FUTURE LAND USE PLAN**

- RESIDENTIAL
- RESIDENTIAL (LOW DENSITY)
- COMMERCIAL
- INDUSTRIAL
- PUBLIC & QUASI-PUBLIC
- AGRICULTURE

**PUBLIC FACILITIES PLAN**

- PARKS
- PROPOSED NEIGHBORHOOD PARK
- OTHER PUBLIC



THE LAND USE PLAN REPRESENTS A GENERAL, LONG RANGE PLAN FOR DEVELOPMENT. FOR SPECIFIC LAND REGULATIONS, REFER TO THE CITY'S ADOPTED ZONING MAP AND OTHER APPROPRIATE ORDINANCES

**COMPREHENSIVE CITY PLAN**



**NEVADA, MISSOURI**

OCHSNER, HARE AND HARE  
GENERAL PLANNING CONSULTANTS  
KANSAS CITY MISSOURI

**COMPREHENSIVE PLAN UPDATE**

APRIL 1968

**FIGURE 8**

these elements should be provided as an integral part of the plan for the neighborhood and in accordance with the following principles:

- (1) The neighborhood unit should be of a size which can be served by one elementary school.
- (2) The elementary school and/or neighborhood park and playground should be located in the approximate center of residential population.
- (3) The street system should be designed in accordance with the principles and standards set forth in Element 3 herein. All major streets should be routed along the perimeter of the neighborhood. Minor residential streets should be designed to provide good access to abutting property, but should be arranged to discourage their use by through traffic. Collector streets should provide fairly direct connection between minor streets and neighborhood recreational, educational, or shopping facilities, or major streets. Whenever possible residential dwelling units should not face on or have direct ingress and egress to a collector street.

1.4 Recommended Strategies - The following is a list of specific housing and residential development strategies to be pursued under the action plans outlined in Chapter III, Plan Implementation.

- A. The city should promote the annexation of land surrounding the city limits and should become more aggressive in providing sewer service to these areas as an incentive for new home construction.

- B. The city should promote new construction within the city limits. The number of available lots for new residential building sites should be increased. The ten acres now owned by the City of Nevada in the southeast portion of the city should be utilized for this purpose.
- C. The provision of affordable housing often requires the use of various financial incentives. Incentive options should be made available for the provision and financing of multi-family housing.
- D. The city should provide incentives to encourage rehabilitation of existing housing units in Nevada. The city should investigate initiating a Neighborhood Housing Service (NHS) program in Nevada. A local NHS would operate as an independent not-for-profit corporation and offer a wide variety of housing rehabilitation services and incentives.
- E. The city should develop housing opportunities for the elderly. Both the development of adult boarding and nursing home facilities should be pursued in Nevada.
- F. The city should review the existing Zoning Ordinance and modify the existing pyramidal type zoning to prevent the construction of residential units on land planned for commercial or industrial development.
- G. Zoning changes that have taken place since 1975 should be reviewed to identify issues, problems and opportunities for mobile/modular home development.
- H. Existing tax laws that favor preservation of older structures should be utilized.

*Habitat  
Humanity.*

## Section 2. Commercial Uses

- 2.1 Goals - Each commercial use should have a location which provides convenient access for customers in an attractive, safe, and sanitary environment, and which is related to other uses in a manner to receive maximum benefit and support from compatible uses and community facilities.

② - The core area of the city, which includes the central business district and town square should remain the dominant commercial area in the city. Other commercial developments should be well planned with various commercial uses grouped together in an attractive manner.

- 2.2 Map Interpretation - Commercial areas have been designated on the Land Use Plan.

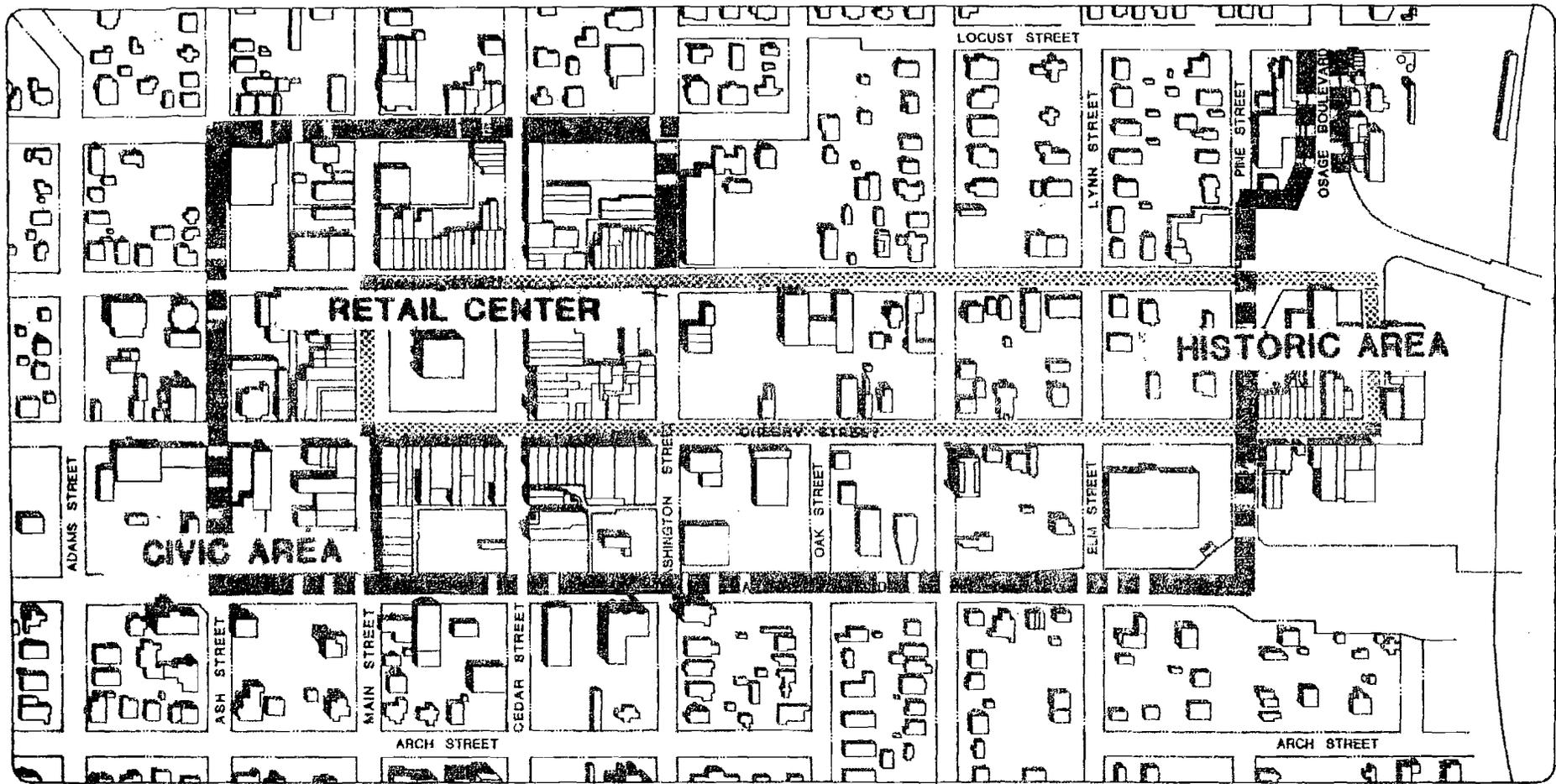
### 2.3 General Policies -

A. The Core Area Plan, Figure 9, graphically illustrates a course of action to further develop and enhance the function of the city's central commercial area.

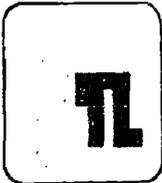
- (1) The existing core area should remain the dominant commercial, historic, and civic center of the community.
- (2) Preservation and rehabilitation of historic buildings or structures should be a public priority and encouraged within the core area as well as throughout the community.
- (3) Additional off-street parking should be conveniently located to accommodate adjoining commercial uses.
- (4) A pedestrian path should be developed to promote pedestrian activity and connect the various sections of the core area.

### B. Planned Shopping Centers

The planned shopping center is intended to be a unified grouping of compatible retail shops and stores, planned as a unit, situated on a site of sufficient size to provide adequate off-street parking space for customers and



 Pedestrian Loop  
 Urban Design Treatment



CORE AREA PLAN

NEVADA, MISSOURI

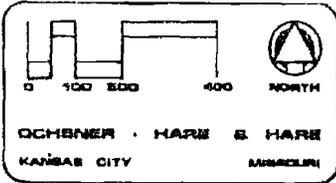


FIGURE 9

employees, oriented and designed to protect adjacent land uses, and located to provide convenient access from surrounding residential areas. Planned shopping centers should conform to the standards described in Table 17.

TABLE 17

CHARACTERISTICS OF PLANNED  
SHOPPING CENTERS  
NEVADA, MISSOURI

Characteristic	Neighborhood	Community
Leading Tenant	Supermarket and Drug Store	Variety Store and Small Dept. Store
Number of Stores	5 - 20	15 - 40
Area of Stores (sq. ft.)	30,000 - 75,000	100,000 - 250,000
Area of Sites (acres)	4 - 20	15 - 40
Radius of Trade Area (miles)	1/2	2
Number of Persons in Trade Area	4,000	35,000

C. General Commercial Areas

General commercial areas are intended to serve a variety of functions. Such areas may be suited for development as offices, open display commercial areas, or general purpose commercial uses. The city should adopt a new ordinance that would limit the type and number of signs in commercial areas.

D. Austin and Osage Commercial Area

The commercial areas located on Austin and Osage should serve to provide convenience to customers and serve as an attractive vehicular and pedestrian connection between the major highways and the city's core area. It is a policy of this

plan that the city develop design standards for Austin and Osage to include such features as improved landscaping, lighting, sidewalks and sign control.

#### E. Tourist Commercial Areas

It is intended that areas strategically located to serve tourists' commercial needs be reserved for that purpose. Development should be planned for tourist-related functions on sites of adequate size to provide off-street parking and to permit design to protect adjacent uses. Tourist commercial areas should be located to provide convenient access from major highways.

### 2.4 Recommended Strategies -

The following is a list of specific commercial development strategies to be pursued in Chapter 3, Plan Implementation.

#### A. The Core Area

- (1) Implement a comprehensive strategy for Nevada's core area. The plan should include an urban design component, a pedestrian loop, an historic area, a sign code, an area for civic activities and opportunities for new residential and commercial activity.
- (2) It is also intended that the city investigate the potential of developing the historic area on the east side of Nevada's core area.
- (3) The existing tax laws favoring preservation of older structures should be utilized.

#### B. Tourist Commercial Areas

- (1) It is recommended that portions of Highway 71 and 54 and running through the city limits of Nevada be landscaped with flowering bushes and flowers. The landscaped areas would serve to create an attractive entryway into the city. This effort should be complemented by the upgrading of the existing landscaping along Highway 71 at Camp Clark.

- (2) The Municipal Golf Course is a potential tourism resource. Currently, the existence of the golf course is not well known outside of Nevada. By constructing identification signs at the golf course that are visible from Highway 71, potential tourists can be attracted to the city.
- (3) It is further recommended that uniform directional signs be distributed throughout the city to further indicate the location of the municipal golf course as well as other attractions in the city.
- (4) There is much potential at Radio Springs Park for both the expanded use by Nevada residents as well as by visitors to the city. The park should be more fully developed for expanded use and easier accessibility.
- (5) A tourist attraction, such as a water slide, has been suggested for location on Highway 71 for good accessibility and visibility.
- (6) The city should promote the development of a K.O.A. campground in Nevada. The possible location east at Highway 71/Austin Interchange should be investigated.

### Section 3. Industrial Uses

3.1 Goals - To provide a variety of sites for diversified industrial uses, served by suitable transportation facilities and public utilities. The arrangement, size and location of sites is intended to provide adequate area for expansion of individual operations, be conveniently accessible to living areas, have a location and arrangement so external effects such as noise, traffic, dust, smoke, odor, blast, and vibration will not adversely influence adjacent uses and areas, and provide a physical environment appropriate for the operation of each use.

3.2 Map Interpretation - The boundaries of industrial areas have been delineated on the Land Use Plan Map.

#### 3.3 General Policies -

- A. Future industrial development should be directly accessible to major thoroughfares and, if feasible, to rail. They should be located in areas where they will not conflict with adjacent land uses.

B. Industrial development should be isolated from residential and public or semi-public areas. New development or expansion should be encouraged within industrial park areas.

. Industrial sites should be attractively screened and landscaped so as to provide a buffer to adjoining land uses.

### 3.4 Recommended Strategies

The following strategy is to be pursued under the action plans outlined in Chapter III, Plan Implementation.

(1) Appropriate planning for future public services and facilities shall be applied to the Industrial Park.

(2) It is recommended that the construction of residential units on lands planned for industrial development be prohibited.

## Section 4. Land Use Planning Outside of the City Limits

4.1 Goals - A planned approach to the development of Nevada's urban fringe is necessary to assure that the amenities contributing to quality of life in the area will be provided in the future.

4.2 Recommended Strategies - It is recommended that the following resolution be carried out by the City of Nevada:

The City of Nevada shall encourage relaxation of existing annexation statutes while being observant of the rights of extra-territorial land owners and users.

The City of Nevada and Vernon County should cooperate toward appropriate land use planning.

## Element Three: The Transportation Plan

### Article 1: Nature and Purpose

This plan for transportation facilities includes plans for major streets, rail, air, and transit facilities. It is intended to promote the orderly development and use of land within the existing and future urban area; to eliminate existing traffic congestion and facilitate the rapid, safe, and efficient movement of people and commodities; to make provision for anticipated future transportation needs and to permit the acquisition of right-of-way for transportation purposes; to create a system of transportation which clearly reflects the social objectives of the city by providing a full range of transportation facilities for use by pedestrian and vehicular traffic, with due attention to aesthetic, recreational, and utilitarian needs; and finally, to provide a local system that is fully integrated with the regional, state, and national transportation systems.

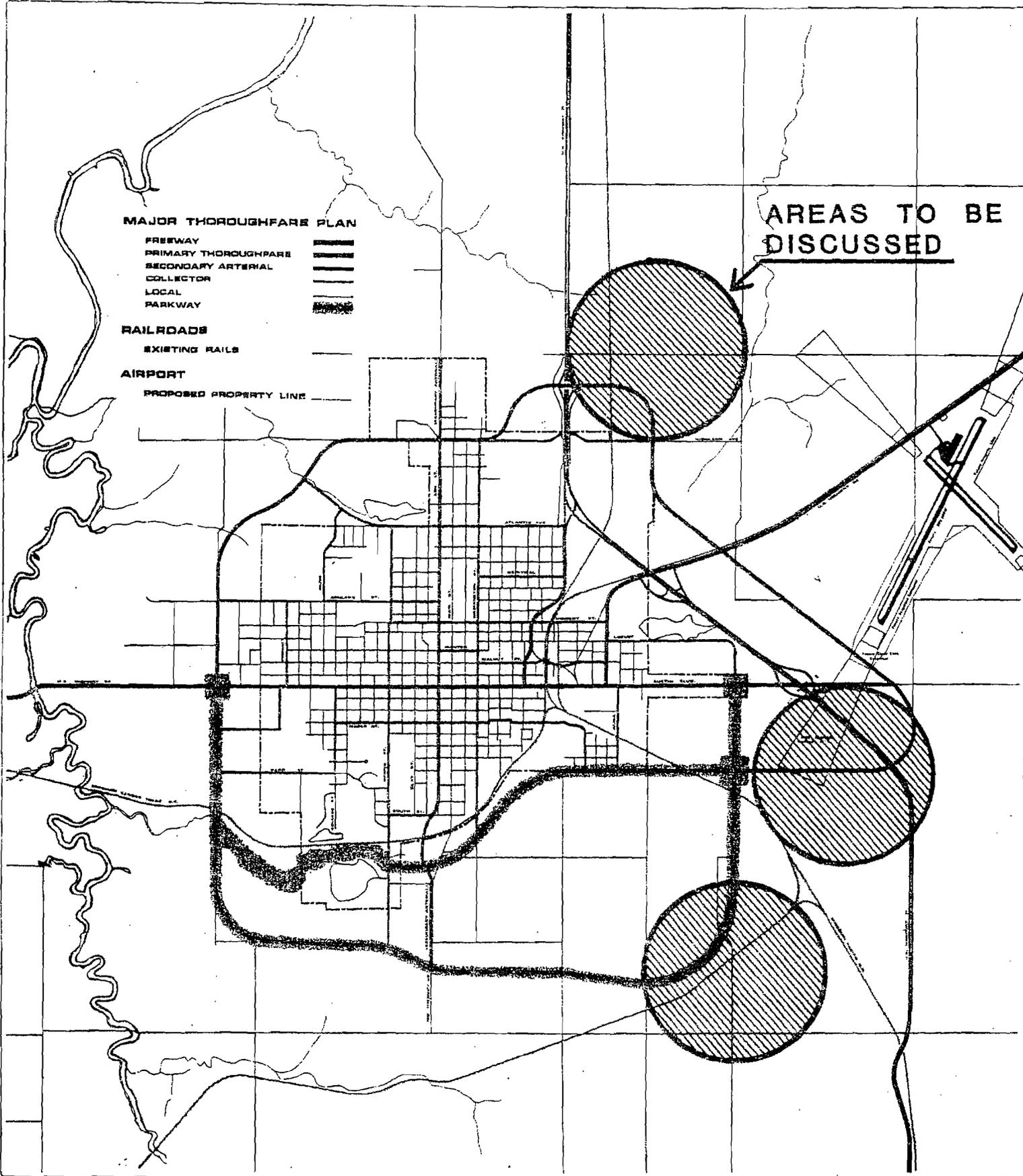
### Article 2: Goals and Policies of the Major Street Plan

The thoroughfare system is the vehicular circulatory system of the community. It brings people and goods into the community and provides the means by which they move about from one destination to another. Thoroughfares define neighborhoods, the basic units of community planning. Ideally, the system should be designed to carry traffic to thoroughfares on the periphery rather than through neighborhoods, providing safer, quieter residential streets and convenient, efficient access to employment, shopping, and other destinations.

The Major Street Plan illustrated on Map 10 indicates the classification and location of the city's thoroughfare system. It is the policy of this Plan that the City of Nevada utilize the functional classification of streets as described below and the designation of streets by functional classification as reflected in Map 10.

The Major Street Plan should be used to guide the city and developers in providing routes important to the community's circulation. Streets of adequate width can be platted early, eliminating costly condemnation at a later date when traffic volumes exceed street capacity. The Plan reflects the likely development pattern of the next two decades.

The locations of the routes were determined by existing routes, topography, and logical service areas for utilities. The emergence of new land uses are also considered in the Major Street Plan, including the proposed Industrial Park and Twin Lakes Park.



**TRANSPORTATION PLAN**

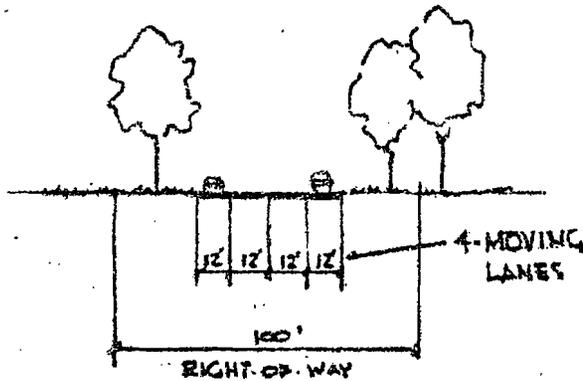
**NEVADA, MISSOURI**

**OEHNER & ASSOCIATES**  
 GENERAL PLANNING CONSULTANTS  
 KANSAS CITY MISSOURI

**FIGURE 1**

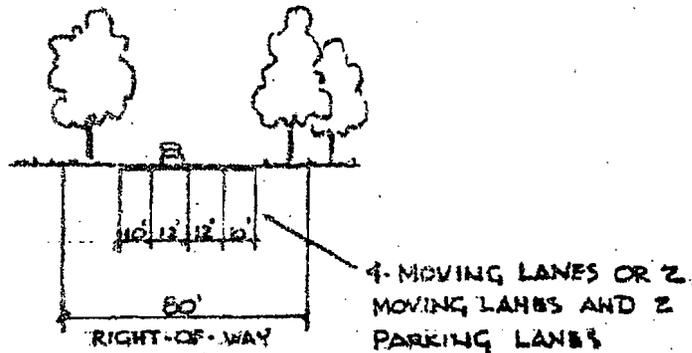
Article 3: Definitions of Functional Classifications of Streets

- A. Freeway. A divided multi-lane arterial street designed for rapid unimpeded movement of large volumes of traffic with full control of access and grade separations at intersections.
- B. Primary Thoroughfare. A multi-lane arterial street designed primarily for traffic movement and secondarily for providing access to abutting properties with a minimum number of at-grade intersections.



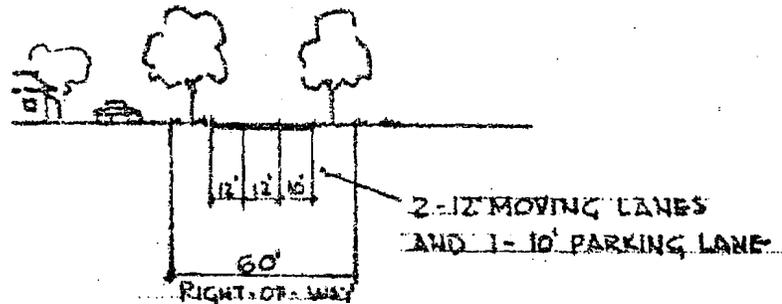
Minimum right-of-way: 100 feet. Minimum pavement width, back to back of curb: 52 feet.

- C. Secondary Arterial. A multi-lane facility intended for both traffic movement and for access to abutting property. Such a street may provide a connection between local and collector streets to primary thoroughfares or freeways.



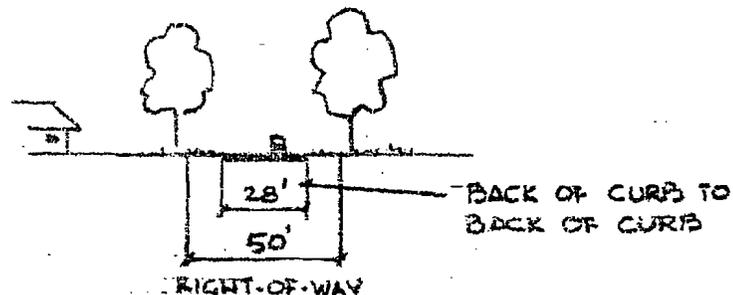
Minimum right-of-way: 80 feet. Minimum pavement width, back to back of curb: 48 feet.

- D. Collector. A street located with a land use area which collects and distributes traffic from local streets to arterial streets. Access to community or neighborhood facilities may be provided. Collectors are identified by their function. While some are designated specifically on the Major Street Plan, the Planning Commission may designate others in the review of plats as areas develop.



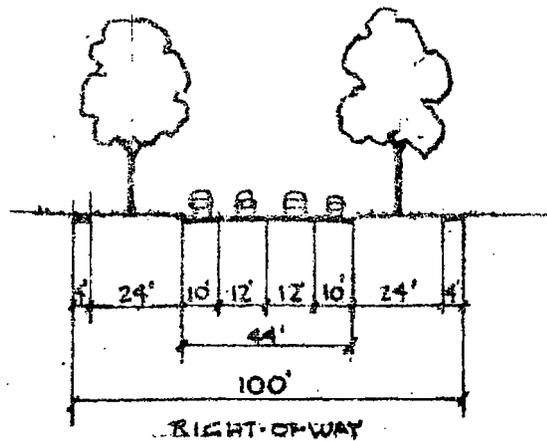
Minimum right-of-way: 60 feet. Minimum pavement width, back to back of curb: 36 feet.

- E. Local. A street which serves the function of providing access to abutting property and low speed circulation within the immediate neighborhood. These streets should intersect with major thoroughfares only where absolutely necessary, and should intersect with each other and with collector streets at 90 degree intersections wherever possible.



Minimum right-of-way: 50 feet. Minimum pavement width, back to back of curb: 28 feet.

- F. Parkway. A supplementary designation to a primary thoroughfare to provide a multi-lane arterial street designed to physically and visually tie together parks and recreational areas through additional width rights of way, planted medians and roadside landscaping to enhance the thoroughfare's visual quality.



PARKWAY TREATMENT  
FOR A SECONDARY THOROUGHFARE

#### Article 4: Rail Service

The City of Nevada is strategically located on two major railroad lines which currently provide freight service to the city. Although passenger rail service to Nevada has been discontinued over the last several years, many Nevada residents recall the advantages when Nevada was a regular railway stop.

The economies of major transport change over the years due to such factors as fuel prices, government regulation and consumer demand. It is possible that the City of Nevada could again reestablish passenger rail service. It is recommended that the city investigate the reestablishment of passenger rail service to Nevada.

#### Article 5: Air Transportation

Nevada's accessibility to major airlines and airports is presently difficult. Driving time to Kansas City International Airport is three hours one way. Even though air taxi service is available from the Nevada Airport, the service is often prohibitively expensive. Both Nevada residents and businesses would benefit by establishing an airline shuttle service between Nevada and Kansas City.

It is recommended that an airline shuttle service be coordinated with existing services in area towns. Joplin, for instance, provides a shuttle to KCI now flying over Nevada. On-demand service should be provided two to three times per week by a private provider. The city should partially subsidize the service by guaranteeing a minimum number of passengers. Empty seats could then be filled by school children on educational trips.

It is recommended that the airport navigational system be upgraded to accommodate the addition of an air shuttle service.

#### Article 6. Additional Transportation Modes

##### 6.1 Transit

There is a need in Nevada for providing a form of transportation service to residents without access to the private automobile. In this area the greatest user need was identified as the elderly and low income citizens.

It is recommended that the city expand the existing taxi subsidy program. Currently a subsidy is made available to qualifying residents. The subsidy provides residents with sixteen one way coupons per month worth a total of thirty-two dollars (\$32). The city should increase this subsidy by the number of coupons made available per month.

As the population of Nevada grows, the existence of a city bus service becomes more necessary and easier to support financially. The city should implement such a service as the city population increases.

## 6.2 Intra-city Bus Service

Nevada residents and businesses are very dependent on the existing intra-city bus service for both passenger and freight service. Cottey College, for example, relies on the Trailways service to transport students to and from Nevada several times per year. Local businesses use the service to obtain parts and supplies on a regular basis for their business needs.

It is important to Nevada that the intra-city bus service and facility be maintained and upgraded. The bus station should also serve as a transportation node in the city. As passengers disembark the intra-city bus, other means of transportation should be made available so that their journey can be completed to their homes, business or other destinations. For example, taxi service should be easily available from the bus station.

It is recommended that the city develop a Transportation Center in Nevada. The Transportation Center should be designed to potentially accommodate such uses as taxi service, municipal bus, intracity bus and Older Adults Transportation Service, (OATS).

Element Four: The Community Facilities Plan

Article 1: Nature and Purpose

The Community Facilities Plan is intended to supplement the Land Use Plan and the Transportation Plan by providing the necessary services to adequately meet current and anticipated needs. The policies which are expressed graphically on the official comprehensive city plan and in written form include policies for (1) satisfying individual community needs and (2) improving the overall quality of life in Nevada.

Article 2: Parks and Recreation

- 2.1 Goals and Policies - It is intended that a full range of parks and playgrounds be provided for all age groups. Facilities should be planned and provided in advance of need and should be located conveniently accessible to those whom the facilities are planned to serve.
- 2.2 Standards - Areas for recreational facilities are intended to be provided as set forth in accordance with the area and location standards of Table 18 below.

TABLE 18

STANDARDS FOR RECREATIONAL AREAS\*

	Standard	Service Radius	Size Range
Community Parks	31.5 Total Ac.	2 mile	40-100 Ac.
Neighborhood Parks	18.0 Total Ac.	.5 mile	5-10 Ac.
Playgrounds		.5 mile	2-4 Ac.
Playfields		1.5 mile	5-15 Ac.
District Park	18.0 Total Ac.	3.0 mile	100-200 Ac.

\* Source: Urban Planning & Design Criteria, Joseph DeChiara and Lee Koppelman, and Ochsner, Hare & Hare

## 2.3 Recommended Strategies -

- A. At present the existing community center is serving much of the recreational need of the city. However, within the next ten years it is expected that the center will be unable to serve the expanded needs of the city. In ten years, facility expansion should be undertaken.
- B. More open space is needed in town for activities such as soccer. There is an opportunity to create such a use at Walton Park, where the city, using available fill materials, could create level space required for such an activity.
- C. Two neighborhood parks shall be developed, one in the northwest sector of the city near the site of the Armory, and one in the northeast sector of the city.
- D. The Twin Lakes Park Plan should be updated to improve recreational opportunities in the city.
- E. The green space, now provided by the Postlewaithe Park should be expanded to the northeast and southwest. A running trail should be developed in the park, however, the natural habitat should be maintained.
- F. The expanded use of existing high school indoor swimming pool should be explored with the school board. A swim team with staff support should be developed.
- G. There is a need for a facility to serve as a performing arts or civic center in Nevada. This multi-purpose facility is required for theatre, dance and other musical productions, a wide variety of classes, public meetings and assemblies, and private meetings and assemblies.

## Article 3: Educational Facilities

### Section 1. Public School Improvements

1.1 Goals - Even though public school enrollment in Nevada has decreased 4 percent in the last five years, elementary school enrollment is on the increase. New facilities and updated programs are needed to serve the needs of the city public school children.

### 1.2 Recommended Strategies -

- A. The public schools of Nevada have recently acquired numerous computer facilities. To make the best use of computer technology, faculty

training should be increased and student involvement with computers should begin at the elementary school level.

- B. It is recommended that school/community relations be improved. Regular media programs should be produced to acquaint the community with the affairs of the public schools. Academic activities should be stressed. These media productions can be assisted by Cottey College.
- C. A regulation size fieldhouse and track should be built at the Nevada High School. The existing facility is out of date and is not adequate to serve the fitness and recreational needs of the school.
- D. Regulation size gymnasiums should be provided at the elementary school level.
- E. The future of the Franklin School and other aging school buildings should be investigated.

## Section 2. Higher Education and Adult Education

2.1 Goals - Nevada adults and young adults need increased educational opportunities. These range from degree programs to classes designed to serve both recreational and intellectual interests and career advancement purposes.

### 2.2 Recommended Strategies -

- A. The city and Cottey College should explore the possibility of cooperative use of the proposed Drama and Arts Center during the summer months.
- B. In order to promote the continued operation of Cottey College programs in Nevada, a local sustaining fund should be developed by local businesses.
- C. Adult education classes in Nevada should be continued and supported.
- D. The desirability of bringing the University of Missouri-Kansas City's Program of Adult College Education to Nevada should be explored. This program would utilize cable television and Saturday classroom activities to facilitate the needs of working adults. Such a program would be operated in conjunction with the existing two year colleges.

- E. It is recommended that high technology education be promoted in Nevada with the purpose of providing opportunities for high technology offices to locate in Nevada, and make jobs available to trained Nevada graduates and other recruits trained in high technology skills.

### Section 3. Child Care and Special Education

3.1 Goals and Policies - The proper care and education of Nevada's children are essential to the future of the city. There is a need in the city to expand child care opportunities and to provide citizens with public education on early childhood education.

3.2 Recommended Strategies -

- A. A 24-hour child and elderly care service should be implemented in the city. A feasibility study should be undertaken to determine available funding mechanisms.
- B. Currently there is a very limited assistance in language therapy available to Nevada pre-schoolers. It is recommended that a program be implemented to identify children with language therapy needs and to provide them with the assistance of a language therapist on a regular basis.

### Section 4. Medical Facilities and Care Programs for the Elderly

4.1 Goals - There is a growing need in Nevada to serve the medical needs of the elderly. Day care facilities for the elderly and existing nursing homes should be improved to serve the future needs of the older population. In addition to nursing home care, alternative care facilities such as adult day care or adult boarding facilities should be provided. Nevada should promote its existing medical facilities to increase awareness of the medical services and facilities available in the city.

4.2 Recommended Strategies -

- A. A new nursing home facility at the city hospital should be constructed.
- B. It is recommended that an adult day care, and adult boarding facility with hospice be developed

in Nevada. Adult day care programs and facilities should be coordinated with the proposed child care program (Section 3). The city should investigate the option of using the existing city operated nursing home for this purpose. This building would be available for use once the proposed new nursing home facility was constructed.

- C. The city hospital should initiate a public relations effort.

## Section 5. Street Improvements

Nevada has an extensive network of streets and sidewalks requiring regular maintenance and upgrading. The provision and maintenance of the city streets is an important and costly responsibility of city government that must be done in an efficient manner.

- 5.1 Standard - A standard of five inches of hot mix asphalt overlay is preferred since the street surface durability is greatly increased.

- 5.2 Recommended Strategies -

- A. Although it is not now possible for the city to afford upgrading all streets to the preferred standards, it is recommended that selected areas needing repair be identified and the preferred standard applied. In addition, it is recommended that due to the importance of the city square, and due to the level of its use, that it be identified as a selected area for street improvement.
- B. The city should reduce required minor street width to decrease construction and repair costs.

## Section 6. Sidewalks

- 6.1 Goals and Policies - It is not considered necessary to provide or repair sidewalks on every Nevada street. However, there are locations (collector streets, the CBD, and surrounding schools) where quality sidewalks are considered essential for the adequate functioning of the city. The maintenance of sidewalks on local streets is the responsibility of adjacent home owners and tenants.

- 6.2 Recommended Strategies -

- A. A pedestrian pathway plan is needed to provide a sidewalk system throughout the city. Sidewalks should be located on collector streets, on

streets connecting the public schools with other major activity centers, and throughout the city core area where ramps should be made available for access by the handicapped. While it is appropriate that the city should finance the major pedestrian pathway, it should be a joint responsibility of the city and the residents to provide sidewalks on local streets which primarily serve the needs of adjacent homeowners or tenants.

- B. The provision of sidewalks in new subdivisions should be the responsibility of the developers.

## Section 7. Parking

7.1 General Policies - More extensive parking facilities are needed in the city's core area for both regular use and for special occasion parking. Parking safety at the city square needs to be improved. Truck parking around the perimeter of the square causes visibility problems for automobile drivers attempting to leave parking spaces.

## 7.2 Recommended Strategies -

- A. It is recommended that parking facilities in the core area be increased.
- B. Truck parking should be restricted to the center lane of the city square.

## Section 8. Library

The library should be made accessible to the elderly and the handicapped. A new elevator should be designed to serve a ground level entrance. In five years the need for expanding the library should be analyzed.

## Section 9. Communications

9.1 Goals and Policies - The City of Nevada needs to respond to the changing field of communications. Such responses are necessitated by expected changes in the city and changes in communication technology itself. Advances in computer technology presents opportunities for the city government in terms of both cost savings and improved communications. As a city grows in numbers and in diversity, the media available in the community must also expand.

9.2 Recommended Strategies -

- A. A citywide information system should be developed. The city should investigate the use of computers and cable service for such activities as city billings and city notices.
- B. New forms of communications (additional newspaper, radio stations, and low power local television station) should be developed as the city grows.
- C. The audio-visual resources of the local radio station should be utilized to produce promotional devices for Nevada.
- D. Telephone service in Nevada should be improved by the development of a local office to serve Nevada residents, and the improvement of long distance service.

Section 10. Fire Protection

10.1 Goals and Policies - Adequate fire protection must be made available to Nevada residents, businesses and industries. It is also important that residents living outside of the city limits have access to fire protection service.

10.2 Recommended Strategies -

- A. It is recommended that as industrial and commercial development, and other city growth occur, the need for an alternate fire station location or an additional station be studied. Issues to be addressed would include adequate storage and training grounds.
- B. The funding of fire district taxation outside of the city limits of Nevada should be explored.

Section 11. Weather Station

It is recommended that the city initiate and encourage the establishment of a National Weather Service Weather Radar Station in or near Nevada recognizing that Nevada is presently located in the extreme ranges of the Monett, Missouri, radar and the Kansas City, Missouri radar station.

Section 12. Intergovernmental Cooperation in the  
Provision of Area Facilities and Services

12.1 Goals and Policies - The adequacy of facilities and services in the Nevada area are of concern to Nevada residents. In many cases important community facilities are provided by various levels of government. It is a goal of the Community Facilities Plan that the City of Nevada cooperate with other levels and departments of government to improve the delivery of services and create cost savings.

12.2 Recommended Strategies

- A. A City/County Coordinator should be appointed. The role of the coordinator would be to attend all relevant city and county meetings and legislative sessions, in order to identify areas where cooperation can occur.
- B. A public education campaign should be initiated to address the problem of suspicion between the residents of the city and the county, and to clarify the roles and responsibilities of each jurisdiction.
- C. The potential for developing a joint city/county jail facility should be examined and analyzed. The use of sales tax financing and the sharing of dispatch services should be explored.
- D. The City of Nevada and the County Court should meet in the spring of 1984 to discuss planning for roads and rights-of-way. The city should work with the county to establish standards for developers of subdivisions and to determine if the county has the power to develop subdivision regulations.
- E. The city and county should explore all alternatives and joint opportunities for cooperation, cost savings, and the generation of joint revenues.
- F. The establishment of a State Police Regional Satellite Station near Highway 71 should be initiated and encouraged, recognizing that the closest such stations are at Carthage and Lee's Summit, Missouri.

- G. It is recommended that the city initiate and support a regional solid waste study including the provision of the regional landfill, possible recycling and energy generation from burning refuse.
- H. It is recommended that the city enhance communications and coordination with the City of Fort Scott, Kansas realizing that this city is closest in proximity, size, and type of government to the City of Nevada.
- I. A financing strategy for the provision and maintenance of county roads should be explored.
- J. A county/township tax collection system should be explored.
- K. The locations of the following agencies should be centralized:
  - Social Security Office
  - Unemployment Office
  - Food Stamp Service
  - Health Service
- L. The city should take the responsibility of making policy recommendation to state and federal governmental officials to improve the coordination of programs and delivery of services.

Element Five: The Economic Development Plan

Article 1: Nature and Purpose

The physical development elements of the Comprehensive Plan are intended to be supplemented by basic growth and expansion of Nevada's economic base.

Article 2: Goals and Policies for Economic Development

2.1 Goals -

- A. It is the goal of the Economic Development Plan to promote the orderly growth of the City of Nevada to a population of 15,000 by the year 1994.
- B. Basic employment should be increased by approximately 81 new positions each year for the next ten years.

- C. It is necessary that the city devise strategies to facilitate new growth by providing adequate services and facilities. These efforts must be monitored as the population expands.
- D. A comprehensive strategy for active industrial recruitment must be developed.

## 2.2 Recommended Strategies -

### A. Industrial Recruitment

The city should initiate an Economic Development Commission. This commission would consist of a public/private partnership directed by an economic development specialist.

It would be the function of the commission to develop a targeting strategy to identify the type of industry desired in Nevada. High technology industry has been identified as one type of desirable industry to be pursued.

It would be the responsibility of the commission to determine the key impediments to industry location in Nevada; to design incentives to overcome impediments; and to educate parties interested in economic development to the various incentives available to them.

Other commission responsibilities would be to initiate a motel market study; develop a fact book on Nevada, and initiate lobbying efforts with the state. Activities should be coordinated with the public relations staffs of various organizations including Missouri Pacific and Missouri Public Service.

### B. Nevada's Central Business District

It is a goal of the Economic Development Plan that Nevada's central business district be promoted to maintain a healthy CBD that can compete favorably with retail development in and around Nevada in the future.

The recommended strategies to achieve this goal include improving the physical appearance and function of the area, retaining existing businesses, and attracting new businesses and use to the CBD.

Specific action plans for these strategies are set forth in Chapter III, Plan Implementation.

C. Tourism

The tourism industry is considered a desirable means of promoting growth in the city. Attracting tourists to Nevada should be accomplished by providing new facilities of interest to tourists and of complementing and augmenting the existing features of the city.

## CHAPTER III: IMPLEMENTATION

### Introduction

Transforming plans into public policy is primarily the responsibility of local government in a community. Public policy decisions are put into effect by numerous legal and administrative procedures. Many public policy decisions require direct action on the part of the city government. Increasingly, however, plan implementation is the result of cooperation between the public and private sectors. The city plays an important role in coordinating community investment strategies that rely upon private initiative in such areas as residential commercial, and industrial development and revitalization.

This Comprehensive City Plan report contains plans, recommendations, objectives, standards and development strategies for all phases of growth of the City of Nevada. In order to make these various elements a meaningful guide to development an overall program for public and private implementation must be developed. Such a program is outlined in this section.

### Adoption of the Comprehensive City Plan

Plan implementation begins by transforming the plans, recommendations, objectives, standards and principles of the Comprehensive City Plan into public policy. Many actions are necessary to finally implement a plan--citizen participation, direct governmental action, and appropriate regulations. But all of these should be based upon the official policy statement of local government concerning the growth and development of the city. Transformation of a Comprehensive City Plan, or in this case a major revision to an existing plan, into the official policy statement of local government is accomplished by formal adoption.

Adoption of a comprehensive amendment to Nevada's Comprehensive City Plan follows the same steps as were required for the adoption of the original plan. These are:

- o Before adopting the plan the Planning Commission shall hold a public hearing.
- o The Planning Commission should adopt the plan as a whole.<sup>1</sup>

<sup>1</sup>Although adoption of the plan as a whole is recommended, state statutes provide the option of adopting separate parts of the plan.

- o A copy of the adopted plan or portion thereof shall be certified to the City Council and the City Clerk.
- o The City Council should endorse by resolution the adoption of the plan by the City Planning Commission.
- o A copy of the adopted plan or portion thereof shall be recorded with the County Recorder of Deeds.

### Administrative Organization

An adopted Comprehensive City Plan is implemented on a day-to-day basis by the administrative organization of the local governing body. Possession of an officially adopted Plan by the City Manager and the operating departments of government serves to coordinate the daily decisions of the various administrative officials toward the accomplishment of the goals and objectives of the Plan. Without such coordination, those direct governmental actions which affect the development of Nevada could hinder instead of aid the orderly growth of the city.

It is essential that the administrative organization possess or have access to the expertise required to successfully implement the Comprehensive City Plan. Various implementation recommendations set forth in this chapter require planning expertise in the development of feasibility studies, ordinances, site plan reviews, and monitoring and evaluation techniques. To accomplish these tasks the following recommendations are made.

#### Supplement Planning Expertise

The city should hire a local staff planner or utilize planning consultants to assist in the following tasks:

Feasibility Studies--The feasibility of the following recommended programs should be determined:

- Day care center
- Multi-purpose center
- Fire station expansion
- Library expansion
- City bus service
- Transportation center
- Computer capability for the city

Plans, Ordinances and Standards--The following should be developed:

- Twin Lakes Park Plan update
- Design standards
- Zoning ordinance revisions

City Planning Commission Staff Support--The staff support should make professional recommendations on zoning requests, subdivision plats, planned developments, etc.

Monitoring and Evaluation--The city administration and planner should monitor and evaluate the effects of community change on the implementation process. The implementation of a monitoring and evaluation program is described under "Monitoring and Review Procedures", page 102 .

### New Program Considerations

In addition to those actions which may be taken on a day-to-day basis by the administrative organization of the city, a number of recommendations were developed by the special citizens committees which relate to day-to-day operations, but which would require specific consideration and approval by both the City Administration and the City Council. In some cases, carrying out the recommendations would require inclusion of the proposed activity in the annual city budget. In addition, many of these recommendations represent community investment strategies that rely upon a public-private partnership for implementation.

The methods of implementing these new program considerations, described in Chapter II are detailed below:

#### Economic Development

Implementing the goals of economic development set forth in Chapter II requires specific strategies for three plan components: industrial recruitments, the promotion of tourism and the revitalization of the central business district.

Economic Development Commission--Many aspects of the three components of the Economic Development Plan should be coordinated to derive maximum benefits. As industrial growth, for example, can positively effect the vitality of the central business district, a healthy CBD can promote the growth of tourism.

An Economic Development Commission should spearhead industrial recruitment activity and provide vehicles for core area development and the promotion of tourism. It is recommended that the City Manager propose the means of selecting the commission as well as the proposed source of funding for the Economic Development programming. The responsibilities of the commission are described below:

Hire an Economic Development Director--The commission should hire an individual to provide day-to-day direction and administration of economic development objectives. The Director should have experience in commercial revitalization, tourism, industrial

retention, attracting new industry, advertising, and promotion. The American Industrial Development Council (AIDC) could be contacted for assistance in locating job applicants. It is desirable that the individual would have already attended or be willing to attend the one week Basic Economic Development Course offered by the AIDC. This intensive course provides an overview of economic development methods, principles, regulations, and promotional activities.

Carryout Elements of the Economic Development Action Plan-- Table 19 describes the major responsibilities of the Economic Development Commission with a suggested timetable for economic development efforts.

TABLE 19  
ECONOMIC DEVELOPMENT ACTION PLAN

<u>Action</u>	<u>Period of Im- plementation</u>		<u>Responsibility</u>
	<u>Less Than 1 Yr.</u>	<u>Yrs. 1-2</u>	
1. Appoint Economic Development Commission	X		Structure alternatives to be recommended by City Manager
2. Hire Executive Director	X		Economic Development Commission
3. Create a Core Area Task Force	X		Economic Development Commission
4. Create a Tourism Task Force	X		Economic Development Commission
5. Prepare Market Analysis	X		Economic Development Commission
6. Identify preferred Target Industries	X		Economic Development Commission
7. Identify Impediments to Industrial Location		X	Economic Development Commission

TABLE 19 (Continued)

<u>Action</u>	<u>Period of Im- plementation</u>		<u>Responsibility</u>
	<u>Less Than 1 Yr.</u>	<u>Yrs. 1-2</u>	
8. Assemble Information on Available Incentives	X		Economic Development Commission and City Government
9. Design New Incentives Where Needed		X	Economic Development Commission and City Government
10. Develop Map of Industrial Land and Industrial Park Parcels	X		
11. Develop Promotional Tools and Informational Brochure, Including Descriptions of Incentives, Standards, Taxes, Utilities, Population Characteristics, and Quality of Life Factors		X	Economic Development Commission.  Utilize Audio/Visual Resources of Local Media
12. Encourage the State of Missouri to Promote Nevada as an Industrial Site	X		Economic Development Commission
13. Explore Opportunities for international trade arrangements		X	Economic Development Commission
14. Coordinate Efforts with Missouri Pacific and Missouri Public Service Company	X		Economic Development Commission
15. Promote the Establishment of a State Police Regional Satellite Station Near Hwy. 71	X		Economic Development Commission

TABLE 19 (Continued)

<u>Action</u>	<u>Period of Im-</u> <u>plementation</u>		<u>Responsibility</u>
	<u>Less</u> <u>Than</u> <u>1 Yr.</u>	<u>Yrs.</u> <u>1-2</u>	
16. Assist Local Hospital with Public Relations Effort	X		Economic Development Commission
17. Initiate Efforts to Establish an Airline Shuttle Service	X		Economic Development Commission
18. Promote the Establishment of a Local Telephone Service Company Office	X		Economic Development Commission
19. Advertise in Industry Specific Promotional Material		X	Economic Development Commission
20. Provide Assistance to Local Firms Interested in Expanding	X		Economic Development Commission and City Government
21. Establish an Industrial Appreciation Day and Banquet	X		Economic Development Commission, City, and Chamber of Commerce
22. Implement Comprehensive Plan Recommendations for Sewer, Roads, Water and Other Capital Improvements		(As required)	
23. Develop a Tourist Attraction		(To be determined)	
24. Monitoring and Evaluation	X		Economic Development Commission and City Government

The Role of City Government--The city should work closely with the Economic Development Commission to assist in providing incentives and scheduling capital improvements as needed to support and encourage development in Nevada. The special citizen committee recommended that various capital improvements be implemented to promote development, core area revitalization and tourism. These recommendations are fully described in the "Capital Improvements Programming" section of this chapter.

Core Area Task Force--It is recommended that the Economic Development Commission create a Core Area Task Force with the responsibility of implementing the Core Area Plan. The Task Force would represent core area merchants, city staff, the Chamber of Commerce and other parties interested in developing a civic center, historic district, tourist interest, downtown residential uses, improved core area urban design, and commercial revitalization. The specific responsibilities of the Task Force are described below:

- (1) Assemble and analyze data. The Task Force should review the Core Area Land Use Survey, page 32, and area economic factors, page 12. This would be supplemented with the most current data on local economic factors from the 1977 U. S. Census on Retail Trade, Wholesale Trade, and Service Establishments.
- (2) Refine goals and objectives. After determining existing problems and conditions in the city's core area, the Task Force should identify the preferred mix of core area uses and develop implementation strategies.
- (3) Provide guidance to the city staff. The Task Force would provide guidance to the city staff on the following plan components:
  - A. The development of design standards for sign control, landscaping and lighting.
  - B. The construction of a core area pedestrian loop.
  - C. The use of incentives for core area revitalization, preservation and the specific development of both a civic and historic area. 353 redevelopment incentives using powers of eminent domain and tax abatement should be considered. An Urban Development Action Grant should be pursued to make available low interest rate loans to developers and to provide funding for additional economic development activities through the pay back of loans from developers to the City.
- (4) Related Responsibility. The activities of the Task Force should also be directed toward creating a core area that is attractive to tourists. Comprehensive plans for citywide tourism development, however, should be spearheaded by an additional task force.

Tourism Task Force--It is recommended that the Economic Development Commission create a Tourism Task Force with the responsibility of identifying and developing a range of activities to promote tourism. These include:

- (1) A new major tourist attraction, such as a showboat with restaurant facility on Radio Springs Lake.
- (2) The enhancement of historical attractions to Nevada including the Bushwhacker Museum and an historic area in the city's core area. These efforts should be coordinated with the efforts of the Core Area Task Force.
- (3) The placement of directional signs to existing attractions such as the Municipal Golf Course, municipal parks, state parks, wildlife areas and area lakes.
- (4) The development of a K.O.A. campground.
- (5) Landscaping the entryway to Nevada and providing rest areas.
- (6) Advertising and promoting existing attractions by such means as brochures and highway signing.

Monitoring and Evaluation--The need to carefully monitor and evaluate the impacts of economic development has been previously mentioned in regard to the city's "Administrative Organization". It is important that the Economic Development Commission work closely with the city to assure that growth in industrial expansion, commercial revitalization and tourism is met with an adequate expansion of city improvements and services. The procedures recommended for monitoring and evaluation are described in detail under the Monitoring and Evaluation section of this chapter.

#### Other New Program Considerations

Taxi Subsidy Program--The Planning Commission should determine the amount by which the city increases the subsidy to the existing Taxi Subsidy Program.

Passenger Rail Service--The reestablishment of passenger rail service to Nevada should be promoted by the following means:

- (1) The city should determine the existing need and potential use of passenger rail service to points within the region.
- (2) Contact should be established with the existing railroads now serving the Nevada area to determine their requirements for establishing passenger service.

- (3) The passenger rail service needs of surrounding communities should be investigated and coordinated.

Transportation Center--It is recommended that the city initiate the development of a Transportation Center by convening a meeting of the local taxi companies, the Older Americans Transportation Service (O.A.T.S.), the intracity bus company, and representatives of the local railroads serving Nevada. A feasibility study for the purchase and rehabilitation of the existing bus station should be undertaken.

Facilities for the Elderly--The Moore-Few Nursing home should explore alternate structures for organization and funding. Efforts in identifying financing and facility expansion should be assisted by the Economic Development Commission, including the development of an adult boarding facility. In addition, the City should continue to encourage the development of housing units for the elderly.

### Capital Improvements Programming

The capital improvement efforts of the city are accomplished through its city budget. In order to provide a guide to future development in the city, a capital improvement program is needed to insure that capital improvement projects are selected on the basis of established priorities and long-range planning. The capital improvement program serves as an important tool for the implementation of the Comprehensive Plan.

Numerous capital improvements are needed in Nevada in the next ten years. These range from a new transportation center and multi-purpose center to major thoroughfares, parks, and funding commitments for citywide housing rehabilitation. The complete list of all recommended capital improvements is described below:

#### Core Area Improvements

- Street improvements
- Pedestrian loop
- Additional parking

#### Transportation/Streets and Sidewalks

- Major thoroughfare proposals
- Street improvements
- Pedestrian pathway
- Transportation center

## Parks and Recreation

The development of two neighborhood parks  
Improvement of the following parks:  
Twin Lakes, Postlewaithe and Radio Springs Park  
The provision of a soccer field  
New community center

## Urban Design

Directional signs  
Landscape entry to Nevada  
Rest areas

## Housing

Incentives package

## Other

Multi-purpose center  
City auditorium  
Natural gas pipeline  
Improved access to the library (to be determined)  
Fire station expansion (to be determined)

It is recommended that for each capital project the following information be developed by the city administrative staff: the nature and extent of each project, the estimated cost, and the potential source of funding. The administrative staff should prepare such information on each project proposal prior to the preparation of the next capital improvement program. In addition, the staff should prepare for consideration by the Planning Commission and City Council the proposed sequence and timing of each proposal.

Consideration of the projects proposed in this planning document must be reviewed in light of various alternative projects represented by current plans described in the 1984 Five Year Capital Improvements Program. It is also necessary that the administrative staff, Planning Commission and City Council consider the potential capital improvements that will be required for proposed annexation plans. The provision of services for areas annexed by the city is discussed in the Annexation section of this chapter.

## Codes and Ordinances

While capital improvements provide important means by which the public sector can implement physical components of

the Comprehensive Plan, codes and ordinances provide additional means to implement plan goals and objectives of health, safety, efficiency, and community betterment. This is accomplished by the development of design standards, zoning, subdivision, and parking regulations, the establishment of setback lines to protect future right-of-way, and minimum street widths, and the control of animals within the city.

The following system of codes and ordinances is recommended to implement components of the Comprehensive City Plan.

#### Street Standards

The city should revise the "Standard Street Design Elements" Section. 31-58 of the Nevada City Code in accordance with the Definitions of Functional Classifications of Streets, Article 3 of the Transportation Plan.

#### Parking

Section 19-127, "Truck Parking Prohibited on Certain Streets", of the Nevada City Code should be revised to prohibit truck parking on the following streets of the city square:

Walnut Street, north side, between Main and Cedar  
Cedar Street, east side, between Walnut and Cherry  
Cherry Street, south side, between Main and Cedar  
Main Street, west side, between Walnut and Cherry

#### Urban Design Ordinance

A set of urban design standards should be established for the city. The standards should apply to the city's core area, including Austin and Osage and should include a comprehensive revision to the city Sign Code. In addition to sign control, the design standards should include the design elements of landscaping, lighting, and sidewalks. Design standards for the city's core area should be developed in coordination with the Core Area Task Force.

A new sign ordinance should be written to revise the existing sign ordinances set forth in Chapter 29 and Chapter 37-8 of the Nevada City Code. The code should be developed toward the goals of creating a more attractive city environment, promoting clear communication to residents and tourists, enhancing the character of various districts within the city, and allowing proprietors the opportunity to express both their identity and the goods and services being offered.

The sign control policies of the City Zoning Ordinance, Chapter 37-8 should be reviewed and revised where necessary to achieve the goals stated above.

The city should consider designating by city ordinance, areas of special sign control. The following special districts and sign control policies should be considered:

Historic Area--The use of signs in historic areas should be compatible with historic architecture, and serve to enhance the historic ambiance.

The Core Area--Sign control in the core area should be designed for pedestrian and vehicular traffic moving at reduced speeds. Signs in this designated area should be typically smaller than those in undesignated areas and promote the identity of the city's center. Controlled use of auxilliary design elements should be considered to promote the town center atmosphere. These include such elements as banners, marquees, sidewalk showcases, and temporary window graphics.

Major Thoroughfares Policy--Sign controls on specified strips along 71 and 54 highways should be designed. Special consideration should be given to sign control on Austin and Osage since these thoroughfares function as entryways to the City's Core Area.

#### Animal Control Ordinance

It is recommended that Chapter 5 of the Nevada City Code be revised to require licensing and vaccination of cats.

#### Zoning

The zoning regulations of the city are the essential tools for implementing the Land Use Plan. They serve to create the needed districts for land use areas and establish minimum development standards. An analysis of the existing Nevada zoning regulations reveals that certain changes should be incorporated into the zoning code to accomplish these purposes. The changes include:

- (1) Making current certain definitions--"house trailer or mobile home", for example.
- (2) Revision of airport zoning regulations based upon the airport master plan.
- (3) Elimination of automatic pyramiding of uses by incorporating a "Use Permitted on Review" procedure.
- (4) Revision of the procedure for zoning newly annexed areas to be consistent with annexation recommendations. This recommendation is fully described in the next section on Annexation.

## Subdivision Regulations

Chapter 32 of the Nevada City Code establishes regulations governing the subdivision of land. These regulations represent an important element in the implementation of the objectives and standards established by this Comprehensive Plan. In general, the existing subdivision regulations are adequate. However, the city should conduct an overall update of the regulation including a consideration of the following:

Sidewalks--Sec. 32-27 of the Nevada City Code should be revised to require that sidewalks be provided on at least one side of every street in new housing subdivisions.

Cost Sharing--Article V of the Nevada City Code should be revised to clearly identify the improvements that are to be the responsibility of the subdivider and those improvements which are to be the responsibility of the city.

Planned Unit Development--The subdivision regulations should make provisions for the use of Planned Unit Development.

## Major Thoroughfare Ordinance

While the Major Thoroughfare Plan is implemented primarily through direct public improvements, an ordinance should be adopted establishing setback lines on all major thoroughfares to protect future rights-of-way and to clearly define the obligation of developers and the city in bearing the cost of major streets.

## Fire Insurance Ordinance

The city should pass an ordinance in accordance with Senate Bill 433 (recently passed) requiring insurance companies to withhold 15 percent of fire insurance claim payments until property owners repair or level burned out structures. If in the case that the property owner does not take such action, the city should be authorized to make needed repairs or proceed with clearance. The cost to the city would be reimbursed from the 15 percent escrow fund.

## Solid Waste Ordinances

It is recommended that the City of Nevada prohibit by ordinance the burning of trash within the city and mandate the subscription of Nevada citizens to a solid waste collection service. (The development of a long range regional solid waste plan is discussed under Intergovernmental Cooperation, page 101).

#### Building Code

The city should update its building standards (Sec. 6-6) by adopting the amendments to the National Uniform Building Code made after 1979.

#### Electrical Code

The city should update its electrical standards (Sec. 11-9) by adopting the amendments to the National Electrical Code made after 1978.

#### Plumbing Code

The city should update its plumbing standards (Sec. 25A-3) by adopting the amendments to the I.C.B.O. Plumbing Code made after 1979.

#### Mechanical Code

The city should update its mechanical standards (Sec. 6-7) by adopting the amendments to the Uniform Mechanical Code made after 1979.

#### Fire Code

The city should update its Fire Protection Standards (Sec. 12-1) by adopting the amendments to the Uniform Fire Code made after 1979.

#### Property Conservation Code

In 1976, the City of Nevada adopted the Property Conservation Code which establishes minimum conditions under which dwellings may be occupied. No changes in the Property Conservation Code are recommended.

## Annexation

The codes and ordinances adopted by the city are only able to guide the development that takes place within the city limits. As growth occurs outside the city boundary, it becomes increasingly necessary to identify and provide areas of land which receive city services and are of sufficient size to provide space for the residential, commercial, and industrial growth. The city must look beyond the city limits when planning the most appropriate land uses for the community. Currently the annexation of land requires that the city implement the excessively stringent requirements of the Missouri State Statutes on annexation. These are described below:

### Annexation Upon Request of Contiguous Property Owners

Annexation is allowed when:

A petition signed by 100% of all property owners within the area to be annexed is presented at a public hearing. If no objections are made (evidence at the hearing may be presented by any person, corporation or political subdivision) and the City Council determines that the annexation is reasonable and necessary to the proper development of the city, and that the city has the ability to furnish normal municipal services to the area to be annexed within a reasonable time, then the city may annex by ordinance. However, the ordinance is not effective until it is approved by a city election in which the annexation passes by a simple majority.

### Annexation Procedures Where Objection Exists

If an objection is filed not later than seven days after the public hearing, the following procedures are required for annexation:

1. The city must determine that the land to be annexed is contiguous to the existing city limits and that the length of the contiguous boundary common to the existing city limit and the proposed area to be annexed is at least fifteen percent of the length of the perimeter of the area proposed for annexation.
2. The city must then propose an ordinance setting forth the following:
  - A. The area to be annexed including affirmation of the contiguous boundary.

- B. That such annexation is reasonable and proper to the development of the city.
  - C. That the city has developed a "Plan of Intent" to provide services to the proposed area.
  - D. That a public hearing shall be held prior to the adoption of the ordinance.
  - E. The date that annexation is proposed to be effective (up to thirty-six months from an election held in conjunction thereto).
3. The city must present at the public hearing, the following:
- A. The "Plan of Intent" including a list of major services to be provided (including but not limited to police and fire protection, water and sewer systems; street maintenance, parks and recreation, refuse collection, etc.).
  - B. A proposed time schedule to provide services within three years from the date annexation becomes effective.
  - C. The level at which the city assesses property and the rate at which it taxes property.
  - D. How the area will be zoned.
  - E. When annexation will become effective.
4. If the city votes favorably to annex the area, before annexation proceeds an action must first be filed in the County Circuit Court for a declaratory judgment authorizing the annexation.
5. If the County Court authorizes the annexation, then the city must hold an election where annexation is approved by a majority of the total votes cast in the city, and by separate majority of the total votes cast in the area sought to be annexed.
6. If less than a majority of the total votes cast in the area proposed to be annexed vote in favor of the proposal, but at least a majority of the votes cast in the city vote in favor, then the proposal must be voted on again (within 120 days). Passage at this second election requires a two-thirds majority of both areas voting.

7. If the second election fails, then no part of the area sought to be annexed, may be the subject of another annexation proposal for two years.
8. If annexation is approved, deannexation can occur if it can be shown that the city has not followed the Plan of Intent within three years after the annexation became effective.

The annexation procedures described above and adopted by the Legislature creates severe barriers to annexation. Cities unable to expand their limits are prevented from providing essential urban services to urbanizing areas. No other unit of government (County or the State) is either politically inclined or legally authorized to meet the void caused by the preemption of legitimate municipal governmental services. Those who partake of the benefits provided by Missouri cities (employment, services, and facilities) should not escape the responsibility to share in their cost.

In order to meet Nevada's Comprehensive Plan objectives, three courses of action are available. Each is recommended:

1. The city should make every effort possible to replace existing legislation with a reasonable, workable and equitable approach to an annexation statute.
2. The City of Nevada and its residents, representing 46% of the county's population, should provide political support to Vernon County to undertake those functions permitted by statute (notably County Planning and Zoning) to the county which would help fill the void created by the actions of the Legislature. A city/county coordinator should be appointed to identify areas where city/county planning can occur, such as in the development of a financing strategy for the provision and maintenance of county roads. (A complete discussion of related functions to be performed by the city/county coordinator is included in the Intergovernmental Cooperation section of this chapter).
3. Concurrent with the two actions proposed above, the city should attempt to utilize the existing annexation procedures. For such effort to stand a reasonable chance of success, it is proposed that:
  - A. The city should establish an annexation task force charged with the following responsibilities:

- (1) Identifying property owners (or groups of owners) willing to consider petitioning for annexation.
  - (2) Negotiating with such owners specific incentives packages including zoning, services, and specific capital improvement commitments.
- (B) Concurrently, the city should initiate a broad-based public relations effort to insure Nevada residents' understanding of the need for annexation and their subsequent support in annexation elections.

### Community Development and Rehabilitation

Public capital improvements and guided land use planning within the city boundaries serve to encourage housing rehabilitation and redevelopment in Nevada. Both public and private investments are necessary to assure that a variety of adequate housing is available for the diverse housing needs of city residents. Opportunities for new construction and the rehabilitation of existing structures should be encouraged through a series of public incentives which serve to stimulate the investment of private capital.

Annexation--Opportunities for new housing construction are promoted through the annexation of lands that have high appeal for residential development. (The implementation of an annexation policy is fully described in the previous section).

Neighborhood Housing Service--The implementation of a Neighborhood Housing Service program is recommended to provide a comprehensive housing rehabilitation for the existing housing stock in Nevada. Implementation requires that the Nevada community take the following steps:

- A. Application to the Neighborhood Reinvestment Corporation--The city must complete the Application for Assistance in Developing A Neighborhood Housing Services Program. The purpose of this application is to identify the willingness and capacity of the community in supporting a NHS program. It is necessary that a partnership be formed among the residents, city, and local civic and financial institutions.

- (1) General description of NHS partnership responsibilities:

- a) Nevada residents--The residents of Nevada must indicate their willingness to participate in the NHS program. Participation

involves serving on NHS boards and committees; a willingness to promote systematic code enforcement, and a commitment to invest capital and labor in their residential property.

(b) The City--A revolving loan fund must be provided through the City of Nevada. This fund would be used to make below market rate rehabilitation loans to qualifying residents who cannot meet normal commercial credit requirements. The city must make a commitment to assist in the development and implementation of the program; increased capital improvements and city services; and the establishment of a systematic housing inspection program.

(c) Local Business and Financial Institution--The executive officers of local banking institutions would be required to agree to invest in the neighborhood by making loans in the area. Local business and financial institutions would need to support the NHS operating budget through their tax-deductible contributions, and serve on the NHS board of directors.

(d) Neighborhood Reinvestment Corporation--The corporation would provide technical assistance and training to the NHS staff and board of directors, including assistance in obtaining 501-3C non-profit status.

(2) Financial Commitments:

Rehabilitation Resources--It is estimated that \$8,662,500 is needed to rehabilitate all deteriorating housing units in Nevada. (See Table 20 ). Eighty percent of the needed rehabilitation can be provided by the private sector in the form of conventional loans and other forms of private maintenance and improvement. The twenty percent remaining consists of rehabilitation financing that must be provided at below the conventional market rate. Since the Neighborhood Housing Services is able to sell fifty percent of the loans on a secondary mortgage market, the actual fund needed in the revolving loan fund over the course of the program is \$866,250, or one half of the total amount termed non-bankable in Table 20.

TABLE 20  
NEEDED REHABILITATION LOAN FUNDS

	Total Rehab Cost	Private Investment	Non- Bankable
Condition 2: Minor Deficiencies	\$5,454,000	\$4,363,200	\$1,090,800
Condition 3: Deteriorating	<u>\$3,208,500</u>	<u>\$2,566,800</u>	<u>\$ 641,700</u>
	\$8,662,500	\$6,930,000	\$1,732,500
			<del>(\$ 866,250</del> 50%)

It is recommended that the city commit \$866,250 over a seven year period in Community Development Block Grant funds for the establishment of a revolving loan fund. The proposed funding schedule is described below.

Years	Revolving Loan Fund Commitment
1	\$123,750
2	123,750
3	123,750
4	123,750
5	123,750
6	123,750
7	<u>123,750</u>
Total	\$866,250

The city should apply to the Community Development Block Grant Small Cities Program for the expressed purpose of receiving revolving loan funds for the implementation of a NHS program in Nevada. The Five Year Capital Improvements Programs should be revised to incorporate the funding schedule above into the Project Summary List for Housing Rehabilitation. The source of funding should indicate Community Development Small Cities funding. If in the case that the funding described above is not obtained, the city should utilize the sales tax to fulfill the needs of the revolving loan fund.

Operating Budget--Local business and financial institutions are required to fund a \$50,000 minimum operating budget consisting of the following components:

Staff

Director	\$24,000	
Rehab Specialist (as needed)	-0-	
Bookkeeper/Intake Person	<u>13,000</u>	\$37,000
Other Expenses		<u>13,000</u>
Total		\$50,000

- B. After receipt of the application described above, Neighborhood Reinvestment will make an on-site visit to Nevada.
- C. Neighborhood Reinvestment upon approval of the application would then enter into a contract with the city.

New Housing Construction--It is recommended that in the third year of the NHS program that an NHS Owner-Built Home program be considered for implementation. The program would provide interested Nevada residents with various incentives to build a single family residence. A partnership could be formed utilizing commitments from the following participants:

- (1) City commitment: donation of 10 acres of developable land, currently owned by the city.
- (2) NHS: The Neighborhood Housing Service would act as general contractor and provide marketing services.
- (3) Missouri Housing Development Commission: financing.
- (4) Owner: labor in the approximate amount of \$30,000.

Multi-family--The provision of multi-family housing units should be promoted through the use of the following incentives:

Fund Projects for 353 Developments--A 353 project would make 100 percent tax abatement available in the first ten years, and 50 percent abatement available for 15 years. Powers of eminent domain could also be utilized through this program.

Income Tax Credit--The Missouri Neighborhood Assistance Act income tax credit should be utilized.

Below Market Rate Financing--Loans at a percentage under conventional rates should be promoted.

Accelerated Depreciation--Multi-family housing serving 20 percent low and moderate income residents should be developed so that accelerated depreciation incentives could be utilized.

If a gap still exists between the cost of providing housing and the available market, additional subsidies should be identified.

Neighborhood Organizations--The city should encourage the development of neighborhood organizations. To achieve this goal, the scope of the existing crime watch programs should be expanded to address additional neighborhood concerns.

### Governmental Organization

Since 1975, Nevada has adopted a constitutional Home Rule Charter which conveys to the City of Nevada all powers which the General Assembly of the State of Missouri has authority to confer upon any city, provided that such powers are consistent with the constitution of the state and are not limited to or denied by the charter or by statute. The charter outlines powers which are essential to the implementation of the Comprehensive Plan.

The current charter empowers the city to acquire lands for public use by lease, purchase, receipt of gift, or by exercise of eminent domain. Except as the charter provides otherwise, all powers of the city are vested in the City Council. The city's charter empowers the council to make investigations into the affairs of city departments, elect a mayor, provide annual city audit, and pass into law city ordinances.

The charter requires that the City Council appoint a City Manager to serve as chief administrative officer of the city, responsible to the council. Each year the City Manager is required to submit to the council a complete financial plan of all city funds, activities, and the proposed five year capital improvements program. Council resolution on the capital program is a primary means of comprehensive plan implementation. In addition to the citizen participation that takes place during the development of the plan, the city charter through public hearing requirements, provides citizens the opportunity to participate in annual capital program decision making. The city charter empowers the City Council to respond by making budget amendments, after adoption for supplemental appropriations, reduction of appropriations, transfer of appropriations, and emergency appropriations.

In order to provide income for city expenditures, the charter empowers the council to set the tax rates and levy on the various classes of property immediately after the budget is finally adopted. In addition, general obligation bonds may be issued by the city.

The adopted Home Rule Charter represents a modern, professional, and workable basis for city government. No changes in the city charter are recommended at this updating of the Comprehensive Plan.

## Intergovernmental Cooperation

Preparation of this plan has identified a number of areas where cooperation among various units of government and organizations is essential to achieving the goals and objectives of the plan. In some cases, functions could be performed jointly by more than one agency with greater efficiency and economy. In other cases, actions by other governmental units could facilitate Nevada's basic ability to perform the functions.

City/County Cooperation--The position of City/County coordinator should be established to accomplish the tasks set forth in the plan for City/County cooperation. The responsibilities of the coordinator should be to:

- (1) Coordinate a public education campaign by documenting the responsibilities, roles and resources of each jurisdiction; communicating this information to the public; and answering inquiries.
- (2) Promote the implementation of a joint City/County jail facility by developing a joint sales tax financing strategy, and coordinating a shared dispatch service.
- (3) Initiate meetings among the various actors who can promote beneficial intergovernmental cooperation. (Planning Commission, City Council, County Court, Task Forces on Annexation, Economic Development, and Tourism, etc.)
- (4) Investigate the development of a County/Township tax collection system.

The city should explore a variety of options for providing and funding the position of City/County coordinator. These options are described below:

Option 1: The functions are performed by a local civic group such as the Rotary Club, Lions or Kiwanis Club.

Option 2: The city funds and hires the coordinator as a member of the city staff.

Option 3. The responsibilities of the position are added to the job description of an existing city hall or county court staff person.

Option 4. The Planning Commission assumes the responsibility of selecting one of its members.

Option 5. The city agrees to reinstate funding to the Kaysinger Basin Regional Planning Commission contingent upon their approval to provide staff.

Option 6. The function is performed as part of on-going professional consulting services.

Option 7. The Chamber of Commerce staffs the position.

Regional Solid Waste Study--It is recommended that the city encourage the Kaysinger Basin Regional Planning Commission to proceed to implement the methane recovery system and landfill operation recommended by the University of Arkansas feasibility study. The city should review the 1978 Vernon County landfill plan prepared by the State of Missouri to determine where such study can be used to meet the needs of the city and where further research is required.

Enhanced Coordination with Fort Scott, Kansas--The City Council should initiate a joint meeting with the City Councils of both cities and plan for subsequent meetings between the joint Planning Commissions to discuss such common issues as tourism, water and other resources, industrial and economic development, transportation and emergency services, including cooperative response agreements.

Centralization of Programs--It is recommended that the Planning Commission take responsibility for initiating and coordinating the centralization of the Social Security Office, Unemployment Office, Food Stamp Service and the Health Service.

Improved State and Federal Coordination--It should be the responsibility of the Planning Commission, City Council and the various task forces and commissions recommended in this plan, to make policy recommendations to state and federal governmental officials to improve intergovernmental cooperation, and to initiate legislation to overcome development barriers, i.e., annexation and revenue limitations.

### Citizen Participation

Even though the implementation of the Comprehensive Plan is guided by local government, the realization of plan goals and objectives are largely the result of the participation of citizens. Citizens assist in the preparation of the plan and by informing the public of planning objectives, and the procedures and methods necessary to accomplish them. When citizens abide by local codes and ordinances, maintain and rehabilitate private property, and invest in local business and industry, they become essential actors in the creation of the city environment envisioned by the Comprehensive Plan. In addition, citizens provide public support of new programs and financial support of capital improvements through their tax dollars.

As citizen participation is essential to the development of the plan, citizen input is required throughout the implementation process and should be an essential component of the Plan Monitoring and Review procedures described in the next section.

## Monitoring and Review Procedures

The successful implementation of the plan requires the establishment of regular monitoring and review procedures. An annual review must be supported by comprehensive assessments of both program effectiveness, and on-going changes in city resources and community characteristics. Well developed monitoring and evaluation techniques should be employed throughout the implementation process since various plan elements are predicated upon unknown factors. These include changes in annexation laws, the establishment of a Neighborhood Housing Services program, and the rate of city growth and development. Monitoring and evaluation promote review and amendment procedures that accommodate community changes in an efficient and timely manner.

The special citizens committees recognized the need to monitor population growth and evaluate the city's abilities to serve the needs of new residents. They also identified four areas in which future evaluation are now evident.

- (1) The expansion needs of the library.
- (2) The need for an alternate fire station location or an additional facility.
- (3) The need for additional means of communication to serve the city.
- (4) The implementation of a city bus service.

Population growth and city development will have a measurable effect on fiscal affairs, for example, the source and amount of city revenues can be expected to change. In addition, the types and levels of services can be expected to change with the changing needs and preferences of the population. It will be necessary to measure these changes on capital outlays, operating outlays, and revenues.

## Model for Monitoring and Evaluation

It is recommended that the city utilize a systematic plan or model for carrying out monitoring and evaluation activities. The model should provide a work plan detailing the kind of information to be collected about programs, how that information should be analyzed, and to whom the information and analysis should be directed. In some cases the primary objective should be to provide information and analysis intended to improve programs being evaluated, i.e., existing city programs or new programs recommended by this plan, once implemented. In other cases, the primary objective should be to pass judgment as to the worth or effectiveness of a program.

Models should be designed which provide for the collection and analysis of information to determine whether program implementations do in fact accomplish goals and objectives of the city's Comprehensive Plan. In some cases a model could be designed to determine if program activities have value, regardless of their original intended purpose. In any case the model should contain a problem solving loop whereby program deficiencies identified in the evaluation are committed to solution-finding efforts.

The city must take actions to assure that certain pre-conditions exist before monitoring and evaluation take place. The city must develop:

- (1) A clearly articulated program;
- (2) Clearly specified goals and/or effects; and
- (3) A rationale linking the program to the goals and/or effects.<sup>1</sup>

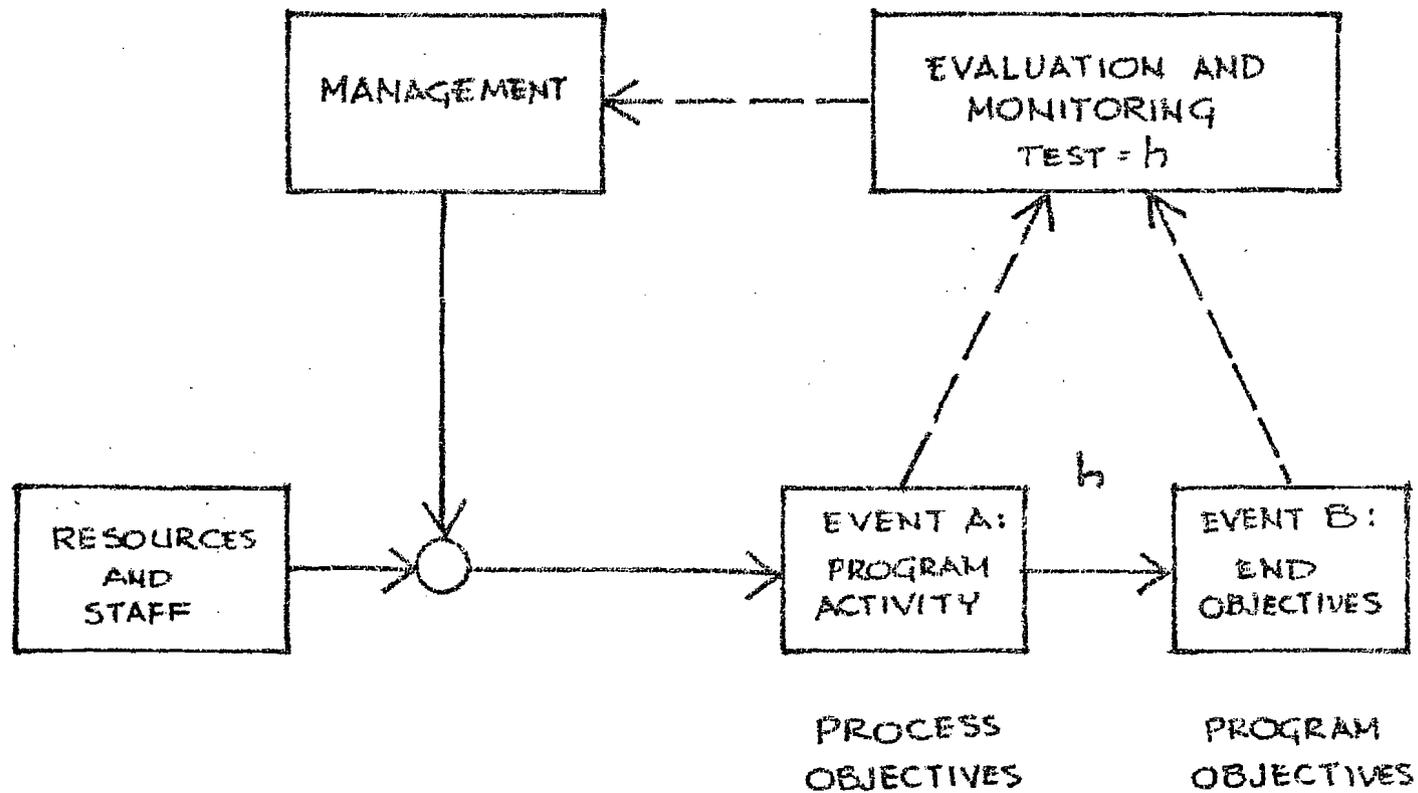
Figure 11 illustrates a simplified program model.

A five stage monitoring and evaluation procedure is recommended. Each state is described below:

Stage I: Documentation of the Program--Stage I work involves a comprehensive description of the design of each program evaluated to include:

- (1) A description of the area or target population.
- (2) The major end objectives of the program.
- (3) The enabling or intervening objectives that must be accomplished before end objectives can be realized.
- (4) The sequence of enabling objectives.
- (5) Placement of all program activities in a time-frame.
- (6) A description of program staff or agencies.
- (7) Description of staff or agency functions.
- (8) List of required resources.
- (9) Base-line data characteristics before start of the program.

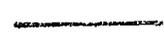
<sup>1</sup>Rutman, Leonard. Evaluation Research Methods: A Basic Guide. (Beverly Hills: Sage Publications, 1977), pg. 18.



### INPUTS



INFORMATION FLOW



HYPOTHESIZED CASUAL LINK



ALLOCATION OF RESOURCES

FIGURE 11

SIMPLIFIED PROGRAM MODEL

The description of each Comprehensive Plan program developed in Stage I can be used as a standard for Stage II work.

Stage IIa: Program Installation--Stage II of the evaluation examines discrepancies between the expected and the actual installation of the program. Input in Stage II should come from both city staff and Nevada residents who comprise the population to be targeted. Where discrepancies are identified, three steps are involved.

Step 1 asks:

- (1) Why?
- (2) What corrective actions are possible?
- (3) What corrective alternative is best?

Step 2 asks:

- (1) Is the corrective action defined as in Stage I?

Step 3 asks:

- (1) Is the corrective action installed?

The natural progression of these questions form a problem-solving loop which is repeated until either the program is installed as originally designed, the program is amended, or a decision is reached to terminate the program.

Stage IIb: Initial Effects--In this stage, the initial effects of the fully installed programs are assessed. It addresses the questions of whether intervening or enabling objectives are being met. It addresses the dilemma that a program may fail to achieve end objectives because of inadequate attention to intervening or enabling objectives.

Stage III: Evaluation--This stage addresses questions relating to:

- (1) Performance data concerning intervening objectives.
- (2) Time estimated as required to complete intervening objectives.
- (3) Time available to reach end objectives.

- (4) Ability of staff to identify alternative enabling objectives, and identify and locate necessary support requirements.

Stage IV: Summative Evaluation--This stage addresses finally the question of whether a program has achieved its end objectives. Actual methodology will vary with the nature of a particular program but the essential questions are:

- (1) What are the stated goals and end objectives, in measurable terms, of the program?
- (2) What has been the performance of the program, measured against stated goals and end objectives?

Stage V: Optional Cost-Benefit Analysis--Where a program has met its stated goals and end objectives, it may be desirable to conduct a cost-benefit analysis. Such analysis would seem appropriate, however, only where there is agreement on both the value and measure of benefits, and where there are at least two programs which produce the results had have been costed out. The basic cost-benefit question is which program among two or more that are available achieves its purpose at the lowest cost.

#### Annual Review

Utilizing the data from the monitoring and evaluation phase, the plan should be reviewed each year. At least once every five years the entire plan should be reconsidered so that the implications of the accumulated annual revisions can be seen in perspective and major adjustments can be made.

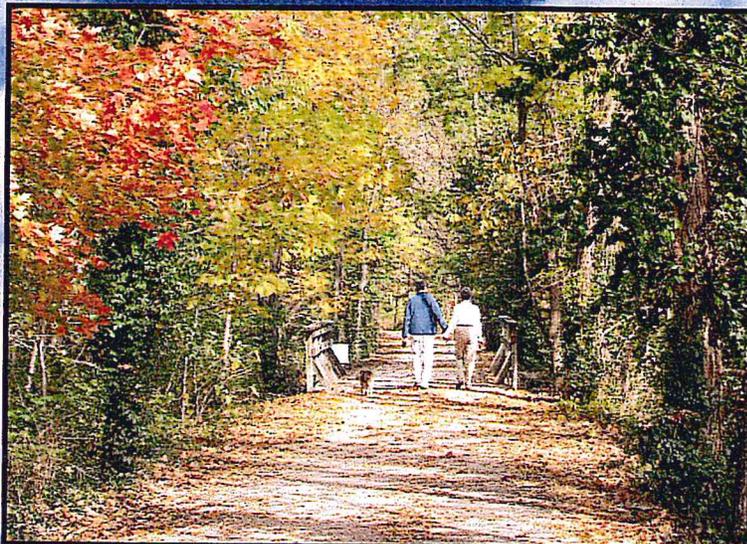
Consideration of amendments to the plan may be initiated by the City Council, the Planning Commission, civic groups, or interested individuals. By keeping the plan amendable, it is intended over a period of time to constantly broaden the area of community agreement on basic development policy.



The following Master Plan Notes and Updates were recommended by the Planning Commission by Resolution No. 1 on November 12, 2002 and approved and ratified by the City Council by Resolution No. 1021 on November 19, 2002.

### **MASTER PLAN NOTES AND UPDATES**

1. The Hwy. 54 corridor from Adams Street west to the Cottey College is one of our few remaining residential frontages along the highway. Although high traffic counts and excellent visibility makes this corridor attractive for commercial and retail development, the community and adjacent neighborhoods place a high priority on preserving the residential character of this area as a unique gateway to Nevada that reflects the quality of life in our community.
2. The Hwy 71 interchange at Austin and KK is an important retail location due to its traffic counts, excellent highway visibility, and the presence of regional retail destination attractions and highway service facilities including food, fuel and lodging. Future upgrade of Hwy 71 to interstate standards will enhance these attributes, and will require consideration of an access point to Austin for a frontage road to parallel Hwy 71 south to Hwy BB. In addition, a "backage" road may be required to consolidate and minimize access points to facilitate traffic circulation between Barrett and Johnson Streets south of Austin.
3. The Highway 71 interchange at Highland is an important employment location for service and manufacturing industries due to its proximity to industrial building and industrial parks to the east, and educational facilities to the west. Industrial facilities to the east have direct access to rail service to support heavy industry. In addition, future residential development to the east of these facilities that would be incompatible with heavy industry its limited by the adjacent 100-acre prairie and wildlife habitat area. To the west of the Highland interchange, future development of Joe Kraft Boulevard is predicated upon development of light manufacturing and service industries that would be compatible with adjacent residential areas and proximity to North Campus educational facilities.
4. The Vernon County courthouse square is the historic heart of Nevada that has transitioned over the past thirty years from a retail center to a governmental services and employment center that has attracted associated professional, commercial and retail support businesses. The community places a high priority on preserving the extensive inventory of historic buildings and enhancing the character and identity of this area.



# Healthy Nevada

## Bicycle and Pedestrian Master Plan

December 1, 2012

PREPARED BY:  
PEDNET COALITION, INC.

PREPARED FOR:  
CITY OF NEVADA, MO

IN COOPERATION WITH:  
CERNER CORPORATION



## ACKNOWLEDGEMENTS

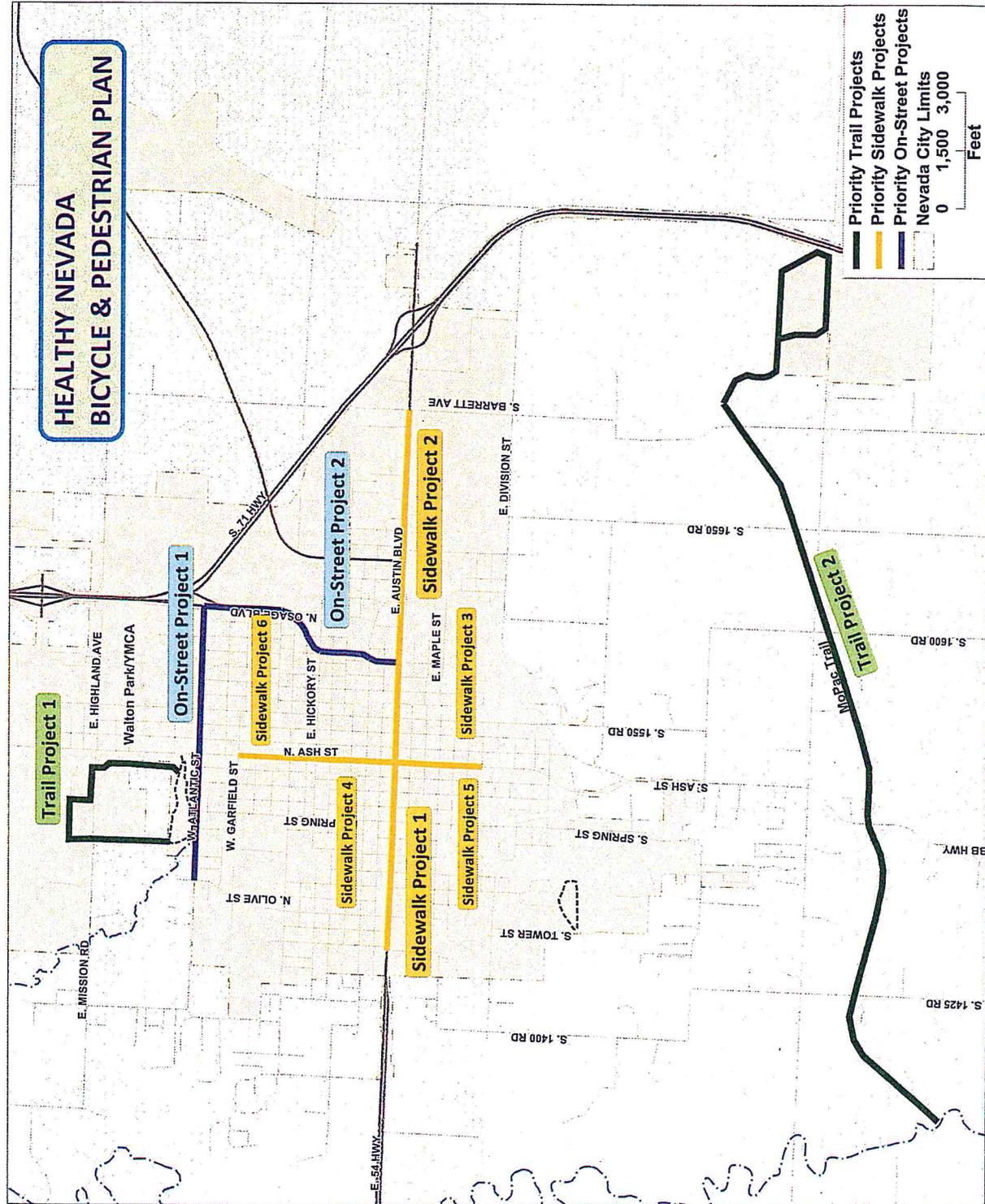
The mission of Cerner Corporation is to contribute to the systemic improvement of healthcare delivery and the health of communities. The Healthy Nevada Bicycle and Pedestrian Plan is a tangible example of Cerner's ongoing commitment to these principles at the community level.

We would like to thank the many people living and working in Nevada who made the Healthy Nevada Bicycle and Pedestrian Plan possible. Although too numerous to mention individually, every person that participated demonstrated a genuine enthusiasm for this project and an eagerness to contribute. This positive approach was evident whether the person was a City of Nevada employee or a citizen approached on the street to ask about their thoughts and beliefs on non-motorized transportation in Nevada.

Cerner Corporation would like to thank the following organizations for their time and resources invested in efforts to promote a Healthy Nevada:

- City of Nevada City Manager's Office
- The City of Nevada Public Works Department
- The City of Nevada Parks and Recreation Department
- Nevada Public Schools
- Nevada Police Department
- Vernon County Health Department
- 3M Corporation
- Osage Prairie YMCA
- On My Own, Inc.
- Cottey College for Women
- Heartland Hospital
- Nevada Multisport Club
- Missouri Department of Transportation
- Vernon County
- Staff of the Healthy Nevada Project
- Nevada Regional Medical Center
- Nevada Medical Clinic

# HEALTHY NEVADA BICYCLE & PEDESTRIAN PLAN



- █ Priority Trail Projects
- █ Priority Sidewalk Projects
- █ Nevada City Limits
- 0 1,500 3,000 Feet

**Sidewalk Project 1:** West Austin Boulevard Repair sidewalk to ADA standards along both sides of Austin Boulevard between South Chestnut Street to North Osage Boulevard. Estimated cost: \$256,000+

**Sidewalk Project 2:** East Austin Boulevard Construct new sidewalk along the north side of Austin Boulevard Estimated Cost: \$425,000+

**Sidewalk Project 3:** South Ash Street Repair sidewalk to ADA standards along both sides of South Ash Street from South Maple Street to West Austin Boulevard. Estimated Cost: \$55,000+

**Sidewalk Project 4:** North Ash Street Repair sidewalk to ADA standards along both sides of North Ash Street between West Austin Boulevard and West Hickory Street. Replace sidewalk on west side of North Ash Street between West Hunter Street and West Allison Street. Estimated Cost: \$133,000+

**Sidewalk Project 5:** South Ash Street Repair sidewalk along South Ash Street from West Pitcher Street and West Maple Street. Estimated Cost: \$63,285+

**Sidewalk Project 6:** North Ash Street Repair sidewalk at ADA standards along both sides of North Ash Street from West Hickory Street and West Garfield Street. Estimated Cost: \$109,500+

**Trail Project 1:** Walton Park/YMCA Trail New trail construction extending from the northeast portion of the existing Walton Lake Trail looping north and then south to join the northwest portion of the Walton Lake Trail. Project length is approximately 1.4 miles. Project cost estimate: \$796,650

**Trail Project 2:** Missouri Pacific Trail The abandoned Missouri Pacific corridor on the south side of Nevada, from Twin Lakes Park to Little Dry Wood Creek presents the opportunity for a significant trail project. As envisioned, a 10-foot wide gravel trail would extend 5.5 miles from Little Dry Wood Creek along the Missouri Pacific railbed to connect with Twin Lakes Park and a loop trail around the perimeter of the park property. Project Cost Estimate: \$2,020,043

**On-Street Project 1:** Road Diet of Osage Boulevard Removal of two of the traffic lanes in lieu of a CTL roadway will have ample width for two 6-foot bicycle lanes. This project will improve traffic flow on North Osage, reduce motorist crashes and allow for one of Nevada's major arterials to be redesigned for the inclusion of bicycle facilities. Project Cost: \$55,000

**On-Street Project 2:** Bicycle Lanes on Atlantic Street North Atlantic Street is a main east-west street in Nevada. Atlantic Street from Osage Street to North Olive Street is approximately 1.33 miles in length with a total road width of 32-feet. The application of 5-foot bicycle lanes on Atlantic Street would result in two traffic lanes of 11 feet each. That would help control speeding on Atlantic Street and facilitate bicycle traffic. Project Cost: \$52,500

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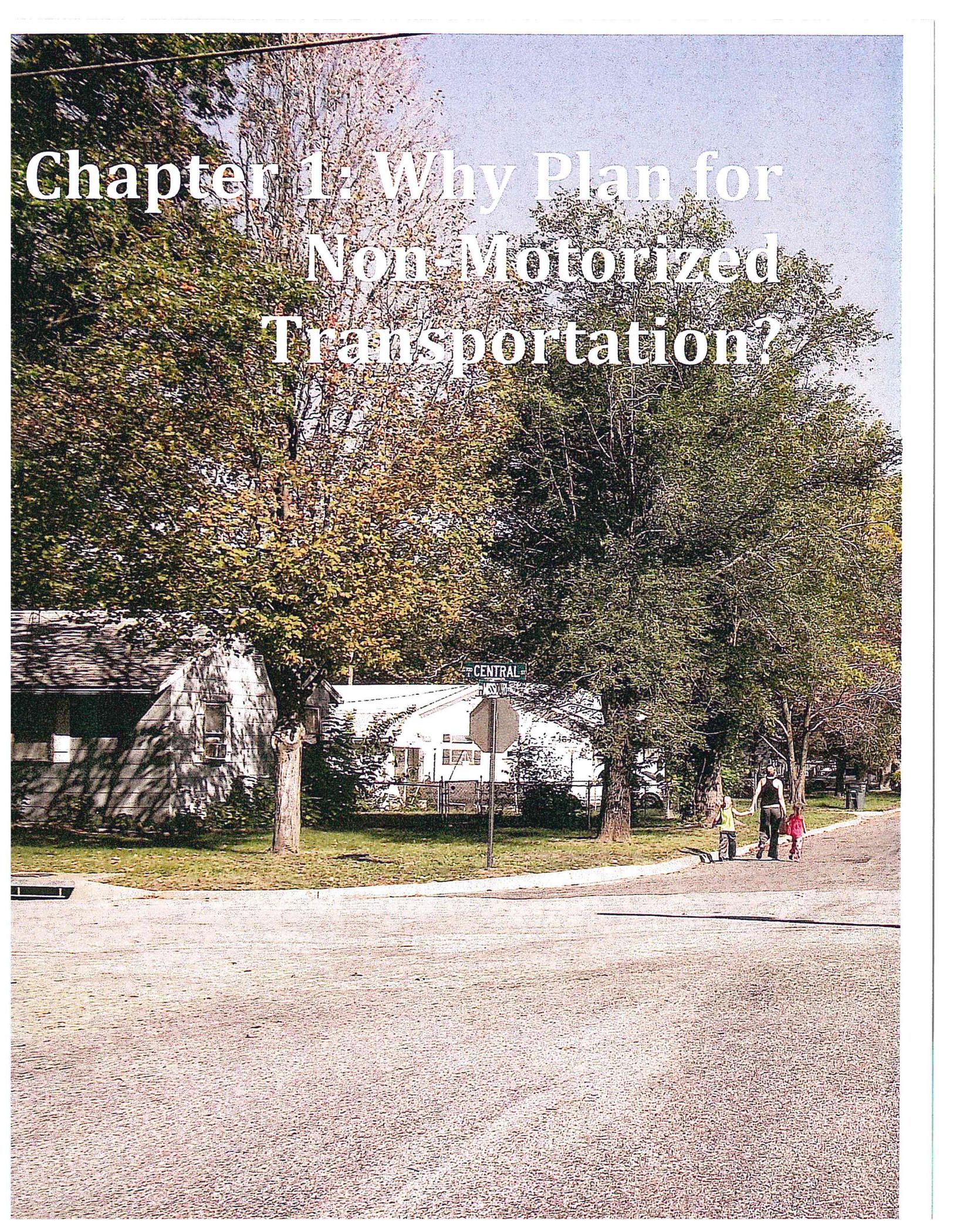
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# Chapter 1: Why Plan for Non-Motorized Transportation?



## CHAPTER 1. WHY PLAN FOR NON-MOTORIZED TRANSPORTATION?

### Why Plan for Non-Motorized Transportation?

Many, if not most, residents of Nevada will welcome this Bicycle and Pedestrian Master Plan. Their excitement will be sincere, as they intuitively understand how the projects and policies listed in these pages will improve the quality of life for themselves and their neighbors.

However, in this age of financial awareness, there will be others who will react to the plan with skepticism, asking tough questions about the wisdom of spending money on bicycle and pedestrian facilities when the community has so many other needs. Those questions are reasonable and will be addressed in this section.

Spending money on bicycle and pedestrian facilities is a wise investment by the City of Nevada and the Missouri Department of Transportation (MoDOT) because:

- It is the right thing to do;
- It will improve the health of its citizens and reduce health care costs; and
- It can reduce the demand on the automobile infrastructure, reducing transportation costs and congestion.

#### It's the Right Thing to Do

The development of the Healthy Nevada Bicycle and Pedestrian Plan has been funded by the Cerner Corporation. Cerner's mission is "to contribute to the systemic improvement of healthcare delivery and the health of communities." The main goal of the Healthy Nevada Bicycle and Pedestrian Plan is to improve the health of the citizens of Nevada.

Bicycling and walking are great exercise and creating opportunities for people to be more active will help Cerner reach its goal of improving the health of the people of Nevada. However, there is a more fundamental reason for building and maintaining bicycle and pedestrian facilities



*A Visually impaired citizen trying to access the YMCA for a workout.*

## CHAPTER 1. WHY PLAN FOR NON-MOTORIZED TRANSPORTATION?

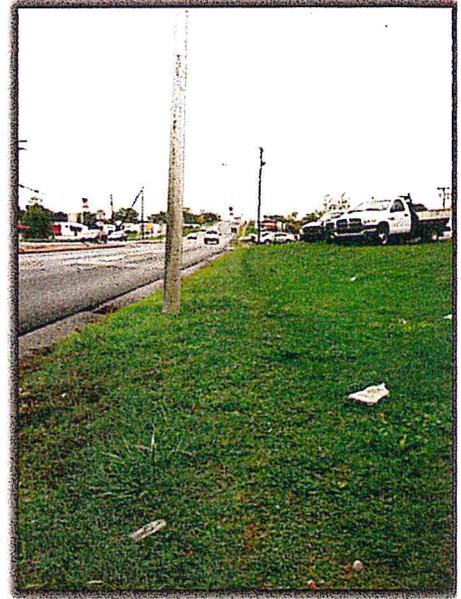
and that is why it will be discussed first. This is simply the right thing to do.

Transportation policy across the United States used to focus on moving people. For the past 60-70 years the focus has changed from moving people to moving automobiles. Reducing congestion and increasing the ease of driving took precedence and bicyclists and pedestrians were marginalized. Today, in most American communities it is difficult and dangerous to travel outside of an automobile.

This change can be seen in Nevada, Missouri. In the older neighborhoods of Nevada, sidewalks are a part of every streetscape, often made of brick and built during the Victorian Era at a time when walking was an important part of everyday life. In the newer neighborhoods on the outskirts of Nevada, there is a lack of sidewalk. This is a testament to the changing views on transportation over time and its affect on pedestrians and bicyclists.

Whereas 100 years ago a government would have never built a street, or allowed one to be built by a private developer, without meeting the needs of pedestrians, today it's commonplace. However, walking for transportation is not an option for many Missourian's and their needs are not being met by the status quo.

In today's environment of bumper-to-bumper traffic it can be hard to imagine that about 40% of Missourians are unable to drive (Missouri Livable Streets, 2011). In fact, approximately 2.3 million Missouri residents are unable to drive because they are under the age of 16, have a physical disability or are too old (Missouri Livable Streets, 2011). If the ratios hold true, it stands to reason that 40% of Nevada residents (~3,300 people) are also unable to drive. Those residents are either forced to be dependent upon others for transportation (if that help is available) or negotiate streets that aren't as friendly to non-drivers as they could be. The evidence can be seen on the streets of Nevada with pedestrians and wheelchair users walking and rolling along heavily trafficked automobile lanes and the trails through the grass that desperate pedestrians leave alongside major arterials.



*Pedestrians forced to walk through the grass have worn an unofficial walking path along Austin Boulevard.*

## CHAPTER 1. WHY PLAN FOR NON-MOTORIZED TRANSPORTATION?

Building a bicycle and pedestrian network is simply the right thing to do. As long as the federal, state and local governments are in the business of providing a transportation network for their citizens: pedestrians, wheelchair users and bicyclists should be accommodated.

### Improved Health and Reduced Health Care Costs

Beyond the fundamental question of mobility, more people who do drive would like to drive less. Many people want to replace a portion of their driving trips with bicycling or walking when it is safe and convenient to do so. Some are motivated out of a concern for their health, the environment, to save money or because they just think it's fun. No matter what their motivation, their health will improve by driving less and walking and bicycling more.

The United States is facing a public health crisis caused by a population that is increasingly sedentary. Much of that sedentary behavior can be linked to the overuse of the private automobile and it starts with children.

In 1969 about 50% of American children walked or rode a bicycle to school, but by 2001 that number had dropped to just 13% (Safe Routes to School National Partnership, 2012). Even worse, half of children who live within ½ of a mile (10-minute walk or less) are driven to school! (Safe Routes to School National Partnership, 2012) It's not only children, many residents now drive for distances that otherwise would be a quick and easy walking or bicycle trip. Of trips that are less than one-mile, over 2/3rds are taken by private automobile (League of American Bicyclists, 2010). The automobile is a wonderful device but it is overused and is responsible for severe health consequences.

Obesity has truly become an epidemic in the United States. Currently, the obesity rate in the State of Missouri is 30.3%, making it the 12th fattest state (Trust for America's Health, 2012). Even more troubling is that the Trust for America's Health estimates that Missouri's obesity rate will be 60.9% by the year 2030 unless corrective measures are put into place to slow or reverse current trends (Trust for America's Health, 2012).

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*As long as federal, state and local governments are in the business of providing a transportation network for their citizens: pedestrians, wheelchair users and bicyclists should be accommodated.*

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## CHAPTER 1. WHY PLAN FOR NON-MOTORIZED TRANSPORTATION?

Being obese increases the risks of diabetes, heart disease, hypertension, blood lipid disorders and some types of cancers (Centers for Disease Control, 2012). All of these effects of obesity raise the already staggering cost of health care in the State of Missouri. In fact, total health care costs to treat obesity related disease in Missouri were over 2 billion dollars in 2011 (Health, 2012). If the obesity trends continue unabated the costs could be as much as 12.1 billion dollars, crippling the Missouri economy (Health, 2012). That is only counting the true medical expenses and not other costs, like the loss of productivity at work by unhealthy employees. The health complications of obesity are tremendous and the amount of preventable human suffering is heart breaking. There is little doubt that automobile dependence and an increasingly sedentary lifestyle have contributed to this problem, and that designing streets to make physically active transportation safe, enjoyable, and convenient, would help to address it.

This is why public health groups are now pointing out the return on investment that our society receives when we build facilities that allow people to walk or bicycle. The American Heart Association has researched the issue and found that for every \$1.00 spent on a walking and bicycling trail the community saves over \$3.00 in health care costs. Figures like these are powerful but it can sometimes be hard for policy makers (like city council members) to use these in crafting city budgets because while everyone wants people to be healthy, those health care costs are borne by the individual, their insurance company, their employer or the federal or state government and usually not the government entity paying to build the trails.

However, more and more employers are considering the average health of the citizens in determining where to place a new facility. If the average citizen in Nevada is less healthy than the average citizen elsewhere, then employers will face increased health care costs and decreased productivity if they build in Nevada. In fact, it has been estimated that an obese employee costs his or her employer approximately an additional \$2500 per year (Graham, 2005). Increasing the health of the people in Nevada is everyone's responsibility and should be everyone's priority.

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*Every \$1.00 spent on bicycling and walking trails results in a savings of \$3.00 in health care costs –  
American Heart Association*

---

## CHAPTER 1. WHY PLAN FOR NON-MOTORIZED TRANSPORTATION?

Statistics are a meaningful, although very impersonal way to view health. To fully appreciate the effect that an increase in bicycling and pedestrian infrastructure can have on the health of Nevada residents, let's imagine a resident who uses the new bicycle and pedestrian facilities to change their life.

Imagine a Nevada resident who lives near the Osage Prairie YMCA and works at the 3M facilities on Austin Boulevard. For years, this employee has driven to work every day and never considered using their bicycle for transportation. Suddenly they begin using a new trail in town and it rekindles the love of bicycling that they remembered from their childhood. Sometime later, on their drive to work, they begin to notice new bicycle lanes and sharrows along the street. Soon the idea hits them that they could enjoy their new favorite recreational activity on the way to work and they begin bicycling the 3-miles (6-miles roundtrip) to work most days of the week.

This individual typically drives to and from work in approximately 20-minutes but after beginning to bicycle it, the trip length increases to 30 minutes. So their new vehicle choice has added 10-minutes to their daily commute but they have gained 30-minutes a day of cardiovascular exercise. Thirty (30) minutes of daily exercise will reduce their risk of heart disease, stroke, diabetes, certain types of cancer and other ailments. In addition, it's helping him maintain a healthy weight by burning as many as 240 calories per day. Assuming their caloric intake remains the same, they could lose over 17-pounds in the first year of bicycling.

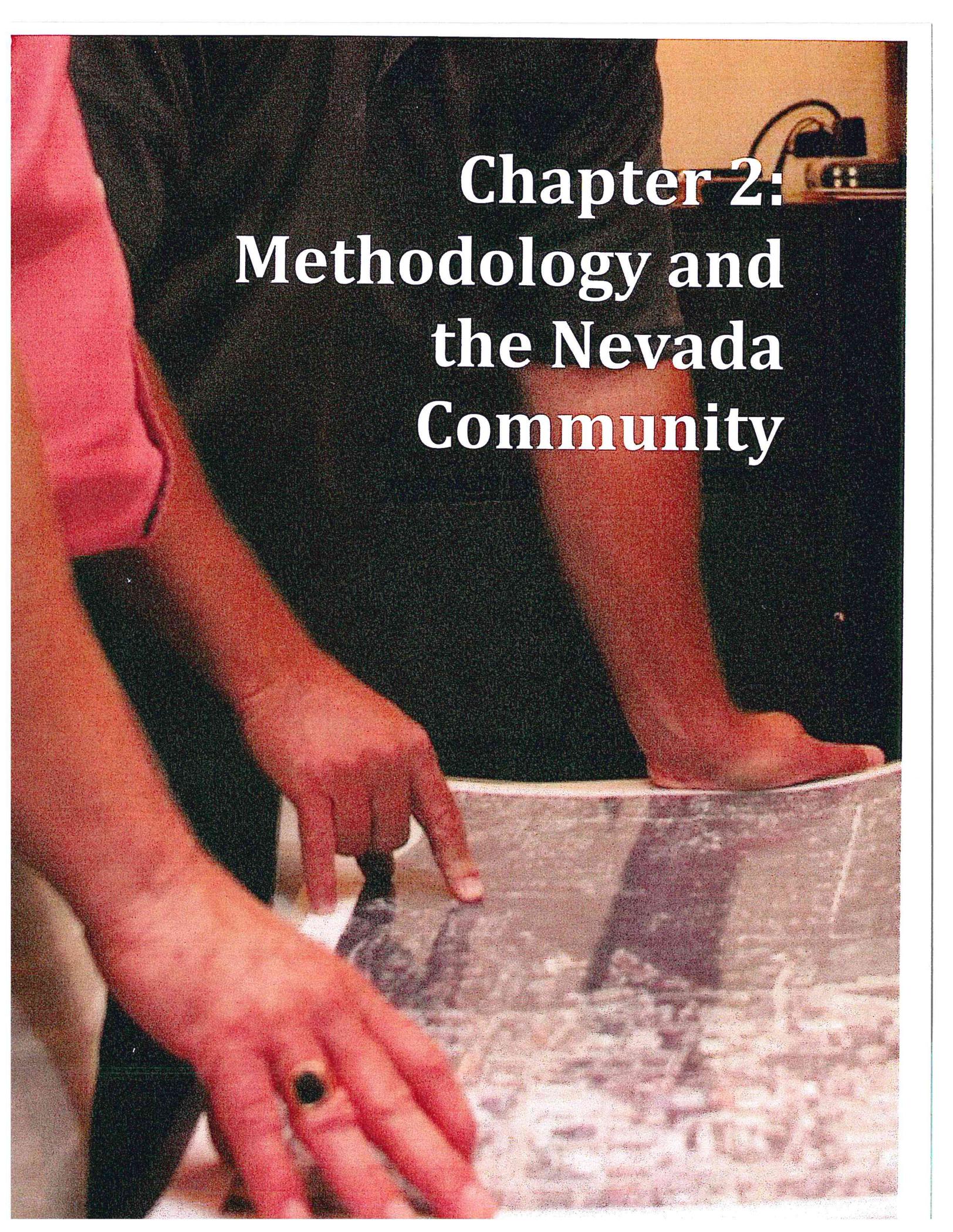
### Reduced Costs for Transportation

Simply put anytime someone in Nevada decides to leave the automobile at home and walk or bicycle instead it saves the City of Nevada and its taxpayer's money. Every time a driver in Missouri purchases a gallon of gasoline, he or she pays two types of tax: a state tax (17 cents per gallon) and a federal tax (18.4 cents per gallon). In addition to the fuel taxes, drivers also pay license and registration fees and personal property taxes on their automobiles. Those taxes

---

*Every form of transportation in the United States, including driving is subsidized by government.*

---



# Chapter 2: Methodology and the Nevada Community

### Methodology

#### Data Collection

The process of developing the Bicycle and Pedestrian Master Plan for the City of Nevada began with the collection of information about the community infrastructure and land uses.

Information was collected from conducting field reconnaissance and surveys (sidewalks, food vendors), and from digital mapping sources available from Vernon County, MoDOT, and the University of Missouri. Base maps were produced showing the City of Nevada tax parcels, street centerlines, streams, topography and flood plain as well as high resolution aerial photography which provided a source to identifying community features.

Field reconnaissance and surveys were used to map the following information:

- Location, design, building material and ADA condition of existing sidewalks;
- Location of schools, parks and other attractors for bicycle and pedestrian traffic;
- Location of areas with non-residential land uses;
- Location of public lands, streams, railways, and flood plain areas for potential trail sites; and
- Potential location of future sidewalk and trail projects.

## CHAPTER 2. METHODOLOGY AND THE NEVADA COMMUNITY

### The Nevada Community

The Nevada Chamber of Commerce provides this brief history of the City of Nevada:

The City of Nevada, Missouri was founded in the 1850's. Originally called Nevada City, the community grew out of the municipal organization of Vernon County in 1855. The City's location was selected by a commission appointed by the governor for the purpose of locating a site for a county courthouse. The original 50 acres cost the county \$250.

As the county seat of Vernon County, Nevada serves as a regional hub of government, recreation, education, and industry.

The 2010 Census shows that there were 8,386 living in Nevada. The median age for residents in the city was 38.3 years. The age distribution of residents found 1,955 were under the age of 18 (23.3%); 964 were between the ages of 18 and 24 (11.5%); 1,895 were from 25 to 44 (22.6%); 2,046 were from 45 to 64 (24.4%); and 1,526 were 65 years of age or older (18.2%).

The gender makeup of the city's population was 45.3% male and 54.7% female.

### Education: Schools and Colleges

Schools and colleges are significant attractors for pedestrian and bicycle traffic. There are four elementary schools, a Middle school, and a High School serving the City of Nevada.

Nevada is also home to several colleges and a technical school. Cottey College for Women with its prominent campus located on W. Austin Blvd is a two-year liberal arts college. A satellite campus of Crowder College is located on the north side of Nevada and offers associate degrees in several fields of study. The Missouri Welding Institute is a trade school serving Nevada and the surrounding area.

---

*The 2010 Census shows that there were 8,386 people living in Nevada. The median age for residents was 38.3 year old*

---

## CHAPTER 2. METHODOLOGY AND THE NEVADA COMMUNITY

### Parks, and Government Owned Land

Parks and recreation facilities, community centers, libraries, along with city, state and federal offices are locations that attract bicycle and pedestrian activity. Vacant government land may be a site for future trails both because it's undeveloped and because there wouldn't be as much opposition. Locating and mapping these community resources was completed using digital tax parcels, field investigation, and local maps distributed by the Nevada Chamber of Commerce.

### Topography, Creeks, and Flood Plains

Digital resources from the State of Missouri were used to map the streams, flood plains and topography in the Nevada area. A 10 meter digital elevation model (DEM) provided the base data for the examination of the elevations and slopes.

The flood plains for the Little Drywood Creek and White Branch limit development west. Little Drywood Creek drains the Nevada area and enters the Marmaton River just northwest of the city limits.

The drainage for Birch Creek in the southern area of Nevada and the flood plain is a significant natural feature in the community. The flood plain serves as a rail corridor for the Missouri and Northern Arkansas railroad. The Birch Creek flood plain reaches northward to East Austin Boulevard just south of its intersection with Centennial Boulevard. See Map One: Natural Features

### Streets and Highways

A digital map of the streets in and around Nevada was provided by the City of Nevada. The map was attributed with the functional classification of the roadway along with the agency responsible for maintenance. Other information such as traffic counts and the location of signalized intersections were included to provide a complete inventory of the area's roadway system.

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*The arrangement of land uses in a community relate directly to the transportation networks available and the suitability of the land to support those uses.*

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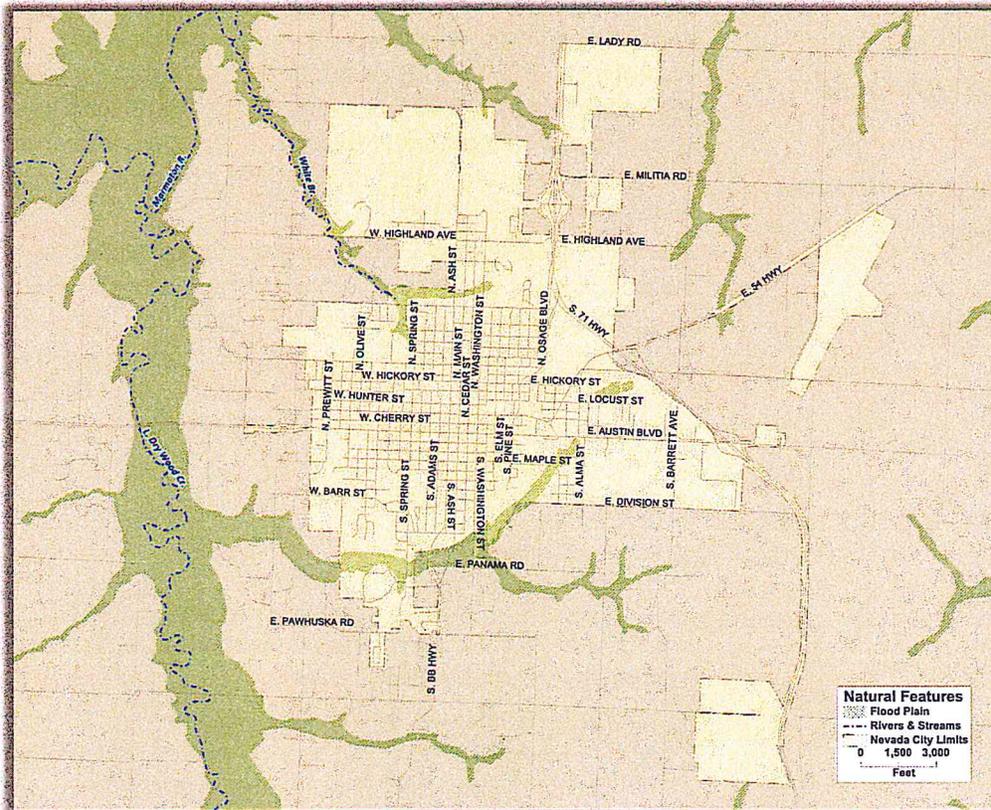
## CHAPTER 2. METHODOLOGY AND THE NEVADA COMMUNITY

### Patterns of Land Uses

The arrangement of land uses in a community relate directly to the transportation networks available and the suitability of the land to support those uses. Residential, commercial, and industrial uses have location preferences based on the need for access or other qualities.

Residential uses make up the majority of the land area in most communities. Residential areas are less land intensive, consume more land, avoid flood plains and are located in areas separated from major roadways and the associated traffic noise. Within the residential district are the neighborhoods, schools, churches, parks, and businesses that directly support the residential neighborhoods.

### Map One: Natural Features



## CHAPTER 2. METHODOLOGY AND THE NEVADA COMMUNITY

Commercial uses prefer locations with immediate access to high-capacity roadways with significant traffic volumes and good visibility to appeal to passing motorists.

Industrial uses frequently require access to a regional or interstate highway or rail service to distribute manufactured goods and to receive the materials needed for the manufacturing processes.

Nevada is a compact community with the great majority of its residential neighborhoods concentrated west of North Osage Boulevard and South Pine Street. The form of the city is based on a traditional grid network of streets. Nevada has few examples of new residential development following the post-war system of "T" intersections, long block lengths and collector streets with cul-de-sacs. The grid system creates multiple four-way intersections that supports pedestrian and bicycle travel by maintaining relatively short (<400 foot) distances between intersections. This provides for more direct routes and shortens both distance and travel times.

---

*The grid street system in Nevada provides multiple four-way intersections that support pedestrian and bicycle travel by maintaining relatively short (<400 foot) distances between intersections*

---

The commercial activity in Nevada is located along and adjacent to U.S. Hwy 54, the major east/west roadway, and north along Osage Boulevard. The blocks immediately adjacent to the Vernon County Courthouse form the core of the central city business district. The downtown is home to federal, state and local government services, offices, small retail shops, and restaurants.

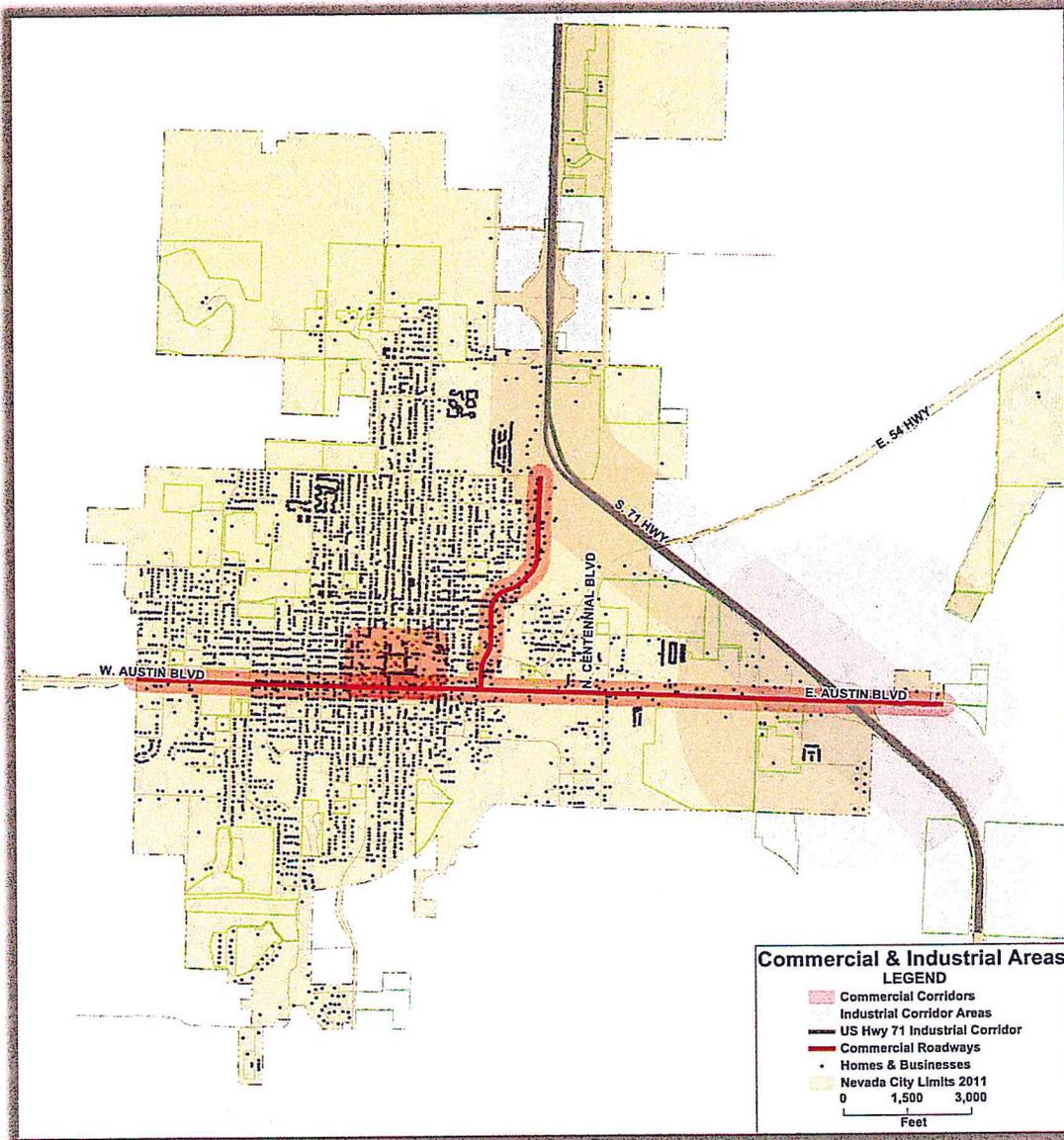
U.S. Hwy 71, now designated Interstate 49, is the major regional highway in Nevada connecting with Kansas City, MO to the north and Joplin, MO to the south. MoDOT reports that multi-axle trucks comprise thirty percent of the traffic on this limited access highway. Industrial activity in Nevada is primarily located along a ¼ mile corridor adjacent to Interstate 49 (U.S Hwy 71), and within 2/3 mile of the Interstate 49 interchange with Austin Boulevard.

The industrial areas of Nevada are primarily along U.S. Hwy 71, U.S. Hwy 54 and the nearby rail lines. Primarily the industrial areas of Nevada are along the eastern and southern edges of the City. Map Two illustrates the

## CHAPTER 2. METHODOLOGY AND THE NEVADA COMMUNITY

relationship of the industrial and commercial areas of Nevada to the highway corridors.

Map Two: Commercial and Industrial Areas in Nevada



# Chapter 3: Current Facilities



### Analysis and Evaluation

#### Sidewalk Evaluation

The condition and connectivity of the sidewalk network and its relationship to the street network is an important component of evaluating the quality of the pedestrian environment. Evaluating the sidewalk condition is also important in helping to plan a prioritized sidewalk plan and for helping the City of Nevada staff develop a plan for maintenance.

The sidewalk data collected in the field was mapped along with widths, design type, construction material and an evaluation of the ADA compliance status. The sidewalk information was also used to produce a sidewalk GIS layer using the digital street lines of the street system.

Sidewalks are part of the street system and are typically built within the street right-of-way (ROW) on the outside edge of the street pavement or curb. The non-street area of the ROW may be shared with overhead and underground utilities, traffic control signs, driveway, and trees, all of which influence the decision on the design type or presence of the sidewalk.

Significant time was spent surveying the sidewalk network of Nevada. Every foot of street within the City limits was traveled and the sidewalks noted:

- Present or not present;
- Condition;
- Material used;
- Width.

There were over 1,300 individual data points collected during this survey work.

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*Every foot of sidewalk in Nevada was surveyed and evaluated. Over 1,300 individual data points were collected.*

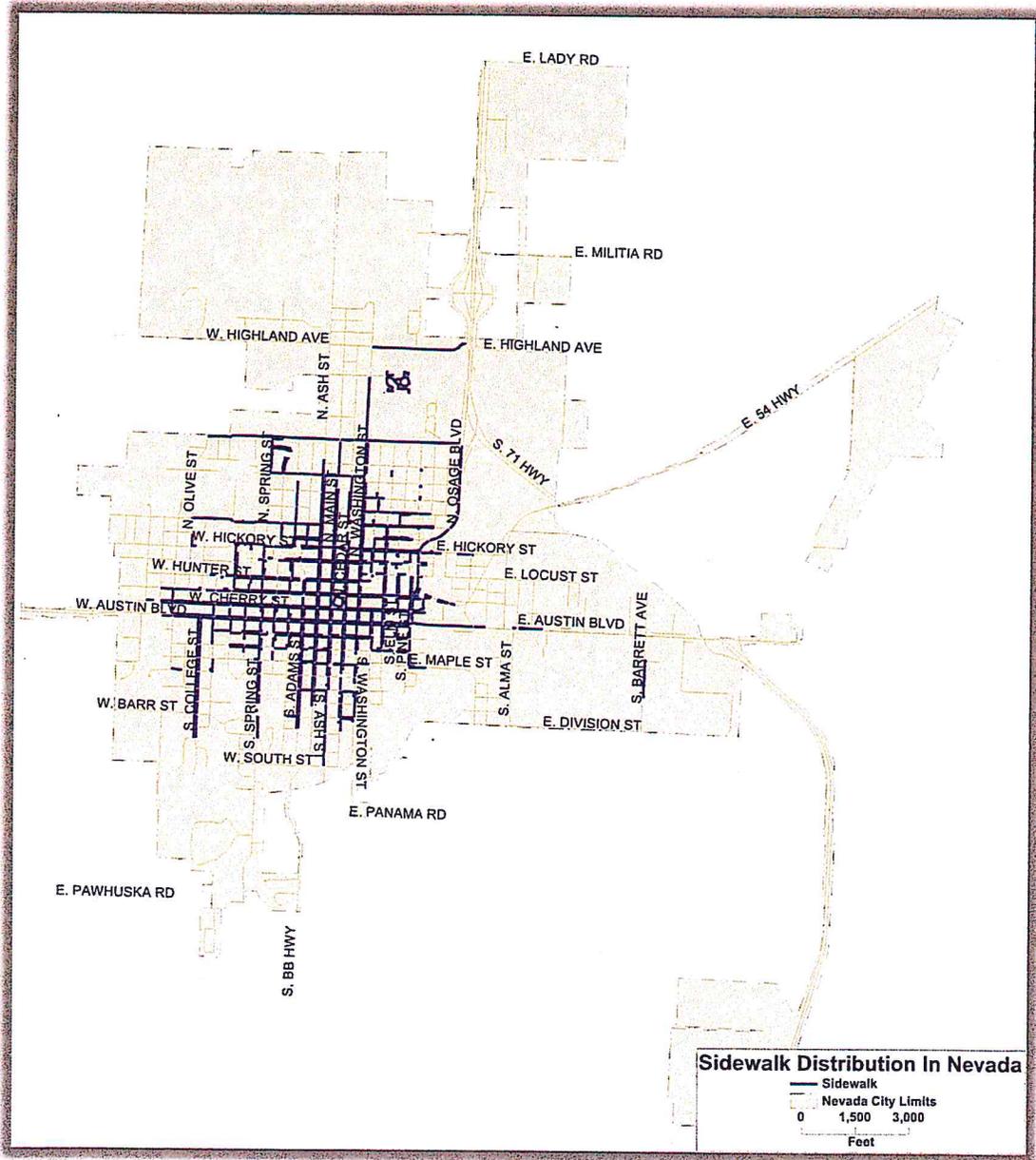
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# CHAPTER 3. CURRENT FACILITIES

## Sidewalk Locations

The majority of sidewalks in Nevada are concentrated in the heart of the city in areas that were developed early in the city's development. Sidewalks are less prevalent at the edges of town and are virtually non-existent in the newer neighborhoods in Nevada.

Map Three: Sidewalk Distribution in Nevada



## CHAPTER 3. CURRENT FACILITIES

Sidewalks should be located on both sides of a roadway to minimize road crossings. The sidewalk should be consistent for, at a minimum, an entire block length.

### Sidewalk Inventory and Roadway Classifications

To better understand the relationship between the sidewalk network and the local roadways, the following tables provide the percentages of roadways with sidewalks and where sidewalk is present, a breakdown of the sidewalk coverage.

Table One: Sidewalk Mileage by Roadway Classification

Roadway Type	Miles (CL)	Miles w Sidewalk	Percent w Sidewalk
Freeway	11.3	0.0	0.0%
Primary Thoroughfare	9.5	3.0	31.4%
Secondary Arterial	3.9	1.6	41.4%
Collector	17.1	8.7	51.0%
Local	62.0	17.5	28.3%
<b>Total</b>	<b>103.7</b>	<b>30.8</b>	<b>29.7%</b>

Table Two: Sidewalk Status by Roadway Classification

Roadway Type	Miles w Sidewalk	Full Both Sides	Full One Side	Partial
Freeway	0.0	0.0	0.0	0.0
Primary Thoroughfare	3.0	1.3	1.6	0.1
Secondary Arterial	1.6	1.2	0.2	0.2
Collector	8.7	2.0	5.5	1.1
Local	17.5	7.3	7.0	3.3
<b>Total</b>	<b>30.8</b>	<b>11.8</b>	<b>14.3</b>	<b>4.7</b>

### Sidewalk Widths

The sidewalk in Nevada is of varying widths, with 89% constructed with widths of four or five-feet in most locations.

## CHAPTER 3. CURRENT FACILITIES

The following tables list the range of sidewalk widths found in Nevada.

Table Three: City of Nevada Sidewalk Widths

Sidewalk Widths	Total Length (Ft)	Percent of Total
11 feet	584	0.3%
10 feet	2,287	1.1%
9 feet	635	0.3%
8 feet	3,559	1.7%
7 feet	3,637	1.7%
6 feet	5,861	2.8%
5 feet	32,740	15.7%
4 feet	153,128	73.6%
3 feet	5,571	2.7%
2 feet	79	0.0%
Total:	207,497	100.0%

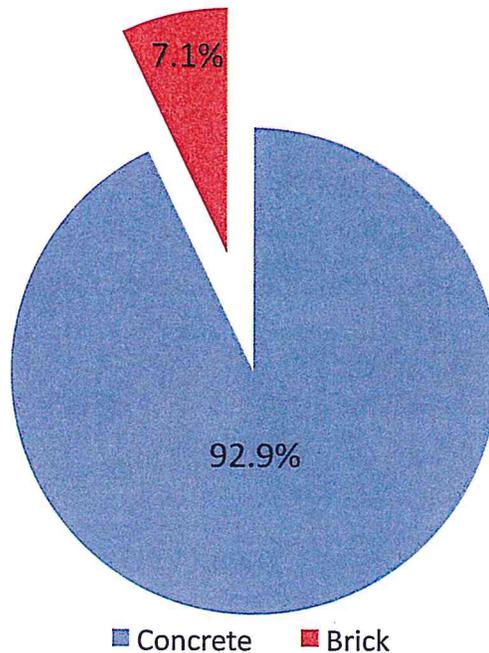
Residential areas account for the majority of all sidewalks with a typical sidewalk width of four feet in both the older and newer neighborhoods.

Sidewalk widths in the six to ten foot range predominate the downtown area, especially adjacent to the Downtown Square.

### Sidewalk Material

Sidewalk in Nevada is either constructed of brick or concrete. In older residential areas of the City, sidewalks constructed of paving bricks are in place. This type of sidewalk has the potential to be considered for historic designation. Newer sidewalks in Nevada are constructed of concrete. The following pie chart details the percent of sidewalk that is concrete and brick.

Figure One: Nevada Sidewalk Materials by Percentage



### Sidewalk Design Type and Construction

There are three sidewalk designs used in Nevada; buffer/furniture zone, no buffer/furniture zone, and built furniture zone. The following outlines the elements present in each sidewalk design:

- Buffer/Furniture zone: grass or unpaved strip between the street's edge and the sidewalk. Typically found associated with residential homes and subdivisions. The buffer strip is traditionally planted as a grass lawn and may have trees planted if the width is sufficient.
- No Buffer/Furniture zone: Sidewalk built from the street edge or back of the curb. Typically found associated with highway and commercial uses. May be found in residential areas and along collector and arterial streets as the "lowest cost" option for

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*In older residential areas of the City, sidewalks constructed of paving bricks are in place. This type of sidewalk has the potential to be considered for historic designation.*

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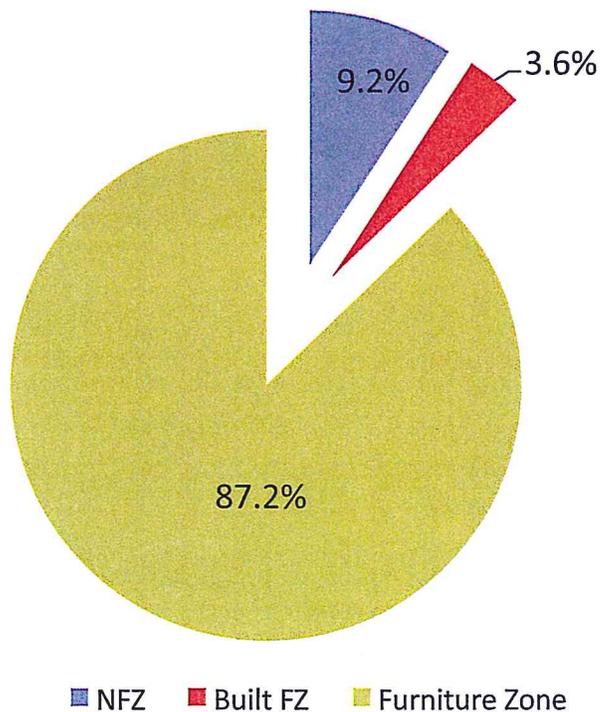
## CHAPTER 3. CURRENT FACILITIES

providing sidewalk when rebuilding or constructing new roadways to reduce construction costs. May be used along roadways with limited right-of-way or when utilities are present.

- **Built Furniture Zone:** Sidewalk is built from the street edge or back of the curb to the edge of the building. Typically this design is associated with downtown and high-density commercial areas.

Each sidewalk design has its advantages and disadvantages. The sidewalk with the furniture zone offers the most benefit for pedestrians, home and business owners, and motorists. The buffer/furniture zone provides a buffer area that distances pedestrian and vehicular traffic. The benefits of the furniture zone are better described in chapter 6. Figure Two illustrates the distribution of the three sidewalk designs in the City of Nevada.

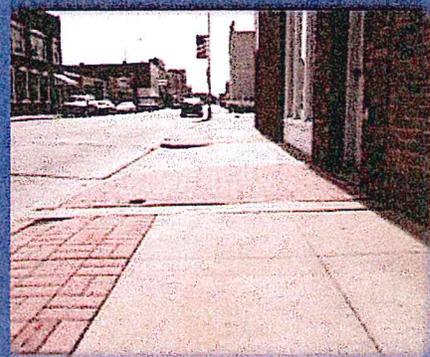
Figure Two: Sidewalk Design by Percentage of Total



### SIDEWALK DESIGNS



Buffer/Furniture Zone Design



Built Furniture Zone Design



No Furniture Zone

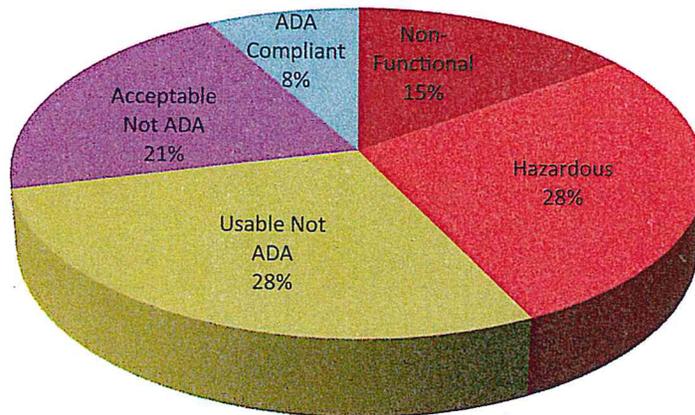
## CHAPTER 3. CURRENT FACILITIES

### ADA Compliance Status

The American's with Disabilities Act (ADA) was passed by Congress and signed by President George H.W. Bush on July 26th, 1990. The law affects sidewalk that has been built since its passage or sidewalk that has underwent a major repair. Of the 39.2 miles of sidewalk present along Nevada roadways approximately 8.1% is ADA compliant. This is based on the evaluation of individual sidewalk sections.

*Of the 39+ miles of sidewalk along Nevada roadways approximately 8.1% is ADA Compliant*

Figure Three: Sidewalk Conditions by Percent of Total



The sidewalk condition was evaluated during the field survey work conducted for this report and rated on the overall sidewalk rating. The rating system did not include measurements for slope or cross-slope. This a subjective evaluation that provides an initial assessment of the sidewalk that does and does not comply with the standards established by the Americans with Disabilities Act. Many roadways do not have a continuous sidewalk for use.

## CHAPTER 3. CURRENT FACILITIES

There are 61.6 miles of roadway with full or partial sidewalk, however along those roadways there is approximately 40 miles of sidewalk, or 1/3 of the sidewalk necessary to have continuous sidewalk along both sides of the roadway.

The ADA compliant sidewalk sections are located primarily in areas of newer residential and commercial development and along MoDOT roadways. The Downtown Square and adjacent streets exhibit the largest concentration of compliant sidewalk in Nevada. Cottey College has ADA compliant sidewalk adjacent to the majority of the campus area, however the sidewalk is not connected to an ADA compliant sidewalk network.

The older neighborhoods, where sidewalk is present, have repair issues that degrade the sidewalk network. Sidewalk has cracked and crumbled from lack of maintenance and tree roots have caused sections of sidewalk to heave, separating the sections and making the sidewalk unable for mobility devices and the visually impaired. A continuous network of ADA compliant sidewalk is necessary to serve the needs of individuals with mobility disabilities.

### Sidewalk Conditions

Every segment of sidewalk in Nevada was evaluated using the following scoring criteria:

- **Non-functional:** Sidewalk exists but is broken and non-functional. Needs total replacement.
- **Hazardous:** Sidewalk exists but the majority is in a state of disrepair. Non-ADA compliant and presents severe trip hazards.
- **Usable but non-ADA Complaint:** Sidewalk surface is generally usable by the general public but is not ADA compliant. Sections of sidewalk need to be repaired because there are severe cracks, upheavals, and excessive cross-slope. Repair is needed but not total replacement.
- **Acceptable but non-ADA Compliant:** Sidewalk surface is generally in good repair but is not ADA compliant.
- **Good & ADA complaint:** Sidewalk is in good repair and

### SIDEWALK RATING



Non-functional



Hazardous



Usable: Non-ADA  
Compliant



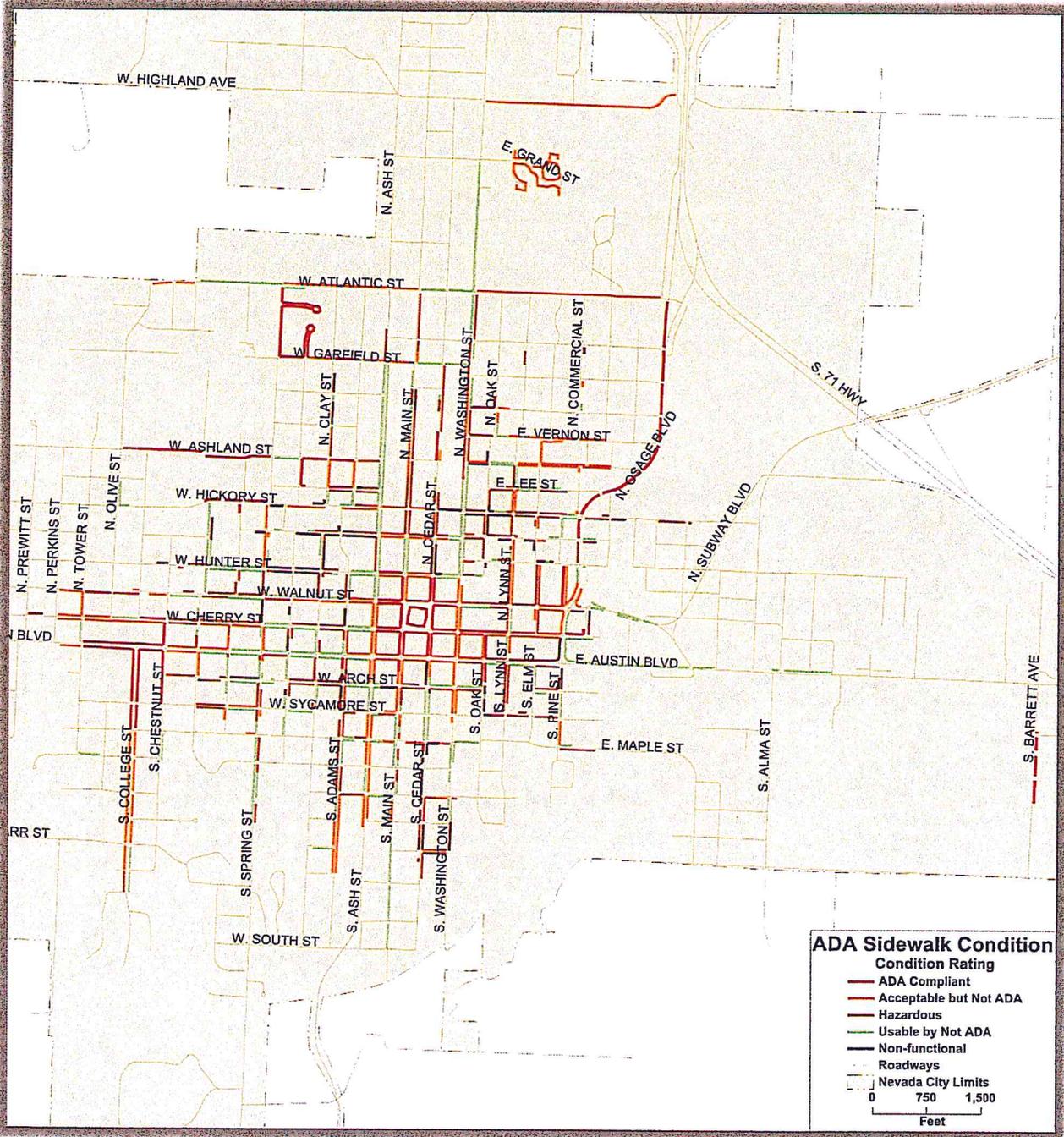
Acceptable: Non-ADA  
Compliant



ADA Compliant

# CHAPTER 3. CURRENT FACILITIES

Map Four: ADA Sidewalk Condition



## CHAPTER 3. CURRENT FACILITIES

### Crosswalks

Painted crosswalks offer a guide for pedestrians crossing roadways and serve to alert motorists of the potential of pedestrian activity. There are 46 painted crosswalks on Nevada streets. All of the Nevada R-V public schools are served by crosswalks adjacent to the facilities, as is the Walton Pool and Lake, the only City park with painted crosswalks. Over a quarter of the crosswalks are located on roadways adjacent to the Downtown Square which have 12 painted crosswalks, both at intersections and mid-block. Map Five: Crosswalk Locations; illustrates the distribution of crosswalks on the local and state roadway network.

MoDOT is responsible for the pedestrian crossing facilities on Austin Boulevard and North Osage Boulevard. Cottey College is served by four crosswalks; three at the intersection of South College and West Austin Boulevard and a mid-block crosswalk of West Austin Boulevard. The intersections of North Osage Boulevard with East Walnut Street and East Austin Boulevard have recently improved crosswalks that include pedestrian refuge areas in traffic islands.

The location and distribution of crosswalks in Nevada focus on serving local public schools, the Downtown Square and Cottey College. All of these institutions are pedestrian generators.

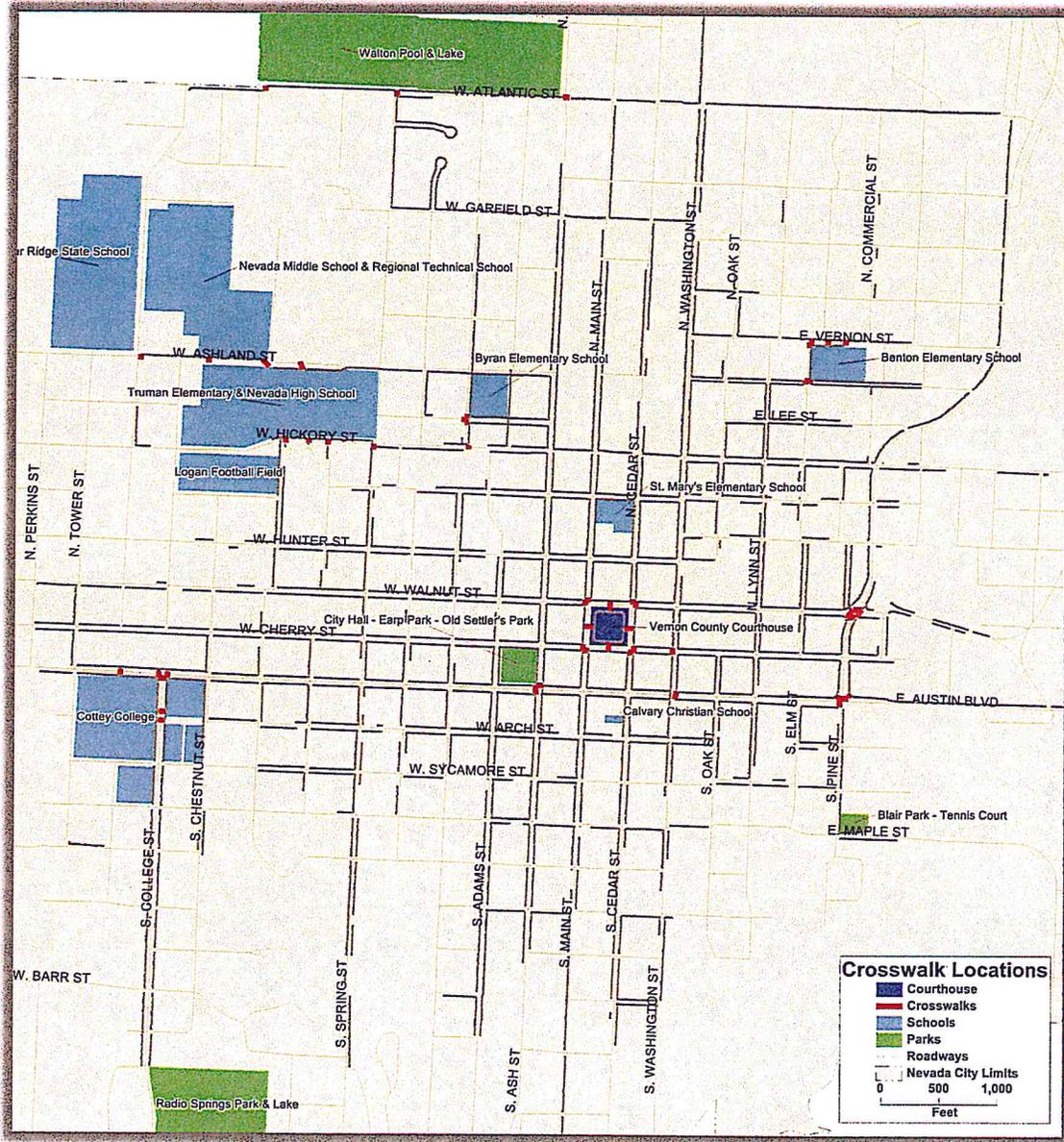
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*Painted crosswalks offer a guide for pedestrians crossing roadways and serve to alert motorists of the potential of pedestrian activity.*

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# CHAPTER 3. CURRENT FACILITIES

## Map Five: Crosswalk Locations

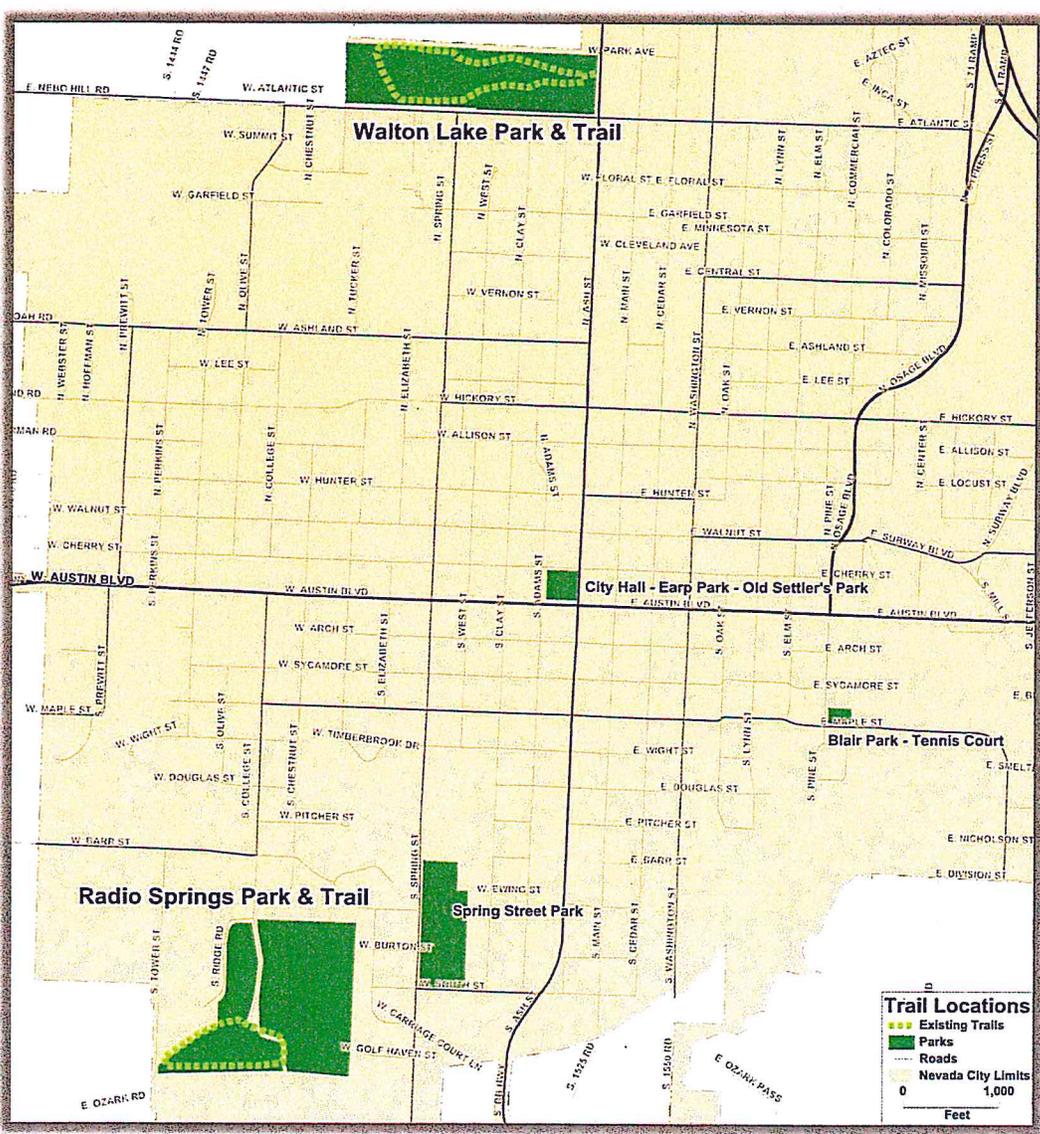


# CHAPTER 3. CURRENT FACILITIES

## Trails

The current trails in Nevada consist of gravel loop trails around lakes in Walton and Radio Springs Parks. These are multi-use trails about 10' wide currently being used for exercise and nature viewing. There are currently no trails being used for transportation. Map Six illustrates the locations of the current trail facilities.

Map Six: Existing Trail Locations

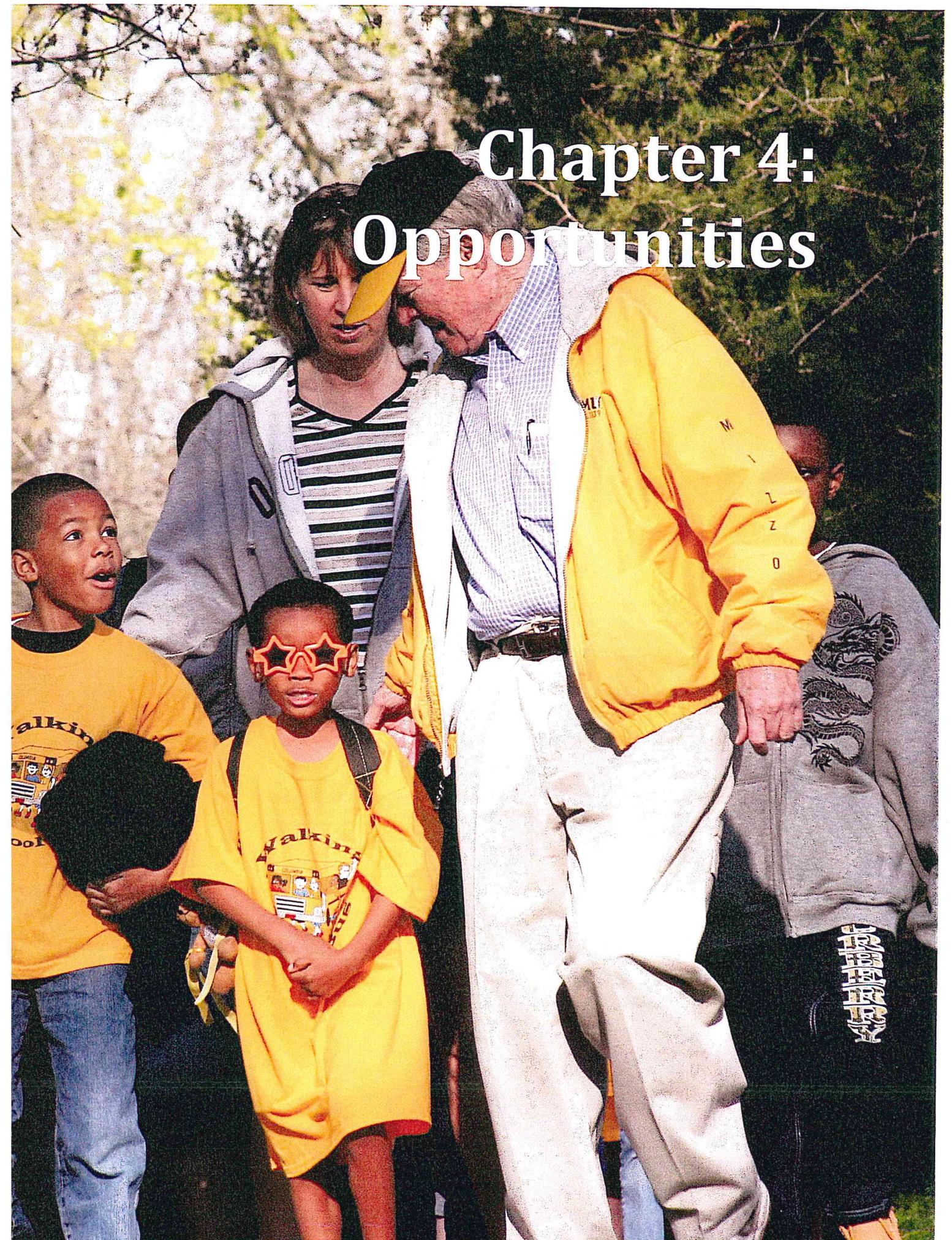


## CHAPTER 3. CURRENT FACILITIES

### **On-Road Bicycle Facilities**

There are currently not any bicycle lanes, sharrows or any other “on-road” facilities for bicyclists or pedestrians in the City of Nevada.

# Chapter 4: Opportunities



### Estimates and Opportunities

To move forward with the development of a balanced and integrated transportation network in Nevada, the existing infrastructure was evaluated and options and opportunities were identified. An inventory of projects was developed that included the repair and replacement of non-ADA compliant sidewalks, the construction of sidewalk on both sides of streets lacking sidewalks, the construction of trails in all available corridors, and on-street bicycle facilities on all non-local streets.

Many of these projects are as basic as constructing a missing sidewalk on an arterial street or repairing existing sidewalk to be ADA compliant. Other projects are opportunities that are more far reaching such as identifying rail corridors and flood plain as potential recreational trail projects.

The intent of the project inventory is not to illustrate the existing deficiencies but to facilitate the prioritization of projects based on community need and benefits and the estimated project costs.

#### Estimating Project Costs

All of the potential projects had an estimated cost calculated by applying generalized construction costs to the project length. It was not practical to do a detailed cost analysis for each of the potential projects, nor was it necessary for the purposes of the plan.

There is no need to do a detailed cost analysis on all of the projects because it would take decades to fund and build all of these projects. Over time, the cost estimates will lose their relevance due to inflation, property transfers, and other economic factors. In Chapter 5, the top 3.975 million dollars of projects have been identified with more detailed cost analysis completed along with maps and artistic renderings.

Cost estimates for each project type; trail, sidewalk, and on-street facilities were derived from a variety of sources such

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*The Healthy Nevada Bicycle and Pedestrian Plan and the projects described are intended as a starting point for discussions, and are not a prescriptive guide for community improvements.*

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## CHAPTER 4. OPPORTUNITIES

as comparisons with similar municipal projects, generally accepted professional estimates, and other literature.

For the inventory of projects the following metrics were used to estimate project costs:

- Mile of sidewalk: linear mile of sidewalk along one-side of the roadway. So a mile of roadway without sidewalk on either side would require two-miles of sidewalk. Unless otherwise noted, the sidewalk is 5' wide.
- Mile of trail: one linear mile of trail. Unless otherwise noted, the width of the trail will be 10.'
- Mile of on-street painting (bike lanes, sharrows): linear mile of markings along one-side of the roadway. So a mile of roadway without a bicycle lane on either side would require two-miles of bicycle lanes. The width of painted on-road facilities is inconsequential to the cost and depends upon available road width, parking and other variables.

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*Of the nearly 40-miles of sidewalk inside the city limits, 8% of it is classified as ADA compliant and 20% acceptable. The remaining 72% is practically non-functional.*

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### Sidewalk Projects

For the sidewalk project inventory the goal was to provide ADA compliant sidewalks along both sides of all the streets and roadways in Nevada. The City of Nevada currently has approximately 40 miles of sidewalk, 5.9 miles of which is classified as ADA compliant and 11.1 miles classified as acceptable for general pedestrian use. The majority of the remaining 22.9 miles of sidewalk is non-functional and needs replacement.

In addition to the 22.9 miles of existing sidewalk that require major repair or replacement, there are 65 miles of roadway that lack any sidewalk, has sidewalk on only one side or the sidewalk is incomplete. In total, there are 170.9 miles of sidewalk that need to be constructed in Nevada to provide sidewalk along both sides of all streets and roadways, with the exception of Interstate 49

## CHAPTER 4. OPPORTUNITIES

Table 4.1: Miles of Roadway Needing Sidewalk

Roadway Type	Miles (CL)	Miles w/o Sidewalk	Miles of Sidewalk Needed
Freeway	11.3	0.0	0.0
Primary Thoroughfares	9.5	8.2	17.8
Secondary Arterials	3.9	2.8	5.6
Collectors	17.1	15.0	34.4
Local Streets	62.0	54.7	113.1
Total	103.7	80.7	170.9

### Sidewalk Costs

For roadways needing new sidewalk, cost was calculated by measuring the distance between street intersections and applying that length to the per foot cost estimate for constructing new sidewalk. For the repair and replacement of existing sidewalk, the actual sidewalk length was used and applied to the per foot estimate for repairs.

The sidewalk project includes all of the sidewalk as well as the ramps and other improvements at intersections, reconstruction of driveway aprons, relocation of utilities and signs, and many other contingencies that are typically encountered. Appendix A: Sidewalk Cost Factors; provides a detailed discussion related to estimating sidewalk construction costs.

The cost for constructing new sidewalk was estimated at \$47.35/foot. The cost for repairing non-ADA compliant sidewalk was estimated at \$23.67/foot. These estimate values are general. The cost of a project, once designed, may be considerably lower or higher.

To meet the goal for providing all the streets in Nevada with ADA complaint sidewalk on both sides would require an estimated \$45,583,969 to complete the needed repair and construction.

## CHAPTER 4. OPPORTUNITIES

Table 4.2: Sidewalk Repair and Construction Estimates

Roadway Type	Miles of Sidewalk		Total Cost
	Construction	Cost Per Foot	
Repair to Existing Sidewalk City-wide	22.9	\$23.67	\$2,861,987
Primary Thoroughfares	17.8	\$47.35	\$4,459,756
Secondary Arterials	5.6	\$47.35	\$1,389,190
Collectors	34.4	\$47.35	\$8,609,088
Local Streets	113.1	\$47.35	\$28,263,945
<b>Total</b>	<b>170.9</b>		<b>\$45,583,969</b>

### Trails

Recreational trail use is popular nation-wide, representing one of the highest-ranked recreational demands in the United States. Trails serve a wide variety of uses. They range from functional transportation connectors, which enable citizens to travel safely from one location to another, to the passive and intimate pathways that provide opportunities to enjoy nature in a quiet and personal way.

The development of this trail plan focused on the following objectives:

- increasing opportunities for people to gain physical activity;
- increasing the use of “non-motorized” transportation;
- increasing the quality of life of Nevada citizens;
- making Nevada a more “livable” city;
- increasing the safety of bicyclists, pedestrians and wheelchair users.

## CHAPTER 4. OPPORTUNITIES

### Trail Planning

When planning trails, anything is possible but not always practical. Trail locations are not limited to the public right-of-way offered by roads and streets. Open corridors such as the floodways of streams and creeks provide opportunities and nearly any undeveloped property could present a possible trail location. Ideally, trail corridors are located in areas that offer a natural setting removed from existing roadway corridor. The ability to consider trail locations outside existing roadway corridors gives trail planners the ability to consider multiple locations that, for example, a plan for sidewalk would not allow. However, a proper trail plan must also be practical.

In researching potential trail locations for the Healthy Nevada Bicycle and Pedestrian Plan, the field investigation began by researching potential trail locations suggested by the citizens of Nevada who were interviewed in this process. Local residents who have decades of experience and local knowledge are often the best sources of information for potential trails.

In addition to the suggested corridors, new trail locations were developed. This process involves several steps but begins by identifying alternatives that connect trip generators like schools, stores, parks and residential areas. To find potential trails with the length and ambiance needed to encourage people to use them for entirely recreational purposes, publicly available right-of-way like government owned property and sewer easements were investigated. Finally, railroad right-of-ways, both active and abandoned were evaluated as potential trail locations.

When the potential trail locations were identified, the corridor was examined to determine if there were circumstances that would disqualify a potential project from being practical by either being too expensive or too intrusive on the local environment. Items such as a creek bank that is too steep to maintain ADA compliance, or the need for expensive bridges, which can sometimes double or triple the cost of the trail, were evaluated. Sometimes it's the hidden items that take a trail off of the plan, like a creek tunnel under a street that is two-feet too short to allow a trail to travel under the road surface.

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*There are many benefits of trails and greenways that planners, funders, and the public need to know about: they make our communities more liveable; improve the economy through tourism and civic improvement; preserve and open space; and provide opportunities for physical activity to improve fitness and mental health.” – American Trails magazine*

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## CHAPTER 4. OPPORTUNITIES

Nearly every proposed trail crosses privately held land at some point. While some landowners might be willing to give an easement, others may have no interest in a trail bisecting their property. Every effort was made to identify trail locations that would minimize the need to acquire privately owned land for trails

Nine trails were identified for inclusion in this plan. Dozens of potential trail location were initially identified but eliminated due to practical considerations.

The adjacent photographs show existing facilities that were investigated as potential trail corridors.

### Trail Cost

All trail projects will require more detailed planning, design and engineering before they can be constructed. There will need to be a fairly extensive public input process to evaluate the detailed designs and further refine the exact routes of all the proposed trail alignments. Once elected leaders and the public decide to pursue a trail route, detailed construction drawings will have to be drawn and construction permitting will be required. Permitting may be required from the city, county, State DNR and in some cases the Federal Army Corps of Engineers. Where land or right of way acquisition is required, the city will have to go through its own internal processes for the acquisition to occur.

For these trail cost estimates, all of those factors have been included as well as basic labor and material costs. However, any of those individual project components could cost more or less than expected.

### Trail Projects

It will be important for the public to want more trails before tackling the more complicated trail routes. The same holds true for some of the secondary trail routes that will involve working with a majority of private land owners along the creek corridors as proposed on the Trails Master Plan.

**Walton Park/YMCA Trail:** A loop trail at the northern edge of Nevada connecting Walton Park on the south to Marmaduke Park and the YMCA on the north.



Potential Trail/Road  
Crossing



Abandoned Railroad ROW

## CHAPTER 4. OPPORTUNITIES

**Missouri Pacific Trail:** A linear trail south of Nevada along the abandoned Missouri Pacific Railroad line connecting to from Little Dry Wood Creek to Twin Lakes Park.

**Schools to Walton Park Trails:** Two trails connecting the middle school and high school areas in Nevada to the Walton Park/YMCA Trail and connecting Walton Lake to Marmaduke Park along the White Branch Creek.

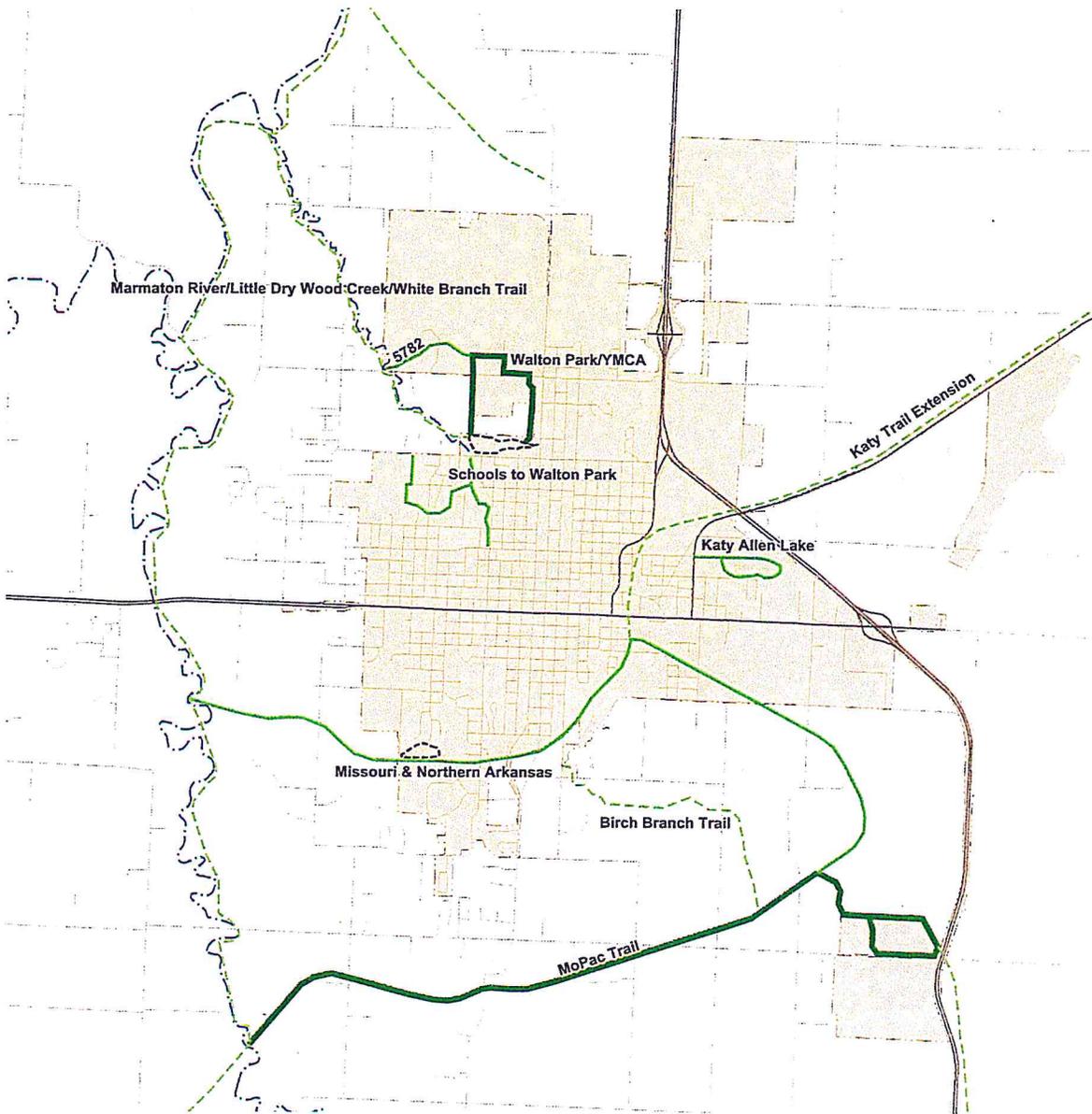
**Katy Allen Lake Recreation Trail:** A recreation loop trail around the lake located in Katy Allen Lake County Park. This trail is intended as a recreation loop.

**Missouri & Northern Arkansas:** This trail parallels the Missouri and Northern Arkansas railroad line that runs through the south side of Nevada. This trail section extends to Little Dry Wood Creek on the west all the way across southern Nevada to Twin Lakes Park on the east. Trails along active railroad lines can provide important transportation links throughout town. This trail route will require working closely with the railroad operators, property owners, and concerned citizens. A very detailed design/public input process is advisable to facilitate discussion.

**Marmaton River/Little Dry Wood Creek/White Branch Trail Complex:** A series of four trails along the Little Dry Wood Creek and the Marmaton River on the west side of the Nevada city limits that would provide an extensive recreation trail system in the future. These future trails are proposed to begin on the north side of Nevada at both the White Branch Creek and the unnamed drainage that connects back to Ash St. all the way along the western edge of Nevada down to the Missouri Pacific Trail south of the Nevada city limits.

**Katy Trail Extension:** A section of trail along the existing Missouri-Kansas-Texas Railroad line that extends from downtown Nevada to the existing Katy Trail State Park in Clinton, MO. The City of Nevada should pursue, at the State level, this connection to the state-wide Katy Trail system. The 200+ mile Katy Trail State Park is a major tourism destination that attracts people from across the country. City officials should begin discussions with Missouri DNR staff and local state representatives to have the state look into the feasibility of Nevada being connected.

Map 4.1: Trail Project Locations



**The Birch Branch Trail:** A connecting trail from Postlewaite Park to the Missouri Pacific Trail following the flood plain of Birch Branch.

**The Missouri and Northern Arkansas Trail:** A Trail paralleling the Missouri and Northern Arkansas railroad line that leaves Nevada and heads due south alongside Hwy. 71.

## CHAPTER 4. OPPORTUNITIES

This future trail may be an important linkage between Twin Lakes Park and future development on the east side of Interstate 49.

Table 4.3: Trail Project Cost Estimates

Trail Project Name	Length	Trail Material	Cost Per Mile	Total Cost
Walton Park to YMCA	1.4 miles	10' Concrete	\$569,035.00	\$796,649.70
MoPac Trail	4.5 miles	12' Gravel	\$448,898.44	\$2,020,043.20
Schools to Walton Park	2.8 miles	10' Concrete	\$870,532.00	\$2,437,489.60
Katy Allen Lake	1 mile	10' Concrete	\$870,532.00	\$870,532.00
Missouri & Northern Arkansas	6.5 miles	12' Gravel	\$743,252.00	\$4,831,138.00
Marmaton Trail Complex	11.7 miles	10' Concrete	\$870,532.00	\$10,185,224.40
Katy Trail Extension	50+ miles	Gravel	No estimate	State Funded
Birch Branch Trail	1.9 miles	10' Concrete	\$870,532.00	\$1,654,010.80
MO-North Ark Trail	1.4 miles	12' Gravel	\$743,252.00	\$1,040,552.80
<b>Total (excluding Katy Tr.)</b>	<b>31.2 miles</b>			<b>\$23,835,640.50</b>

### On-Street Facilities

Street improvements provide the main opportunity for non-motorized transportation in the core of the city. Even if all of the trails recommended in this plan were built, street connections are still required to fill in gaps where trail development is not possible. In these situations street improvements fill the gaps, allowing for a safe route along a roadway, between trail sections.

On-street bicycle facilities are also relatively inexpensive compared to sidewalk and trail projects, but installing these projects has an immediately noticeable impact on the community.



Bicycle Lane Example #1



Bicycle Lane Example #2



Sharrows Example #1



Sharrows Example #2

### On-Street Bicycle Facilities Opportunities

When considering “on-street” facilities the discussion focuses on bicyclists. This is because sidewalks and crosswalks typically meet the needs of pedestrians and wheelchair users.

There are many types of on-street facilities but the two that will be the focus of this plan are:

- Bicycle lanes
- Sharrows

Generally, new bicyclists prefer bicycle lanes but the application is limited by road widths and on-street parking. Bicycle lanes are ideally 6-feet in width but can be as narrow as 4.5-feet in certain situations (see chapter 6). The addition of bicycle lanes removes as much as 9 to 12-feet from the existing street width. Usually this is preferable because excess lane width is undesirable inside of a city because it leads to excess automobile speeds.

Many streets have sufficient pavement width for bicycle lanes however it would require the removal of on-street parallel parking. Bicycle lanes can exist with on-street parallel parking but it is absolutely critical that the lanes are wide enough to reduce the risk of the bicyclists being injured by a suddenly opened automobile door. In order to reduce this risk, the bicycle lanes need to be at least 6 feet wide in areas where the lane will be passing a parking lane or places where parking is allowed. In addition, it is desirable to include a buffer between the bicycle lane and the parked automobiles.

In some instances, there just isn't enough pavement to stripe bicycle lanes. The application of “sharrows” to the roadway is the preferred approach.

A sharrow is an intentionally vague road marking. It can best be thought of as a “share the road” sign only painted on the pavement. They do a great job of educating motorists about their responsibility to share the road with

## CHAPTER 4. OPPORTUNITIES

bicyclists and they can increase the confidence of bicyclists who would otherwise be too intimidated to bicycle on the roadway.

### On-Street Treatment Selection

Most of Nevada's streets are low trafficked local streets. Low traffic streets do not need on-street treatments because almost anyone would feel comfortable bicycling on them. The streets that were chosen for treatment are the more heavily trafficked streets in Nevada with the exception of Interstate 49 and U.S. Highway 54.

Bicyclists can legally travel both of those streets but, in general, people are less likely to do so. Also, U.S. HWY 71 has a shoulder serviceable by bicyclists and U.S. HWY 54 lacks the width necessary for typical bicycle treatments.

### Streets Selected for On-Street Facilities

#### West Ashland Street

West Ashland Street from North Ash Street to North Prewitt Street is approximately 0.9 miles in length. The total pavement width is approximately 26' which is too narrow for standard bicycle lanes. The application of sharrows on West Ashland Street is recommended.

#### North Ash Street

North Ash Street from Atlantic Street to South Street is approximately 1.75 miles in length. North Ash has a total pavement width of approximately 36-feet which is far wider than required for two 11-12 foot travel lanes. The addition of six-foot bicycle lanes on Ash Street would not only facilitate bicycle traffic but reduce the total road width to approximately 26-feet which is a more appropriate lane width for a minor collector like North Ash Street. These narrow lanes will help control motor vehicle speeds.

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*On-Street bicycle facilities are also relatively inexpensive compared to sidewalk and trail projects, but installing these projects has an immediately noticeable impact on the community.*

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### **Atlantic Street**

Atlantic Street from Osage Street to North Olive Street is approximately 1.33 miles in length with a total pavement width of 32-feet. The application of 5-foot bicycle lanes on Atlantic Street would result in two traffic lanes of 11 feet each. That would help control speeding on Atlantic Street and facilitate bicycle traffic.

### **Spring Street**

Spring Street from West Atlantic Street to South 1497 Road is approximately 2.4 miles in length with a total pavement width of 30-feet. Spring Street is right on the edge of having enough existing width to create bicycle lanes. If the City of Nevada prefers, the street could have two 4.5-foot bicycle lanes, leaving two 10.5-foot traffic lanes. A 10.5-foot traffic lane is wide enough for city traffic, although it may appear out of place in Nevada's over-sized streets. Sharrows could be placed in lieu of bicycle lanes on Spring Street if the City of Nevada isn't comfortable with 10.5-foot traffic lanes on Spring Street.

### **North Osage Street**

North Osage Street from East Austin Boulevard to East Atlantic Street is approximately 1.05 miles in length. N. Osage Blvd. is a MoDOT maintained primary thoroughfare with an arterial street cross section with four traffic lanes and a total pavement width of 50-feet. North Osage Street does not have a center-turn-lane.

North Osage Street is the ideal candidate for a relatively new, but proven, traffic technique known as the "road diet". The road diet works by removing two of the lanes of traffic and replacing them with bicycle lanes and a two way continuous left turn lane. The traffic capacity is maintained and collisions are reduced by removing left turning movements from the travel lanes. Through traffic is uninterrupted by left turning vehicles decelerating or stopping in the travel lane. This reduces the instances of rear end collisions. The capacity of the roadway is maintained by eliminating turn delays, allowing through

## CHAPTER 4. OPPORTUNITIES

vehicles to maintain speed providing a more continuous flow of traffic.

A road diet not only facilitates bicycle traffic but also increases the automobile capacity and reduces traffic crashes on roadways like Osage Street. Although this may seem counter-intuitive to many, the “road diet” has been thoroughly researched and has proven to be very effective.

Table 4.4: On-Street Facilities Projects

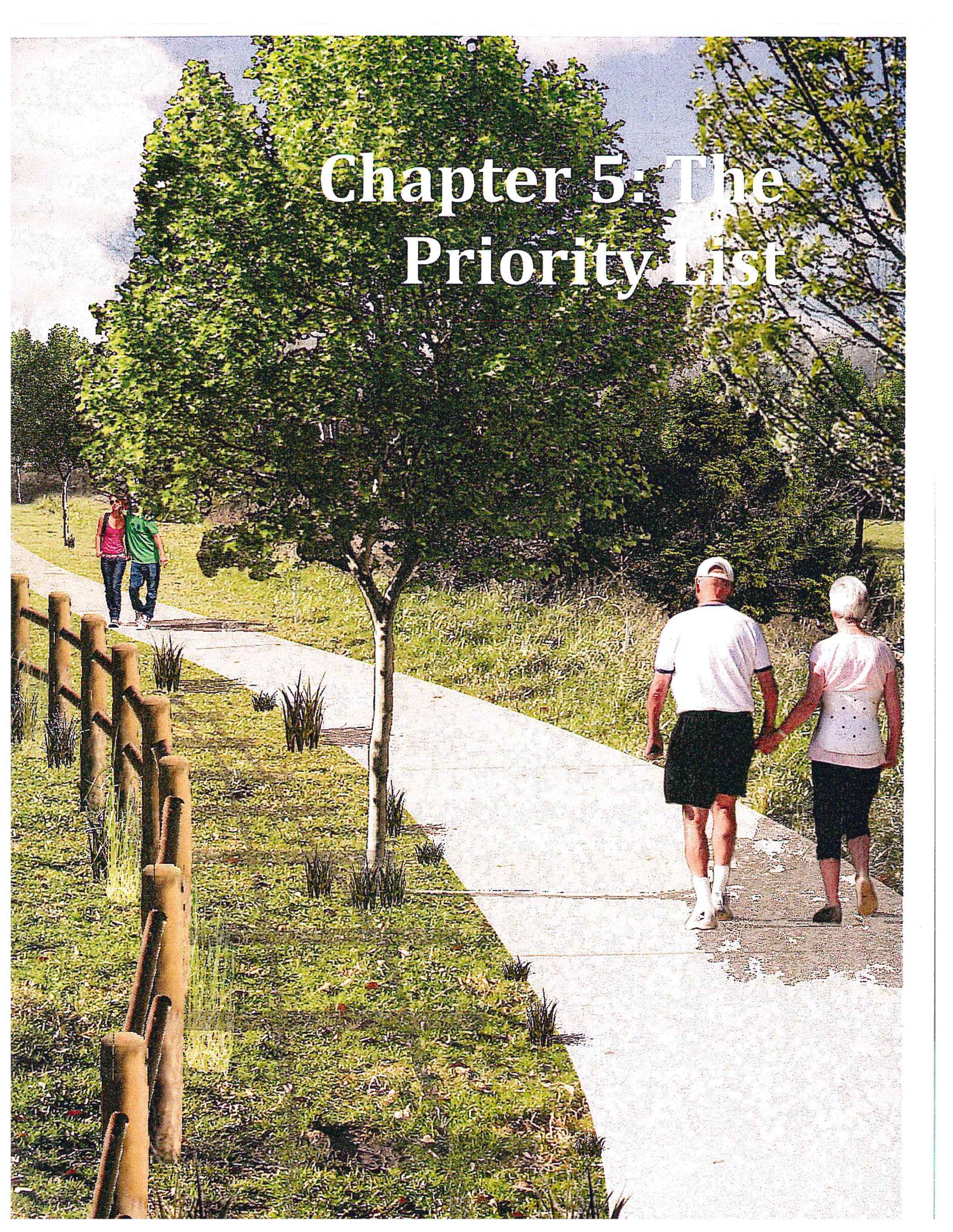
Street Name	Length (Miles)	Treatment	Cost Per Mile	Total Cost
West Ashland Street	1.8	Bicycle Lanes	\$25,000	\$45,000
North Ash Street	3.4	Bicycle Lanes	\$25,000	\$85,000
Atlantic Street	2.6	Bicycle Lanes	\$25,000	\$65,000
Spring Street	3.4	Sharrows	\$4,600	\$15,640
North Osage	2.10	Road Diet	\$25,000	\$52,500
Total	13.3			\$262,960

### Total Opportunities

In total, \$69,682,570 of infrastructure opportunities were identified in the evaluation process for the community. The cost breakdown by project type is:

- \$45,583,969 total project cost for sidewalks;
- \$23,835,640.50 total project cost for trails; and
- \$262,960 total project cost for on-street facilities.

# Chapter 5: The Priority List



## CHAPTER 5. THE PRIORITY LIST

### Why Prioritize Projects?

In Chapter 4, a comprehensive project list was outlined complete with cost estimates for the construction and implementation of all the project opportunities. However, the sheer number of projects and the \$69,682,570 associated cost are far too great for Nevada to consider building in the immediate future. The sidewalk, trail, and on-street facilities projects were prioritized and from the prioritized results \$3,975,977 worth of projects that offered the highest return on investment were selected for consideration.

### Prioritized List is Not Proscriptive

The Healthy Nevada Bicycle and Pedestrian Plan and the projects described are intended as a starting point for discussions, and are not a proscriptive guide for community improvements. The information provided and projects outlined will hopefully serve as a resource to support future investment decisions by the City of Nevada and others concerning sidewalks, trails, and on-street bicycle facilities.

The planning behind the Healthy Nevada Bicycle and Pedestrian Plan focuses on the long term development of an integrated system of sidewalks, trails, and on-street bicycle facilities. While this priority list was needed to focus the results of this Bicycle and Pedestrian Master Plan, and was created in good faith, it should certainly be up for debate by the citizens of Nevada as to which projects would benefit the community the most.

### Factors That Influenced Selection

First, the projects were ranked based upon these criteria:

- Promise to increase the mobility of bicyclists and pedestrians. For example, connecting a grocery store or school with a housing area.
- Promise to increase physical activity.
- Promise to reduce automobile trips in Nevada
- Quality of the project. For example, would a trail project only be possible if it included several “at grade” crossings thereby reducing its comfort and safety.

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*The Healthy Nevada Bicycle and Pedestrian Plan and the projects described are intended as a starting point for discussions, and are not a proscriptive guide for community improvements.*

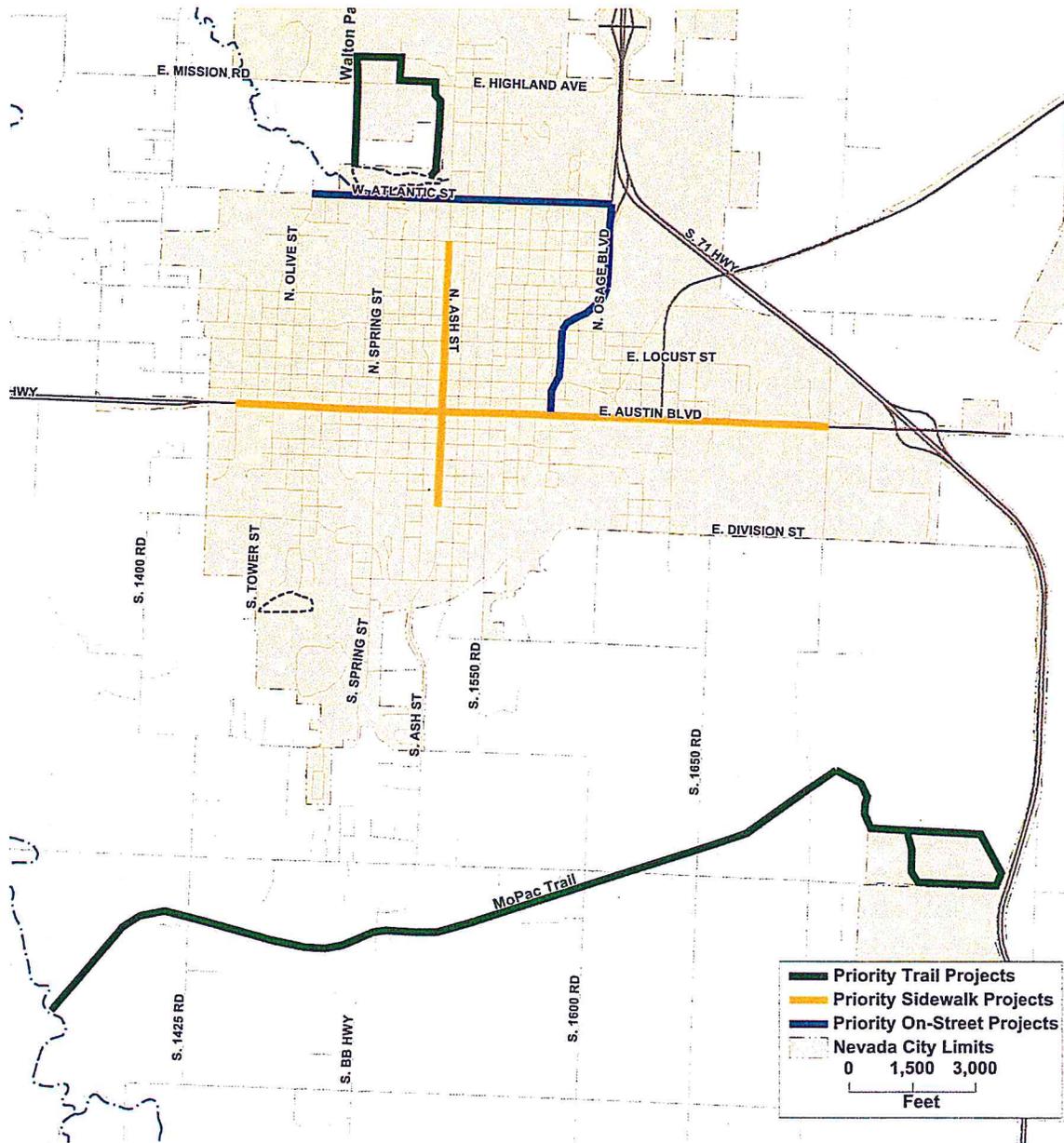
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# CHAPTER 5. THE PRIORITY LIST

Then the highest ranked projects were weighed against two "costs:"

- The cost to complete the project.
- The ease of completion. For example, would the land acquisition process be difficult because the project crosses several private land holdings.

Map 5.1: Priority Project Locations



## CHAPTER 5. THE PRIORITY LIST

### Sidewalk Priority Projects

The development of the sidewalk plan focused on the following objectives:

- improving conditions for people who are currently walking;
- improving accessibility to sidewalk facilities for pedestrians with disabilities;
- providing connections to places that attract pedestrians;
- Increasing levels of walking; and reducing the number of crashes involving pedestrians.

To aid in the identification of areas for sidewalk improvement an analysis of the proximity of target uses to the homes and businesses in Nevada was conducted. The initial priority classification was created based on distances to parks, schools and grocery stores. The residential and business addresses were provided with one of the following values; ½ mile, one mile, or more than one mile, from park, school, and grocery store. To produce the initial priority classification, the sum of the distance values were calculated and assigned to all City address locations.

#### Sidewalk Project 1: West Austin Boulevard

Repair sidewalk to ADA standards along both sides of Austin Boulevard between South Chestnut Street and North Osage Boulevard.

- Project Length: Approximately 5,415-feet on the North side and 5,415-feet on the South side of Austin Boulevard.
- Sidewalk Width: 6-feet
- Buffer/Furniture zone width: 6-feet, where feasible
- Estimated cost: \$256,000+
- Pedestrian Generators: Grocery, government, and schools

Comments: This MoDOT arterial is the city's major east-west roadway. The existing sidewalk on the north and south sides, while in generally acceptable condition is non-ADA compliant.



#### Sidewalk Project 1: West Austin Boulevard

Repair sidewalk to ADA standards along both sides of Austin Boulevard between South Chestnut Street to North Osage Boulevard.

Estimated Cost: \$256,000



#### Sidewalk Project 2: East Austin Boulevard

Construct new sidewalk along the north side of East Austin Boulevard from North Osage Boulevard to South Barrett Avenue.

Estimated Cost: \$425,000



### Sidewalk Project 3: South Ash Street

Repair sidewalk to ADA standards along both sides of South Ash Street from South Maple Street to West Austin Boulevard.

Estimated Cost: \$55,000 +



**Sidewalk Project 4:**  
Repair sidewalk to ADA standards along both sides of North Ash Street between West Austin Boulevard and West Hickory Street. Replace sidewalk on west side of North Ash Street between West Hunter Street and West Allison Street.

Estimated Cost: \$133,000 +

### Sidewalk Project 2: East Austin Boulevard

Construct new sidewalk along the north side of Austin Boulevard from North Osage Boulevard to South Barrett Avenue.

- Project Length: 6,540-feet
- Sidewalk Width: 6-feet
- Buffer/Furniture zone width: 6-feet, where feasible
- Estimated Cost: \$425,000+

Comments: This is a project with community-wide impacts. East Austin Boulevard is a MoDOT roadway and is the city's major east-west arterial. The extension of sidewalk east of N. Osage Blvd would provide a connection to major employment and shopping areas, as well as providing an important connection for local sidewalks as development occurs. Pedestrian safety is an issue along this high speed corridor.

### Sidewalk Project 3: South Ash Street

Repair sidewalk to ADA standards along both sides of South Ash Street from South Maple Street to West Austin Boulevard.

- Sidewalk Length: Approximately 1,125-feet on the west side and 1,125-feet on the east side of South Ash Street.
- Sidewalk Width: Maintain existing sidewalk width, 4-5-feet
- Buffer/Furniture zone width: Maintain existing buffer and expand where feasible.
- Estimated Cost: \$55,000+

Comments: South Ash Street is a secondary arterial roadway and is a MoDOT maintained roadway.

### Sidewalk Project 4: North Ash Street

Repair sidewalk to ADA standards along both sides of North Ash Street between West Austin Boulevard and West Hickory Street. Replace sidewalk on west side of North Ash Street between West Hunter Street and West Allison Street.

## CHAPTER 5. THE PRIORITY LIST

- Repair approximately 1,659-feet on the west side and 2,044-feet on the east side of North Ash Street. Replace 385-feet of sidewalk
- Sidewalk Width: Match existing sidewalk width 4 to 9 feet.
- Furniture zone width: Maintain existing buffer, expand where feasible
- Estimated Cost: \$133,000+

Comments: South Ash Street is a secondary arterial roadway and is a MoDOT maintained roadway.

### Sidewalk Project 5: South Ash Street

Repair sidewalk along South Ash Street from West Pitcher Street and West Maple Street:

- Repair sidewalk to ADA standards approximately 1,114-feet along both sides of South Ash Street between South Maple Street to West Pitcher Street.
- Sidewalk Width: Maintain existing sidewalk widths
- Furniture Zone Width: Maintain existing buffer or expand to 6-feet where feasible
- Estimated Cost: \$63,285+

Comments: South Ash Street is a secondary arterial roadway and is a MoDOT maintained roadway.

### Sidewalk Project 6: North Ash Street

Repair sidewalk to ADA standards along both sides of North Ash Street from West Hickory Street and West Garfield Street.

- Repair approximately 1,928-feet on the west side and 1,928-feet on the east side of North Ash Street.
- Sidewalk Width: Match existing sidewalk width feet of 4 to 9 feet. Five foot minimum where feasible.
- Buffer Width: Maintain existing buffer, expand where feasible
- Estimated Cost: \$109,500+

Comments: North Ash Street is a secondary arterial roadway and is a MoDOT maintained roadway.



### Sidewalk Project 5: South Ash Street

Repair sidewalk along South Ash Street from West Pitcher Street and West Maple Street:

Estimated Cost: \$63,000 +



### Sidewalk Project 6: North Ash Street

Repair sidewalk at ADA standards along both sides of North Ash Street from West Hickory Street and West Garfield Street.

Estimated Cost: \$109,500

### Trail Priority Projects

Recreational trail use is popular nation-wide, representing one of the highest-ranked recreational demands in the United States. Trails serve a wide variety of uses. They range from functional transportation connectors, which enable citizens to travel safely from one location to another, to the passive and intimate pathways that provide opportunities to enjoy nature in a quiet and personal way. As stated on the American Trails website:

“There are many benefits of trails and greenways that planners, funders, and the public need to know about: they make our communities more liveable; improve the economy through tourism and civic improvement; preserve and restore open space; and provide opportunities for physical activity to improve fitness and mental health.”

The development of this trail plan focused on the following objectives:

- increasing opportunities for people to gain physical activity;
- increasing the use of “non-motorized” transportation;
- increasing the quality of life of Nevada citizens;
- making Nevada a more “livable” city;
- increasing the safety of bicyclists, pedestrians and wheelchair users.

### Trail Project 1: Walton Park/YMCA Trail

New trail construction extending from the northeast portion of the existing Walton Lake Trail looping north and then south to join the northwest portion of the Walton Lake Trail. Project length is approximately 1.4 miles.

## CHAPTER 5. THE PRIORITY LIST

This project would provide an important link between the Walton Park area and the recreation and campus area around the Osage Prairie YMCA. Much of the proposed route is on existing quasi-public land (YMCA, cemetery, etc.) but development will also involve acquisition of easement from some private property owners. This trail project would be an opportunity for expanding the recreation and fitness benefits of the Walton Lake Trail as well as provide a transportation link between the surrounding residential areas and to the public schools to the south of Walton Park.

Project cost estimate: \$796,650

Figure 5.1: Conceptual View of the Walton Park/YMCA Trail



### Trail Project 2: Missouri Pacific Trail

The abandoned Missouri Pacific corridor on the south side of Nevada, from Twin Lakes Park to Little Dry Wood Creek presents the opportunity for a significant trail project. As envisioned, a 12-foot wide gravel trail would extend 5.5 miles from Little Dry Wood Creek along the Missouri Pacific

## CHAPTER 5. THE PRIORITY LIST

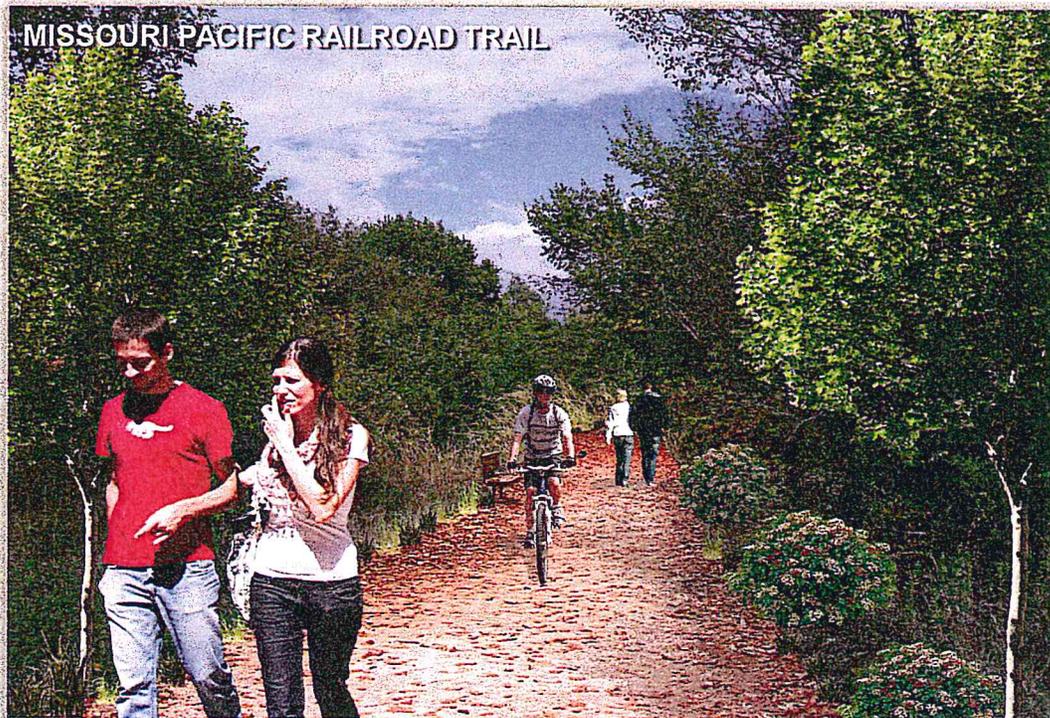
railbed to connect with Twin Lakes Park and a loop trail around the perimeter of the park property.

The proposed trail would intersect Hwy BB, South 1425 Road, South 1600 Road, East Quail Road, South 1650 Road, and South 1700 Road offering on-street multiple entrance and exit locations from the south side of Nevada. Trail usage would be supported by a parking lot and restroom facility at Twin Lake Park.

It is widely recognized by planning professionals that the first step to encouraging individuals to begin biking and or walking is to get them started recreationally. Once they begin biking for fun they will be more likely to use a bike for transportation. This trail enables Nevada to have a showcase project that will immediately increase health and encourage public support for new facilities.

Project Cost Estimate: \$2,020,043

Figure 5.2: Conceptual View of MoPac Trail



## CHAPTER 5. THE PRIORITY LIST

### On-Street Project 2: Bicycle Lanes on North Atlantic Street

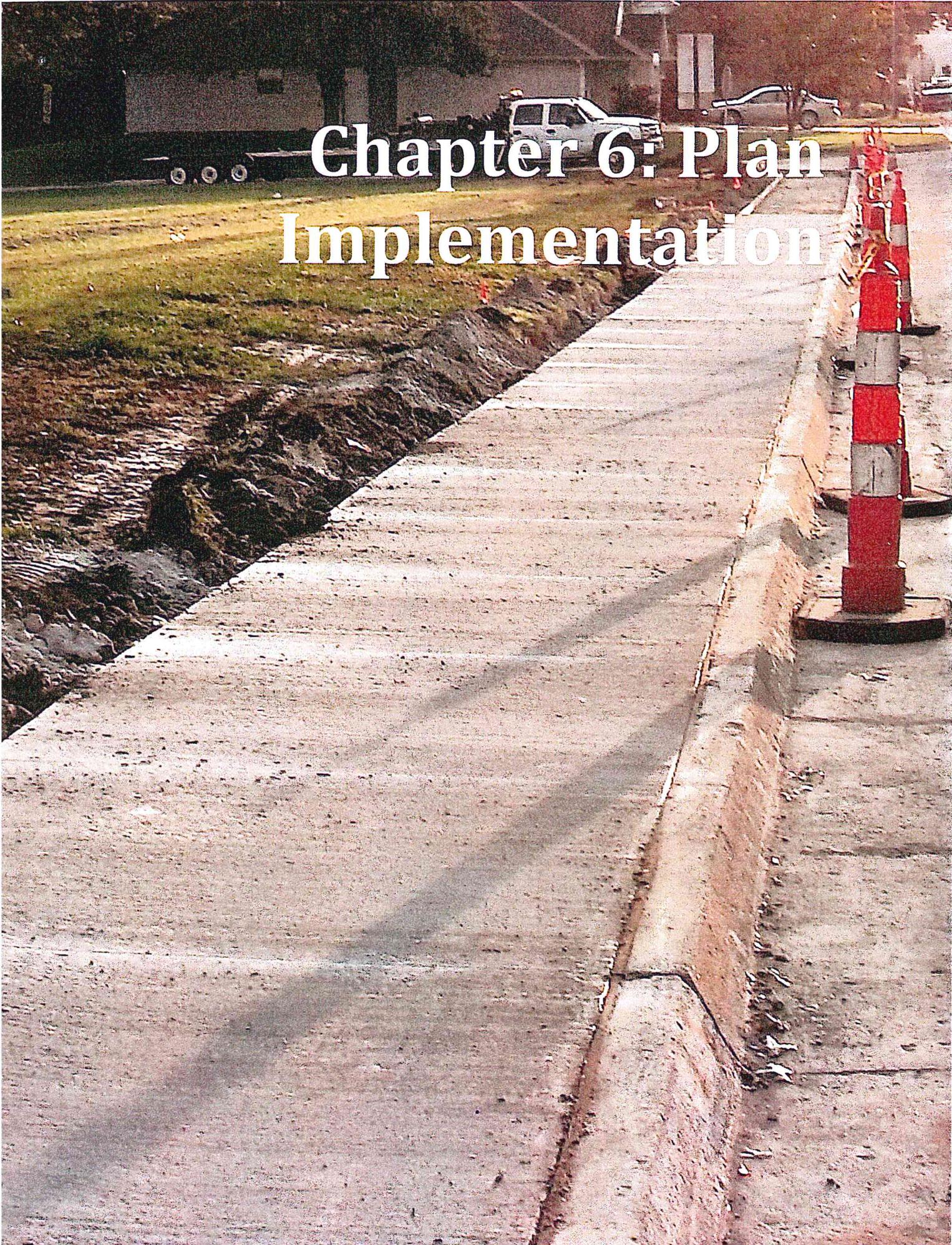
Project Description: North Atlantic Street is a main east-west street in Nevada. Atlantic Street from Osage Street to North Olive Street is approximately 1.33 miles in length with a total road width of 32-feet. The application of 5-foot bicycle lanes on Atlantic Street would result in two traffic lanes of 11 feet each. That would help control speeding on Atlantic Street and facilitate bicycle traffic.

Project Cost: \$52,500

Figure 5.4: Conceptual View of Atlantic Street Project



# Chapter 6: Plan Implementation



## CHAPTER 6. PLAN IMPLEMENTATION

### **Plan Implementation: Design, Policy & Funding**

Proper project design, thoughtful policy initiatives and creative funding mechanisms are key to implementing this plan. This chapter will cover all of those topics.

### **Best Practices: Sidewalk, Trails, and On-Street Treatments**

Sidewalks may seem simple. After all, they are basically just strips of concrete alongside a road. However, the details make all the difference between a good facility and an expensive mistake. For example, across the United States new sidewalks are built that were intended to be American's with Disabilities compliant. However, one tiny mistake like not maintaining proper slope at a driveway make them unusable by wheelchair users. It's important that not just City of Nevada staff but also contractors are well versed on sidewalk design and construction.

It's also important that the City install policies that mandate proper sidewalk design from developers. For example, the minimum accepted width for a sidewalk is 3 feet wide and most sidewalk sections in Nevada are 4 feet wide. That is too narrow to function as a proper transportation device. Changing the policy to 5-foot would place Nevada more in line with other communities and ensure better facilities are built.

### **Sidewalk Width**

A minimum width for any sidewalk regardless of location and roadway classification should be 5-feet. A 5-foot sidewalk provides adequate space for two pedestrians to pass or a pedestrian and personal mobility device. In areas that attract pedestrian traffic and/or where people may congregate, the width of the sidewalk will need to be greater than 5-feet to accommodate the situation and circumstances.



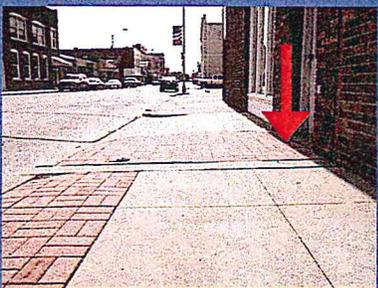
Curb Zone



Buffer/Furniture Zone



Pedestrian Zone



Frontage Zone

The suggested minimum widths for sidewalks are:

- Local Streets: minimum 5-feet in width
- Collector Streets: minimum of 5-feet in width
- Secondary Arterials: minimum of 5-feet in width
- Primary Thoroughfares: minimum of 6 to 8-feet in width
- Downtown: minimum of 8 to 12-feet in width

For the non-buffer design sidewalks, increased sidewalk width is needed to provide distance from the street edge or curb to provide for passing pedestrians and any commercial activity that will share part of the sidewalk. This applies principally to the area in and around the Nevada downtown.

### Sidewalk Zones

A sidewalk has four main design features that are often referred to as “zones”. These features are the curb, buffer/furniture zone, pedestrian, and frontage zone. In this section, the curb and furniture zone will be discussed.

While one of the main purposes of a “curb zone” is to facilitate the proper water drainage of the street, the curb also works to protect pedestrians from motorists who are not maintaining control of their vehicle. For this reason, the curb around sidewalks should not be of the “mountable” variety but rather than upright or “non-mountable” variety.

The “buffer/furniture zone” is the second zone in sidewalk design. The physical attributes of the furniture zone were described in section Chapter 3. In this section, the benefits of the furniture zone will be discussed. The furniture zone serves as a buffer between the roadway and the sidewalk and it is also a place where items can be stored and not block the sidewalk.

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Furniture zones reduces the proximity to passing traffic increasing both safety and comfort for the pedestrian, especially on rainy days when water collected on the street present a splash hazard. In residential areas, the buffer is grass covered and maintained as part of a lawn, or if the width is sufficient, planted with trees of a suitable growth habit to minimize future conflicts with overhead utility lines.

The buffer aspect of the furniture zone is extremely important to both the safety and comfort of children and people with physical disabilities.

The furniture zone also gives the government and property owners a place to store items that must be near the road. For the government, these items may include utility poles, parking meters, a bench or a mailbox. For homeowners that may include refuse carts, lawn waste or other items waiting to be picked up. In many areas without a furniture zone, the sidewalk is often blocked several times per week. This essentially makes the sidewalk useless for its intended purpose.

**Furniture Zones:** The area located between the roadway edge and the sidewalk offer a number of practical advantages as well as benefits for pedestrians. The minimum widths should be:

- Local Streets: minimum 3 to 5-feet in width
- Collector Streets: minimum of 3 to 5-feet in width
- Secondary Arterials: minimum of 4 to 6-feet in width
- Primary Thoroughfares: minimum of 6 to 8-feet in width

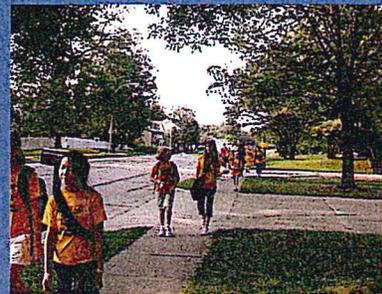
### Continuity

Sidewalks should be continuous along an entire block; street intersection to street intersection. Sidewalks with missing sections are not ADA compliant and may promote

### Benefits of Buffer/Furniture Zone



Space for Trashcans and Other Items.



Room for Children to Veer without Falling into Roadway

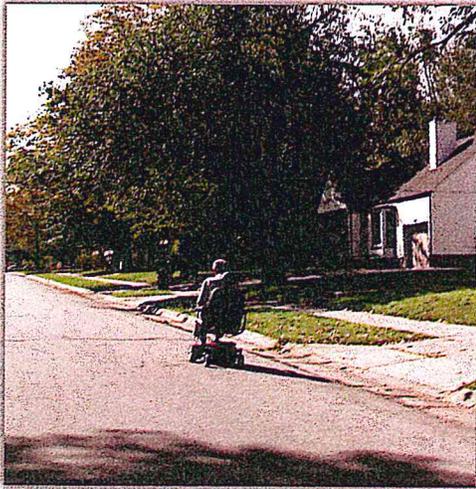


More Comfortable and Safety

mid-block street crossings or other unsafe pedestrian movements.

### The American's with Disabilities Act

The American's with Disabilities Act was passed by Congress and signed by President George H.W. Bush on July 26th, 1990. The law affects sidewalk that has been built since its passage or sidewalk that has underwent a major repair.



*Most of Nevada's wheelchair users are using the street because Nevada's sidewalk system is not ADA compliant.*

In Nevada there are many wheelchair users as well as visually impaired and physically disabled individuals. In conducting interviews in Nevada, residents expressed a concern that there would be a crash because individuals were using their mobility devices on the roadway, rather than the sidewalk when one is available. Some citizens expressed frustration, thinking that these individuals were simply choosing to place themselves in harm's way by using the roadway rather than the sidewalk.

However, during the sidewalk evaluation it became clear that wheelchair users are forced to use the public streets because only 8.1% of Nevada's sidewalks are truly ADA compliant. When you consider that the compliant sidewalks are periodic and inconsistent, you will realize that few trips that can be made by wheelchair on the sidewalk system.

### Right-of-Way Acquisition

Most sidewalks can be built without having to purchase right-of-way. However, many landowners do not fully understand the concept of the public right-of-way and may assume that their lawn extends all the way to the curb of the roadway. Even though it is well within the rights of the city to build a sidewalk, it is critical to ensure that the disruption of the yard is minimized and perhaps even improved with tree plantings or other landscaping to minimize public complaints and most importantly opposition to future projects.

Ultimately the location of new sidewalk along existing streets will be decided by a government entity after a series of public hearings. It is critically important that decision

## CHAPTER 6. PLAN IMPLEMENTATION

makers consider sidewalk as a piece of transportation infrastructure rather than a single amenity for a single neighborhood.

### **Sidewalk Construction Costs**

Depending on current contracts the City of Nevada has with local contractors, often it can be advantageous for the city to create a summer sidewalk construction crew. One or two skilled flat concrete foremen can lead several inexperienced workers to repair existing walks around the city or pour new sections of sidewalk or trail in a very cost effective manner. This may or may not be an option depending on the skill level of existing city staff and the current contract price for flat concrete work in Nevada.

If it costs \$40 per lineal foot to pour a 5' wide sidewalk with a city crew and a private contractor can do the work for \$45 per lineal foot, it may not be worth the trouble to create a new construction crew. It is fairly simple to contact a local concrete contractor and ask for preliminary cost estimates for various types of flat concrete work (see appendix for cost information) and then compare those numbers with what it would cost to employ 3-5 seasonal workers along with 2 full time public works employees, the cost of concrete, rebar, and forms and see what is the best option for the City of Nevada to take.

The advantages of having a designated City concrete crew are that they are always available when you have a project that needs repair or new construction. However there are initial costs associated with purchasing concrete forms and hiring additional staff. An added benefit to hiring summer crews is teaching young workers a new trade.

### **Trails**

Trails are a great first step to an active community. Initially, they serve as recreation and fitness corridors where citizens begin to feel comfortable walking and biking again. As a trail system grows, it begins to serve the transportation needs of those who live near a trail and work or shop at another point along the trail system. Eventually the recreation trail



Concrete Example



Concrete Example



Gravel Example



Gravel Example

users become comfortable commuting on the streets and a portion of the population begins using both trails and streets to recreate, commute and live a healthier lifestyle.

### Trail Materials

With the increasing popularity of trails, many cities are faced with a variety of decisions regarding trail design. Municipalities must balance the initial cost of development and the long-term maintenance cost, with the goal of providing the best service in the most cost effective manner possible. This requires good judgment and sound design to achieve the desired result: a trail system that provides a safe place to recreate and a functional option for non-motorized transportation.

Gravel trails are the least expensive to build initially and many users prefer the natural look and perceived softness to the trail user's joints. Because a majority of a trail's cost is in the land acquisition, grading and bridge development, the actual savings of going with gravel over a hard surface is usually minimal. Gravel is a definite improvement over a natural (dirt) surface for year round use, however riding a bike or walking on gravel in winter months or after a rain can leave a user with splatter on his clothing. Gravel trails require year round maintenance as every time it rains, inevitably gravel will wash away and have to be replaced. Gravel trails can be a good option where a trail does not have many elevation changes and where a trail is elevated out of a flood area. For this reason, many rail to trail conversions use the existing gravel base of the railroad line and add some fine gravel (3/8" minus) on top and open the trail up for use with very minimal expense.

Asphalt trails do not perform well in Missouri's expansive clay soil. In parts of the country where there is rocky or sandy well drained soil, they can be an attractive surface for trails because they have the best initial smooth surface, but because of seasonal cracking and ongoing maintenance they are not a good option and the smooth initial surface lasts only a couple of years before the trail is riddled with cracks. Asphalt trails are only slightly less expensive than

## CHAPTER 6. PLAN IMPLEMENTATION

concrete trails and for this reason, if a hard surface is chosen, it should be concrete.

Concrete trails are the preference for many municipalities because they tend to last the longest with the least amount of maintenance. They are slightly more expensive initially, but the savings in maintenance labor and materials as compared to a gravel trail can be recovered in 5-10 years. Concrete trails are a necessity wherever a trail may flood or where a trail experiences slopes exceeding 5 percent. For this reason any trail built in the floodplain should be a concrete trail.

### Concrete and Gravel Cost

Construction estimates and bids can fluctuate greatly depending on topography, existing site conditions, site accessibility and drainage issues. For the purpose of this comparison we have assumed that this is new trail construction in a bottomland setting. Bridge costs, design, engineering, surveying, acquisition, signage and amenities (restrooms, drinking fountains, parking lots) are virtually the same regardless of material type and thus are figured the same for this comparison. Because surface flow is more complex with gravel trails, extra pipe and ditching is required to minimize storm water damage. Excavation time and soil removal is greater for gravel trails because depth is greater and more soil must be hauled away.

On average a concrete trail costs about \$870,532.00 per mile (\$165/ lin. Ft.) and gravel trail costs about \$743,252.00 per mile (\$141/ lin. Ft.).

### Tree Removal

Wherever tree removal is necessary, it is important to incorporate extensive tree planting to compensate for lost trees. Trees are a tremendous asset, especially in trail corridors and typically trail users demand that they be planted and cared for along trails.



Trail Designers Should Aspire to Route Trails Around Mature Trees.

### Trail Amenities



Bicycle Racks



Parking



Benches



Restroom

### Trail Amenities

Initially, development of a trail system should focus on getting miles of trail built. As the trails become popular, there will be demand for additional facilities such as drinking fountains, restrooms and parking lots so that recreational users can drive to a trailhead. Signage is important as the system develops so that users can learn where they are on a trail and where they can go. Benches and even fitness equipment can enhance a trail experience as the trail system develops further.

### City Trail Policies

One of the issues the citizens of Nevada will have to discuss is what level of easement and land acquisition, if any, the City of Nevada wants to pursue to develop trails, and other bike/pedestrian improvements.

Trails are a linear facility much like roads and utility (sewer, electric, and water) lines. Typical trail development first occurs along abandoned railroad corridors and along streams where there is no development and little opposition to trails. As the trail system develops, and connections to the trail system are not as obvious, the community of Nevada will need to determine what level of land acquisition is acceptable to city leaders.

With any proposed plan there will be a lot of excitement and a lot of reservation from citizens. There will be situations where tree removal is inevitable in order to build a trail. Parking along streets may be lost or lessened as part of proposed road improvements. Right of way acquisition and utility relocation may be necessary for various types of pedestrian improvements. It is important to address these issues as part of initial design discussion so that there are no surprises during construction that can upset the citizenry.

It is common for citizens to be concerned about change in their cities, especially if a proposed trail is near their property, but there are numerous examples and data that show trail development is positive for communities and increases residential property value. Typically trail users

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tend to be people who care about the environment and are good stewards of their natural resources. They tend to pick up trash instead of leaving it, and positive use of an area by trail users tends to run off any negative elements that might otherwise use an isolated area like an abandoned railroad corridor.

### Crosswalk Best Practices

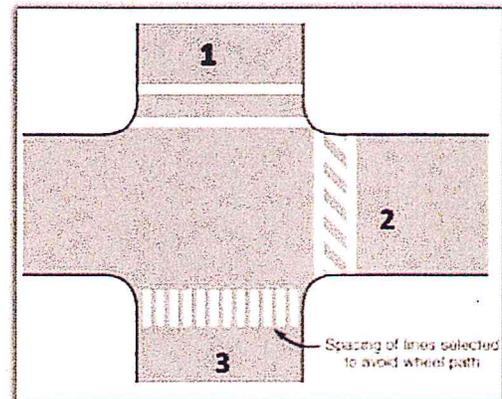
Crosswalks are important for pedestrian mobility and safety. A marked crosswalk signals to pedestrians that the location is safe to cross and that they (pedestrians) have the right-of-way in that location. Drivers who approach a pedestrian in a crosswalk are instructed by Missouri law to “yield the right-of-way, slow down or stop” to allow that pedestrian to cross the crosswalk. However, motorists can only stop if the crosswalk has been installed properly.

While there are many types of crosswalk markings, three will be discussed in this section (see diagram).

1. Two transverse lines
2. Zebra stripe
3. Continental stripe

The “two transverse lines” crosswalk is the least visible of the three and should only be used in locations where traffic would otherwise be stopped. If the crosswalk is placed mid-block then it is recommended that either the zebra or continental stripe design is used.

The majority of crosswalks in Nevada are located at intersections in places where vehicular traffic is controlled by means other than the crosswalk. In this scenario, the “two transverse lines” crosswalk is adequate.



Credit: Federal Highway Administration



Two Transverse Lines are Only Appropriate at Stop Sign or Traffic Signal Due to Low Visibility.

**Local Example, Poorly Painted Mid-Block Crosswalk**



From the Pedestrian Point-Of-View the Crosswalk Looks Visible



From the Drivers Point-Of-View the Crosswalk Cannot be Seen From an Appropriate Distance



On-Street Parking Blocks Motorists and Pedestrians Sight Path

Some crosswalks are located in positions known as “mid-block.” Mid-block means that there is not an intersection nearby and that traffic will only stop at the crosswalk if a pedestrian is crossing. These are the type of crosswalks where particular attention to best practices needs to be paid.

Local examples of heavily used “mid-block” crossings that could benefit from more visible markings are the crosswalks located near the vocational school.

You can see from adjacent photograph that painting two transverse lines look sufficient from the pedestrian’s point of view before they enter the street. However, the next photograph illustrates how difficult it is to view the crosswalk from the driver’s point of view from the distance that they would have to make a decision about whether or not to stop or yield to a pedestrian.

The City of Nevada should consider using either the “zebra” or “continental” style of crosswalk and discontinue the use of the “two transverse lines” type of sidewalk in mid-block locations.

**On-Street Parking and Mid-Block Crosswalks**

Additionally, particular attention should be paid to mid-block crosswalks that occur in places where on-street parking is allowed. This is because the parked vehicles can both block the pedestrian’s view of the street and block the pedestrian from the motorist’s sight lines.

The last photograph demonstrates how dangerous this mix between on-street parking and mid-block crosswalks can be. Imagine a student walking right-to-left would be completely blocked by the parked vehicle until directly in the path of passing traffic.

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There are two solutions to this situation:

1. Restricting on-street parking near mid-block crossings; and
2. Creating “bulb-outs” extensions for crosswalks.

A bulb out is an extension of the curb into the street to narrow the crossing distances for pedestrians, slow traffic by narrowing the lane and allowing the pedestrian to walk past parked vehicles to see oncoming traffic before crossing the street. In most locations in Nevada the demand for on-street parking is minimal. In this location at the vocational school, school was in-session and there was only a few automobiles parked on the street.

The City of Nevada is encouraged to the parking usage adjacent to mid-block crosswalks and consider restrictions to on-street parking near these crossings.

### On-Street Parking and Bicycle Lanes

Part of the Missouri Model Vehicle code deals with bicycling laws. Section 300.330 states, “A designated bicycle lane shall not be obstructed by a parked or standing motor vehicle or other stationary object.” This means that if the City of Nevada adopts this traffic ordinance then parking will be illegal anywhere that a bicycle lane exists.

Most communities do make parking illegal on streets with bicycle lanes and for good reason. When a motorist is driving in their traffic lane they have the expectation that the lane will be obstructed by a parked automobile. Bicyclists deserve the same expectation. However, often removing of parking is not possible because the nearby homes lack driveways, or more commonly, the local government lacks the political will necessary to remove parking on a particular street.

In Columbia, Missouri, the City Council has decided to not adopt Section 300.330 and therefore parking is legal in a bicycle lane in Columbia. It was decided that if the City were forced to ban parking in order to install a bicycle lane, that



Bulb-out Crosswalk Design. Credit: Federal Highway Administration.

Columbia would never be able to install their bicycle lane system.

There are positives and negatives to either approach, but the issue is one that City leaders should be aware of because it will have to be addressed.

### **Funding for Bicycle and Pedestrian Projects**

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*There are many potential sources of funding that the City of Nevada has access to. However, some are not consistent or the allocation is outside of the City's control.*

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There are many potential sources of funding that the City of Nevada has access to. However, some are not consistent or the allocation is outside of the City's control. For example, Surface Transportation Funds are allocated to the City of Nevada every year by MoDOT and with the passage of MAP-21 it's difficult to draw a conclusion as to how reliable those funds will be. Looking internally at the most consistent and robust sources of funding, the City of Nevada has two main sources of internal funding that could be used to generate funding for bicycle and pedestrian infrastructure:

- The Street Fund, a ½ cent sales tax along with property taxes, motor vehicle fuel taxes and licensing fees that is used for street maintenance, repairs and capital improvements. Although the ballot language used during the last election restricts the use of these funds to motorized transportation projects. This tax generated approximately \$737,602 in 2012;
- The Parks Construction Fund, a ½ cent sales tax that generated approximately \$737,602 in 2012.

While these funds represent potential sources of funding, in reality the funds are already stretched very tightly. In 2012, the Nevada City Manager requested a budget that didn't fund the development of any new infrastructure; all of the funding went to repairs and maintenance.

Currently, the City is spending funds from a \$200,000 grant provided by the Missouri Department of Transportation's Transportation Enhancements Program. The influx of outside funding has drastically increased the City's recent "sidewalk repair" budget. Prior to the MoDOT grant, on a

## CHAPTER 6. PLAN IMPLEMENTATION

typical year the amount that the City spent on sidewalk repair was minor, and did not address the ongoing sidewalk maintenance backlog. For example, in 2009 the City of Nevada spent only \$865 on sidewalk repair. When examining the sidewalk deficiencies in Nevada, the sheer magnitude of the funding shortfall becomes clear.

Compiled in this report, the City of Nevada's has:

- \$45,583,570 worth of sidewalk deficiencies;
- \$23,835,640 worth of potential trail projects; and
- \$262,960 worth of striping projects.

It's clear that the answer to the funding solutions are:

- Be realistic and prioritize projects;
- Adopt the 20-year Bicycle and Pedestrian Plan;
- Seek outside sources of funding;
- Reexamine the allotment of the Street Fund;
- Identify potential new internal sources of funding.

### **Prioritize Projects**

The Bicycle and Pedestrian Plan has identified approximately 69.7 million dollars worth of infrastructure projects. That figure takes into account every deficiency (missing sidewalk, broken sidewalk, etc.) within the City of Nevada as well as potential projects, like new trail construction. While that figure is realistic in the sense that these projects are individually needed and realistic, combined the number is far too large to likely ever be fully funded. This is why prioritization of the projects is key. Some projects offer the City of Nevada more "bang for the buck" than others.

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### City of Nevada Bicycle and Pedestrian Master Plan

To move forward with a coordinated program of projects to support bicycle and pedestrian improvements it is important to have consensus on the projects, priorities and potential funding. One step toward this effort would be for the City of Nevada to consider the adoption of the priority projects listed in chapter 5 as the “City of Nevada 2023 Bicycle and Pedestrian Master Plan”.

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*Almost all outside funding for bicycle and pedestrian facilities flows from the Federal Government.*

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This action would not direct any funding towards the plan but would “formalize” the plan as a goal of the City of Nevada and authorize city staff to work towards finding funding to complete those projects.

This will have the additional benefit of helping city staff identify potential future trail corridors and connections to protect them. For example, if a new subdivision is being planned near a future trail, then the city can ask the developer for an easement to allow for that subdivision to be connected to the future trail, whenever funding is secured to build it.

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*There are two state agencies that administer federal funding that can be used for bicycle and pedestrian facilities; the Missouri Department of Transportation (MoDOT) and the Missouri Department of Natural Resources (DNR).*

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### Non-City Sources for Project Funding

#### Federal Funding

Almost all outside funding for bicycle and pedestrian facilities flows from the Federal Government. In fact, even grants that flow through state agencies like the Missouri Department of Transportation originate from the Federal Highway Administration by way of legislation that dictates how federal transportation funding is spent. For example, the \$200,000 Transportation Enhancements (TE) grant that the City of Nevada received in 2010 was actually mandated by the Federal government. The Missouri Department of Transportation (MoDOT) had to use those funds on TE projects and the City of Nevada won a competitive grant award from MoDOT and received the funding.

There are two state agencies that administer federal funding that can be used for bicycle and pedestrian facilities; the Missouri Department of Transportation

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(MoDOT) and the Missouri Department of Natural Resources (DNR). The Missouri Department of Transportation has programs that are funded through the Federal Highway Administration by way of the latest federal transportation legislation.

In 2010, the United States was operating under the transportation legislation bill known as, "The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users" or "SAFETEA-LU." SAFETEA-LU was replaced in July of 2012 with a new piece of legislation known as "Moving Ahead for Progress in the 21st Century" or "Map 21". At the time of this writing (November, 2012) not all of the details related to the implementation of MAP 21 had been released by the Federal Highway Administration.

Here is a brief breakdown of what is known about Map 21:

- Three major bicycle/pedestrian programs; (SRTS, Recreational Trails, and Transportation Enhancements) were combined into a single program called "Transportation Alternatives."
- Federal spending on bicycle and pedestrian infrastructure was cut by at least 33% from previous funding levels.
- MoDOT can "opt-out" of additional Transportation Alternatives funding, and spend those funds on more auto-centric purposes.
- Programs that used to not require a local match (like SRTS funds) now require a 20% match.
- Recreational Trail funds will remain the same, but the Governor can reject the funding making all of Missouri ineligible for funding.

While the details have yet to be decided, it's clear that funding from federal transportation sources are even more competitive and are more "expensive" for local communities because of the need for a local match. To give

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an example of how this will affect efforts in Nevada, the \$200,000 SRTS project would now require Nevada to front \$40,000 of their own funds.

Further complicating matters is that MAP-21 is only valid for two-years as compared to SAFETEA-LU, which was originally passed as a five-year bill. It's likely that by the time the City of Nevada adopts a "20-year Bicycle and Pedestrian Plan" and begins looking for funding sources in earnest, that the United States will be operating under a different set of policies regarding transportation funding. It will be imperative that city staff stays current on transportation funding opportunities.

The Missouri Department of Natural Resources has two programs that they are responsible for: the Land and Water Conservation Fund (LWCF) and Recreation Trails Program (RTP). LWCF grants must be for outdoor recreation facilities, require a 55% match and applications are typically due in June. RTP Grants require at least a 20% match and are typically due in May. Both of these grants can be used for land acquisition costs in addition to capital improvements.

### **Non-Government Funding**

There are philanthropic organizations that fund projects to increase bicycling and walking. However, most of these organizations prefer to fund policy changes rather than small capital improvement projects. For example, if given the choice between funding a particular sidewalk project, or funding an initiative that would result in a policy change ensuring that bicyclists and pedestrians begin to get their fair share of transportation sales taxes in a community, most would consider the policy change to be a permanent fix to the problem and prefer that option. After all, building a single sidewalk and then continuing with "business as usual" doesn't result in much positive change.

If Nevada hopes to be competitive for these philanthropic dollars, they will need to not look at it in the same way they would a governmental grant. Whereas government grants usually cannot fund advocacy or policy changes, groups like the Robert Wood Johnson Foundation are primarily

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interested in advocacy and policy change. Grants like those need to be applied for by a non-profit organization, with possibly the city as a partner.

Capital improvements like sidewalk and trail projects can often be a part of the project, but remember, their “end goal” is usually a new policy rather than the sidewalk itself.

### City of Nevada Street Fund

The budget of the City of Nevada is tight and leaves little room for additional expenses. However, with the new requirement of all federal bicycle and pedestrian funding requiring a local match (20% for Transportation Alternatives) and with the ongoing maintenance costs, it is important that the City of Nevada dedicate some of the funding it receives on bicycle and pedestrian facilities.

This is also a matter of simple fairness as currently every Nevada resident pays into the ½ cent sales tax “street fund” but that money is almost entirely spent on automobile facilities. To examine this issue in complete fairness, only the portion of the Street Fund paid for by the local ½ cent sales tax will be examined; purposely excluding the motor vehicle fees like licensing and fuel taxes and even excluding the property tax.

Using one year as an example, in 2009 when \$865 was spent on sidewalk maintenance, that equaled 0.02% of the “Street Fund” was spent on non-motorized facilities. Considering that perhaps as much as 40% of Nevada residents cannot drive (see chapter 1), that’s not a fair use of these funds. With their annual Street Fund allotment, the City of Nevada is inadvertently saying to bicyclists and pedestrians that they are not an intended user of the transportation system and that motor vehicle traffic is the priority of the City. Times are tough and the budget is tight, but bicyclists and pedestrians in Nevada are tax-paying citizens just like motorists and their needs are not being addressed in the budget allotment.

If the City of Nevada committed to spending even a small amount of their Street Fund on bicycle and pedestrian

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*If the City of Nevada committed to spending even a small amount of their Street Fund on bicycle and pedestrian infrastructure they would see a tremendous return on their investment.*

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infrastructure they would see a tremendous return on their investment. For example, if the city directed 5% of the annual "Street Fund" to bicycle and pedestrian facilities that would equate to approximately \$55,000 per year (2012 value). That's not enough money to correct Nevada's bicycle and pedestrian deficiencies, but it would be a good start towards, (1) creating a sidewalk maintenance fund and (2) building a fund that can be used as "local match" when applying for federal transportation funding. For example, that annual fund allotment could be used to supply a 20% match on a \$250,000 infrastructure grant through the Transportation Alternatives program. In years without a successful grant application requiring matching funds, the City of Nevada could use those funds to repair specific sections of existing sidewalks or conduct maintenance work.

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*Without this funding...projects...would not be possible due to changes in federal transportation policy. There would also not be any funding for maintenance, which means that even the new sidewalk in town will deteriorate far before their normal life cycle resulting in a squandering of the tax dollars spent on sidewalks.*

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Without this funding for local match, projects like the SRTS sidewalk (\$200,000) would no longer be possible due to changes in federal transportation policy. There would also not be any funding for maintenance, which means that even the new sidewalk in town will deteriorate far before their normal life cycle resulting in a squandering of the tax dollars spent on sidewalks. For example, sometimes projects as simple as identifying trees that need to be removed along existing sidewalks before its roots cause catastrophic damage to the sidewalk. Having a bicycle and pedestrian fund, with dedicated funding, is a wise use of these tax dollars.

The transportation sales tax was passed with language directing it towards resurfacing and construction of existing roads and streets. This means that it's not currently possible to use this fund for non-motorized infrastructure. However, that should change with the next renewal as spending even 5% of this funding on non-automobile facilities will offer Nevada a tremendous return on investment.

### **New Internal Funding Sources**

Eventually the citizens of Nevada will begin to see some bicycle and pedestrian improvements and see the quality of their life improve from these changes. For instance, once people start cycling along a new trail, or walking around

## CHAPTER 6. PLAN IMPLEMENTATION

their neighborhood on a new sidewalk they will begin to wonder why other areas in the community do not look the same. This effect will be compounded by the maps created and included in this Bicycle and Pedestrian Master Plan along with the artistic renderings; designed to positively influence public opinion when it comes to new bicycle and pedestrian projects. At some point, the citizens of Nevada may be ready to vote to tax themselves and begin to make real progress on the bicycle and pedestrian network in Nevada.

An example may include a potential 1/8th cent sales tax for “creating safer routes to school.” A tax like this would generate approximately \$191,000 of income per year, which could build a healthy segment of sidewalk or trail per year.

A new tax would be a large step for Nevada and since many residents have never experienced a robust sidewalk or trail system, the hunger for this new tax may not yet exist. It should be considered in the future, however.

### **Private/Public Partnerships**

Private/public partnerships are becoming more important as federal sources of transportation dollars shrink. The Healthy Nevada project is a great example of a Private/Public partnership and Nevada should look for other partnering opportunities in the future.

For example, perhaps the Nevada School District can contribute to a “sidewalk fund” to be used as matching dollars on future federal sidewalk grants? Even \$5,000 or \$10,000 per year can go a long way towards securing potentially hundreds of thousands of dollars for new sidewalks. Other potential private/public partnerships might include the large employers or colleges in town contributing to a matching fund.

## APPENDIX A: SIDEWALK COST FACTORS

### Factors to Consider When Calculating the Cost of Sidewalks:

1. Presence of curb and gutter: The costs of providing curb and gutter, which presumes the need to also provide a street drainage system, run much higher than the cost of sidewalk alone. A standard perpendicular curb ramp and top landing need a minimum border width of almost 12-feet at intersections if there is a 6-inch curb. A 6-inch curb reduces the minimum border width to 10-feet. Yet, on many urban streets, this work must be performed prior to installing sidewalks. If this is the case, only the cost of sidewalks and curb ramps should be attributed to expenditures for pedestrians – catch basins are provided to drain the roadway surface used by motor vehicle traffic.
2. Number of driveways: To comply with ADA, many existing driveways must be replaced with ones that provide a level passage at least 3-feet wide. It can also be advantageous to inventory all existing driveways to see if any can be closed, resulting in a cost-savings.
3. Number of intersections: While intersections represent a reduction in the sidewalk, curb ramps are required where sidewalks cross intersections and the cost of providing additional traffic control at each intersection should be considered.
4. Obstacles to be removed: The cost for moving or removing obstacles such as utility poles, signposts, and fire hydrants vary too much to be itemized here; however, they are required to be moved if they obstruct access. These costs must be calculated individually for each project.
5. Structures: While minor sidewalk projects rarely involve new structures such as a bridge, many projects with significant cuts and fills may require retaining walls and/or culvert extensions. The costs of retaining walls must be calculated individually for each project.
6. Right-of-way: While most sidewalk projects can be built within existing rights-of-way (especially infill projects), some may require some right-of-way easement. An alternative to acquiring right-of-way is to narrow the



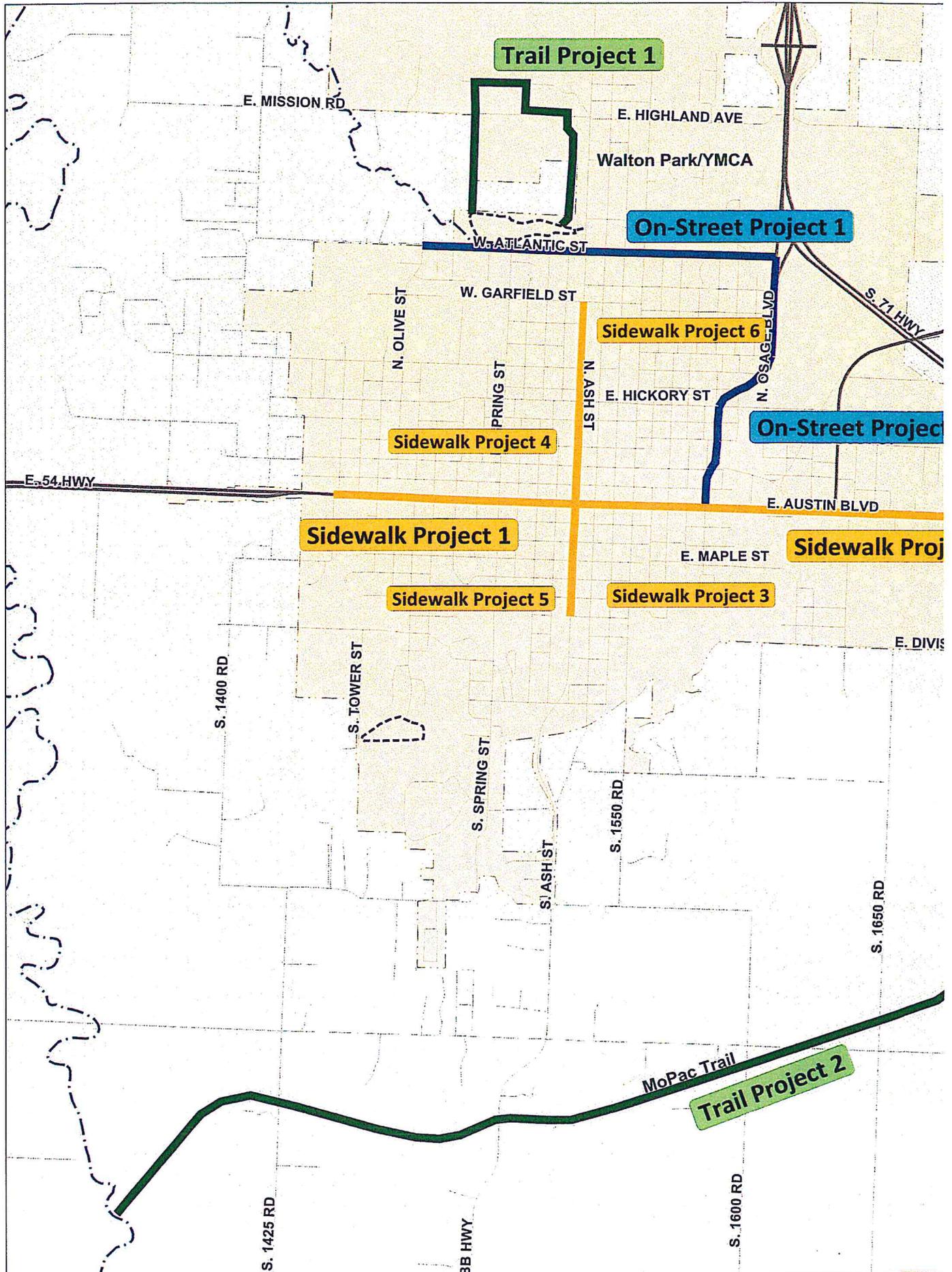
## APPENDIX A: SIDEWALK COST FACTORS

roadway, which should consider the needs of bicyclists (e.g., through bike lanes or shoulders, at a minimum of 5-feet).

7. Miscellaneous factors: Planters, irrigation, benches, decorative lampposts, and other aesthetic improvements cost money, but they are usually well worth it if the impetus for the project is to create a more pleasant and inviting walking environment.

When project costs appear to be escalating due to one or more of the above-listed items, especially retaining walls or acquiring right-of-way, consideration may be given to narrowing the sidewalk in constrained areas as a last resort. The full sidewalk width should be resumed in non-constrained areas—this is preferable to providing a narrow sidewalk throughout, or dropping the project because of one difficult section.





# HEALTHY NEVADA BICYCLE & PEDESTRIAN PLAN



— **Priority Trail Projects**  
— **Priority Sidewalk Projects**  
— **Priority On-Street Projects**  
 **Nevada City Limits**  
 0    1,500    3,000  
 Feet

**Sidewalk Project 1: West Austin Boulevard**  
 Repair sidewalk to ADA standards along both sides of Austin Boulevard between South Chestnut Street to North Osage Boulevard. Estimated cost: \$256,000+

**Sidewalk Project 2: East Austin Boulevard**  
 Construct new sidewalk along the north side of Austin Boulevard Estimated Cost: \$425,000+

**Sidewalk Project 3: South Ash Street**  
 Repair sidewalk to ADA standards along both sides of South Ash Street from South Maple Street to West Austin Boulevard. Estimated Cost: \$55,000+

**Sidewalk Project 4: North Ash Street**  
 Repair sidewalk to ADA standards along both sides of North Ash Street between West Austin Boulevard and West Hickory Street. Replace sidewalk on west side of North Ash Street between West Hunter Street and West Allison Street. Estimated Cost: \$133,000+

**Sidewalk Project 5: South Ash Street**  
 Repair sidewalk along South Ash Street from West Pitcher Street and West Maple Street. Estimated Cost: \$63,285+

**Sidewalk Project 6: North Ash Street**  
 Repair sidewalk at ADA standards along both sides of North Ash Street from West Hickory Street and West Garfield Street. Estimated Cost: \$109,500+

**Trail Project 1: Walton Park/YMCA Trail**  
 New trail construction extending from the northeast portion of the existing Walton Lake Trail looping north and then south to join the northwest portion of the Walton Lake Trail. Project length is approximately 1.4 miles. Project cost estimate: \$796,650

**Trail Project 2: Missouri Pacific Trail**  
 The abandoned Missouri Pacific corridor on the south side of Nevada, from Twin Lakes Park to Little Dry Wood Creek presents the opportunity for a significant trail project. As envisioned, a 10-foot wide gravel trail would extend 5.5 miles from Little Dry Wood Creek along the Missouri Pacific railbed to connect with Twin Lakes Park and a loop trail around the perimeter of the park property. Project Cost Estimate: \$2,020,043

**On-Street Project 1: Road Diet of Osage Boulevard**  
 Removal of two of the traffic lanes in lieu of a CTL the roadway will have ample width for two 6-foot bicycle lanes. This project will improve traffic flow on North Osage, reduce motorist crashes and allow for one of Nevada's major arterials to be redesigned for the inclusion of bicycle facilities. Project Cost: \$65,000

**On-Street Project 2: Bicycle Lanes on Atlantic Street**  
 North Atlantic Street is a main east-west street in Nevada. Atlantic Street from Osage Street to North Olive Street is approximately 1.33 miles in length with a total road width of 32-feet. The application of 5-foot bicycle lanes on Atlantic Street would result in two traffic lanes of 11 feet each. That would help control speeding on Atlantic Street and facilitate bicycle traffic. Project Cost: \$52,500