

### Welcome to Smart Growth Cheyenne...

What will the future be like in Cheyenne? Change is inevitable. By 2030, the Cheyenne region could have 56,000 new residents, bringing its total population to 135,000. Growth will bring with it new homes, jobs, and the prospect of significant changes to the quality of life in the community.

But if change is inevitable, the way it happens is not. To make sure these changes benefit the entire community, Cheyenne residents have been working together to articulate a vision for growth and development. Through the *PlanCheyenne* process, residents have been asking tough questions, debating issues, and developing solutions to the growth challenges that Cheyenne faces. Among the questions that residents have been considering: What kind of development pattern will attract young people and keep housing affordable? How do we strengthen the economy and spend public money wisely? What will our transportation needs be in the future, and how do we meet them? How do we maintain and build on the unique character of Cheyenne as the community grows?

To answer these questions and identify options that implement *PlanCheyenne*, city officials applied to participate in US EPA's Smart Growth Implementation Assistance (SGIA) Program. The Smart Growth Implementation Assistance Program provides technical assistance—through contractor services—to help selected communities identify policy options to help achieve their growth and development vision. This is a competitive, national program and Cheyenne was selected from 55 other communities to participate.

After they were selected, city officials discussed project goals and objectives with US EPA. Following these discussions, EPA worked with ICF International to assemble a team of national experts to assist the city in identifying options that would implement *PlanCheyenne* and formulate a development plan for the property north of Frontier Mall to reflect smart growth principles and Cheyenne's growth vision. This report is the culmination of this effort. The options presented have been developed by the contractor team, with input from the City and US EPA. They are examples of how the City may further develop according to the principles established in the Plan Cheyenne process.

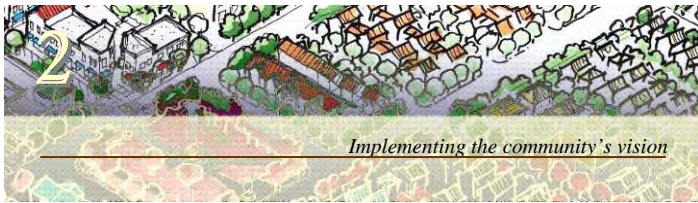
### *Smart Growth Principles*

- ☑ MIX LAND USES
- ☑ TAKE ADVANTAGE OF COMPACT BUILDING DESIGN
- ☑ CREATE RANGE OF HOUSING OPPORTUNITIES AND CHOICES
- ☑ CREATE WALKABLE NEIGHBORHOODS
- ☑ FOSTER DISTINCTIVE, ATTRACTIVE COMMUNITIES WITH A STRONG SENSE OF PLACE
- ☑ PRESERVE OPEN SPACE, FARM-LAND, NATURAL BEAUTY, AND CRITICAL ENVIRONMENTAL AREAS
- ☑ STRENGTHEN AND DIRECT DEVELOPMENT TOWARDS EXISTING COMMUNITIES
- ☑ PROVIDE A VARIETY OF TRANSPORTATION CHOICES
- ☑ MAKE DEVELOPMENT DECISIONS PREDICTABLE, FAIR, AND COST EFFECTIVE
- ☑ ENCOURAGE COMMUNITY AND STAKEHOLDER COLLABORATION IN DEVELOPMENT DECISIONS

*Source: Smart Growth Network*



*Smart growth projects are taking root across the country. The workshop in Cheyenne sought to explore these concepts in uniquely western community.*



## **The Project**

The city asked the consulting team to illustrate development that would help to achieve the community's goals articulated in *PlanCheyenne*.

The City felt that Cheyenne could support a broader range of housing types and development patterns, specifically compact, mixed-use development. They wanted the consulting team to assess the market for compact, mixed-use development in Cheyenne, and work with the community to illustrate what such development would look like on the ground.

Using the 500-acre property north of Frontier Mall as an example, the City asked the consultants to prepare a development plan that: adds to housing and transportation choices, preserves open space and Cheyenne character; and helps Cheyenne attract and retain employees and businesses in the increasingly competitive front range environment.

Further, City officials also asked consultants to outline policy options that make this type of development a feasible and economically attractive option for the development community.

The purpose was not to provide the definitive development plan for the property. Rather it was to provide an example that is supported by the market, and supports the goals of the owners of the property and to illustrate concepts and approaches applicable to future development in Cheyenne broadly.

Cheyenne's vision is unique and admirable, but how can citizens make it real? What does it mean for new development? What type of development will help Cheyenne be an economically competitive, vibrant, unique and livable community in the future? What does it look like on the ground and will the market support it? What are the regulatory and institutional barriers to achieving Cheyenne's vision? What are some solutions? To help answer this question, the city of Cheyenne applied to EPA for assistance.

## ***Cheyenne's Growth Vision***

The characteristics of smart growth are probably very familiar to those who have participated in the development of *PlanCheyenne*. In *PlanCheyenne*, citizens expressed their hopes for growth:

### Foundation 1:

#### Growing as a Community of Choice

The Cheyenne area will be a community with a reputation as a great place to live and do business, by providing for a variety of housing (predominantly in attractive hometown neighborhoods), opportunities for employment, and essential retail and other services, as well as focusing on quality of life factors.

### Foundation 2:

#### Creating Livable "Hometown" Neighborhoods

As we build new neighborhoods, the Cheyenne Area will strengthen our community by "raising the bar" on the quality of new residential development and ensure that neighborhoods contain a mix of uses and amenities such as parks, integrated trails and open space, schools, convenience retail and personal services, and civic uses.

### Foundation 3:

#### Fostering Vital Employment and Activity Centers

*PlanCheyenne* aims to continue to support a solid economy built on family-wage jobs and a vibrant business community. It promotes on-going partnership efforts among the many economic development organizations and others to selectively recruit and foster business and industrial development.

### Foundation 4:

#### Developing a Connected and Diverse Transportation System

As the Cheyenne Area grows, the transportation system will need to grow also to meet our mobility needs, for all modes of travel.

### Foundation 5:

#### Celebrating Our Character and Varied Heritages

As the Cheyenne Area grows, we will celebrate and enhance our character and heritage by focusing on preserving our historic areas and downtown, creating and maintaining public places, supporting cultural events, and preserving our rural ranching and cultural landscapes.

### Foundation 6:

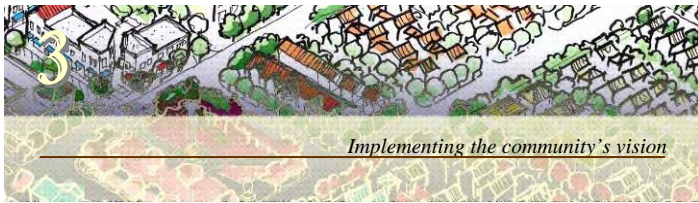
#### Creating a Legacy of Parks, Open Spaces, and Trails

*PlanCheyenne* aims to improve neighborhood and community parks— providing adequate land to meet our needs and provide high quality, accessible parks that are integral parts of neighborhoods. The Plan also aims to conserve "significant" open space lands—to weave the natural environment through our built environment and around it.

### Foundation 7:

#### Developing in a Fiscally Responsible Way

The Plan aims to guide growth to promote efficient use of public & private resources and to provide adequate public facilities.



### **The Development Workshop**

On May 2-4, 2006, the city hosted a public design workshop to develop a plan for the property. (A list of participants is provided on page 23).

Prior to coming up with a development plan, the consulting team assessed demographic and economic trends to better understand the development types and products that the Cheyenne market can support. The resulting development plan for the property was informed by their analysis.

The consulting team consisted of national experts on transportation, community design and economic development:

- Dena Belzer, Strategic Economics;
- Jim Charlier, Charlier and Associates;
- Tim Van Meter and
- Rick Willams, Van Meter, Williams & Pollock.

This team has extensive experience working with large and small communities in the West and brought to the project a new perspective to examine development issues in Cheyenne. Adhir Kackar and Geoffrey Anderson of the EPA assisted the consulting team. The contractors worked with city staff, property owners, and workshop participants to design a development plan. Additionally, the team also held discussions with staff and city/county elected officials to identify policy options for implementation of the innovative development options discussed in *PlanCheyenne* and illustrated on the property.

This report presents the results of this work, namely:

The illustrative development plan for the property.

The potential impacts of building smart growth neighborhoods on key development issues facing the community.

Policy options for the City to implement the innovative development-- discussed in *PlanCheyenne* and illustrated on the property.

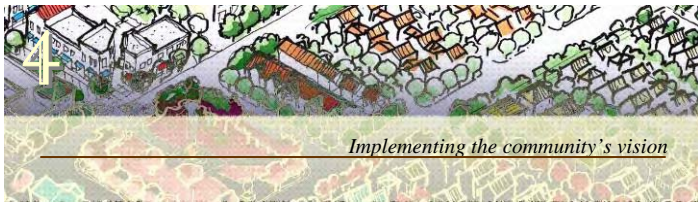
Ultimately the team created a proposal for a development that consists of a series of mixed-housing neighborhoods, a main street district, neighborhood parks and school, bike paths and streets that are safe and comfortable for pedestrians, bicyclists and cars.



*Landowners discuss the project site with the consulting team.*



*Mayor Spiker and Councilman Segrave at the Development Workshop.*



## The Possibilities

EPA's consultant team set out to show how development on the project site could help meet landowner goals and those of citizens as articulated in community meetings and the seven foundations of *PlanCheyenne*:

- Growing as a Community of Choice
- Creating Livable "Hometown" Neighborhoods
- Fostering Vital Employment and Activity Centers
- Developing a Connected and Diverse Transportation System
- Celebrating Our Character and Varied Heritages
- Creating a Legacy of Parks, Open Spaces, and Trails
- Developing in a Fiscally Responsible Way

In response to these goals the team examined the property and its surroundings, consulted with property owners, city officials, and residents and experimented with several design concepts.

Ultimately the team created a proposal for a development that consists of a series of mixed-housing neighborhoods, a main street district, neighborhood parks and school, bike paths, and streets that are safe and comfortable for pedestrians, bicyclists and cars.

The highest intensity land uses, including Main Street retail (shaded purple), apartments and townhomes (shaded in orange), and commercial & retail development (proposed shaded in red, existing outlined in dash black) are located on the southern portion of the site. The majority of the site is devoted to single family homes (shaded yellow). The density of these homes is lowest along the east, west and northern edges of the site to allow blending between them and surrounding, existing residential development. (See Page 5: Land Use Designation Map).

The placement of land uses in the plan maximizes compatibility, land value and synergy among uses. The uses are located and mixed together to promote walking. Retail and higher density residential are mixed horizontally and vertically to provide a customer base to support shops and restaurants, minimize traffic and protect the character of single family streets and neighborhoods within the development.

Townhouses are concentrated around key neighborhood centers (main street, plaza, school) and near other higher density housing. The townhouses increase the diversity of housing in the neighborhood. Their location and design including height, setback and entrance off the street, helps distinguish neighborhood centers from other parts of the development. Locating many residents near the services they will use regularly makes it possible for a greater portion of neighborhood residents to walk to meet their daily needs.

Apartments wrap around parking lots, thereby shielding the parking and allowing for a transition between land uses of differing intensities.



## Meeting the Community's Goals

The development plan translates the community's goals into a physical form.

### Functionality:

The network of gridded streets, with smaller block sizes, makes it easy for residents to navigate this new neighborhood on bike and foot. The design also allows traffic to flow more smoothly throughout the area, since it can be distributed onto several streets, rather than concentrated on a few arterials.

### Choice:

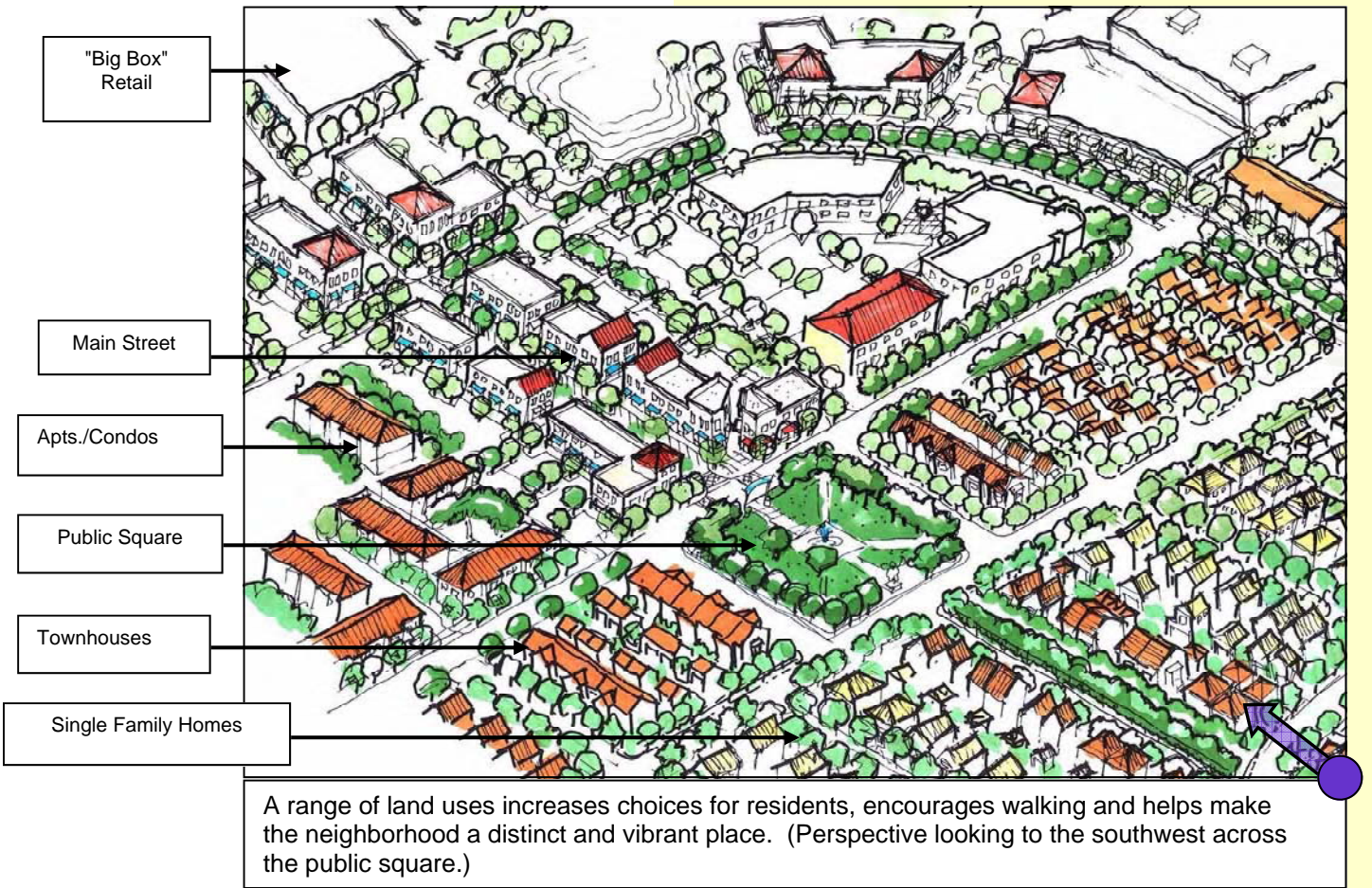
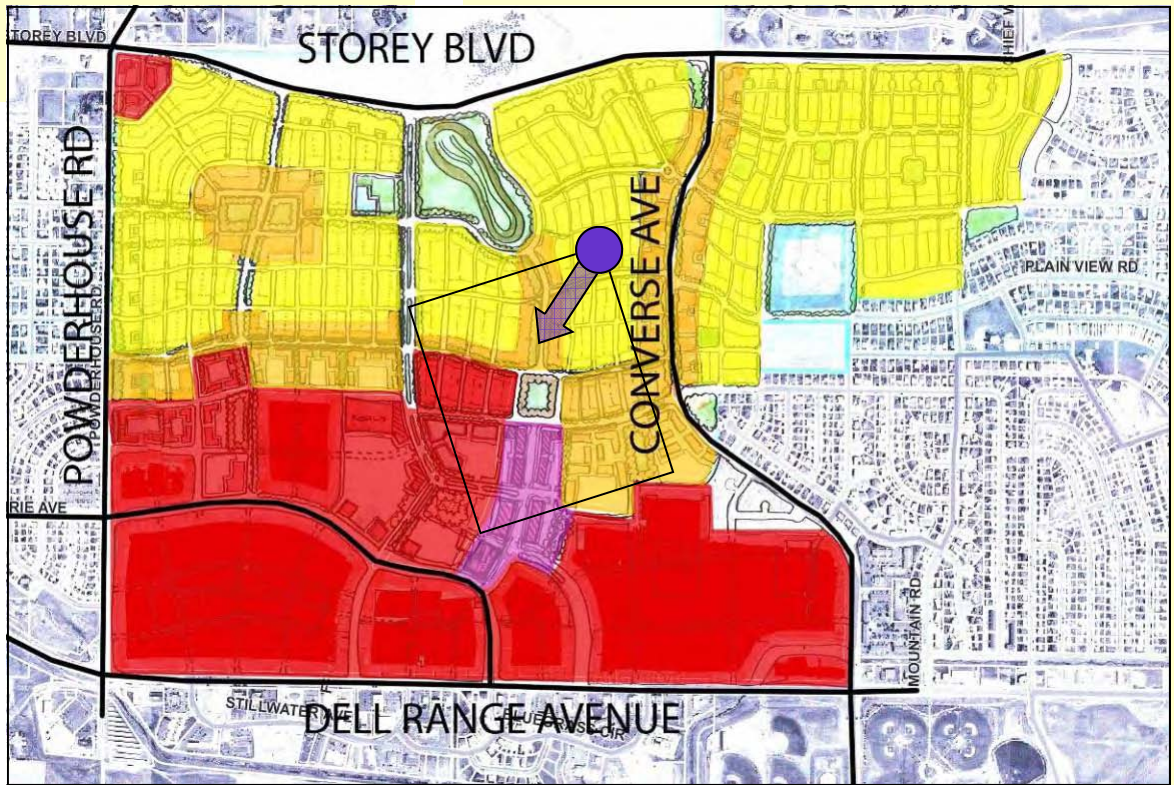
By allowing for more housing units per acre and a range of housing types, the city facilitates the creation of more units at different price points. This also allows property owners to get the most economic value out of their land.

### Fiscal Responsibility:

By focusing growth in an area that is already served by infrastructure and employing design elements that reduce maintenance and service costs, such as narrow streets and compact building, the plan helps the city develop in a more fiscally responsible way.



# LAND USE DESIGNATION MAP:



*...Dell Range is a place where I go to run Saturday errands, but there's not really a heart to it; no place I would really want to stay and linger. — Workshop Participant*

# MAIN STREET

## **Smart Growth & Main Street**

Residents, through *PlanCheyenne* and during the workshop, expressed a desire for livable, hometown neighborhoods. Neighborhoods are different from subdivisions. Neighborhoods are characterized by having a mix of land uses, located in close proximity so that people can accomplish daily tasks conveniently and comfortably, with many tasks accomplished by walking.

The concept plan provides shopping destinations for neighborhood residents and the broader community along a Main Street. Main Street shops could include restaurants, clothing stores, pharmacies, dry cleaners, grocers or food markets, as well as new offices.

Establishing a Main Street with shops and neighborhood amenities means that people can meet daily needs by walking to stores. The orientation and design of Main Street will create a sense of place and an area for people to gather in a way that strip development would not. Because the retail is geared toward the

neighborhood, it doesn't detract from downtown, yet can still meet the needs of nearby residents and tourists.

Main Street is located adjacent to Frontier Mall because that is the most viable location for retail activity on the project site. Main Street benefits from increased access to traffic along Dell Range Blvd and capitalizes on retailers' interest in locating in the Dell Range corridor. Main Street will generate interest in other business in the corridor. Visitors will be drawn to dine, shop or recreate in Main Street, but many will also visit other retailers in the corridor during their visit.

New residences will support existing and Main Street retail. Neighborhood design and the proximity of homes to Main Street (most homes are located within 1-mile of Main Street) will make it convenient for neighborhood residents to walk to Main Street businesses.

A public square lies just north of Main Street and across the street from apartments and townhomes. This configuration adds activity around the public square, makes Main Street a more interesting and useful space, and gives people a reason to linger, stroll and stay in the area. One can imagine dad spending time with the children in the square while mom shops, joining them afterward for dinner at one of the restaurants along Main Street.



*The Main Street development section provides for a pedestrian-friendly area on the Dell Range corridor. An example of vertical mixed-use, this design illustrates ground-level retail uses with offices and residential units on the second floor.*

# NEIGHBORHOODS

## Smart Growth & Neighborhoods

Neighborhoods are the fundamental building block of the development plan and are designed to be the livable hometown neighborhoods articulated in *PlanCheyenne*.

There are an estimated 2000 housing units in this development plan of varying type and price, including single-family homes, townhouses and apartments.

The variety of housing types provides housing options for the range of people who live in Cheyenne including workforce housing and housing for young professionals (the absence of both of which has been identified as a barrier to economic growth in the community).

Neighborhoods are designed for safety and to be comfortable places to walk, utilizing key elements (right) to creating walkable places.

Townhouses are located along north south streets to help make those streets more grandiose and distinctive. Apartments wrap around parking lots, thereby shielding them and allowing for a transition between land uses of differing intensities.

## Neighborhood School

The development plan identifies a location for a small, neighborhood school in the northwest quadrant of the site to accommodate children from this development and surrounding neighborhoods. The school site includes recreation and park space.

It's envisioned that neighborhood residents will use these facilities after hours and that the school will support a range of community activities - neighborhood fairs, after school programs and evening classes, among others.

The street network that serves the school includes short blocks, narrow streets and sidewalks. These attributes support a better walking environment and make walking to school safer and easier for children.



*The development plan allows for a wide range of housing choices, including traditional single-family homes.*



*Townhouses along the north and south streets, like Converse Avenue, offer a distinct housing choice and add character to the corridor.*

## Creating Walkable Places

- provide short blocks and frequent intersections that connect streets, provide access and multiple routes;
- use narrow streets and on-street parking that slow traffic speeds;
- provide sidewalks, dedicated paths, buildings close to the street edge, and;
- use street trees create a sense of enclosure and make the walking experience more interesting.



## KEY ELEMENTS:

# PARKS

### Smart Growth & Parks

There are eight small parks within the community. They are located at frequent intervals so that no one resident has to walk further than 800-feet to reach them.

Unlike the larger parks in Cheyenne, these neighborhood and pocket parks serve a different purpose. They provide recreation space, provide a sense of identity for the community and create a public space for community interaction and functions. They define and give identity to neighborhood. Studies have also shown that proximity to parks can raise property values. A study by the Center for Rural Massachusetts found that homes with access to community green space appreciate by an average of 20 percent more annually, even with a significant reduction in lot size.



*Great parks make the neighborhood livable and allow for shared use so that individual lot sizes can be smaller, yet functional.*

## KEY ELEMENTS:

# STREETS & PARKING

### Smart Growth & Streets

The typical street network in most new residential development offers few ways in and out, wide streets, poor connectivity, few direct routes, limited ability to walk to stores, schools or restaurants. Often, the result is an automobile oriented landscape that increases traffic congestion and that makes it unrealistic to bicycle or walk.

In contrast, the development plan employs a connected street network, with short blocks and frequent intersections to give pedestrians, bikers and drivers more options for getting around. This street design minimizes congestion by dispersing traffic. Streets are narrow which helps to keep traffic at reasonable speeds and saves taxpayer money by reducing the cost of building and maintaining roads. Emergency vehicles benefit from connected networks because they have more route choice. This decreases response times.

Though the property is mostly residential, locations where more commercial activity is supported will find benefits from a connected network. Intersections increase desirable locations for business activity. They create more block faces, corner lots, and smaller parcels for stores and offices. Smaller parcels may mean lower rents, which helps reduce the costs of starting a business. Intersections also make businesses more accessible and visible to pedestrians and cars, which can translate to more customers. Intersections offer businesses more sidewalk frontage, and provide additional storefront on-street parking which local businesses like.

Streets are narrow and can accommodate dedicated bike lanes, on-street parking of vehicles of all sizes and allow emergency vehicles to pass quickly and safely. Snow removal is still possible with narrow street widths and parkway strips along the street can be used for snow storage. Developers like narrow streets because it reduces the amount of street that they have to provide which translates to lower construction costs.



Wherever possible, streets in the development connect to streets outside of the development. This increases access from surrounding neighborhoods and increases the number of streets that drivers in the area can use to move around—while reducing the number of cars on any given street.

### **Bike lanes**

All of the streets in the development can accommodate bicycling, either through dedicated lanes or because they are narrow enough to slow travel speeds and thus making bicycling safer. Bike lanes are connected internally to each other and externally to the City Greenway system via existing lanes on Converse Street. Providing internal and external connections makes bicycling a more viable transportation alternative.

### **Alleys**

Alleys are used in the development plan because they make neighborhoods more pedestrian-friendly and help maximize the curb appeal and property values of homes.

Alleys minimize the number of curb cuts and driveways in a neighborhood. In doing so, they make it possible for developers to devote the front of the lot and the street to uses that make neighborhoods safe and more comfortable to walk in and that improve their look and feel. These design elements include:

- on-street parking (improves the pedestrian experience by providing a buffer against traffic); and
- sidewalks, landscaping and trees.

Alleys also provide access to the rear of lots. This gives emergency responders an additional access point and makes it possible to place garages behind homes.

Alleys support placing garages to the rear of lots. Rear loading garages can accommodate large vehicles, including recreational vehicles and boats.



*Neighborhoods and streets in the project are designed to make walking safe and comfortable.*

### **Did you know?**

A study of over 20,000 accidents in Longmont, CO found that more accidents occur on wider streets than narrow streets. This study found that the safest streets were narrow 24-foot wide streets.

The cost of paving a road averages \$15 per square yard. Reducing street width by four feet can save more than \$35,000 per mile of residential street. In addition, since narrower streets produce less impervious cover and runoff, additional savings can be realized in the reduced size and cost of downstream stormwater management facilities.

*"The way we have been building requires people to get in their cars to go almost everywhere. We need to start bringing together the places where people live and where they work." Stephen Vance, Planner—San Diego*

# THE MARKET

## Smart Growth & Market Flexibility

The consulting team analyzed a number of different development configurations for the property before determining that the current development plan makes the most sense under current market conditions in Cheyenne.

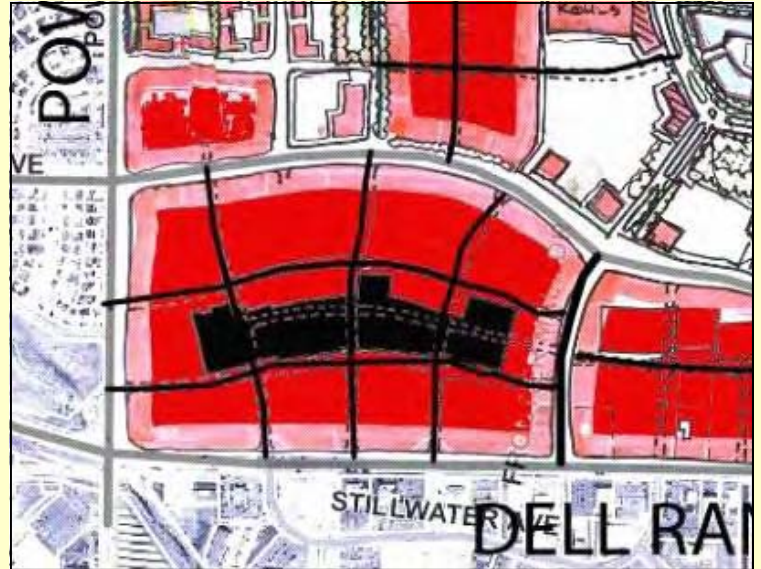
If market conditions change the landowner may chose to pursue any of the other designs that were initially discussed and considered, or propose a new plan. All of the land use and design principles (mixed land use, compact building, complete streets, etc) that apply to the current development plan can work in other market conditions. What may shift from this current development plan to others are the amounts of different land uses and their location on the property.

The development plan is flexible enough to respond to many different segments within the housing market and to allow for ongoing absorption through multiple market cycles.

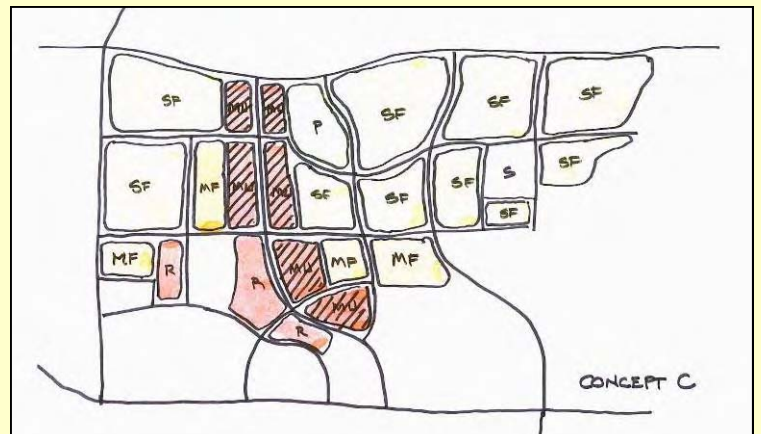
Frontier Mall and big-box retail have made the Dell Range corridor the primary retail concentration in the region. This market factor determines the amount, type and location of retail activity on the property. The majority of retail in the project is "main street" retail.

Located on the southern portion of the site, "main street" retail provides the opportunity to add in new retail formats without undercutting the existing mall and other retail activity along Dell Range. It is unlikely that the market will be big enough over the next few years to support any significant new retail development outside the Dell Range corridor or the downtown. And, the addition of approximately 2,000 units on the site helps to ensure that this area will remain the primary retail center for the entire region for many years to come.

A recent trend in retailing is the conversion of malls and strip centers into mixed-use places. This could happen to Frontier Mall and surrounding retail. If it does, it is likely that this will involve a change to the current street network on the Frontier Mall property. The illustration below identifies potential locations of new roads (via dotted lines) on the Frontier Mall property, that would provide direct pedestrian and automobile access between the neighborhood and Frontier Mall and retail that surrounds it. The viability of the plan is not predicated on this occurring.



*Retail activity is concentrated on the southern portion of the development site. Existing retail parcels, including Frontier Mall (above) could experience a similar trend as other regional retailers and move toward a more 'main-street' type model. Possible future roads are indicated on the map above.*



*Several scenarios (shown above) for development were explored regarding the configuration of uses on the project site. Changes in market conditions could require changes to the mix of uses on the property.*

# THE ENVIRONMENT

## **Smart Growth & The Environment**

The development plan helps Cheyenne to accommodate new growth while minimizing its environmental impacts. These land use approaches can be applied to other development in Cheyenne. By bringing jobs and housing closer together, increasing housing densities, and designing street networks to accommodate bikes and pedestrians, the Smart Growth Development Plan introduces real opportunities to increase transportation options for residents (transit, walking and bicycling). Increasing transportation choice helps reduce a development's impact on air quality.

Lower density, dispersed development consumes large amounts of green space in a region. This development pattern can degrade watersheds and individual water resources (e.g. lakes, streams, rivers) because it increases the amount of impervious surface in a watershed, consumes open space and disrupts the ability of natural lands to manage and treat stormwater runoff.

The development plan is built compactly. It includes 2000 units of housing on less than 500 acres of land. The density of the project helps minimize the overall imperviousness of the Dry Creek watershed and makes it possible to preserve open space and natural lands. These preserved lands help manage and treat stormwater runoff. Reducing watershed-wide imperviousness and protecting natural lands and open space help limit development impacts on regional water quality.

However, while increasing densities can better protect water resources at a regional (or watershed) scale, a poorly planned development with higher density can increase site-level impervious cover, which magnifies water quality problems.

A number of site level techniques can help minimize site-level impervious cover. These include low-impact development techniques (rain gardens, bioretention areas, and grass swales) and site-design practices (reducing parking spaces, narrowing streets,

and eliminating cul-de-sacs). The development plan employs many of the site-design practices.

When combined with concentrating development —these techniques can prevent, treat, and store runoff and associated pollutants and help ensure that higher-density development achieves its potential for enhancing environmental quality.



*Concentrating development in urban areas will help preserve valuable open space.*



*The ridgelines and creek bottoms throughout Cheyenne are critical environmental areas for our community.*

*By reducing unnecessary parking spaces, creating narrower roads, and eliminating the use of cul-de-sacs, development can minimize the amounts of paved surfaces, saving on construction costs and minimizing off-site stormwater runoff.*

STOREY BLVD

STOREY BLVD

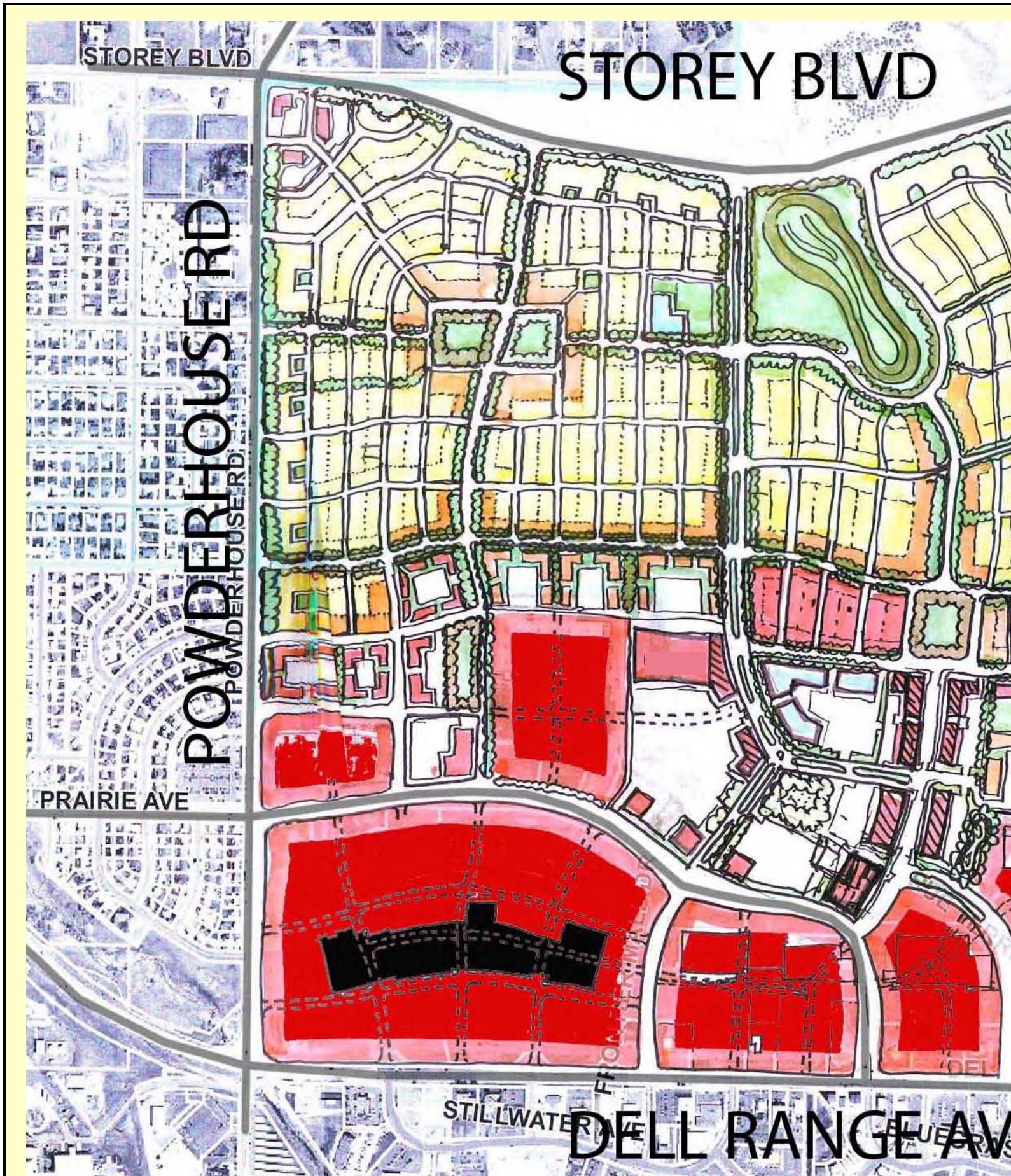
POWDERHOUSE RD

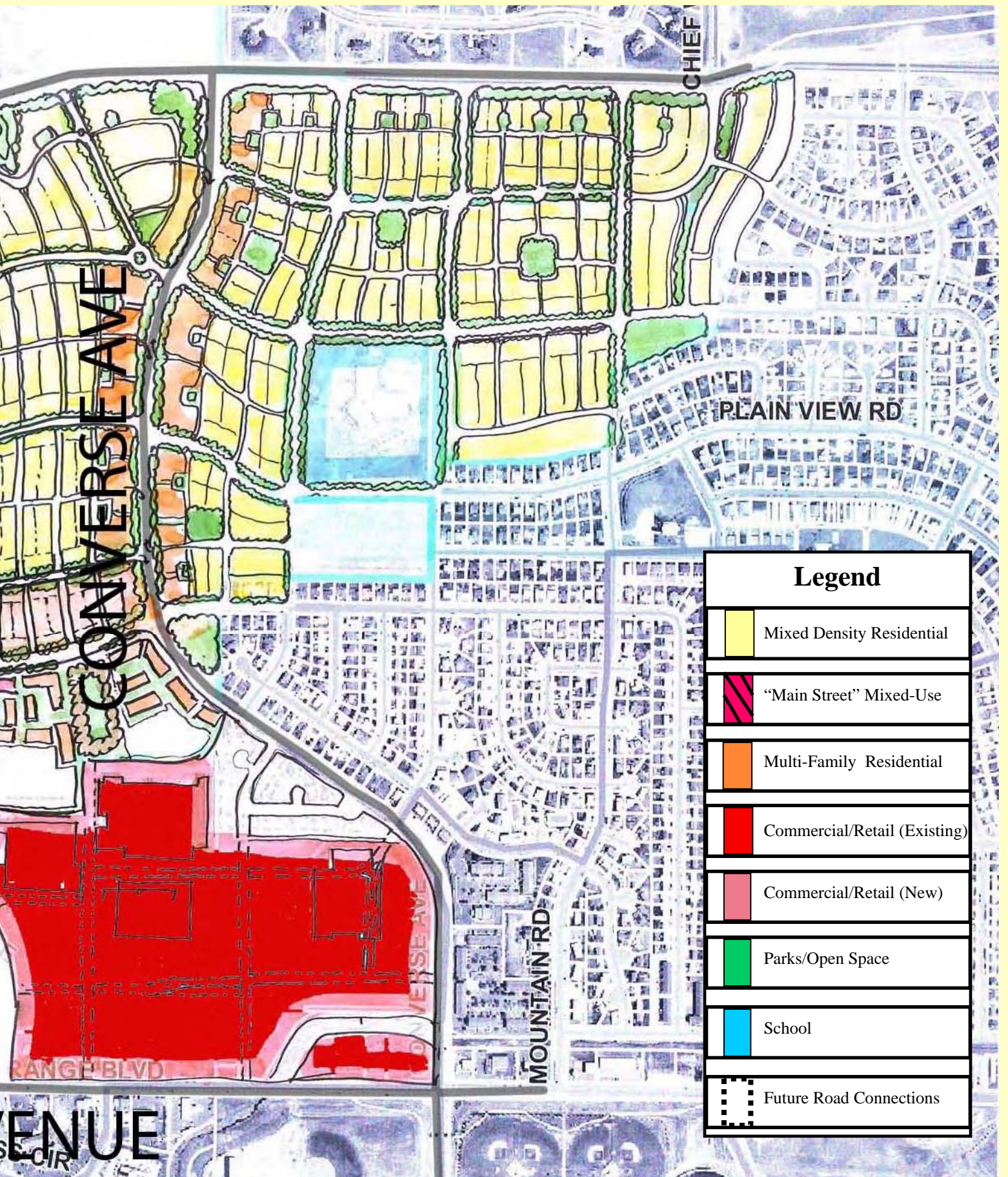
PRAIRIE AVE

STILLWATER AVE









DELL RANGE AVE

SMART GROWTH DISTRICT





### Legend

	Mixed Density Residential
	"Main Street" Mixed-Use
	Multi-Family Residential
	Commercial/Retail (Existing)
	Commercial/Retail (New)
	Parks/Open Space
	School
	Future Road Connections

# DEVELOPMENT PLAN

## REALITY CHECK

### **Smart Growth Can Happen in Cheyenne**

In coming up with a development plan for the property the consultant team analyzed regional and local demographic and economic data and spoke with local experts to determine the market for compact, mixed-use development in Cheyenne. The development plan is based on their market analysis.

The market analysis suggests that there is a demand for compact and mixed-use development in Cheyenne.

### **The Housing Market is changing**

Cheyenne is part of the Front Range and is impacted by the economic and growth conditions in the rest of the region. As the region grows, so does Cheyenne, and as the region changes, it changes Cheyenne. State and local trends, such as continued growth in the energy sector, will also have an impact on how fast Cheyenne's population and economy grow.

The character of future population growth in Cheyenne will be different than what the city has experienced in the past. Cheyenne must be ready for these market changes.

Cheyenne's population will likely diversify in the coming years and decades. Communities in the US and along the Front Range have seen decreases in household size as the percentage of empty nesters, young professionals, singles and childless couples in their population has increased. People in these demographic groups often want different things than other people. The rise of these populations has partly driven demand for compact, mixed-use urban neighborhoods, nationally and regionally. This does not mean that all households of this type have the same housing preference.

Given the experience of other communities

whose population has changed much like Cheyenne's it is reasonable to expect that there will be some demand and interest from residents for compact, mixed-use places and neighborhoods. Some of this demand will come from new residents; and a portion from existing residents whose housing preferences will shift as they grow older or their housing needs change.

During the site visit, the consulting team heard from both young and old that they would like to see more diversity in housing types and would live in a compact, mixed-use neighborhood or place, but are unable to do so because such places are rarely built in Cheyenne or in the County. Housing types that residents wanted to see more of included: one level living for seniors, downtown condominiums, smaller homes or cottages and starter homes.

### **Higher density residential development (part of the Smart Growth market) is already selling**

Higher density residential projects and mixed use developments are in demand as evidenced by recent development projects in the Cheyenne area.

From 1999 to 2004, the average sales price of a condo or townhome in the Cheyenne market increased by 49.8%. By comparison, the average sales price of single family homes during the same time period increased by 38.1%. In September 2004, the average sales price of a condo/townhome exceeded the average sales price of a single family home.

Concurrent to the Development Workshop, several mixed-use projects have been proposed in the Cheyenne area.

### **Developers are making money by building smart growth neighborhoods along the Front Range and nationally**

Smart Growth neighborhoods are a small, but increasing segment of the real estate sector. There are more than 350 smart growth neighborhood existing or under construction and another 300 that are in the planning, entitlement or design stage. The number of smart growth neighborhoods built or planned has steadily increased. Between 1997 and 2003, the annual increase was 28 percent from 2003 to 2004 it was 37 percent.

*"The people are still going to come. The developers are going to build. You have a golden opportunity right now to plan your communities."* Jim Hamilton, National Association of Realtors

### Cheyenne has the land

Cheyenne can support this kind of development. Not only is the market there, the city has available land to accommodate this development. The city has an estimated 2100 acres of vacant property. Downtown and county enclaves are prime locations for redevelopment and new smart growth neighborhoods. Older, strip shopping centers, malls, and big-box developments can also be converted to new compact, mixed use centers and neighborhoods.

### CASE STUDIES

Bradburn in Westminster, Colorado has been called the classic American town. It is similar to the Cheyenne site in that it is located along an existing major arterial and near major employment centers. Bradburn is expected to generate a 20% annual return on investment from residential sales, and 12% annually from the town center. Bradburn is like many smart growth neighborhoods in that returns are expected to increase over time. Development costs for Bradburn was \$37 million, revenue as of March 2003 was \$45 million.

New Town at St. Charles is a new smart growth neighborhood in eastern Missouri. It is similar to the Cheyenne site because of its large land area. Built on 740-acres of prairie land this neighborhood has the distinction of being the best-selling development in the Midwest. This is based on a 2005 study by Market Graphics of 17,280 developments across 16 states. New Town had the best market statistics of any of these developments.

Another measure of its success, is the speed with which the project has reached initial construction and sales. Within 30 months 300 homes have been built. The developer expects to see 20 to 30 closings per month.

The strong sales of New Town is in part attributable to the absence of any other similar development in the area and demand from the community for a neighborhood with a sense of place and housing choice. Housing in New Town includes townhouses, cottages, mansions and live-work units, ranging in price from the mid-\$100,000s to the \$800,000s.



*Smart neighborhoods, like Bradburn (above), can provide all the same housing options as a typical subdivision, and usually include a variety of townhomes, apartments, and lofts. This variety allows residents to select a home that matches their individual budgets. Homes in Bradburn range from the low \$100's to the upper \$800's.*



*These photos (above) depict the variety of elements that can contribute to creating a successful neighborhood. Bookstores and other neighborhood retail can add vitality to a neighborhood and give it identity. Parks & playgrounds near where people live give kids places to play and adults to exercise.*

*Photos Courtesy of St. Charles, MO Planning Department*

# RUN THE NUMBERS

## Smart Growth & Market Interests

*Developers are interested in building smart growth neighborhoods.*

Smart growth neighborhoods are resilient real estate products. Economic cycles affect the ability to sell homes, and lease retail and office space. In some cycles all of these products sell well and in others only a segment prosper. By mixing land uses a developer can insulate themselves somewhat from the negative affects of the economic cycle. Diversity makes it easier to spread risk across different products, and capitalize on what is desired by the market at any given time.

The limited supply of smart growth neighborhoods in many markets means that homebuyers are willing to pay a premium for them. A 1999 study of single family, homebuyers that bought homes in smart growth neighborhoods showed that, on average, the homebuyers were willing to pay up to \$20,000 more to live in their neighborhood than to live in the same house in a conventional subdivision. (Eppli and Tu, *Valuing the New Urbanism*, 1999)

Also, compact development mean less land per unit, reduced site preparation, and lower per unit infrastructure costs - all factors that reduce the hard costs of construction and increase profit for developers. (Transportation Research Board, *Cost of Sprawl-2000*, 2002)

## The Coming Demand

During the workshop, several people identified the desire to live in a community like the one depicted in the Smart Growth Development Plan. The following discussion is from a young professional in the community:

*“Preference is not exactly what causes you to buy a home. What’s left over is what you have to purchase. It’s not like there are a lot of choices on what you want. I’ll offer my own example. In the sense that I am a young, single professional and my friends are the same. They don’t have kids because they are newly married or single. I work downtown; where would you recommend that I buy a home? I have a good job. I want to buy a home so that I can start gaining equity for the future. Where would you suggest that I purchase? There are no homes for people that do not have a family. Well I don’t have a family; so I don’t need three bedrooms. I need a house located next to downtown amenities, next to attractions, next to coffee shops and book stores. So in some ways our communities reflect who we want to live here. In fact we want young people, but we haven’t offered them a place to live.”*

This example identifies that there is both a market and benefit to building neighborhoods incorporating the principles of smart growth.

## “When can I buy a lot in this neighborhood?”

Several participants from the general public who participated in Cheyenne’s Smart Growth Workshop were interested in living in the proposed neighborhood. As of the publication date of this report, several projects reflecting Smart Growth principles have started working their way through the development review process.

## The financial return of compact development

A study of development patterns in Sarasota, Florida showed that an 8,000-acre parcel would generate 34 percent more revenue if it were build using village or compact development patterns than if it were build at lower densities.

Development form	Net revenue	NPV revenue
Village	\$76.3 million	\$16.3 million
Low Density ranch homes	\$35.7 million	\$12.1 million

Source: Fishkind & Associates (cited in New Urbanism: Comprehensive Report and Best Practices Guide, 3<sup>rd</sup> Edition)



## JOBS & ECONOMY

### **The Impacts of Smart Growth**

*Developments like the Smart Growth Development Plan can help attract young people to Cheyenne.*

Government and service jobs constitute sixty percent of the jobs in Cheyenne. Four of the five largest employers in Cheyenne are government agencies, the fifth is Cheyenne Regional Medical Center. Cheyenne's knowledge workers are concentrated in these industries. Many workers in these industries are approaching retirement age, as they leave the workforce they will need to be replaced by younger professionals. Young workers are different than the older workers they'll replace in many ways. Housing cost, access to recreational amenities, access to culture, nightlife, interesting and unique places and urbanity are all considerations that factor into the decisions of many young people when they decide to pursue or accept a job.

Currently, Cheyenne lacks the kinds of places that attract young professionals. During the workshop we heard from several young people who stated that they drive to Fort Collins and other Front Range communities to experience nightlife and urban living. They stated that they would like to see these amenities in Cheyenne.

*PlanCheyenne* proposes a number of strategies that make it possible to transform Cheyenne into the kind of place that young professionals and entrepreneurs will want to live, work and play in. These include: revitalizing downtown into a walkable and vibrant place, expanding access to recreational amenities, open space and parks; and building neighborhoods that are walkable, compact, mixed-use places and that include a diversity of housing types and price points.

*Developments that take advantage of smart growth techniques can help increase housing choice in Cheyenne which in turn can help address Cheyenne's worker shortage.*

Businesses ranging from local hotels and restaurants to larger employers such as Cheyenne Regional Medical Center are finding it difficult to fill some of their job openings. One reason for this shortage is the lack of affordable and workforce housing in the region. Cheyenne has seen their housing prices increase significantly in recent years to levels more commonly found in the Denver metro. Income levels though have not risen to keep pace with housing prices.

Unless employees can find housing, worker shortages will continue to be an anchor on growth of existing business, and an impediment for new businesses seeking new locations.

By building new neighborhoods that have a mix of housing types and sizes, such as envisioned in the Smart Growth Development Plan, the city can begin to meet the changing housing needs of the community. Compact, mixed-use neighborhoods typically include houses of different sizes and types, such as townhouses, apartments, accessory units, single family homes and even live-work spaces to accommodate a broader range of lifestyles. The diversity of housing types and sizes leads to different housing price points. More price points translates to greater housing choice and makes it possible for households to find market rate housing that they can afford.

There is a shortage of dense housing (townhomes, condos, cottage homes) in Cheyenne, which raises their price. As the housing stock in Cheyenne diversifies, this shortage should decline and make it possi-



*Townhomes, like those depicted in the Development Plan, can provide young professionals with a starter home at a price that matches their budget.*

# THE TAXPAYER

## Smart Growth Saves Money

Cities have found that pursuing a mix of housing types and other smart growth strategies, including more compact development & redevelopment, can also pay off fiscally. For example, Fayette County, KY (includes Lexington): saves \$1.08 in service costs for every 1,000 new residents because of its compact development pattern whereas in Jefferson County, KY (Louisville): taxes go up by \$36.82 with each 1,000 new residents because of their spread-out development pattern.

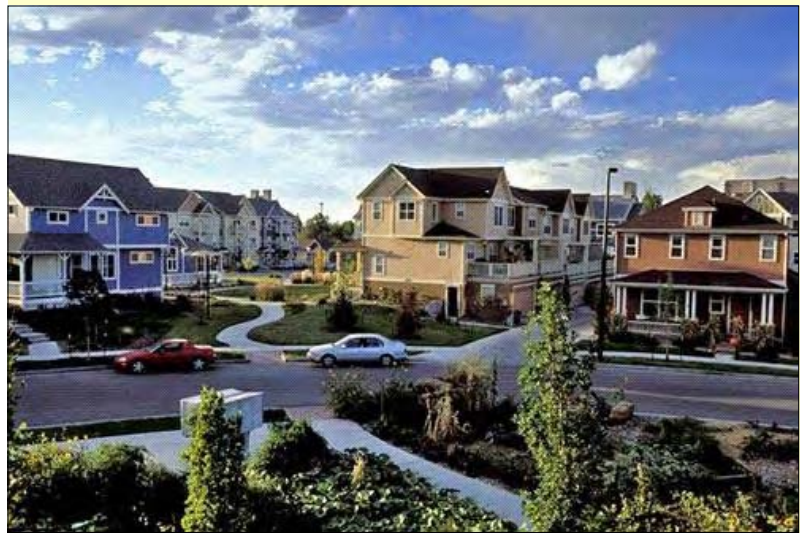
Redevelopment increases tax revenue and can often catalyze area wide revitalization. For example, Greensboro, NC saw annual tax revenues generated from the Southside Neighborhood grow from \$400,000 in 1995 to over \$10 million in 2003, following redevelopment. Redevelopment transformed a blighted area of the city, into a cohesive, walkable neighborhood with a range of housing choices, and public and open space. The benefits didn't stop there; redevelopment of Southside has spurred additional public and private investment in downtown Greensboro.

Taxpayers are also benefited by a reduction in maintenance costs associated with infrastructure. Reducing the pavement area, as a result of building narrower streets, means the public works department has less road surface to plow, resurface, and rebuild over time.

### Community Competition

*"It's very easy to become a very, very wealthy place with smart growth, because it's so attractive and wonderful that people will come in and bid up housing prices."*

*--Mayor Randy Kincaid, Davidson, NC*



*Building neighborhoods with housing choice and interesting places can help Cheyenne attract young people and provide affordable places for them to live.*

*"The challenge for leaders is to create the right market, land use, and other regulatory climates to accommodate new growth in more sustainable ways." Arthur C. Nelson, The Brookings Institution*

# PUBLIC HEALTH

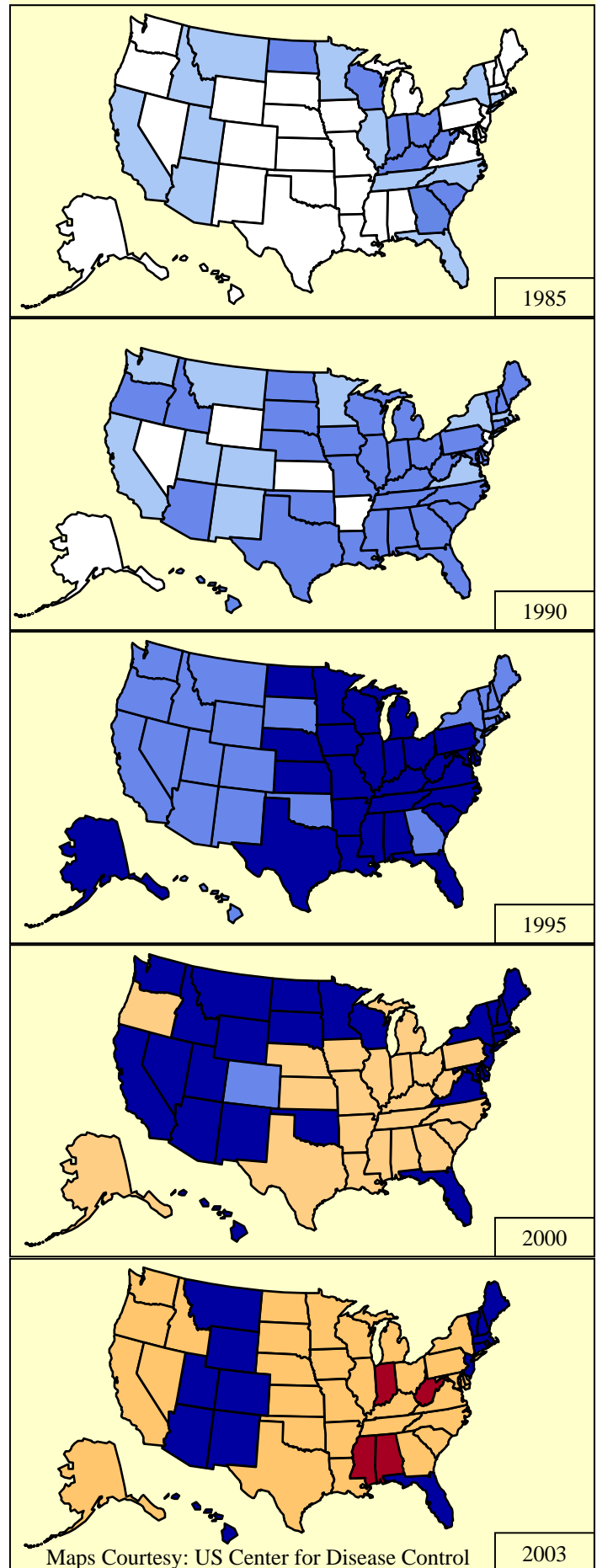
## The Obesity Epidemic

Across the country, adults and children are decreasing activity levels and gaining weight. The Center for Disease Control (CDC) has been tracking rising obesity rates and the numbers are alarming, as the charts to the right demonstrate. Wyoming has not been immune to this national trend. According to a new report by Trust for America's Health (TFAH), Wyoming has adult obesity rates of 21.7 percent, ranking it the 36th heaviest state in the nation. Research also shows that the percentage of overweight children, aged 6-19, has doubled in the US since 1968. This supports the CDC's estimate that currently 3 out of 10 children are overweight. Concerns about childhood obesity have driven the Laramie County School District #1 to encourage local schools to promote more nutritious food choices in schools.

There are a range of factors that contribute to obesity, including genetic factors, diet, exercise and the built environment. The way that communities are built impacts the ability of adults and children to integrate exercise into their daily lives. Neighborhoods that are compact, and have a mix of uses, and that make walking and bicycling safe and comfortable make it easier for people and children to live active lives. These places support and often encourage residents to walk to a store or restaurant, take an evening stroll, walk the dog or baby, bicycle, and allow children to walk or bike to school. Incorporating moderate physical activity into daily life can help people lead healthier lives. According to the US Department of Health and Human Services, regular physical activity, defined as at least 30 minutes of moderate activity on at least five days per week, or 20 minutes of vigorous physical activity at least three times per week, is critical to sustaining good health.

The development plan includes many features that make it easy for residents to exercise without knowing they are doing so. Mixing land uses on the site makes it possible for residents to walk to complete many errands. Frequent parks provide residents easy access to recreation areas. The streets are designed to balance the needs of pedestrians, bicyclists and drivers. And as a result the neighborhood is a safe and comfortable place for all residents, old, young and active, to walk and bicycle. Streets are wide enough to allow for bike lanes and cars, but narrow enough so that cars are less likely to travel at high speeds. The streets are short and intersect frequently, and have sidewalks on both sides. This gives people many more paths or routes that they can use and helps to diffuse traffic and slow cars. The development plan includes street trees and cross walks that further support walking and bicycling. Bike lanes connect to city's greenway system.

## Obesity Prevalence Rates



*“Fast food, long days sitting at a desk, and suburban neighborhoods that require cars all magnify hereditary factors such as metabolism and efficient fat storage [that impact obesity].” – Cheyenne Regional Medical Center Website*



## **The Impacts of Smart Growth**

Frequently, communities' find that their development and transportation policies make it difficult to achieve quality of life goals and promote better development patterns. Local zoning and subdivision patterns often make building compact, mixed-use and walkable communities a difficult and costly process for developers. Similarly, local transportation investments and street standards often create a street pattern that limits development options for the private sector.

City officials are concerned that their regulations are not fully supportive of the development pattern desired by Cheyenne residents. They asked the consulting team to examine development regulations and process in Cheyenne and identify policy options or incentives the city could adopt that would make it easier for developers to achieve their objectives and help meet the community's goals.

Prior to the workshop the consulting team examined Cheyenne's development and transportation regulations (including the new Road, Street & Site Planning Design Standards). During the visit the team spoke with city planning and transportation staff, local developers, elected officials, landowners of the property, and citizens to understand the barriers and opportunities in the current development process. The team received feedback on many of their ideas from these audiences.

This section summarizes the policy options that were developed during the workshop (These options are presented in greater detail in two Appendices, available by contacting the City Planning office at 637.6281 or online at [www.plancheyenne.org](http://www.plancheyenne.org)).

These options support implementation of the Smart Growth Development Plan, specifically, and compact, mixed-use, walkable neighborhoods generally. They also create a policy framework that makes it possible for developers to build places that implement Cheyenne's growth vision.

## **#1.) Get the regulations right**

Cheyenne's current zoning and subdivision regulations do not allow the by-right development of smart growth neighborhoods. The current development process requires developers to request exceptions and variances to current development regulations without any certainty that such exceptions would be granted, or negotiate with the city via the planned unit development (PUD) process. Developers are often weary of both approaches because each is fraught with uncertainty and a lack of predictability.

There is a range of legislative and administrative changes that the city could make to their development regulations. The easiest, least resource intensive and most effective would be to attach development standards to the Planned Unit Development (PUD) process that allow smart growth by right (the current process lacks standards). This would add certainty and predictability to the PUD process and make smart growth the normal development outcome rather than the exception.

## **#2.) Limit piecemeal Annexation**

Cheyenne residents expect their government to spend taxpayer money wisely. The City can use their annexation policy to achieve this goal and promote an efficient land use pattern. The city's current annexation policy allows for piecemeal annexation. This practice makes it difficult for the city to provide services (water, sewer, roads, parks, trails) efficiently and in a fiscally responsible manner. It also makes it difficult to locate and design those services in a way that increases land value and helps meet the goals of *PlanCheyenne*.

Piecemeal annexation encourages development in areas that lack infrastructure. This can waste taxpayer money if new services (roads, sewers, schools, and parks) are built even though existing services have available capacity. Piecemeal annexation also increases the number of parcels and landowners that can impact a development decision. This adds to the complexity of trying to coordinate land use, transportation and infrastructure. Lastly, piecemeal annexation can increase development pressure on open space, resource and environmentally sensitive areas. This is because undeveloped land becomes "development-ready" when it is served by infrastructure or is proximate to it.

Incentives exist to reduce piecemeal annexation. The City could give preference in their annexation decisions to pro-

jects that comply with the goals and objectives of *PlanCheyenne*, or with a small area plan or the new smart growth PUD standards. The city could also consider incentives that discourage landowners from dividing their property. This includes fast tracking review and permitting of projects that are master planned and meet PUD standards. If the PUD standards allowed smart growth by right, fast tracking projects that met those standards would also encourage master planning of parcels and support compact, mixed-use, and walkable neighborhoods.

### **#3.) Small Area Planning Process**

Cheyenne contains a number of large-scale sites, such as the Cole Property, that will account for a substantial portion of future development activity in the city and county. These large sites present a tremendous opportunity for the city and county to enhance the quality of life in Cheyenne and help landowners and developers maximize the value of their land.

Many communities in the U.S. use small area plans (a.k.a. sub area, specific or precise area plans) to guide the development of large parcels. In Cheyenne this is an underused tool that can be very effective in adding predictability to the development process and building the kinds of places and neighborhoods desired by residents.

Small area plans benefit the public and developers. Governments find them useful because it helps them coordinate and maximize development activity to achieve the broader vision for a given area or neighborhood and helps maximize efficiencies when delivering infrastructure such as roads, open space & trails, parks and schools.

Developers and landowners are often supportive of small-area plans because they add predictability and certainty to the development process. Because they articulate the goals, objectives and development outcomes that are desired by the public, they give developers a clear sense of the kind of development product that will be acceptable to the community and that will receive permits quickly and easily. Small-area plans also give developers assurance of planned infrastructure investments and adjacent development, factors that impact when and how a property will be developed. The city could target the use of small area planning to large parcels within the City or those targeted for annexation.

### **#4.) Refine Street Standards**

Cheyenne's street network, an arterial-based system, is typical of most communities' street networks. Arterial street networks have long blocks, wide streets and a limited number of intersections with other streets. Congestion is emerging as a quality of life issue in the region, in part because of the limited capacity of the current street network. The current street network also makes it difficult for the city to achieve many other objectives such as increasing walking and bicycling, improving response times for emergency service, supporting transit use and expanded transportation choice, and using taxpayer money wisely.

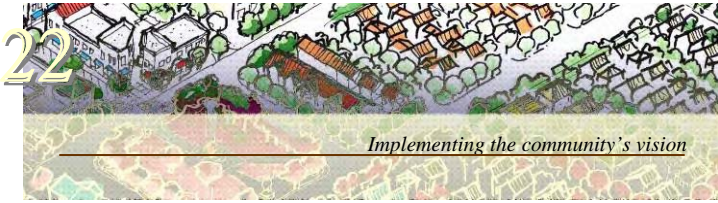
As a result, Cheyenne may want to explore different network configurations, in particular the complete or connected street network. Connected networks have many roads, narrower streets, frequent intersections and short blocks. They also diffuse traffic. These characteristics of the connected network combine to offer more route choices and more direct routes and thereby minimize congestion. The attributes of a connected street network also help to support walking and bicycling.

There are a number of strategies that the city can pursue if they chose to increase the connectivity of the current street network. Building more connected streets will help meet the goals of *PlanCheyenne*, support walking and bicycling and compact, mixed-use neighborhoods. Transportation policy options include:

- Encourage access management and use of intersections.
- Establish connectivity standards.
- Increase allowable street types.
- Create safe and comfortable walking environments.



Discussion of development policy options with Cheyenne staff, several developers, and the consulting team.



## **A Bright Future**

The Citizens of Cheyenne want development that benefits the economy, community, environment, and public health. They want to see development concentrated in key activity centers to preserve ranchland, use taxpayer money wisely, and increase the number of exciting and vibrant places in town. They want walkable neighborhoods that are attractive, convenient, safe, and healthy. They want safe, decent homes in communities that are designed to encourage social, civic, and physical activity.

Most of all, residents want to create more choices for workers, visitors, children, families, single people, and older adults—choices in where to live, how to get around, and how to interact with the people around them. They understand that when communities do this kind of planning, they preserve the best of their past while creating a bright future for generations to come.

The Smart Growth development plan translates into physical forms the values and goals that the community has articulated during *PlanCheyenne*. All of the pieces of the development plan work together to create the kinds of neighborhoods and places residents have expressed a desire to see more of in Cheyenne. It also provides an example of a development approach that makes it possible for property owners to build what they want and also to achieve community goals.

This design is transferable to other parts of the city and county and can help Cheyenne create more great places in the community. The development concepts can be applied to many of the designated activity centers (including the Dell Range Corridor) in *PlanCheyenne*. Applying the development concepts discussed in this report to these activity centers can help make them the next great places in Cheyenne. In

doing so, the community can encourage jobs and activity to stay within Cheyenne and can create a wider range of housing and lifestyle choices that will attract younger workers and meet the needs of the region's changing population.

There is an opportunity in Cheyenne to build compact, mixed-use and walkable neighborhoods and places. A growing and changing population is creating a market for these kinds of neighborhoods in Cheyenne. As evidenced by *PlanCheyenne*, residents support building these neighborhoods in appropriate locations. And developers exist nationally and in the Front Range that are experienced and capable of meeting this demand.

The city can achieve the goals of *PlanCheyenne* by making it easier for developers to build compact, mixed-use development. This can be done by increasing predictability in the development process, allowing developers to build compact, mixed-use neighborhood by right, and increasing the connectivity of Cheyenne's street network.

Cheyenne has an unprecedented opportunity to shape future growth patterns for the better. Growth is not threatening to overwhelm the city and surrounding county. The steady pace of future growth, the vision articulated in *PlanCheyenne* and the leadership exhibited by the city in planning for growth and development create this opportunity to build the kinds of places that resident's value and that will help the region continue to prosper. Cheyenne has a rich tradition of building great neighborhoods that it can draw on to create new places that reflect the city's heritage and prepare it for the future.

Perhaps the most enduring and valuable resource that the city has are its people and the vision that they have established. By following this vision the city can grow in ways that are unique to Cheyenne and support a quality of life that will make the region a great place to live, work and play for generations to come.

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### *Special Thanks*

To Mayor Spiker & the City Council for allowing the Team to use the City's excellent facilities, and for encouraging the exploration of new planning ideas for the Cheyenne community.

Frank & Louise Cole and family, and Ed Murray III & family for their hospitality, participation and willingness to let us develop a design for their properties.

### *Workshop participants*

Participants in the workshops represented a wide range of viewpoints and interests. We had participation from property owners, businesses, real estate professionals, interested citizens, city officials and staff and others. The participants listed have been consolidated from sign-in sheets that were circulated during the public meetings and are included for reference purposes only. This list may not represent the full number of attendees. Individuals may not have seen the sign-in sheet at the workshop or they may have chosen not to sign in. We thank you for your commitment to playing a role in Cheyenne's future.

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## Appendix A: Development Policy Options

Cheyenne's development regulations make it difficult for the market to build the kind of places that residents have stated they want to see and that help the community meet the goals of PlanCheyenne. The following options can help the city remove current regulatory barriers to better and efficient development patterns.

1. Revise Planned Unit Development (PUD) ordinance to allow smart growth development by right.
2. Reduce piecemeal annexation.
3. Increase use of small area planning.

### **Policy option: Revise PUD ordinance to allow smart growth by right.**

The existing regulatory framework and the current zoning regulations in Cheyenne make it difficult for developers to build compact, mixed-use neighborhoods. The city's development standards do not permit by-right construction of this neighborhood type. The regulations currently require that developers that wish to build compact, mixed-use and walkable neighborhoods have to ask for exceptions and variances to current zoning and subdivision ordinances, or apply for approval under the city's PUD ordinance. The current PUD ordinance lacks standards and therefore adds unpredictability to the development review process. The city's PUD ordinance and their existing subdivision and zoning regulations impede and deter developers and landowners that want to build "livable hometown neighborhoods". The zoning code and regulations can be modified with relative ease to make it possible to build smart growth neighborhoods by-right.

Specifically, Cheyenne could update its PUD zoning district to include a variety of zoning districts that fall under the PUD heading and would constitute a "kit of parts" to allow smart growth development by-right. Separate zoning districts could be developed for retail, high-density residential, medium density residential, low density residential and mixed land uses, street network, open space and trails and public facilities, such as schools and fire stations. The primary efforts should be focused on the fundamental regulations such as density allowed, setbacks and more innovative parking approaches.

The zoning districts could then be applied to a specific site to create mixed use, walkable areas with a variety land use intensities and development opportunities. The zoning districts could use traditional zoning or a combination of a form based code with design guidelines. Design guidelines could be developed which augment the zoning regulations and provide the foundation for the specific design guidelines for each PUD. These will provide a qualitative vision and allow for tailoring of vision for the area to it site specific qualities.

Through this approach the City would essentially fast track the development of smart growth neighborhoods. Developers who meet the standards of the PUD would sail through the development review process with relative ease and receive their permits quickly. The opportunity for a short and streamlined development review process would be a significant incentive for developers to build smart growth neighborhoods.

The use of the PUD may also be considered for smaller sites where mixed-uses is desired or other special considerations call for flexibility or unique design solutions. This may also be appropriate for larger scale redevelopment projects within the downtown. Given the different function and development pattern of downtown, the City may want to consider developing a separate set of zoning districts that apply to redevelopment activity in downtown, which reflect the downtown patterns and character. Flexibility on parking standards, consideration of on-street parking, and potentially parking maximums rather than minimums may need to be considered so that that the parking requirement does not transform the building type into a suburban development which changes the uniqueness of downtown forever. Here build to lines for definition of mixed-use retail store frontages may need to be considered for some specific areas of the downtown.

**Policy option: Reduce piecemeal annexation**

Cheyenne residents expect their government to spend taxpayer money wisely. The City can use their annexation policy to achieve this goal and promote an efficient land use pattern. Under the current annexation policy, owners can sell portions of their property off piecemeal. That property is often annexed following a request from the subsequent owner. This practice makes it difficult for the city to provide services (water, sewer, roads, parks, trails) efficiently and in a fiscally responsible manner. It also makes it difficult to locate and design those services in a manner that adds value to the land and meet the goals of PlanCheyenne.

It makes sense to use the roads, sewers, schools, and parks that you've already built before investing taxpayer money in duplicating these services through new construction. Piecemeal annexation makes it difficult to do this because it encourages development in areas that lack infrastructure. As a result, current residents subsidize the construction of new infrastructure, through their taxes, even though existing infrastructure remains underutilized. By limiting piecemeal annexation the city can support development in existing neighborhoods and

encourage a less dispersed pattern of development. This saves taxpayer money and promotes a fair and efficient development pattern.

Piecemeal annexation increases the number of parcels and landowners that can impact a development decision. This adds to the complexity of trying to coordinate land use, transportation and infrastructure. Consider the challenge of building a connected street network. In a connected street network roads in adjacent neighborhoods intersect with each other frequently. Under piecemeal annexation there is no requirement that one landowner design their portion of a street network so that it intersects the network of an adjacent neighborhood. The development of streets in both neighborhoods occurs independently of each other. Multiply the challenge of coordinating between two adjacent parcels to coordinating among multiple parcels that may or may not be adjacent and whose landowners may not share similar development aspirations and its clear the challenge that piecemeal annexation can pose to efficient land use patterns and delivery of infrastructure. Piecemeal annexation can also increase development pressure on open space, resource and environmental sensitive areas. This is because undeveloped land becomes "development- ready" when it is served by infrastructure or proximate to it.

There are incentives that could reduce piecemeal annexation and its impacts. The City could give preference in their annexation decisions to projects that comply with the goals and objectives of PlanCheyenne or other city plans (such as a small area plan) or with new smart growth PUD standards. They could also fast track review and permit projects that are master planned and meet PUD standards. Developers can master plan their property under the current PUD ordinance but many do not. The current PUD process does not provide any certainty to a developer that their project will be reviewed in a timely manner. Nor is does it clearly establish the standards that proposals must meet to be permitted. By adding standards to the PUD and fast tracking the review of projects that comply to the standards, the city would add certainty to the process and give developers a true incentive to master plan their parcels. The City could also add standards that support smart growth to the PUD (policy option 1) and fastrack proposals that meet those standards. This would encourage master planning of parcels and support compact, mixed-use, and walkable neighborhoods.

**Policy option: Increase use of small area planning.**

Cheyenne contains a number of large-scale sites, such as the Cole Property, that will account for a substantial portion of future development activity in the city and county. These large sites present a tremendous opportunity for the city and county to enhance the quality of life in Cheyenne and help landowners and developers maximize the value of their land.

Many communities in the U.S. have developed small area plans (a.k.a. sub area, specific or precise area plans) to guide the development and redevelopment of large sites. In Cheyenne this is an underused tool that can be very effective in adding predictability to the development process and building the kinds of places and neighborhoods desired by residents. Small area planning can help the city promote development consistent with community goals and add certainty and predictability to the development review process.

Small area plans benefit developers and the public. Citizens like them because it lets them contribute to decisions about their community. Governments find them useful because it helps them coordinate and maximize development activity to achieve the broader vision for a given area or neighborhood and help maximize efficiencies when delivering infrastructure such as roads, open space (incl. trails), parks and schools.

Developers and landowners are often supportive of small- area plans because they add predictability and certainty to the development process. Because they articulate the goals, objectives and development outcomes that are desired by the public, they give developers a clear sense of the kind of development product that will be acceptable to the community and that will receive permits quickly and easily. Therefore, they remove a great deal of the uncertainty and negotiation that is typical of the development review process in Cheyenne and in most communities nationwide.

A small- area plan also informs a developer of the specifics of what the city will approve on the parcel next to theirs. Assurances about adjacent development can create the opportunity for collaboration and joint marketing between developers, and supports synergies between developments. Additionally, small-area plans can also identify the types and timing of infrastructure and other public investments that the city will be making in a given area. This provides assurances to a developer or landowner of the kinds of investments that the city will be making and makes it possible for them to develop their property in a manner that maximizes the city's infrastructure investment.

The City has developed small area plans in the past but these plans differ in content and purpose from the type of small area plan that is discussed here. Small area plans typically establish a development vision, identify policies adopted or proposed to achieve the vision and the desired design and land use pattern for an area. Plans often address:

- streets and their design characteristics (including the primary and secondary street systems),
- land uses (including parks and open spaces, provisions for schools), and
- critical infrastructure.

Plans can also include: zoning regulations for each of the land uses, and design guidelines

which augment the zoning regulations and provide the qualitative characteristics. The city could target the use of small area planning to large parcels within the City or those targeted for annexation.

## **Resources**

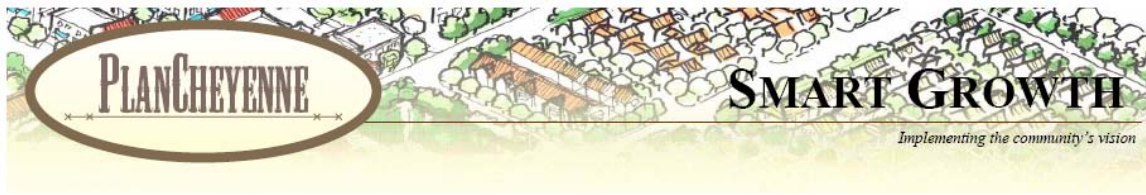
American Planning Association. *Model Smart Growth Codes, Interim PAS report*, 2006.

<http://www.planning.org/smartgrowthcodes/>. Model codes includes: sample mixed-use zoning, live-work, town center, affordable housing code.

Local Government Commission *Smart Growth Zoning Codes: A Resource Guide*. Spring 2003. Survey of 150 smart growth zoning codes in the nation, identifies the best codes and provides language.

Mountain View, California's Downtown Precise Plan,  
[http://www.ci.mtnview.ca.us/citydepts/cd/apd/pdf/Downtown\\_Precise\\_Plan.pdf](http://www.ci.mtnview.ca.us/citydepts/cd/apd/pdf/Downtown_Precise_Plan.pdf).  
This small area plan that includes many of elements of a good small area plan.

Van Meter Williams and Pollock. *EWA Smart Growth Design Code*. 2005.  
[http://www.vmwp.com/urban/urban\\_projects/Ewa/Ewa.html](http://www.vmwp.com/urban/urban_projects/Ewa/Ewa.html) This code includes examples of alternative development patterns supported with revised development standards including parking, community design and walkability, street design, and street networks.



## Appendix B: Transportation Strategies

This Appendix provides additional information and suggestions for transportation planning and street design practices that could contribute to achievement of PlanCheyenne goals, including realization of a smart growth neighborhood on the Cole Property and in other similar parts of the city.

The consulting team identified three street network issues (network connectivity, access management, and missing collector/connector streets) that warrant some attention. These are described below. Cheyenne's new draft street standards, developed through PlanCheyenne, represent a positive step and should serve the City well in avoiding overly-wide streets, reducing storm water run-off and addressing speed and safety issues on local streets. As a next step, the City could consider broadening these standards with additional street types and designs which are summarized below. Finally this Appendix identifies techniques available for use if the City chose to pursue improvements in neighborhood pedestrian environments.

### 1. Street Networks

Streets are the fundamental building blocks of urban places. Decisions about street infrastructure and layout shape cities and towns for many generations to come.

A key smart growth technique available to city planners and decision makers is to ensure that streets are developed such that they represent a *network* rather than just a collection of facilities. This makes it possible to address the issue of *network connectivity* as a fundamental planning principle that could help Cheyenne achieve its PlanCheyenne objectives. The network approach also would allow the City to be deliberate and strategic in making *access management* decisions. Finally, this would allow the City to consider whether to take steps to ensure that certain network components such as *collector and connector streets* (missing from the network today) are built as the City develops and redevelops in the future.

**Network Connectivity.** Two of the primary characteristics of urban street systems are *corridor capacity* and *network connectivity*.

Corridor capacity is a useful strategy for opening new lands to development and for connecting new outlying neighborhoods with older city centers. Network connectivity, by contrast, is a useful strategy for encouraging redevelopment and infill within the existing urbanized area. Emphasizing connectivity over corridor capacity does not mean that mobility is diminished as a concern or that traffic capacity becomes less important. Rather it means achieving capacity and mobility by developing a well-connected network of streets rather than by concentrating capacity investments in a few major arterial corridors.

As Cheyenne has grown in the years since World War II, most public policy emphasis has been placed – by both the City and the State of Wyoming – on corridor capacity. Now, as the City considers techniques for achieving the goals and objectives of PlanCheyenne, it may wish to consider shifting its policy emphasis from corridor capacity to network connectivity.

Cheyenne has recognized the importance of this issue. One of the policies identified in the “Community Foundations” section of PlanCheyenne highlights connectivity as part of “creating livable ‘hometown’ neighborhoods.”

*Policy 2.2.c: Connected Streets and Sidewalks Neighborhoods should have connected streets and sidewalks to make walking and bicycling safe and convenient. They should be designed with connected systems of open space, bikeways, trails, and streets with sidewalks that provide internal links as well as links to other neighborhoods and to neighborhood centers.*

Nationally, transportation planners are beginning to address connectivity as an important characteristic of transportation networks, especially roads and streets. A recent study by Dr. Susan Handy at the University of California/Davis (“Planning for Street Connectivity”, American Planning Association PAS #515) documents the techniques that local governments are using to ensure minimum levels of connectivity. Cheyenne could draw on this ongoing research and analysis in developing its own connectivity standards.

The primary techniques for achieving connected networks are:

- Keeping block sizes small in both residential and commercial development;
- Providing or requiring minimum spacing between intersections;
- Ensuring that collector/connector streets are provided as areas develop (discussed in a later section below);
- Discouraging or disallowing long cul-de-sacs and dead-end streets; and,
- Ensuring parallel route redundancy for emergency service access.

**Access Management.** Another street network issue that may be important for Cheyenne to consider is *access management* along arterial, collector and connector streets. In the case of arterials under state jurisdiction, updating the



current system may require cooperative effort with the Wyoming Department Transportation.

Access management is the process of managing the dual role that highways, roads and streets play:

- Serving pass-through traffic; and,
- Providing direct access to abutting property and land development.

Allowing inappropriate or excess frequency of access to public roadways can lead to unnecessary increases in traffic accidents and congestion. However, limiting access too much reduces the efficiency of the entire street network, increasing congestion on major arterial routes, discouraging redevelopment and infill in existing urban areas, increasing average trip lengths and increasing response times for emergency services. So, the network connectivity and access management issues are interrelated.

One way to make sense out of these competing objectives is to separate the treatment of driveways from the treatment of intersecting streets. Tables A-1 through A-4 below provide a simplified overview of a possible access management structure.

The distinction between streets and driveways has been further complicated somewhat by the proliferation of private streets that can be thought of as fitting in both categories. This is too complex a problem to be fully addressed here, but in general a reasonable approach is to base decisions on access, at least in part, on the *function* of the private connecting facility. Is it providing access to a single property (a driveway), or to an entire area with multiple property ownerships (a street)? Does it essentially “dead end” in the area being accessed (a driveway), or does it connect on through the adjacent area to streets serving other districts and neighborhoods (a street)?

Over the past several decades, public works departments and state DOTs have practiced a wide array of approaches to access management – from allowing excessive frequency of access points (driveways and curb cuts) along streets and highways to being overly zealous in limiting access in the hope of avoiding congestion. Research has shown that the best outcomes are achieved through a balanced approach that limits access enough to maintain traffic and pedestrian safety but allows enough access to enable the street system to function as a network.

Research by the City of Portland and other entities has determined that the optimum spacing for intersections with urban arterial streets is in the range of 300 feet to 528 feet. The best way to ensure that minimum connectivity objectives are met at the same time that excess intersections are avoided is to set both minimum and maximum spacing standards.

The following access management system was identified by the consulting team as an example of the kind of approach that could work for the City of Cheyenne:

**Table A-1. General Access Management Structure**

<b>Regulatory Action:</b>	<b>Improve Traffic Flow</b>	<b>Improve Safety</b>
Restrict Driveways	Yes	Yes
Restrict Street Intersections	Yes, but subject to minimum connectivity	Yes

**Table A-2. Driveway Management System**

<b>Street Classification</b>	<b>Residential Driveways</b>	<b>Commercial Driveways</b>
Arterial	Not Allowed	Allowed for consolidated driveways serving multiple commercial and mixed use sites only
Collector	Driveways allowed for multi-family buildings and multiple properties only; no “back out driveways” and no single family driveways	Allowed, but limit spacing
Connector	Allowed	Allowed, but limit spacing
Local	Allowed	Allowed, but limit spacing

**Table A-3. Access Management Intersection Standards**

<b>Functional Classification</b>	<b>Minimum Spacing (no closer than)</b>	<b>Maximum Spacing (no farther apart than)</b>
Arterial – Signalized	660’	1,320’
Arterial – Not Signalized	330’	660’
Collector – All	200’	528’

The consulting team also suggested that the City could consider implementing minimum connectivity standards for subdivisions and large commercial sites.

Table A-4 shows representative standards of the type the City could consider adopting for its use.

**Table A-4. Potential Connectivity Standards**

Minimum Intersections/Square Mile	200
Maximum Block Perimeter – Residential	1,400'
Maximum Block Perimeter – Commercial and Mixed Use	1,800'
Maximum Block Length – Residential	330'
Maximum Block Length – Commercial and Mixed Use	528'

**Collector and Connector Streets.** A final street network issue of potential concern for Cheyenne is the lack of *collector and connector streets* in the local network. *Collectors* are streets that provide local continuity within the city between nearby neighborhoods and commercial centers. Collectors provide some parallel redundancy with arterials, but are designed for lower speed travel and are not continuous over as long a distance as arterials. *Connectors* are streets that connect immediately adjacent neighborhoods to each other, and connect neighborhoods to abutting neighborhood convenience centers and nearby commercial areas. Connectors relieve traffic on arterials by allowing direct circulation between abutting areas so that local trips are not forced to circulate on arterials. However, connectors should also be designed to discourage cut-through traffic.

Cheyenne’s new draft street standards do not include a connector classification. Adding this street type to the functional classification system could help the city promote context sensitive and pedestrian friendly design for certain neighborhood streets that, due to their location and continuity, may carry some traffic that is moving between neighborhoods.

## 2. Street design standards

As the City works to provide mobility while at the same time achieving local goals for quality of life and economic vitality, it may be helpful (both to the public works department and to private sector developers) to have access to additional street designs for use within developed areas. This could be accomplished in part by adding new, more modern design layouts and cross sections to the local street design standards.

Two primary principles could help guide these changes:

- All new construction and reconstruction should result in “complete streets;” and,
- Streets should add value to, rather than subtract value from, abutting lands.

**Complete Streets.** *Complete streets* are facilities that are designed to accommodate safe and convenient movement by all modes of ground transportation: motor vehicle (personal travel and freight movement), public transit, bicycles and pedestrians. By requiring complete street layouts and cross sections, the City could increase flexibility in its citizens' local travel choices, reduce dependency on automobile travel, improve safety for bicyclists and pedestrians, set the stage for growth in local public transit service, and mitigate some of the negative effects of inexorable increases in traffic and congestion.

**Streets That Add Value.** Another key principle the City could consider using to guide development of street standards is that public streets should not have the effect – due to their design – of diminishing the value of abutting and nearby lands. Many cities and metropolitan regions of the US have been wrestling with this issue in recent years, and Cheyenne has the opportunity to adopt some of the techniques and concepts that have emerged. Generally, the concept is that the local economy and tax base should be strengthened, rather than weakened, by public street investments.

Property values can be negatively impacted when:

- Streets are designed to maximize the flow rate of pass-through traffic at the expense of local circulation and access to abutting and nearby properties; and,
- Streets are built with inadequate attention to appearance and amenity.

Overly-wide, unattractive streets with high volumes of fast-moving traffic often have the effect of “blighting” abutting properties and neighborhoods. These areas respond by drawing back from the street and by changing land use to auto-oriented uses (fast food restaurants, drive-through banks, auto repair and supply, etc.). Such areas may also reach a point where the only viable economic use is large-footprint retail (discount big box stores) with large surface parking lots buffering the stores from the street. To the extent that these are uses and activities desired by the City, that outcome may be acceptable. However, to the extent that the land disinvestment and use changes are not consistent with City objectives, such trends would represent unintended consequences of street design decisions.

Cities through the US are pursuing programs to design and build (and rebuild) streets with the intended outcome that they might add value to abutting properties, stabilize existing neighborhoods and commercial areas, and grow the local tax base. In some places, these programs go under the catch phrase, “great streets” (Austin, TX, St. Louis, MO, and Lake Oswego, OR, among many others).

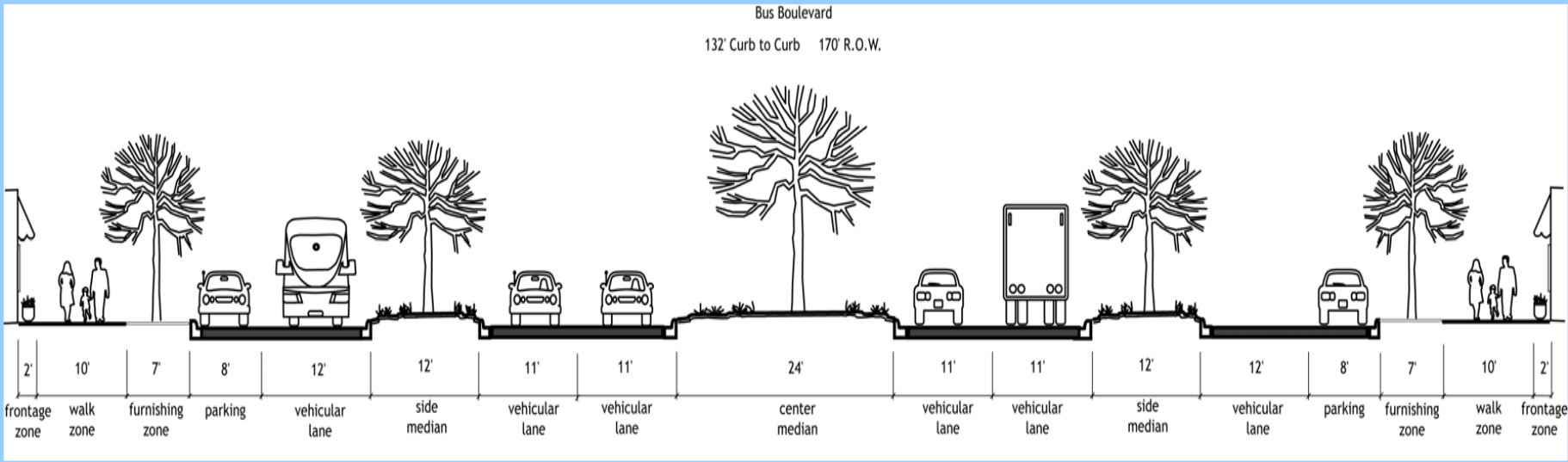
If Cheyenne decided to pursue something similar, a first step might be to update its local street design standards to allow selected new street types. Some examples of potentially desirable street types that are not part of the City's

current street design standards include the multiway boulevard, multilane parkway, divided avenue and yield street, all described below.

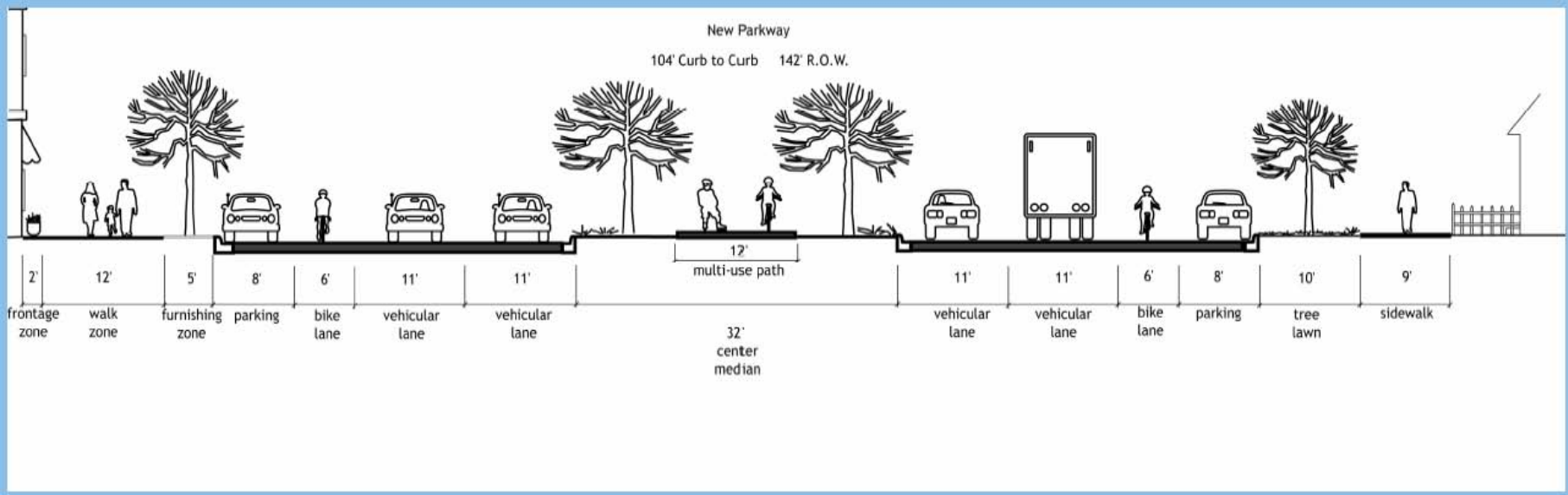
**Multiway Boulevards.** These are streets that carry pass-through and regional traffic in four or more center lanes, and carry local circulation and access traffic in side lanes. Multiway boulevards usually include a planted center median separating the directions of travel in the center (through) lanes. In ideal situations, side medians are also provided to separate through lanes from local lanes. The side access streets provide on-street parking and well-designed sidewalks.

Figure C-1 illustrates and gives sample measurements for each part of such a boulevard. This particular facility (from a project under development in Honolulu, HI) has been planned as a bus boulevard with the intent that local buses would use the side streets and regional express buses would operate in the center through lanes.

**Figure C-1. Multiway Boulevard**



**Figure C-2. Multilane Parkway**



Bicyclists on this facility will be able to use the side street lanes where speeds of motor vehicle traffic are slower. The medians provide “pedestrian refuges” for pedestrians crossing the street at the midpoint and on either side of the center through lanes. While the center median limits left turns, it none-the-less facilitates access to abutting properties by providing separate, low-speed access or frontage streets with on-street parking and accommodation for pedestrians.

Multiway boulevards solve one of the central dilemmas in urban transportation – how to provide a significant rate of flow for pass-through traffic without forcing changes in use on abutting properties. However, such facilities are expensive and are appropriate only in corridors where sufficient right of way is available, capacity needs are great, and the City wishes to maintain the viability of existing land uses and neighborhoods. They are also appropriate only in commercial and mixed use districts. An extensive literature is available on the subject of multiway boulevards, including The Boulevard Book, by Alan Jacobs (Jacobs, MacDonald and Rolfe, The Boulevard Book, MIT Press, 2002). An example of a small city with a boulevard is Chico, CA (the Esplanade). The newest boulevard in the United States is Octavia Boulevard in San Francisco (Figure C-2 below).

**Figure C-3. Octavia Boulevard in San Francisco**



**Parkways.** Another potential addition to Cheyenne’s street standards is the multilane *parkway*. The Western states have a long tradition of parkways, including the City of Denver, where such important streets as East Sixth and Monaco were designed as beautiful, well-treed avenues that today carry substantial traffic volumes while at the same time maintaining the value of abutting homes.

**Figure C-4. Monaco Parkway in Denver**



An example of a cross section of a multilane parkway (again from a Honolulu project) is shown in Figure C-2 . The key feature of this facility is the generous center median that provides space for large street trees and in this case a center sidewalk/trail element (similar to East Sixth in Denver). Parkway are appropriate for use on streets classified as arterials and major collectors where these larger facilities traverse residential areas, and in many instances can be used in commercial districts as well. Figure C-2 shows residential land uses on the right and to commercial/mixed use land uses on the left.



Parkways provide some of the same benefits as boulevards—attractive, tree-lined design with a comfortable environment for walkers and bicyclists. On-street parking can be incorporated into parkways where appropriate. Separating the two directions of travel has a number of potential benefits that may be desirable in specific situations:

- narrowing the perceived width of the street, thereby reducing speeding;
- enhancing pedestrian comfort and safety by providing a middle-of-the-street pedestrian crossing refuge;
- providing a more extensive shade canopy to reduce heat gain in the summer;
- reducing storm water discharge through water absorption by street trees; and,
- managing access by eliminating left turns where they are undesirable.

In commercial areas the loss of left-turn access to businesses will tend to encourage more of a storefront environment. Impacts of reduced auto access can be mitigated by the increased level of pedestrian activity and by providing parallel local streets. Parkways are more expensive and require wider rights of way than undivided multilane streets. However, at the same time they are safer than undivided multilane streets and are less likely to induce undesired changes in abutting land use.

**Avenues.** North American cities have made extensive use of avenues – tree-lined streets, particularly in residential areas. Cheyenne shares this tradition in its older neighborhoods, but its newer subdivision streets have been built with an emphasis on width of the traveled way and little attention to street trees or other amenities. (See Figure C-5 below.)

**Figure C-5. Comparison of Streets in Cheyenne**



Recent Subdivision Street – No Street Trees



Older Street with Cottonwoods

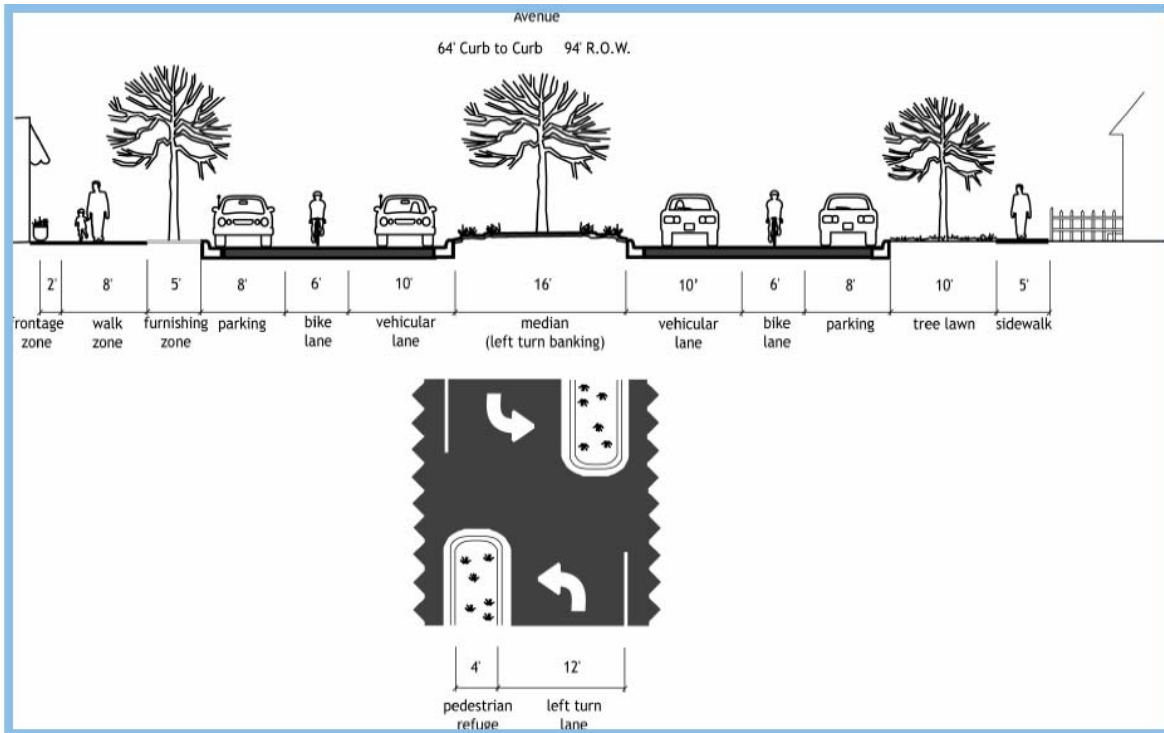
Street trees confer many benefits to the traveler, the abutting property and the street itself. These include:

- Reduced speeding due to changed driver perceptions of the street size and type;
- Reduced heat gain on and near the street during summer months;
- Increased on-site absorption of storm water;
- Increased and stabilized property values;
- Improved pedestrian environment, encouraging more walking;
- Improved air quality, especially reduced levels of localized ozone;
- Screening of unsightly vertical roadway elements (power poles, etc.); and,
- Extended life of asphalt pavements, reducing resurfacing costs.

A policy Cheyenne could consider would be the encouragement of increased use of street trees in new subdivisions as well as the insertion of street trees in any streets undergoing major reconstruction by the City or State.

Another concept that could be used where an overly-wide street is causing speeding problems or where the City hopes to encourage redevelopment is the two-lane avenue, an example of which is shown in the cross section in Figure C-6 below. In this figure, residential land use is shown on the right and commercial land use on the left. The median provides space at intersections that can be used for left turn lanes if needed.

**Figure C-6. Divided 2 lane Avenue**



**Local Streets.** Many new local streets built in the U.S. over the past 50 years are wider than they should be or need to be. Overly-wide neighborhood streets are a public policy concern for a number of reasons:

- Building neighborhood streets wider than necessary is unsafe. On the subject of residential streets, the engineering profession relies on a publication of the Institute of Traffic Engineers (in cooperation with the Urban Land Institute, American Society of Civil Engineers, and National Association of Homebuilders) entitled Residential Streets. That document cautions against over-sizing of residential streets as follows: “Residential street designers should select the minimum width that will reasonably satisfy all realistic needs, thereby minimizing construction and annual maintenance costs, while at the same time maximizing the livability of the community. The tendency of many communities to equate wider streets with better streets and to design traffic and parking lanes for free-flow traffic is a highly questionable practice. Certainly providing for the free flow of traffic in two 11- or 12-foot lanes that are never occupied by parking can encourage traffic to speed. Encouraging slower traffic speeds through narrower streets can improve the safety of streets for residents. Some studies indicate that as a street becomes wider, accidents per mile increase exponentially; and that the

safest residential street may be a narrow street.” (Residential Streets, Third Edition, ITE, NAHB, ULI, ACSE, 2001 – ULI Catalogue # R34. p. 22)

- The national standard for highway design, the American Association of State Highway and Transportation Officials’ “Green Book” also cautions against overly wide roadways. For example, in the section on local urban roads and streets (pp. 394 – 407) the green book recommends 10- or 11-foot travel lanes and 7-foot parking lanes. Many local public works departments have in recent years published street design standards emphasizing narrower cross sections in neighborhoods. (A Policy on Geometric Design of Highways and Streets, Fourth Edition, AASHTO, 2001)
- The current research literature on the relationship between street widths and safety clearly indicates that the transportation profession as a whole is concluding that overly wide local streets have a negative effect on safety. One recent example is an article published in the Journal of the American Planning Association that compares accident rates on different types of streets and concludes “...clear zones and other forgiving design practices often have an ambiguous relationship to safety in urban environments, and may be associated with declines in safety performance.” (“Safe Streets, Livable Streets.” Eric Dumbaugh. Journal of the American Planning Association, Summer 2005, pp. 283 – 298. p. 291)
- Finally, there is a strong and direct relationship between vehicle speed and the likelihood a pedestrian struck by a motor vehicle will be killed. (See Figure C-7.) If Cheyenne is to build pedestrian-friendly neighborhoods, it will be important to build neighborhood streets that operate at 25mph or less. Every additional foot in lane width encourages higher average vehicular speeds, regardless of posted speed. This should be of particular concern in neighborhoods with schools.

**Figure C-7. Pedestrian Survival Rates and Vehicle Speed**

<b>PEDESTRIANS VS. SPEED</b>	
<u>Vehicle Speed</u>	<u>Survival %</u>
20mph	95%
30mph	55%
40mph	15%

Source: Charlier and Associates.

- Overly wide streets are inappropriate in a residential context. One of the most important initiatives in transportation planning and design today is Context Sensitive Design (CSD) also known as Context Sensitive Solutions (CSS). This is a nationwide program of sweeping significance that was initiated by the Federal Highway Administration and that has been supported by legislation both in Congress.. The basic idea is that streets should be designed to be appropriate to their specific context. The general consensus of leading CSS professionals is that neighborhood streets should not be wider than absolutely necessary. Wide streets are inappropriate to the residential context and detract from community and neighborhood values. A summary of current directions in CSS can be found in an article published in the August issue of the ITE Journal. (“Linking Safety-Conscious Planning and Context-Sensitive Solutions.” Michael Meyer. ITE Journal, Institute of Transportation Engineers, August , 2005.)
- The emerging practice nationally in smart growth is to use traffic calming measures (including on-street parking and narrow lanes) as safety enhancement measures. As new neighborhoods are developed in Cheyenne, the City has the opportunity to avoid a need for future traffic-calming retrofits (traffic circles, speed bumps, etc.) by building streets that do not encourage speeding in the first place. Figure C-8 below shows an example of a street in Cheyenne where traffic calming measures were necessary because the width of the street encourages speeding. The trend nationally is toward building narrower streets as a safety enhancement. A good summary on this subject is: Best Development Practices: A Primer for Smart Growth. Reid Ewing. American Planning Association (APA) in cooperation with the Urban Land Institute (based on work completed for the State of Florida), available from APA.

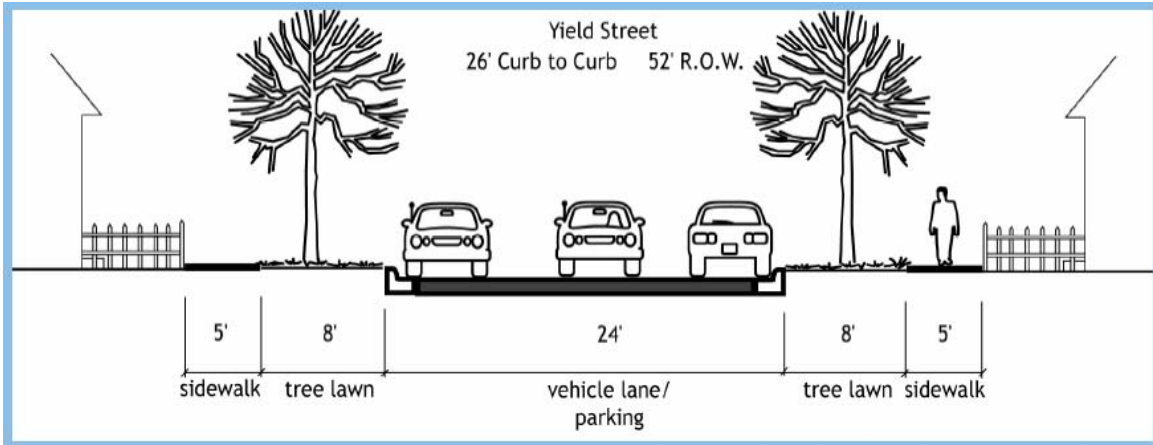
**Figure C-8. Traffic Calming Measures in Cheyenne**



- Narrower streets reduce storm water runoff. Another significant trend in transportation engineering is the widespread adoption of “sustainable” design practice. The federal government and several leading non-governmental organizations addressing this issue recommend minimizing storm water runoff through a variety of measures, including adopting narrower street cross sections for local streets. A recent regional guide published by Portland Metro states, “...narrower roads are encouraged in the Green Streets project to both encourage travel at posted speeds as well as to reduce overall impervious surface.” The new draft LEED-ND standard for neighborhood developments sets the objective of reducing impervious area and street runoff by 25%. (See Green Streets: Innovative Solutions for Stormwater and Stream Crossings. First Ed., 2002. Portland Metro; and LEED for Neighborhood Developments. Preliminary Draft. September 6, 2005. National Resource Defense Council, U.S. Green Building Council and Congress for the New Urbanism.)
  
- Wide streets increase the cost of new housing and the cost of maintenance. An emerging policy concern in Cheyenne will be the affordability of new housing. While “affordable housing” programs and requirements can address a small part of this need, providing low cost market rate housing can also help expand home ownership opportunities for Cheyenne residents. Adding four feet of curb-to-curb width on neighborhood streets increases the cost of those streets by about \$800,000 per centerline mile. Even in relatively high density neighborhoods, this increases the cost of building a home by at least \$4,000 – just for additional pavement. (Charlier and Associates) Of course, the actual cost impact is higher because more land is required for wider streets, leaving less land for housing. Wide streets also cost more to maintain. Many of the key costs of maintenance (snow removal, patching and sealing, sweeping, etc.) and periodic rehabilitation (resurfacing, etc.) are direct functions of the square footage of surface area of the street. Reducing street widths saves the money, reducing tax burden.

One street type Cheyenne could consider adding to its standards is the “yield street.” The yield street is narrow and yet allows for parking on both sides of the street. The resulting street has a traveled way width that varies depending on the location of parked cars. Where two cars are parked on opposite sides of the street, only one lane is available for moving vehicles. If two vehicles approach such a point from opposite directions, one must yield to the other (hence, the term “yield street”). Yield streets reduce street construction costs and storm water drainage, encourage vehicles to move slower, and yet allow for numerous areas where a 20-foot wide clear area is available for parking of fire apparatus (usually at driveways where cars cannot park along the street).

**Figure C-9. Yield Street**



### 3. Pedestrian Environment

It is clear from the PlanCheyenne process that the City and its citizens intend to foster neighborhoods and commercial areas that are walkable, both as a mobility strategy and as a quality of life measure. To implement the new policies of Plan Cheyenne, the City could consider the following strategies:

- Ensure sidewalks are installed in all new development;
- Set standards for good pedestrian design, especially of sidewalks; and,
- Set priorities for public investment in pedestrian districts.

**Sidewalks in New Development.** The ShapeCheyenne document recognizes the importance of sidewalks. Policy 4.3.d states:

***Interconnected Neighborhood Street, Bikeway, and Sidewalk Patterns***

*Design neighborhood street systems to encourage internal walk, bike, and auto circulation while limiting traffic volumes and speeds on neighborhood collector and local streets with housing fronts. Install sidewalks on both sides of neighborhood collector streets and at least one side of residential streets in accordance with street design standards.*

A key to implementing this policy will be requiring sidewalks along new subdivision streets and in new commercial and mixed use projects. Often cities face a dilemma when developers argue that sidewalks are not needed because of the small size of the subdivision, or because of its peripheral location relative to the rest of the city. However, years later these subdivisions become neighborhoods well within the developed part of the city. If their streets were not provided with sidewalks it can be difficult or impossible to retrofit sidewalks into the streets at a later date. One way to avoid this is to ensure that all new development includes sidewalks on both sides of every street as a matter of public policy.

**Pedestrian Design Standards.** Good walking environments are clearly part of the PlanCheyenne vision. To implement this vision, Cheyenne could consider ensuring that sidewalk design reflects modern principles of pedestrian design.

Good sidewalk design requires allocation of adequate space to the pedestrian function and also requires the standardized placement of key elements of roadway infrastructure to organize the street cross section in a manner that allows for safe, comfortable sidewalks. City streets are divided into three general zones horizontally at the surface level:

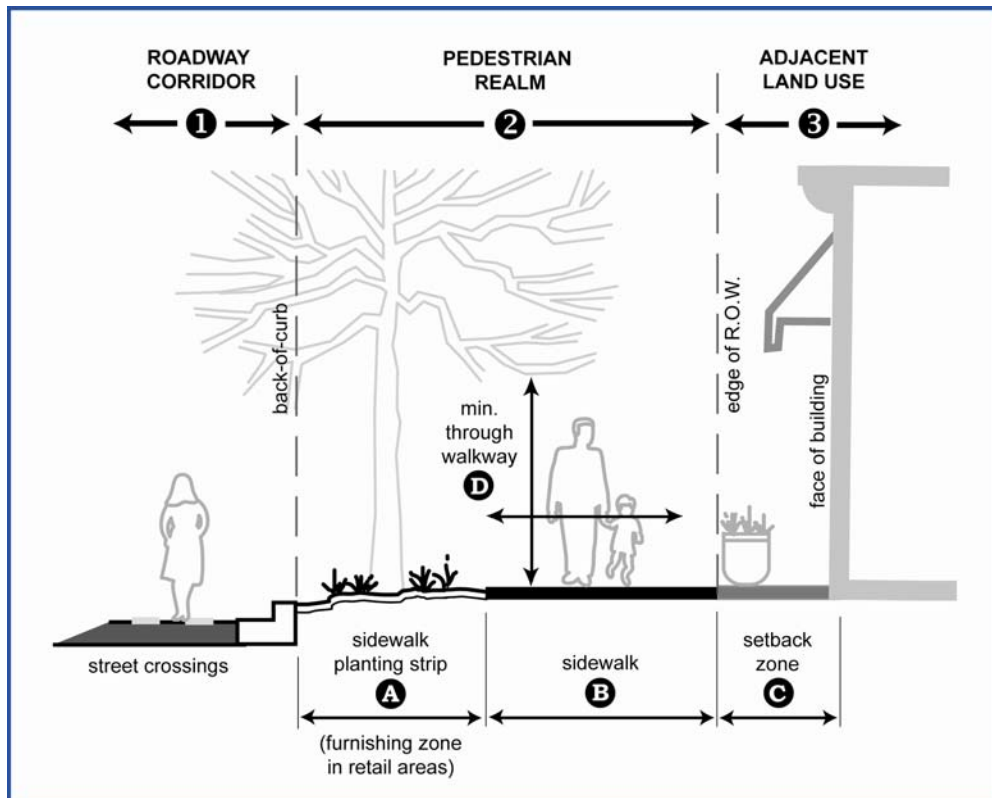
- the roadway corridor;
- the pedestrian realm; and,



- the adjacent land use.

Figure C-10 below shows the interrelationship of these three primary street elements. Each of the three plays a role in providing for a favorable walking environment.

**Figure C-10. Systematic Orientation of Street Elements to Encourage Walking**



### *The roadway corridor*

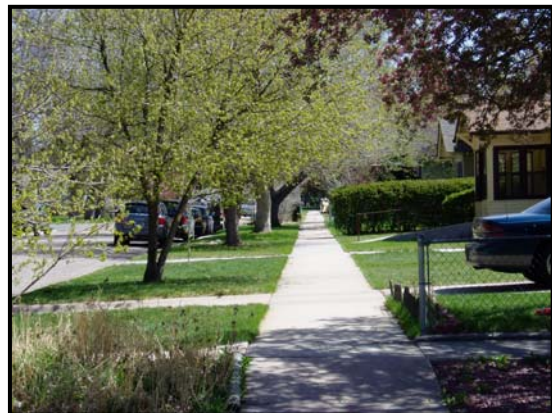
The “roadway corridor” part of the street influences the walking environment through its size and the speed of its traffic. Where high volumes of traffic will be present, on-street parking can provide a buffering effect for pedestrians. Where streets are wide (more than two or three lanes) special attention should be paid to cross walk orientation and design.

Safe crossings are critical to create a safe and comfortable walking environment. As a first step the city could provide marked, visible, and signalized crosswalks at intersections. Additional steps include timing signals so that pedestrians have sufficient time to cross streets, reducing street width or providing medians so that pedestrians have to cross no more than three travel lanes, and encouraging mid-block crossings and shorter block lengths so that crossings are more frequent. Short blocks help to slow down cars which make it safer to cross streets at designated crossings.

### *Adjacent land use*

The importance of “adjacent land use” is often overlooked in pedestrian planning and design. For most walking purposes, pedestrians will be attracted to streets where the abutting properties help provide a comfortable, attractive walking environment. In commercial areas, this means there will be a coherent street wall with numerous doors and windows (no blank walls) and with awnings and street furniture. In residential areas, this means an appropriate relationship between the sidewalk and abutting homes and buildings with front yard setbacks and trees in lower density neighborhoods. In areas where there are apartment buildings, the relationship of adjacent land use to pedestrian realm should be similar to that found on good commercial streets. Figure C-11 below shows examples of existing streets in Cheyenne with good design relationships.

**Figure C-11. Good Pedestrian Design in Cheyenne**



### *The pedestrian realm*

The “pedestrian realm” itself is also important, of course. Within the horizontal street space allocated to the pedestrian realm, it is useful to assign space systematically to three functions: the planting strip (residential) or furnishings zone (commercial); the sidewalk; and, a setback zone. In Figure C-9, the setback zone is shown within the adjacent land use area, which will often be the case where buildings are setback from the right of way line. In other instances where buildings are built up to the right of way line, the setback zone is normally provided within the pedestrian realm of the street.

North American cities, including Cheyenne, have allowed development of sidewalks that are ineffective at providing good walking environments because they have not followed these design principles. Common examples include sidewalks attached to the back of curbs and street trees or other vegetation installed within the sidewalk part of the pedestrian realm, impeding pedestrian mobility, especially for those with disabilities. Often the problem is exacerbated by the inadvertent location of underground utilities in such a way that proper

placement of surface features is not possible. The most common example of this is the placement of power poles and other street elements in the sidewalk due to poor planning.

Figure C-10 shows an example of a design orientation that can be applied along urban streets in a variety of settings to provide a safe, comfortable walking environment.

Neighborhoods and places that include continuous sidewalks on both sides of the street and that separate those sidewalks from the street with a reasonably sized planting strip are enjoyable places to walk. Sidewalks provide a dedicated, safe path for pedestrians. The planting strip buffers and protects pedestrians from the street and also makes the walking environment more pleasant. The area for the planting strip is usually 5 feet wide and often includes street trees, planting strips, utility poles, fire hydrants, bike racks, etc. In commercial settings this area is commonly called the Edge and Furnishings Zone.

Sidewalks are required to be a minimum of 4 feet for accessibility reasons. Increasing the sidewalk width to 6-8 feet is better for walking because people can pass each other or walk side by side. Safe and comfortable walking environments also include pedestrian amenities such as bus shelters, pedestrian furniture, signage for wayfinding, and street lighting. Some of these amenities are more appropriate in commercial settings than in residential ones.

### **Priorities for Public Investment in Pedestrian Districts**

Given limited funds, Cheyenne may wish to consider tiering its pedestrian investments, focusing first on downtown and proposed activity centers where, because of the variety of land uses, high levels of pedestrian activity are expected

**Resources:**

Burden, Dan, et al., *Street Design Guidelines for Healthy Neighborhoods*, Center for Livable Communities, Local Government Commission, January 1999. [www.lgc.org](http://www.lgc.org).

Helps communities implement designs for streets that are safe, efficient, and aesthetically pleasing for both people and cars. It features helpful guidelines that specify street widths and implementation strategies.

Charlier Associates. *Downtown Kailua Pedestrian Environment Guidelines and Honolulu- Ewa and Kapolei*, <http://www.charlier.org/index.php?id=1,91,0,0,1,0>. Provides information on the science behind creating safe and comfortable places to walk.

Institute of Transportation Engineers, *Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities: An ITE Proposed Recommended Practice*, 2005. [www.ite.org](http://www.ite.org). Guidance for traffic engineers on designing roadway improvement projects in places where community objectives support walkable communities, compact development, mixed land uses, and support for pedestrians and bicyclists.

Institute of Transportation Engineers, *Guidelines for Neighborhood Street Design*, 2001. [www.ite.org](http://www.ite.org). Information for traffic engineers on how to build more neighborhood-scaled streets.

United States Environmental Protection Agency. *Parking Spaces/Community Places: Finding the Balance through Smart Growth Solutions*, 2006. <http://www.epa.gov/smartgrowth/parking.htm>. A survey of innovative solutions that help communities manage parking and promote smart growth development patterns.