Emigration Canyon Township General Plan - DRAFT

Salt Lake County, Utah
Public Review Final Draft
Emigration Township Planning Commission
May 2012
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Emigration Canyon Township General Plan

Salt Lake County, Utah


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How to Use the Plan

The design of this General Plan is intended to make the use of this document as user friendly as possible. A number of elements have been included in order to make navigation through the digital version of the plan simple and understandable.

Table of Contents

In the margin of each page is a small table of contents, as shown to the left, showing the user which section of the plan they are currently reading. By clicking on this table, users will be taken directly to the main Table of Contents page at the beginning of the document, from which users can navigate to any other section of the General Plan.

Best Practices Hyperlinks

Within the document are numerous internal hyperlinks that, when clicked, take you immediately to another page. Throughout the document are small icons for each of the “Best Practices” topics, such as those shown to the left. These icons indicate to the user that there is more information located in the Best Practices section that is pertinent to the topic being discussed.

Additional Hyperlinks

Throughout the document are additional hyperlinks, highlighted in blue text, such as this: hyperlink. This change in color tells the user that there is additional information within the document, or a website located outside the General Plan, that will provide further information. Clicking on this blue text will take the user directly to that part of the plan or to the external website.

Bookmarks

The portable digital file (PDF) format of this General Plan allows for additional bookmarks that improve navigational ability. These bookmarks, located on the left side of the main document browser, can quickly move users from one section to another.
Introduction

Background

The Emigration Canyon Township General Plan is a part of an on-going Salt Lake County effort that began over forty years ago. In 1965, Salt Lake County adopted a General Master Plan for the entire Salt Lake Valley. This plan divided the county into seven large planning districts, one being the Emigration Canyon District. In 1985, Salt Lake County adopted the first Emigration Canyon Master Plan as an update to the 1965 planning efforts. A new Emigration Canyon General Plan was developed by Salt Lake County and adopted in November 1999.

All research and public input that was gathered during the previous General Plan update process has been utilized in the creation of the current document. All existing material was evaluated and updated where necessary to include all feedback and public workshops in which the community participated. General plans for all areas of unincorporated Salt Lake County are available for review on the Planning and Development Services web site: http://www.pwpds.slco.org/zoning/html/generalPlan.html

Emigration Canyon Township encompasses a large portion of northeastern Salt Lake County within the Wasatch Mountain Range of northern Utah. The Emigration Township General Plan study area is bordered by Salt Lake City on the west, follows City Creek Canyon and Red Butte Nature Reserve Area boundaries on the north and northeast, and is bordered by Summit County on the east and a small segment of Morgan County. The southern border is the ridgeline separating Emigration Canyon from Parley’s Canyon, which runs in a southwesterly direction toward the boundary of Salt Lake City.

Emigration Canyon provides easy access to Salt Lake City, Park City and the Salt Lake Valley via the connection to I-80 in neighboring Parley’s Canyon. Emigration also provides easy access to the University of Utah and downtown Salt Lake City via Emigration Canyon Road, which becomes Sunnyside Avenue or 800 South, a busy Salt Lake City street.
Emigration Canyon has become a popular place to live for many people who work in Salt Lake City or Park City due to the easy access it provides to the Salt Lake Valley and points beyond while also providing a living environment with notable natural beauty and serenity.

**What is a General Plan?**

A general plan is the long-range plan for the physical development of a community. The overall intent of this general plan is to make the planning process simple, fair, efficient, and predictable. For each area of the county it spells out what kind of development is considered desirable and appropriate.

The general plan is an advisory, non-binding document. This plan is to be used by the Salt Lake County Council, Emigration Canyon Township Planning Commission, Emigration Canyon Community Councils, developers, property owners, and the staff of various county departments, as a policy guide for making decisions. This general plan contains the community’s official best practices regarding land use, community design, transportation, housing, the natural environment, business and economics, and community services. Its policies apply to both public and private properties. The general plan is consulted when considering zoning changes, site plan review for specific developments, and other land use matters.

**Planning Authority**

The general plan is required by Utah State law to meet certain minimal standards. The general plan is a legally adopted policy document, and has been prepared to comply with Utah State law. Utah Code 17-27a-401 establishes a minimum list of topics to address. Local governments are given some flexibility in the organization of these elements and may address other topics of local interest or importance.

The general plan is intended to be comprehensive, long range, and internally consistent. Its policies apply to all property within the township. General plans in Utah are authorized and required by the Land Use Development and Management Act (LUDMA) located in Utah State Code, Titles 10 and 17.

Under the State of Utah enabling legislation for planning and zoning, Section 17-27a-401 provides a description of a long-range, comprehensive
plan: “In order to accomplish the purposes set forth in this chapter, each county should prepare and adopt a comprehensive, long-range general plan.” The general plan should address the “present and future needs of the county” as well as provide for “growth and development of the land within the county or any part of the county.” When adopted, this general plan should function as the compass of the community; fundamentally, it is a long-range, broad policy document used to guide future decision-making related to land use and community development. The general plan should also be considered to be flexible to account for future changes unforeseen at the time of its creation.

General plans have a long-term horizon and generally look out twenty or more years. However, these plans should be reviewed and updated on a regular basis.

Over time, changes will occur for many reasons, including unforeseen conditions, new development trends, and advancements in technology and information. These variables are subject to review and it may be necessary to amend the plan from time to time to ensure that it remains relevant. Requests for amendment may be submitted by individuals or initiated by the county itself. Most amendments propose a change in the land use designation for a particular property. Policy and text amendments also may occur. The Projects section of the document is intended to be reviewed and updated annually, allowing for evaluation of progress within the community, as well as the addition of new projects. Any proposed amendment will be reviewed to ensure that the change is in the public interest and would not be detrimental to public health, safety, and welfare. All amendment proposals require public hearings by the Emigration Canyon Township Planning Commission and Salt Lake County Council and must comply with Utah State statutes. Section 17-27a of the Utah State Code defines the process for adopting and amending the Plan. In addition to the Utah State Code, the Salt Lake County Zoning Ordinance sets forth the procedure for a request to amend the General Plan in Chapter 19.90.070.

Core Concepts

1. A general plan is the long-range plan for the physical development of a community.

2. The general plan is an advisory, non-binding document.
3. The general plan is required by Utah State law to meet certain minimal standards.

4. The Context section covers the existing conditions of Emigration Township as of 2012.

5. The Best Practices section is an expandable encyclopedia of policies to guide community planning decisions.

6. The Projects section is a community-driven listing of improvements or programs to be considered for implementation within Emigration Township.

General Plan Organization

The Emigration, Kearns, Magna, Millcreek and other General Plans will all follow a consistent template and organization. The general philosophy behind this standardized format is to ensure plans can be easily updated and regularly used by County staff, elected and appointed officials, and the general public.

All township general plan updates will include reorganizing the general plans into a new structure, as described below:

1. Context
   a. Goals and Objectives
   b. Emigration Canyon History & Current Conditions

The Context section covers the existing conditions of Emigration Township as of 2012. This section describes the current conditions of the planning area in terms of land use, mobility, housing, economic base, facilities, parks, and open space. It also describes, through goals and objectives, the community values and overall vision for its future. This section of the plan does not answer any questions or provide recommendations on how to implement this community vision; it simply describes the baseline and the future goals of the community.

The goals and objectives of the plan are fairly broad in scope and are intended to provide an overall guide for County Planners and decision-makers in their administration of Salt Lake County. Each ordinance developed or planning decision made by the County should tie back to at
least one of the General Plan goals or objectives.

2. **Best Practices**
   a. Purpose Statement
   b. A-Z Topics (in alphabetical order)

The Best Practices section is an expandable encyclopedia of policies to guide community planning decisions. These best practices are to be used as a guide for planning commissioners, County staff, and other County officials when making decisions. These best practices are not intended to be used as a hard and fast rule, but will give decision-makers a benchmark against which to measure planning proposals and decisions.

Salt Lake County has developed a list of nearly **200 Best Practice topics** that could be included in the general plans over time. This list will continue to expand. Initially, the plans will include best practices on thirteen general topics that are required by law or were identified as essential to current planning issues in the County. Subtopics within these initial Best Practices will be expanded into their own Best Practice topics over time.

The first two pages of each Best Practice topic can be included in staff reports to assist county elected and appointed officials when reviewing a proposal. These two pages include an executive summary of the “Core Concepts” of the Best Practice, and the “Key Questions” that a planning commissioner or staff member should ask when reviewing a proposal.

3. **Projects**
   a. Purpose Statement
   b. A-Z Projects, Programs, & Regulations
   c. Project Locator Map

The Projects section is a community-driven listing of improvements or programs seen as important throughout the Township. Similar to the Best Practices section, the Projects section is an infinitely expandable inventory of projects, programs, or regulations specific to each township planning area. This list of projects will be reviewed annually in concurrence with County budget cycles, and when appropriate, the County will explore steps toward implementation. These may include capital facility expenditures, programs to be developed, ordinances to be updated/developed, or plans to be updated/developed. Specific project summaries will describe the following:
Where is the project physically located within the county?

Why is the project needed?

What are the objectives of the project?

What needs to be done?

Who are the potential stakeholders?

What are the initial recommendations?

What is the time frame for the project?

The Projects section allows the County to track and demonstrate progress and successes in implementing the overall planning area vision and in making Salt Lake County a better place in which to live, work, and recreate.

General Plan Map

The General Plan Map is the map referred to by the County staff and officials, and the general public when considering a change to the land uses within the County. This map provides the County and public a physical guide to implementing the overall planning area vision and the goals and objectives identified in the general plan by identifying the relative level of change or anticipated growth for an area.
Chapter 1 Context

Core Concepts

The Context section is intended to start a conversation about the future of the township by outlining the context for all future decision-making. This section is specific to each township general plan and is intended to provide a snapshot of the township at a given point in time, and an overview of existing conditions on a variety of topics.

- The Context section does not provide any recommendations or future plans.
- The Context section should be updated with each major general plan update, typically scheduled in five-year intervals.
- The goals and objectives of the Context section should guide all township decision-making, and should be reviewed as part of any decision-making process.
Emigration Canyon Township Goals & Objectives

Goal 1: FRAMEWORK

Establish a framework for development that follows sustainable best practices and is consistent with the vision and core values of the community.

Objective 1.1: Best practices will be developed that are consistent with the community’s vision following the development and adoption process used by Salt Lake County for inclusion in general plans.

Objective 1.2: Collaborate with townships, cities and other jurisdictions for coordinated and sustainable development of the region with regard to the use of County resources and services.

Goal 2: COMMUNITY

Develop a community with quality design features that encourage and support social and community relationships, as well as healthy, active lifestyles.

Objective 2.1: The concepts of good community design will be preserved and fostered at all levels.

Objective 2.2: Spaces and opportunities that invite community involvement, create a sense of place, and that honor the history of the canyon is encouraged.

Objective 2.3: Develop a network of physical connections including trails that maximize the number of potential routes between neighborhoods to encourage a sense of community.

Objective 2.4: Maintain a sense of entry into the community.
Goal 3: MOBILITY AND TRANSPORTATION

Roads will be improved to accommodate the needs and ensure the safety of Emigration Canyon residents and other users while minimizing associated impacts on the environment and adjacent development.

Objective 3.1: All public and private roads must be built and maintained to County standards.

Objective 3.2: Road improvements should be designed from a comprehensive perspective to accommodate all users, including bicycles and pedestrians, wherever possible and appropriate.

Objective 3.3: Work to develop trailhead parking in appropriate areas where trails exist or are planned.

Objective 3.4: The feasibility of public transit options and connections to and from Emigration Canyon Township should be examined.

Goal 4: OPEN SPACE, RECREATION AND TRAILS

The quality of life and rural open character of Emigration Township will be protected as development occurs, through the preservation of open lands, a network of public and private open space, trail corridors and facilities for active and passive recreation.

Objective 4.1: Continue to pursue a land acquisition program for future open space preservation and access. Educate property owners regarding options for the preservation of open space.

Objective 4.2: Canyon residents’ understanding and support for future trails and other recreational opportunities throughout the community will be solicited.

Objective 4.3: The public, trail-user groups, and neighborhood groups should be involved when implementing the adopted Emigration Canyon Trails Master Plan.

Objective 4.4: The creation of a funding partnership to acquire, plan and manage trailheads and trails will be pursued.
**Objective 4.5:** Develop partnerships for trail use and parking enforcement, maintenance and education. Work to educate the public regarding the responsibility of trail users.

**Objective 4.6:** Pursue County funding for the maintenance of the Township’s recreational amenities.

**Goal 5: LAND USE**

Maintain zoning which provides for single-family lots and housing styles in locations consistent with canyon resources and constraints. Accommodate well-planned and well-executed single-family housing opportunities which are compatible with the canyon environment and which are enhanced by abundant open space.

**Objective 5.1:** Existing zones that protect the unique canyon setting of the area including the retention of existing large-lot zoning appropriate for the mountain setting will be maintained.

**Objective 5.2:** New development which incorporates open-space design, such as clustered housing subdivisions will be encouraged where feasible and appropriate.

**Objective 5.3:** Subdivision design that promotes physical connectivity between developments will be encouraged.

**Objective 5.4:** Commercial development will be limited to existing commercially zoned areas.

**Objective 5.5:** The Ridgeline Protection Areas identified and delineated in the previously adopted Emigration Canyon General Plan (1999) shall be adopted as part of the 2012 Emigration Canyon Township General Plan.

**Objective 5.6:** The rural dark-sky character and aesthetic of the canyon should be encouraged and enhanced through the development of night-time lighting guidelines and ordinances.
Goal 6: PUBLIC SERVICES AND UTILITIES

Provide public facilities and services that meet the needs of the community.

Objective 6.1: Public services and utilities that are appropriate in scale and designed for the Canyon’s environment will be provided.

Objective 6.2: Community response committees, neighborhood watches, and surveillance for crime prevention and public safety will be promoted.

Objective 6.3: Coordinate with Salt Lake County Public Works to develop and support a capital improvement plan that will provide appropriate township infrastructure and public services compatible with the township land use plan.

Objective 6.4: Collaborative regional infrastructure planning “public-private partnership” projects will be encouraged.

Objective 6.5: All residential and commercial areas of Emigration Township will be accessible by the Unified Fire Authority of Salt Lake County.

Objective 6.6: The risk of wildfire damage will continue to be minimized through education programs on fire dangers in wild land urban interface areas and through the adoption of standards such as those contained in the Wildland Urban Interface Code (WUI).

Objective 6.7: Encourage coordination between Salt Lake County, the Salt Lake Valley Health Department, water districts, private water systems, and other agencies to ensure that septic systems are maintained and monitored so as not to negatively impact the public water supply.

Objective 6.8: The feasibility of developing a sewer system, either canyon-wide, or small systems on a more limited basis in parts of the canyon will be explored.
Goal 7: NATURAL RESOURCES

The environmental quality of Emigration Canyon Township will be protected, maintained and improved for future generations. Existing studies and data will be used to reduce the risk to life and property from the impacts of natural and development-related hazards.

Objective 7.1: Coordinate with applicable agencies to enforce regulations that minimize the impacts of development and prevent damage to natural systems and sensitive lands.

Objective 7.2: Protect valuable environmental resources which contribute to the quality of life in Emigration Township.

Objective 7.3: Guidelines for the use of renewable sources of energy should be developed and adopted.

Objective 7.4: Continue pursuing initiatives for recycling and alternative waste disposal options.

Objective 7.5: The community’s groundwater supply must be protected from significant depletion or hazardous contamination.

Objective 7.6: Effective and efficient landscaping and grading will be used to prevent soil erosion and slippage. Native landscaping suited to the canyon environment will be encouraged to make efficient use of water resources.

Objective 7.7: Development will be adapted to the existing terrain in order to protect public health and safety and to minimize risks from known geologic and other hazards.

Objective 7.8: Land use and development patterns that incorporate nature into the built environment and increase public awareness and responsibility toward the natural environment will be pursued.

Objective 7.9: Significant vistas and landscapes that have special visual and aesthetic qualities will be preserved and maintained. Important view corridors and open areas in the canyon will be maintained through sensitive site and building design.

Objective 7.10: Critical and historic wildlife movement corridors will be protected, and, where possible enhanced by access to water features and riparian habitats. Human interference into critical wildlife habitat areas will be minimized, including discouraging the feeding of wildlife.
Emigration Canyon History and Current Conditions

The first account of Emigration Canyon by an Anglo explorer is believed to have been made by John C. Fremont in 1845. Knowledge of his and other explorers’ accounts helped inspire others to journey west using this route.

In 1846 the Donner-Reed Party (usually referred to as the Donner Party) traveled through Emigration Canyon and what is now Salt Lake City on their westward journey. The dense brush and boulders toward the canyon mouth made travel impossible and forced the party to cut and chop their way over Donner Hill on August 22, 1846. A marker exists today at that site to commemorate the event. The three-week delay experienced by the party passing through Emigration Canyon on their way to California was significant and contributed to the historically-noted demise of the party in the Sierra Nevada Mountains where they were snowed in for the winter.

Emigration Canyon is significant in Utah history as the original route used by Mormon pioneers entering the Salt Lake Valley. It was near the mouth of the Canyon in 1847 where Brigham Young famously declared, “This is the right place, drive on.” Throughout Emigration Canyon, there are several historic markers designating where the Mormon pioneers passed through while traveling to the Salt Lake Valley. An example is the Last Camp Site marker commemorating one of the historic camps used by the Mormon pioneers before they entered the Salt Lake Valley. Emigration Canyon was declared a National Historic Landmark in 1961. This rich history is also celebrated at This Is the Place Heritage Park at the mouth of Emigration Canyon.

After the Mormon Pioneer Trail was established, Emigration Canyon functioned as the gateway to the town forming in the Salt Lake Valley. Between 1849 and 1851, many people migrated through Emigration Canyon on their journey west for the California Gold Rush. Later, the canyon was part of the Pony Express Trail during the short and fabled time period that it existed from 1859 to 1861.

Emigration Canyon was also important in the early days for the natural resources that it supplied to the growing population in the Salt Lake Valley. Timber was cut and brought to a sawmill at Little Mountain where it was processed for use in the city. In addition to timber, there was also an abundance of lime in the canyon, which was quarried and burned in lime kilns. Evidence of early quarrying may still be found today in some exposed rock areas.
Year-round homes were built in Emigration Canyon as early as 1852 when lumber grants were given to John Killyon and D.H. Wells (who later became Governor of Utah) to use canyon resources. Year-round residences were established to supervise those timber-harvesting efforts. Homesteading began in the Canyon in the 1870’s, and continued through the early 1900s. In addition to homesteading, grants of private land were given as partial payment for the new Union Pacific Railroad, which was completed in 1869. From early in its history, it was clear that Emigration Canyon held great value as a place to retreat from the pressures of city life, while still being in close proximity to civilization. Today its beauty is still enjoyed for many of those same reasons.

A variety of commercial developments and ventures were tried in Emigration Canyon over the first century of settlement. In 1864 German-born Henry Wagener established Wagener’s Brewery in the lower portion of the canyon. This brewery was one of the largest in the West and was popular for summer social gatherings, and with the soldiers stationed at nearby Camp Douglas. The brewery was destroyed by fire in 1914. In 1907 the Emigration Canyon Railroad was built by LeGrand Young. The railroad originally brought stone from several quarries in the Pinecrest area to the area where the University of Utah stadium parking lots now exist. People began riding the empty railcars up into Pinecrest for personal recreational pursuits. The railroad company subsequently purchased open-air cars for passenger transportation up the canyon. During this same time period, two local hardware merchants named Strevell and Patterson built the Pinecrest Bed and Breakfast Inn. This resort was easily reached by train and allowed people a place to dine and dance within the canyon. Though these developments, the “Pinecrest community” was born. Many small lots were created in the canyon and sold for “tent houses” or small cabins. The railroad accommodated the recreational users by selling dayfare tickets which were known as “Campers Tickets.” The availability of newer, inexpensive building products, such as concrete, created a lack of demand for quarried stone. As a result, the need for the train diminished, and in 1917 the train service was discontinued.

Emigration Canyon became more accommodating to year-round living as automobiles became commonplace. The once-popular tent houses and small cabins were renovated to become larger cabins, and some eventually became year-round homes. The presence of more year-round residents also fueled the development of additional commercial institutions and ventures. In 1949 Ruth Evans purchased a Salt Lake Trolley car and had it moved up the canyon to open Ruth’s Diner on the site where it still
exists today. In 1977 another restaurant was built next to Ruth’s Diner. That structure, which today is commonly known today as the “old Santa Fe Restaurant” existed as a variety of different restaurants over the years and is currently vacant. Salt Lake County has however been working with a new property owner to open a commercial venture in this location. Other establishments which existed in the canyon over time were the Skycrest Inn, two different inns both called the Emigration Inn, a YWCA girls camp, a small store at Kelvin Grove and the Sun and Moon Café which currently exists in the Canyon. Camp Kostopulos, a residential all-year camp for persons with disabilities was established in the Canyon near Ruth’s Diner starting in 1967, and currently occupies a 25-acre site.

With its rich history, Emigration Canyon has served in many different capacities over the last 160 years. It was part of the Federal Sheep Driveway, where sheep were driven through the Canyon to the Rio Grande Railroad station in Salt Lake City. It was also used as a summer pasture for grazing sheep. Given its cold climate and altitude, the Canyon was also the site of a small ski slope at Little Mountain which featured a towrope. Elsewhere in the canyon, there existed a skating pond and riding stables. Unlike other Wasatch Front canyons, Emigration Canyon maintains a sizable year-round residential population, as well as its striking natural beauty, a balance that is valued today by the current residents.

Credits: Historical information and photos extracted from the Emigration Canyon General Plan (1999) Salt Lake County Public Works; Ruth’s Diner website; Utah State Historical Society; Deseret News; and, Emigration Canyon Township Facebook Page.

Emigration Canyon Today

1.1 Census

According to the U.S. Census Bureau 2010 Demographic Profile, the total population of Emigration Township is 1,567 persons with a median age of 44.9 years. Approximately 43.2% of the population is employed in the educational and health services sector of the economy. In addition, the occupation most frequently reported is in the management and professional category. The reported median and mean household income levels put Emigration Township among the more affluent areas of Salt Lake County.

There were a total of 589 households identified in the Township in 2010 with an average household size of 2.66 people and an average family size of 2.98 people. A total of 677 housing units were identified with 589 of
those occupied and 88 are identified as vacant. The U.S. Census defines “vacant housing units” as those that are for rent, rented but not occupied, for sale only or sold but not yet occupied, for seasonal or recreational use or other vacancies, including abandoned units. Approximately 88% of all housing units within the township are owner occupied.

1.2 Land Use & Zoning

Land Use

The Emigration Canyon Township study area includes approximately 12,000 acres. The majority of this acreage is currently undeveloped. Approximately 4,800 acres, or 40% of the total land is privately owned. The rest of the land in Emigration Canyon is publicly owned or managed—either by the U.S. Forest Service, which manages around 4,100 acres (34%), or Salt Lake City, which owns approximately 3,100 acres (26%). Salt Lake County owns or holds 306 acres as open space within the canyon. Lots in Emigration Canyon are dominated by single-family residential uses. There are 1,136 identified lots of record in the canyon.

The Salt Lake County Zoning Ordinance and its associated maps define and identify zone classifications. Zone classifications define allowable land uses and the maps indicate zone boundaries. Zoning was first introduced in the canyon in 1951. Emigration Canyon underwent a major rezoning to reflect the appropriate land uses and lot sizes compatible with the canyon environment in July of 1987. This zoning remains relatively unchanged. Today the predominant zoning classifications in the Canyon are FR-0.5, FR-1, FR-5, FR-20 and C-2/zc zones. Emigration Canyon contains many small lots of record (non-conforming to the existing base zones), which have existed since the early 1900’s. Many of these lots were originally intended to serve as camping lots, and are only twenty-five feet wide. Provisions in the Zoning Ordinance dictate the consolidation of these “substandard lots” under a defined set of criteria. The goal is to consolidate these historic parcels into lots that more closely comply with the modern requirements of the underlying zone.

During 1997 an overlay zone was applied to unincorporated areas of Salt Lake County in the Wasatch Canyons, including Emigration Canyon. The overlay zone and associated zoning regulations are known as the Foothills and Canyons Overlay Zone or FCOZ. The general purpose of FCOZ is to preserve the natural character of the Wasatch Canyons by establishing standards for foothill and canyon development. FCOZ standards allow
development to be evaluated on a site-by-site basis, while ensuring that development will be compatible with the natural landscape. FCOZ prohibited the development of structures on slopes greater than 30-percent grade, but did allow for exceptions on lots of record. FCOZ also set forth standards for required setbacks from stream channels and wetland areas and other sensitive lands. The FCOZ regulations are perceived by many to be more restrictive of development than previous land use regulations and have by all accounts had an impact on development in Emigration Canyon since their adoption.

Residential Land Use

Privately-owned land has been developed into a variety of residential lot sizes. Although most of the privately-owned acreage remains undeveloped, the portion of land that has been developed mostly surrounds the main thoroughfare or has easy access to it in established subdivisions. The housing units in the canyon are predominately single-family dwellings. Emigration Canyon is predominately comprised of residential neighborhoods that are single-family housing types. Negligible amounts of medium-density residential uses are present, and it is a community that is dependent upon and oriented to the automobile.

Commercial Land Use

Emigration Canyon has limited commercial development. Currently existing commercial establishments include Ruth’s Diner and the Sun and Moon Cafe. It is unlikely that commercial development will expand greatly beyond these sites, due to conditions placed on the existing commercial zones, the lack of commercial zoning available elsewhere in the canyon, the land constraints of the environment, and the limited desire for additional commercial zoning in the township.

Utility and Infrastructure Uses

Parallel to the way in which Emigration Canyon has historically acted as a gateway and route for settlers passing through on their journey westward, the canyon today functions as a gateway for many utility services entering the Salt Lake Valley. Present in Emigration Canyon are numerous designated utility rights-of-way. These existing rights-of-way (ROWs) include pipelines that carry crude oil and natural gas, and there are also fiber-optic communication cables and electrical transmission lines. These ROWs are an important feature in the canyon as they often serve as the de-facto trails and function as wildlife.
Emigration Canyon also houses wireless telecommunications infrastructure. This infrastructure is mainly located at a site on Little Mountain. This property, owned by Salt Lake City, houses equipment for numerous service providers. Despite this concentration, Emigration Township does have numerous areas where wireless phone and other providers encounter service issues and problems. The upgrading and expansion of service is often dependent upon finding a site suitable for this purpose. Such a site would not impact aesthetics, would not intrude on designated ridgelines and would be ideally situated in a place to overcome “dead spots” which are caused by the physical topography of the canyon itself. This has proved challenging. Several companies have looked at enhancing services in the canyon in recent years and will undoubtedly continue to pursue solutions in the future. A new wireless telecommunication facility was approved by the Emigration Township Planning Commission in January 2012 for installation in the canyon. This new facility will be located across from Standel Cove. It is intended to improve emergency communication and response in Emigration Canyon. Space in the facility has also been set aside for privately-owned wireless radio equipment to facilitate emergency communication functions.

Related to public infrastructure, the centrally located Emigration Canyon Fire Station acts as a de-facto “community center” within Emigration Township. This Unified Fire Authority (UFA) facility was completed in 2008, and includes a meeting room that is used for Emigration Community Council meetings, and other public events. The Fire Station also serves as a directional landmark within the canyon since it sits adjacent to the entrance to the Emigration Oaks Subdivision.

1.3 Canyon Water System and Supply

The Emigration Improvement District (EID) is the main water purveyor in Emigration Canyon. The EID is classified as a Special Improvement District under Utah State Law. There is also a small water provider in the Pinecrest area that services approximately twelve homes. Emigration Canyon is considered a secondary watershed by the Salt Lake City Department of Public Utilities, so the canyon is not included within Salt Lake City’s Extraterritorial Jurisdiction to regulate water resources.

The EID provides water to approximately 270 homes in Emigration Canyon. The system has 450 total meter-boxes available. There are approximately 180 meter-box connections that are vacant at the present
These connections are available to be used on vacant lots within the canyon, and for existing residences that have private wells and did not sign up for EID water services.

The EID completed a major system-wide water line upgrade and expansion in 2007. This upgrade ensured that a fire hydrant was located within 250 feet of every home on the system and that fire flow from the hydrants would produce a minimum of 1,500 gallons per minute of water.

The EID water system is gravity fed and includes two reservoirs and three wells. The two reservoirs provide approximately 300,000 and one million gallons of capacity respectively. Typical system-wide indoor water use is in the range of 50,000-60,000 gallons of water per day outside the summer months. The total system water use now reaches about 250,000 gallons per day during the hottest and driest summer months when irrigation use is at peak demand. The Emigration Improvement District promotes water conservation by canyon residents. Water restrictions were enacted during the summer of 2000. That year water usage peaked at approximately 225,000 gallons per day. Voluntary restrictions lowered this usage to approximately 150,000 gallons per day.

1.4 Water Quality and Septic Systems

In 2000 Emigration Creek was listed as an impaired waterbody for recreational use by the Utah Division of Water Quality (DWQ) based on data collected showing high bacterial levels (fecal coliform). “Impaired waters” are those waterbodies that currently fail to meet water quality standards established by the state. Subsequent to listing, the state is required to develop a Total Maximum Daily Load (TMDL) water quality study to establish pollutant level reductions in impaired waters and achieve water quality standards. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive on a daily basis and still meet water quality standards. The TMDL process results in load allocations to each pollutant contributor. These allocations often result in regulatory controls and mandates.

At the time of data collection, the state water quality standards for pathogens were for “Total” and “Fecal Coliform”. Since that time, the state has adopted E. coli as the pathogen standard; therefore this study addresses E. coli concentrations.

Coordinated monitoring efforts by the State Division of Water Quality, Salt Lake County, Salt Lake Valley Health Department (SLVHD), Salt Lake City, University of Utah and U.S. Geological Survey (USGS) suggest potential
origins of E. coli contamination in Emigration Creek include improper solid waste disposal, stormwater runoff, domestic animals including pets, wildlife, seepage from old sewage holding vaults, and poorly sited or failing septic tank leach fields. Continuing studies and monitoring are ongoing in order to identify the main source(s) of contamination if it is possible to narrow down the source(s).

The Emigration Creek TMDL submitted to EPA will include pollutant load reduction goals to meet the water quality standard for E. coli. This will be accomplished with a collaborative and coordinated effort of agencies, organizations and the Emigration Township community.

All existing and new development is required by State Law to provide individual septic tank drain fields and holding vaults. The Salt Lake Valley Health Department is charged with responsibility for regulating these facilities for compliance with laws governing groundwater contamination and source water protection. Due to the terrain and physical limitations of Emigration Canyon, a canyon-wide sewer system is not feasible or practical and is unlikely to be developed. Smaller treatment systems on a more limited basis could be feasible is some areas of the canyon as an alternative to an all-inclusive sewer system.

The State Division of Water Quality presently does not consider urban stormwater runoff as "wastewater" but does require that best management practices (mainly erosion and runoff controls) be implemented during both construction and post-construction phases.

1.5 Transportation and Roads

Traffic safety conflicts on Emigration Canyon Road have become a notable issue for canyon residents and have been pushed to the forefront of concerns that County Public Works is often asked to address. In addition to a gradual increase in traffic over time from the growth of the residential population in the canyon, it is believed that more traffic travelling from Salt Lake City to Park City may be using Emigration Canyon as an alternate route to avoid heavy traffic on Foothill Drive where it intersects Interstate 80. An even more significant impact is the popularity of Emigration Canyon for recreational road bicycling activities. Residents describe the popularity of this activity as having "exploded" in recent years, and this increased usage has led to conflicts with residents and has created "share the road" issues. Given the physical parameters of the canyon and the canyon road, natural hazards (loose rocks, drainage issues, visibility), the lack of consistent recreational bicycle lanes in some areas where the canyon is too narrow to make them
feasible, the conflicts and potential worry about conflicts between bicycles and motor vehicles has been of increasing concern to residents, recreational users, and Salt Lake County.

1.6 Sanitation and Waste Disposal

Waste disposal issues have become a growing concern in parts of Emigration Canyon. During the winter months, weather conditions make it difficult to move individual residential cans up or down steep driveways and cans left by Emigration Canyon Road cause conflicts with snow removal efforts and block traffic flow when they are tipped over in the roadway. In warmer weather, cans create an additional traffic hazard for cyclists by blocking bicycle lanes and impacting safe travel along the narrow main canyon road.

Salt Lake County Public Works has been working to find alternatives to curbside waste collection in parts of Emigration Canyon. Subsequent to the County Council amending the Public Right-of-Way ordinance to prohibit cans on the roadways before and after collection days, the need to provide alternatives for waste disposal and recycling became apparent. The Sanitation Division has now installed two Community Container sites in Emigration Canyon, one near the fire station and the other adjacent to Sunnydale Lane, in order to address the right-of-way ordinance changes. The Sanitation Division is seeking a location for a Community Container site for the Pinecrest and Killyon’s Canyon areas, which is challenging because the site must be large enough to be functional and accessible for both service truck and residents and must be located far enough away from Emigration Creek to satisfy all regulatory requirements.

1.7 Public and Recreational Land Use

Publicly owned lands constitute the majority of land area in Emigration Canyon. These lands are owned by the U.S. Forest Service and the Salt Lake City Corporation and are maintained for watershed and open space purposes. All of the land owned or managed by these groups have been designated Anti-Degradation Areas by the Salt Lake County 208 Watershed Plan and the Utah State Code. This designation may ensure that much of the publicly owned or managed land remains in its natural state. These lands contain many of the trails that exist in the canyon. These trails are identified in the Salt Lake County Trail Access Plan. Future trails are identified in the adopted Emigration Canyon Trails Master Plan. Canyon trails are generally multi-use designated, accommodating a mix of hiking and biking activities. Policies regarding future use of trails and improvement of potential trails are outlined in the
Over the years, the amount of open space in Emigration Canyon has increased through purchases using the Salt Lake County Open Space Fund. This includes property adjacent to the Emigration Place entrance known as Perkins Flat, a 37-acre Open Space acquisition. The most recent addition was a 269-acre parcel in Killyon’s Canyon acquired by Salt Lake County in 2010. This property is known as the Killyon’s Canyon Open Space Preserve. The Preserve was dedicated on June 8, 2011. This property is pristine and contains rolling meadows, thick forests and great vistas. It has proved popular since its dedication, which has caused some issues and concerns with parking and traffic for residents who live near the trailhead. Salt Lake County Public Works is exploring solutions to the parking and traffic issues in this area to alleviate impacts on the residents that live adjacent to the preserve entrance.

1.8 Natural Resources

Emigration Canyon Township is characterized as Intermountain Semi Desert by the US Department of Agriculture. Within the township areas of Salt Lake County there are a variety of environments such as the foothills of the Oquirrh Mountains, the canyons of Emigration Township, and the lowlands and wetlands of the Wasatch Valley floor.

Emigration Canyon has a variety of natural conditions and ecological systems that should be given careful consideration as development occurs. These conditions include topography, climate, soil and vegetation, wetlands, wildlife, geology, water resources, and air quality.

Topography and Slope Stability

Elevations in Emigration Township range from about 5,100 feet near the mouth of canyon to just over 8,900 feet at the summit of Lookout Peak along the northern township boundary. Due to the natural topography, slope stability issues are the most prominent geologic hazard encountered in the canyon. Historically, landslides have occurred in Emigration Canyon. Much of the canyon is dominated by lands where slopes exceed 30 percent. Current County zoning regulations, the Foothills and Canyons Overlay Zone (FCOZ) is restrictive of development on slopes greater than 30 percent. Current Salt Lake Valley Health Department regulations do not allow leach fields on slopes over 25 percent. Since many residential lots in Emigration Canyon were platted in the distant past without regard to the natural topography, some existing lots have slopes too severe to
accommodate safe development.

Climate

Emigration Canyon’s climate, like Salt Lake County and the rest of the southwestern states, is very dry. Emigration Canyon has all four seasons with moderately hot summers and cold winters. July is typically the hottest time of the year, with an average high of 89 degrees; the average low in January is at 20 degrees. The average annual precipitation is 19.4 inches. Emigration Canyon’s average low precipitation is in July at .74 inches, and its average high is in May at 2.09 inches.

Vegetation

Emigration Canyon has varied topography and a variety of vegetation zones which correlate, to slope, elevation and soil types. The foothill communities located at the lower part of the Canyon are dominantly scrub oak of various varieties. Scrub oak is the most extensive plant community in the canyon environment. It begins in the lower foothills at about 5000 feet and covers most of the areas up to about 7,500 feet. Streamside communities are dominated by maple, chokecherry, birch, alder, and cottonwood. Many varieties of deciduous shrubs are also found in this community. Rising in elevation, plant communities are dominated by aspen, fir, and spruce. At higher elevations, the most abundant trees are the Douglas Fir, Englemann Spruce and Alpine Fir. Above the timberline, at high elevation, a variety of shrubs dominate the vegetation pattern.

Geologic Setting

Emigration Township is located along the western flank of the central Wasatch Mountain Range within the Middle Rocky Mountain physiographic province. Bedrock units found across the township have a range of physical properties and some can pose severe development constraints because of instability, shrink/swell potential, or soil characteristics.

Soil characteristics are an important factors in determining development potential and the limitations for a site. This is especially important in all areas of Emigration Township since septic systems are exclusively used for wastewater disposal. Important soil characteristics include the slope, percolation rates, drainage patterns, depth-to-water table, texture, presence of clays, erosion potential, and bearing capacity. Emigration Canyon has several soil types and a substantial amount of the township is identified with “moderate” constraints for development based on the soil characteristics.
1.9 Natural Hazards

Emigration Township covers a unique combination of geologic conditions and topography which result in areas of natural hazards. The areas with the highest risk from natural hazards typically include steep hillsides, adverse geology, problem soils, or close stream proximity. Additional hazards result from the exacerbation of natural conditions by human activities and modification of the natural environment. This might include disturbances of soil and rock creating slope stability problems and erosion resulting from changes in natural drainage patterns due to development activities.

Seismic Hazards

Emigration Canyon Township is located near the center of the Intermountain Seismic Belt (ISB). The ISB is a zone of earthquake activity that runs north-south through the Intermountain West from northwestern Montana in the north, through Wyoming, Idaho, and Utah, and southern Nevada/northern Arizona to the south. Earthquake-related hazards pose a significant risk to all the residents of Salt Lake County. The Salt Lake Segment of the Wasatch Fault is considered active since it has ruptured the ground surface during several major earthquakes within the past ten-thousand years. Earthquake experts predict about a 20 percent chance of a large earthquake occurring sometime during the next fifty years along the Wasatch Front.

No known active faults have been mapped within Emigration Canyon Township. The nearest active fault is the Salt Lake segment of the Wasatch Fault, located about two-and-a-half miles west of the mouth of Emigration Canyon. Seismic hazards in Emigration Township will come primarily from the seismic waves that are generated during large earthquakes, should such an event occur. However, given the nature of sediments found in Emigration Canyon, the soil liquefaction potential is typically considered to be low.

Hydrology and Flood Hazards

Emigration Creek and its tributaries are the principal drainages carrying runoff through Emigration Canyon. Most creeks have well defined channels that have experienced historical flooding. Some small drainages flow continuously and some intermittently throughout the year. All drainage tributaries have the potential for high flows during the spring runoff period. After a winter of heavy precipitation, many parts of Emigration Canyon dealt
with high water and flooding issues during the Spring of 2011.

Jurisdictional wetlands have been delineated by the U.S. Army Corps of Engineers along Emigration Creek. There may be some isolated wetland areas along tributary drainages.

Air Quality

Recently, with all the changes that are related to our environment, the federal government has set new standards for air emissions that all of Salt Lake County must follow. These regulations at this time are not being enforced, but in the next several years the government is giving each state a time when they must comply. Presently, all of Salt Lake County is designated as a PM10 non attainment area. In Utah, ambient PM2.5 data collected over the past seven years indicate that the new 24-hour standard is usually violated across most of the state’s monitoring network. However, the annual standard is not violated anywhere in the state; hence there will be no assumption of a non attainment area boundary described by a metropolitan area.

Wildfire Hazards

Residential development in Emigration Canyon often interfaces with areas of undeveloped canyon lands that exist in a natural state. These undeveloped lands may be privately owned, owned by the U.S. Forest Service or Salt Lake City or held under a conservation easement preserving them in perpetuity as open space. This bordering of residential development on open lands or what is termed the Wildland-Urban Interface (WUI) is part of the charm of the canyon for many residents. It allows residential development to exist in a setting close to nature with open space, natural vegetation and wildlife, and, limited neighboring development. This same charm does have some inherent risks associated with it, mainly dangers from wildfire that can and do occur in the foothills and canyons from time to time. Whether these fires are started due to natural causes such as lightning, or by human activities, they can quickly spread across the thicker natural vegetation of undeveloped areas and threaten adjacent residential development.

Homeowners need to take precautions to be “Firewise”, a term that comes from the National Fire Protection Association (NFPA) and their programs related to reducing the risk of development from wildfires. Firewise programs are intended to teach people how to adapt to living with the potential of wildfire to prevent losses. There are many aspects
Elements can include creating “defensible space” around residences, attention to plant and landscaping materials to choose appropriate species, and building construction methods and materials to make structures more fire resistant. Creating defensible space may involve the selective thinning and pruning of vegetation for fire protection purposes, and not necessarily clear-cutting vegetation. Homeowner education and information is also an important component of Firewise programs. The Emigration Canyon Community Council has been at the forefront in developing a Firewise program and information for Emigration Canyon. In 2011, Emigration Canyon was recognized for the distinction of being one of nine pilot Firewise Communities that had been in existence for over ten years. Ongoing efforts have included securing grants to raise awareness and fund vegetation management activities.
Chapter 2 Best Practices

Topics

- Capital Facilities
- Census
- Communications
- Corridors
- Definitions
- Energy
- Housing
- Land Use & Mobility
- Maps
- Open Space
- Parks
- Subdivisions
- Sustainability
Core Concepts

1. The Best Practices section is intended to serve as the primary source of County policies to be used when making planning decisions for the Township.

2. The Best Practice section applies to the entire County, and is not Township General Plan specific.

3. The Best Practices section is expandable, and is organized alphabetically, with each topic having its own identifying icon.

4. The Best Practices includes only what are believed to be the very best planning standards practiced throughout the state, region, nation, and globe.

5. The Purpose Statement of each Best Practice explains why this topic is of relevance, and why it is important for the County to consider it during decision-making.

6. The Core Concepts of each Best Practice list the key concepts that any reader should know about that Best Practice topic.

7. The Key Questions section of each Best Practice lists a series of questions that decision-makers, community members, staff, and applicants should ask themselves about a proposal to evaluate whether or not it meets the standards of the Best Practice.

8. The Best Practices section is advisory, and while it should be heavily relied upon for decision-making, these standards must ultimately be implemented by ordinance.

9. The Best Practices section includes all topics required by Utah State Code to be included in a General Plan.

The Best Practices section is an expandable encyclopedia of policies to guide community planning decisions. These best practices are to be used as a guide for planning commissioners, County staff, and other County officials when making decisions. These best practices are not intended to be used as a hard and fast rule, but will give decision-makers a benchmark against which to measure planning proposals and decisions.

The first two pages of each Best Practice topic will be attached to staff reports to assist County elected and appointed officials when reviewing a proposal. These two pages include an executive summary of the “Core Concepts” of the Best Practice, and the “Key Questions” that a planning commissioner or staff member should ask when reviewing a proposal.
Capital Facilities

Purpose Statement

Use of public funds for facilities or services should serve one of two purposes: they should either improve the quality of life of the residents of the community or encourage private investment that will improve the economic climate of the community. Capital facilities are public structures and services necessary to support the community, including but not limited to roads, water, sewer, waste disposal, affordable housing, schools, community centers, parks, and libraries. The quality of capital facilities have a profound effect on the form and functioning of any community. A systematic planning effort is vital in making decisions about the construction and financing of public facilities. While there are several options for funding of public investment, communities must be cautious in determining which financing mechanism is most appropriate, which can vary widely depending on the type of project.

Best Practices

Core Concepts:

1. Capital facility plans should be prepared in compliance with legal requirements so that communities have the option of using this important funding source as the need may arise.

2. Develop and adopt a capital improvements plan (CIP) for each proposed capital utility project in order to monitor progress and anticipate difficulties.

3. Prepare regular capital needs inventories in order to evaluate conditions of capital assets and anticipate future needs and costs in the next three to five years.
4. Encourage community and regional participation in resource conservation programs in order to reduce demand for water, sewer, solid waste, road, and energy facilities, thereby reducing the need for costly future facility investment.

5. Coordinate future road construction needs with Salt Lake County and metropolitan planning organization (MPO) departments.

6. Balance road maintenance funds for routine works, periodic works, and special works projects.

7. Ensure that community centers and libraries are centrally located, accessible to all, and serve as multi-use buildings, especially as community gathering places.

8. Use an existing park facilities assessment and public input to develop community-specific park standards and determine capital needs for future facilities.

9. Analyze public financing options carefully, as they can vary by project, and should be tailored to meet specific community needs.

10. Consider using special assessment areas (SAAs) and various types of redevelopment areas (RDAs), which seem to be the financing mechanisms most suited to the needs of unincorporated Salt Lake County.

**Key Questions:**

How will this project improve the quality of life in our community?

How will this project encourage private investment in our community?

What financing mechanism will be required to fund this project?

Have we prepared the legally required plans to proceed with this project?

What present facility needs are we facing as a community that will be addressed with this project?

What future needs are anticipated with the completion of this project?

Are we centrally locating this capital asset, accessible to all, and designing with sustainability in mind?
Chapter 2 - Best Practices

Discussion

Capital Facility Planning Process: Utah Legal Requirements

Capital facility plans should be prepared in compliance with legal requirements so that communities have the option of using this important funding source as the need may arise. Utah law has specific requirements for capital facility plans, if the plans are to be used as the basis for calculating impact fees. Impact fees are an important means of financing capital facilities where new development is generating a portion of the demand for the facilities.

All local political jurisdictions and private entities serving a population greater than 5,000 are required to prepare capital facility plans before imposing impact fees. (Utah Code 11-36-201(2)(a)).

If used as the basis for impact fees, Utah law requires that the Capital Facilities Plan (CFP) include the following information (Utah Code 11-36-201(2)(c)):

- Demands placed on existing public facilities by new development activity.
- The proposed means by which the local political subdivision will meet those demands.

In preparing the plan, each local political jurisdiction should generally consider all revenue sources, including impact fees, to finance system improvements. Best Practices regarding potential options for financing of capital improvements are included later in this section of Best Practices (see Financing, page 10).

Utah law also has specific noticing requirements for a Capital Facility Plan (11-36-201(2)(b)), if the Plan is to be used in conjunction with the preparation of impact fees. These requirements are as follows:

All entities provide written notice of intent to prepare or amend CFP including:

- A statement of intent.
- Description or map of geographic area.
- Sent to:

(1) Each county in whose unincorporated area and each municipality whose boundaries is located the land on which the proposed facilities will be located.
Utilities\textsuperscript{1}

The community should develop and adopt a capital improvements plan (CIP) for each proposed capital utility project in order to monitor progress and anticipate difficulties. Essential to the function of a community, utility systems require careful planning and financing in order to be efficient and practical. A strategic approach to utility projects and improvements is needed to ensure that the cost of living or doing business in the community is not overly burdened by the associated costs of such projects.

The community should use a systematic approach to forecasting future utility needs. The following steps must each be addressed as issues arise. The first step is to develop and adopt a CIP for each proposed capital project to determine, monitor, and implement the following:

- Project purpose.
- Year of construction or acquisition.
- Sources of demand (i.e., new development, commercial, residential, etc.).
- Existing and projected service levels.
- Clearly identify project-wide and system-wide improvements.
- Budgeted amount.
- Financing source(s).
• Operation & maintenance costs.

• Maintain current asset base and meet future capital needs.

• Efficiently utilize tax dollars and other funds.

**Prepare regular capital needs inventories in order to evaluate conditions of capital assets and anticipate future needs and costs.** It is essential to conduct a regular capital needs inventory (CNI) in order to:

- Inventory condition of existing facilities and other capital assets (roadways, parks, etc).

- Identify deferred needs.

- Determine need for repair, replacement, betterment or expansion.

- Forecast future demand for facilities and other infrastructure.

Determine what will be needed to maintain current assets and meet future demands based on desired levels of service.

**Estimate Project Costs**

- Fully-loaded design and construction costs for each project included in the capital inventory.

- Include land acquisition, right-of-way, engineering, legal fees, contingency, etc.

- Inflation factor for future project costs.

- Impact on operating budget.

**Determine Funding Options/ Capacity**

- Determine level of funding available for future capital investment.

- Determine appropriateness of debt funding versus pay-as-you-go.

- Match funding mechanisms to projects to best utilize available resources.

- Consider all financing options.

- Plan for “stabilized rates” with periodic increases that will meet future needs without undue fluctuations in rates.
Resource Conservation

Encourage community and regional participation in resource conservation programs in order to reduce demand for water, sewer, solid waste, road, and energy facilities, thereby reducing the need for costly future facility investment. Many communities have found that an important element to addressing community utility needs is the promotion of resource conservation programs. Active conservation by a community can significantly delay the need for a new facility, or render the facility no longer needed. Stemming demand can make renovation or capacity improvements to existing facilities a much more economical or practical option. For example, a reduction in per capita water use can delay the need to construct expensive new reservoirs or pipelines in order to increase supply in urban areas.

Many conservation programs are already in place across the State. Community leaders should actively promote existing conservation programs to cultivate an ethic of resource conservation across the community.

Minimize water use in buildings and for landscape irrigation to reduce the impact to natural water resources and reduce the burden on municipal water supply and wastewater systems. Townships should promote the actions recommended by the Jordan Valley Water Conservancy District’s “Slow the Flow” campaign, sponsored by the Governor’s Water Conservation Team. More information is available at www.slowtheflow.org. The Utah Rivers Council has also spearheaded the “Rip Your Strip” program to encourage replacing water-intensive sod in parking strips with low water use plants. More information is available at www.ripyourstrip.com.

Reduce the waste hauled to and disposed of in landfills. Any encouragement to recycle and reduce waste will ease pressure on the current Salt Lake County landfill as well as delay the need to open future landfills. Promote proper disposal of office and household hazardous waste. Townships should promote participation in the Salt Lake County recycling program, which has significantly reduced the amount of solid waste taken to the County landfill. More information is available at www.sanitation.slco.org.

Other forms of conservation will help cultivate an ethic of resource conservation, even though they are not utilities controlled by the public. Assemble an energy advisory committee to develop an
overview of issues and recommendations with respect to community energy-use patterns and transportation. Promotional conservation programs are run by many utility companies in the valley. Questar Gas offers extensive energy saving tips and rebates through their “ThermWise” program. This program offers rebates to customers that upgrade to more energy efficient appliances as well as make home improvements that will reduce their demand on the utility. More information is available at www.thermwise.com.

Rocky Mountain Power operates a similar electricity conservation program, offering tips and rebates for customer participation. More information is available at www.coolkeeper.net, and www.rockymtnpower.net. Townships should also consider involvement in other resource conservation programs sponsored by the Utah Transit Authority, EnergyStar, and other organizations.

Roads

Construction

Coordinate future road construction needs with Salt Lake County and metropolitan planning organization (MPO) departments. Road construction projects must be well orchestrated from a planning angle and must also ensure that the project is both timely and financially feasible. Communities must coordinate with County and MPO governing bodies to mitigate disruptions to the surrounding roadway network during construction.

Maintenance

Balance road maintenance funds for routine works, periodic works, and special works projects. Conduct routine maintenance each year that can be funded from the yearly budget. Activities can be grouped into cyclic and reactive works types. Cyclic works are those undertaken where the maintenance occurs on a pre-determined schedule. An example is culvert cleaning, which is dependent on environmental effects rather than on traffic levels.

Reactive works are those where intervention levels, defined in the maintenance standard, are used to determine when maintenance is needed. An example is road patching, which is carried out in response to the appearance of cracks or pot-holes.
Ensure that periodic work activities are undertaken at regularly scheduled intervals to preserve the structural integrity of the road, or to enable the road to carry increased axle loadings. The category normally excludes those projects that change the geometry of a road by widening or realignment. Works can be grouped into preventive, resurfacing, overlay and pavement reconstruction.

Special works are activities whose need cannot be estimated with any certainty in advance. Such activities include emergency works to repair landslides and washouts that result in the road being cut or made impassable. Winter maintenance works of snow removal or salting are also included. A contingency allowance is normally included within the yearly budget to fund these works, although separate contingency funds may also be provided.

**Community Centers and Libraries**

Ensure that community centers and libraries are centrally located, accessible to all, and serve as multi-use buildings, especially as community gathering places. These important facilities should be located in areas that can be accessed by a variety of transportation modes, including pedestrian traffic.

Depending on the focus of the community center, ensure that the center’s activities and programs do not exclude any resident of the community. The centers should incorporate a variety of spaces and recreational amenities to meet multiple community needs. These may include art and music studios, pre-school classrooms, gymnasiums, juice bars, and sandwich delicatessens, etc.

Where possible, locate community centers in historic downtowns to preserve the “core” of the community and increase activity in the downtown area. Locating community centers in previously developed areas can usually reduce the overall capital cost required to build as they can utilize existing infrastructure investments.

Library facilities can serve as the educational and community heart of a neighborhood. They should be located close to activity centers and transit stops to make library facilities accessible to all residents. Locate libraries in multi-purpose buildings, or design them as such, to cater to a range of functions.

Where possible, locate libraries in historic downtowns in order to
Chapter 2 - Best Practices

**Preserve the core of the community and increase activity in the downtown area.** Where possible, link schools to libraries for educational programs, and for joint use of infrastructure. Support the development and access to high-quality Internet material, within libraries, that is educational and attractive to children and all residents in an age-appropriate manner.

**Parks**

Use an existing park facilities assessment and public input to develop community-specific park standards and determine capital needs for future facilities. Parks, trails and recreational facilities make an enormous contribution to the quality of life enjoyed by a community, providing opportunities for social interaction, athletic competition, family and individual recreation, and adding visual appeal to urban settings.

Salt Lake County currently enjoys 12 acres of parks per 1,000 residents, and an additional 100 acres of open land per 1,000 residents. While this is higher than the average established by the National Parks and Recreation Association (6.25 to 10.5 acres of open space per 1,000 population), this level may be more appropriate for the larger household sizes and outdoor recreation-oriented lifestyle enjoyed by many in Utah. Although widely accepted in the past, there is increased recognition that nationally-based park standards may not be getting communities what they really need. Many feel that national standards do not recognize the unique conditions, resources and needs of different communities and cultural groups. Further, these standards may unintentionally advance quantity rather than quality of facilities and may not be a true reflection of today’s needs.

However, standards can serve some useful purposes. It is important to identify current inventory levels (i.e., park acres, trail miles, recreation facilities, etc.) in each community in order to ensure that resources are fairly and equitably spread throughout the County. Standards should then be set for existing inventory and a needs assessment through public input to establish a list of priorities. Standards should be the product of a public process to determine needs, rather than the starting point.

The needs assessment should be evaluated for various demographic groups (i.e., age, household size, and geographic location). It is important that park and recreation facilities meet the needs of all residents. Generally, research shows that younger families have more interest in recreation facilities such as ball fields, while older residents are more...
inclined to cultural events and activities. Based on its unique demographic characteristics, each community should create its own set of standards.

The parks plan should designate between neighborhood-scale, community-scale, and regional-scale park facilities and should indicate whether facilities are intended to be project-wide (serving only a specific development or neighborhood) or system-wide (serving the larger community). This distinction is important when funding facilities through impact fees.

Financing

Analyze public financing options carefully, as they can vary by project, and should be tailored to meet specific community needs. Some of the most common forms of capital facility financing used by cities are not appropriate for townships in the unincorporated county.

**General Obligation Bonds**

Cities can use general obligation (GO) bonds, approved by their voters, to finance facilities. While a county can also issue GO bonds, it cannot “isolate” a portion of its electorate and obligate only the townships for the payment of the capital facilities that benefit each of them respectively. Therefore, it is unlikely that a GO bond that benefits one of the townships would ever be approved in a countywide election. General obligation bonds are not considered a likely source of financing for the townships.

**Utility Revenue Bonds**

Cities often use utility revenue bonds to finance large-scale utility facilities. In the case of the County, special service districts for water, sewer and other utilities often provide these services, and have the ability to issue utility revenue bonds. When this form of financing is used, it is important to establish utility rates that will cover the debt service without unduly burdening existing development with the cost of expanded facilities necessitated by new development. The proper balance of rates and impact fees is necessary in order to achieve fair and equitable costs.

**Excise Tax Revenue Bonds**

Revenue bonds payable from excise tax revenues are governed pursuant to [Utah State Code Section 11-14-307](#). Without the need for a vote, cities and counties may issue bonds payable solely from excise taxes levied by
the city, county or those levied by the State of Utah and rebated to the city or county such as gasoline taxes or sales taxes.

### Class B&C Road Bonds

Gasoline taxes are collected and distributed pursuant to cities and counties

<table>
<thead>
<tr>
<th>Economic Funding Tools</th>
<th>Economic Development Area</th>
<th>Renewal Area (Must Have Finding of Blight)</th>
<th>Community Development</th>
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</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>Value-added job creation</td>
<td>Renewal of blighted areas</td>
<td>General municipal development</td>
</tr>
<tr>
<td>Tax Increment Financing</td>
<td>Property tax increment with TEC approval (due to job creation), but no increment on retail component</td>
<td>Property tax increment for the entire project area</td>
<td>Limited to the use of municipal sales and property tax unless other taxing entities opt-in (Both sales and property tax of the other tax entities may be used on an opt-in basis)</td>
</tr>
<tr>
<td>Property Tools</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Blight</td>
<td>No</td>
<td>Yes, with a very tight definition tied to physical characteristics</td>
<td>No</td>
</tr>
<tr>
<td>Taxing Entity Committee</td>
<td>Yes, super-majority vote</td>
<td>Yes, super-majority vote</td>
<td>No</td>
</tr>
<tr>
<td>Defined Area</td>
<td>Yes</td>
<td>Yes</td>
<td>No, unless using opt-in for property or sales tax increment</td>
</tr>
<tr>
<td>Length</td>
<td>Negotiated with taxing entities</td>
<td>Negotiated with taxing entities</td>
<td>Negotiated with taxing entities</td>
</tr>
<tr>
<td>Additional Concepts</td>
<td>Require two separate TEC meetings (first meeting to evaluate project area proposal and project area pro forma, budget, etc. Second meeting held at least 7 days later to vote on project area)</td>
<td>Require annual TEC meetings on approved project to assess project progress</td>
<td>Ability to access state incentive fund as outlined in HB-11 of 2005 (but will depend on job creation)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Necessary and appropriate test (but for text) will be applied</td>
</tr>
</tbody>
</table>
in a formula that is based upon population and number of city or county road miles within the local government’s boundaries. These funds can be utilized by cities and counties to construct, repair and maintain city and county roads and can be utilized as a sole pledge for repayment of debt issued for those purposes.

Practical consideration for the issuance of this type of debt for most cities and counties lies with the fact that most local governments spend these funds and more on the maintenance of roads. Therefore, while it is used as the means for securing the debt, other general funds may actually be utilized by the issuer to make the annual payments or to pay for maintenance while the excise tax bonds are being retired with Class B&C road fund revenues.

**Sales Tax Revenue Bonds**

Sales tax revenues can be utilized as a sole pledge for repayment of debt without a vote of the constituents and funds can be utilized for the acquisition and construction of any capital facility owned by the issuing local government. They are frequently used for parks and recreation facilities or other city buildings such as City Hall or Public Safety buildings.

**Municipal Building Authority Lease Revenue Bonds (MBA)**

Pursuant to the Utah Municipal Building Authority Act (17A-3-301) Cities, Counties and School Districts are allowed to create a non-profit organization solely to accomplish the public purpose of acquiring, constructing, improving and financing the cost of a project on behalf of the public body that created it.

The security for a MBA bond is a first trust deed on the real property, any buildings or improvements and a security interest in any furniture, fixtures and equipment financed pursuant to a particular MBA transaction. The only pledge by the City/County is that it will remit any lease payments received from the MBA to the trustee. Bonds structured in this fashion are not considered long-term debt as the lease payments are subject to an annual appropriation by the County.

Due to the security structure, the best types of capital facilities to finance under this mechanism are those that are deemed as “essential purpose” by the bond market. Municipal buildings such as city halls, public safety buildings and public works buildings are typically considered essential public purposes. That stated, many other capital improvements and facilities have been funded using MBA bonds including parks and recreation facilities.
**Tax Increment Revenue Bonds – CDAs, EDAs and URAs**

Consider using special assessment areas (SAAs) and various types of redevelopment areas (RDAs), which seem to be the financing mechanisms most suited to the needs of Salt Lake County townships. Under Utah law, redevelopment agencies may create community development areas (CDAs), economic development areas (EDAs) and urban renewal areas (URAs). Urban renewal areas are governed by Section 17B-4 of the Utah State Code and can be created by a city or county for the general purpose of providing for redevelopment and economic development through various tools associated with the buying and selling of property and utilizing tax increment as a means to promote development and provide needed infrastructure.

**Impact Fee Revenue Bonds**

Utah State law allows cities to charge new development for the cost of providing service to newly developed areas through the imposition of impact fees once a complete impact fee analysis has been completed and adopted. Impact fees are calculated to cover the cost of bringing new development up to the same service standard, often referred to as the “level of service,” as existing developed areas within the Township/County.

Although impact fees can technically be pledged as a repayment source on bonds, due to the uncertainty related to timing of collection of impact fees they are not considered a secure enough source of revenue on their own to secure financing at a reasonable cost. Typically impact fee revenues are utilized as one portion of the funding available to make debt payments when system revenue bonds are issued, with the bulk of the revenues coming from user fees.

**Special Assessment Bonds**

Special Assessment Areas (SAAs), formerly known as Special Improvement Districts or SIDs, are a financing mechanism that allows governmental entities to designate a specific area which will be benefited by public improvement(s) and levy a special assessment, on parity with a tax lien, to pay for those improvements. The special assessment is then pledged to retire bonds, known as Special Assessment Bonds, issued to finance construction of the project.

The underlying rationale of an SAA is that only those property owners who benefit from the public improvements will be assessed for the improvement
costs as opposed to previously discussed financing structures in which all city/county residents pay either through property taxes or increased service fees. Therefore, the SAA structure is extremely well suited for the townships.

**Resources**


4. Salt Lake County Solid Waste Programs: [www.sanitation.slco.org](http://www.sanitation.slco.org)

5. Utah Rivers Council, Rip Your Strip Xeriscape Campaign: [www.ripyourstrip.org](http://www.ripyourstrip.org)


7. Questar Gas Company Energy Saving Program: [www.thermwise.com](http://www.thermwise.com)

8. Rocky Mountain Power Energy Saving Program: [www.coolkeeper.net](http://www.coolkeeper.net)
Purpose Statement

Planners and decision makers worldwide share a common need for high-quality and timely statistics to identify needs, measure trends, and evaluate results. Census data are vital to meeting these needs. Every ten years the United States federal government is constitutionally required to conduct a census of the population. In addition to recording the number of individuals in the country, the census also collects other data, including age, gender, race, ethnicity, housing status, income, etc. Censuses provide essential data for allotting political representation, for national and sector planning, for allocating resources, for locating roads and other infrastructure, and for guiding the marketing and distribution efforts of private enterprise. They also provide basic data on the size, composition, location, socioeconomic status, and change over time of the population. Data from a population census can be used for improving housing, schools, medical care, transportation, and employment, enabling users to paint statistical portraits in a number of ways.

Best Practices

Core Concepts

1. Reliable demographic data is essential to projecting the future capital needs of a community, in assessing future revenues and expenditures involved with the provision of ongoing services, in creating economic development plans and strategies, and in assessing housing needs.

2. A combination of sources needs to be used to get the best demographic analysis.

3. While the US Census Bureau provides annual updates to the 10-
year census figures, this data can be inaccurate in rapidly-growing communities, and can be updated using a variety of local sources.

4. Accurate population data plays a vital role in revenue distribution for sales taxes and roads; therefore, communities should ensure that their population data provided by the annual Census updates is valid.

5. Household characteristics, particularly age data, play an important role in assessing the housing needs of a community and in assisting a community to plan for lifecycle housing needs.

Key Questions

What is the current demographic profile of our community?

What demographic trends are occurring in our community (aging population, smaller households, etc.), and how do they apply to this proposal?

What impact will these demographic trends have on the types of services and facilities required in the community?

How quickly or slowly is the population projected to grow?

What economic development opportunities are associated with our market?
Discussion

Reliable demographic data is essential to projecting the future capital needs of a community, in assessing future revenues and expenditures involved with the provision of ongoing services, in creating economic development plans and strategies, and in assessing housing needs. Demographic data is essential for economic development purposes, and assists with identifying target markets and buying power. Demographic trends are also critical in assessing the need for entry level housing, move-up housing, and life cycle housing needs. Population pyramids often reflect the current housing availability in a community, and are an important tool in assessing future demand.

Demographic Sources

A combination of sources needs to be used to get the best demographic analysis. The Associations of Government have the most updated data regarding future growth projections at the traffic area zone (TAZ) level. The County Planning and Development Services Division can provide information regarding developable land and projects “in the pipeline,” while schools often have a good understanding of enrollment data.

The American Community Survey (ACS), available online, is conducted by the Census Bureau to update demographic characteristics of communities in between the 10-year census period. The ACS is sent to a small percentage of the population on a rotating basis and helps determine how more than $300 billion per year is distributed. In Utah, several major revenue sources for local communities — such as sales tax and road funds — are partially distributed based on population. Updated data is therefore especially critical in rapidly-growing communities.

Building permit data, combined with estimates of household size, is a good source of updating current population figures. This data is available online. School data is a good source for updating household size figures (in the period between Censuses).

The Economic Development Corporation of Utah (EDCUtah) periodically conducts updates of demographic data for counties throughout the state. These updates can be applied to local communities within their respective counties.

Sales tax data can be obtained on an annual basis from the State Tax Commission and provides excellent information regarding local spending patterns.
Employment data is provided on an annual basis by Utah’s Department of Workforce Services and is a good tool for comparing employment centers, local strengths and areas of opportunity.

Income information, combined with median home pricing (obtained from the Assessor’s Office) is critical information used to assess trends in housing affordability in a local community. Summaries of recent sales data is provided by the real estate multiple listing service (MLS).

Rent rates are summarized and provided by local brokerages and are also an important tool in assessing affordability in a community.

**Assessing Population Data**

While the US Census Bureau provides annual updates to the 10-year census figures, this data can be inaccurate in rapidly-growing communities, and can be updated using a variety of local sources. Current population data for local communities can be obtained and evaluated through a variety of means, including:

- Governor’s Office of Planning and Budget (data at city and county level);  [www.governor.utah.gov/dea/popprojections.html](http://www.governor.utah.gov/dea/popprojections.html)
- Residential water connections;
- Traffic Area Zone (TAZ) data (available from Wasatch Front Regional Council – WFRC);  [http://www.wfrc.org](http://www.wfrc.org)
- Census 2000 household data, updated with residential building permit data since 2000;  [www.census.gov](http://www.census.gov)
- School enrollment data.

Household size (used in estimating the population from the number of households) can be evaluated beginning with 2000 Census data. Changes in household size since the last US Census can be assessed by working with the local school district and through interviews with local real estate brokers and others who are familiar with recent development trends in the community. Household size can then be multiplied by the total number of households in order to estimate the current population of a community.

**Accurate population data plays a vital role in revenue distribution for sales taxes and roads; therefore, communities should ensure that their population data provided by the annual Census updates is valid.** Many communities in Utah have felt that the Census Bureau updates significantly understate the actual growth that has occurred, and have
successfully challenged the Census Bureau updates. The Census Bureau updates should be reviewed annually by local communities and, if they are low, should appeal the results by completing Census Bureau challenge forms that allow the Bureau to evaluate and increase the official population figures for that community. This is important because several funding sources, distributed to local communities on the basis of population, rely on the Census updates for their funding distribution formulas.

Population projections at the county and city level are made by the Governor’s Office of Planning and Budget. In order to apply these projections to a smaller, township level, several factors should be evaluated, including traffic area zone projections; local school enrollment projections; amount of vacant, developable land; availability of infrastructure; planning pipeline projections; and interviews with local planning departments.

**Household Characteristics**

Household characteristics, particularly age data, play an important role in assessing the housing needs of a community and in assisting a community to plan for lifecycle housing needs. Census data is the best source for detailed household characteristics, including age, income, educational levels, race, and poverty levels. Updates to some household characteristics are provided by EDCUtah at the County level and can be used to assess trends in the general area.

Household characteristics are important in planning for housing and for economic development. Data regarding income and wage levels is used to assess housing affordability; income data is also used to project the buying power of a community and to assess sales leakage as well as other economic factors.

Age, household size, and income information is important in identifying target markets for economic development that will increase the tax base of a community. Age data is also important in planning for lifecycle housing and in meeting the needs of an aging population, including essential health care services. Demand for parks, recreation, public transportation and cultural facilities is also tied to age and must be considered in meeting the quality of life needs of the residents of a community.
Housing Stock Data

The Census provides detailed housing data regarding year built, number of rooms, and basic utilities provided. This data can be helpful in assessing if basic housing standards are being met, or if a significant portion of the community is in need of housing assistance. These items are discussed in greater detail in the Best Practices: Housing document.

Commute to Work Data

Time spent commuting to work can significantly impact quality of life. Data regarding the distance required to reach one’s workplace, as well as mode of transportation used, is available through the Census. This is valuable information in assessing the buying power that may be entering or leaving a community, planning for future transportation projects, and identifying opportunities to create more jobs locally. Regional scale planning usually must be in place to significantly affect commute times across the region.

Resources

1. Demographic Data

Demographic Profiles: United States Census Data 2000


American Factfinder: United States Census Data 2000

Detailed categories, with cross tabulations, i.e., age by gender, etc. http://factfinder.census.gov/servlet/DataSetMainPageServlet?_program=DEC&_submenuld=&_lang=en&_ts=

Governor’s Office of Planning and Budget (GOPB)


University of Utah Bureau of Economic and Business Research


Economic Development Corporation of Utah

Updated demographic information. http://www.edcutah.org
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Wasatch Front Regional Council


American Community Survey 2006

Update demographic data for areas with populations of 65,000 and above.  http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=ACS&_submenuuld=&_lang=en&_ts=

2. Economic Data

Utah State Tax Commission


Utah Department of Transportation


Department of Workforce Services


3. Development and Housing Data

Commerce CRG

Retail, office and industrial information, including market absorption and rates.  http://www.commercecrg.com/

New Reach (fee required)

New development information by location; inventory and pipeline.  http://www.newreach.com/

Salt Lake Board of Realtors

Purpose Statement

An unfortunate theme of government is often ongoing conflict among elected and appointed officials and frustration by the citizenry and subordinate governing bodies over decisions made by the executives. Many times the cause of conflict is simple misunderstanding of the form of government under which the county or city is operating. Other times, the conflict is rooted in misunderstandings of the roles and authorities of the various boards, commissions, and councils. Clearly articulating the authorities of local governments delegated by the states and the governmental structure chosen by the citizenry can help resolve such conflicts. At a minimum, members of a community or local government body can better understand how decisions are made.

Best Practices

Core Concepts

1. The County employs a system of soliciting input from the ground up which, if properly implemented, results in well-informed decision making.

2. Serving on a County board, commission, or council is about public service.

3. All County boards, commissions, and councils should respect the public process and the due-process rights of all citizens.

4. All legislative decisions and recommendations should be based on a number of factors, including: the current and adopted goals, policies, and regulations of the County or Township; community input; and the
advice of County staff and legal counsel.

5. The Mayor works in coordination with the County Council and other elected officials, but has no supervisory authority over them.

6. The Mayor’s role is primarily in administration of County government, not in the formulation of policy.

7. As the administrative officer of the County, the Mayor is tasked with ensuring inter-governmental coordination and communication with the general public on County activities.

8. The County Council is the governing body that makes legislative decisions and sets County policy.

9. In its decisions, the County Council must balance county and community interests to the best of its ability.

10. The Board of Adjustment is a quasi-judicial, not a policy-making body.

11. The Board of Adjustment may only grant variances within the legal framework specified by Utah statutes.

12. The Planning Commission is intended to shape and recommend policy.

13. The Planning Commission has a dual role as both a quasi-legislative body with broad discretion, and a quasi-judicial land-use authority with limited discretion.

14. Community Councils are encouraged to develop community priorities regarding municipal services and facilities within their community district.

15. Community Councils are encouraged to make recommendations concerning land-use policy within their community district.

16. A Community Council’s role is primarily as an advisory body to the Planning Commission and the County Council.

Key Questions

What authority does the body reviewing the application have?

Is this a legislative or administrative action?

If administrative, does the application meet the specific requirements of adopted county ordinances and regulations?
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If legislative, does the application meet the intent of the adopted goals, policies, and regulations of the County or Township?

If legislative, what feedback or recommendations have been provided by County staff, the general public, community councils, or planning commissions?

If a variance is requested, does it meet the five requirements outlined by State statute?

Are the respective levels of government following the County’s established, bottom-up, framework for communication and decision-making?

Does the County’s established framework for communication and decision-making afford adequate and appropriate opportunities for communication and input?

How can communication and coordination among the respective levels of government be improved, while remaining within state statute and the established County communications framework?

Discussion

The United States and the states, counties, and cities within it rely on representative democracy, a form of government founded on the principles of the people’s representatives. The representatives from more than one independent ruling body are charged with the responsibility of acting in the people’s interest, but not as their proxy representatives. Representatives do not necessarily always act according to the wishes of their constituencies. It is often appropriate that they exercise independent initiative that they feel best protects the long-term interests of those constituencies.

The United States government is much more complex and is generally termed a constitutional republic. A constitutional republic is a state where the head of state and other officials are elected as representatives of the people to govern according to existing constitutional law that limits the government’s power over citizens. In a constitutional republic, executive, legislative, and judicial powers are separated into distinct branches and the will of the majority of the population is tempered by protections for individual rights so that no individual or group has absolute power.

Police Power

The United States Constitution is the supreme source of federal governmental authority and the protection of individual rights. Authority to
protect public health, safety, and welfare is reserved to the states, and then delegated to local governments by enabling legislation. It is finally enacted by local ordinances.

The authority to regulate land uses through zoning, ordinances, and plans is derived from the police power of the state. The police power is the authority delegated to local governments to adopt measures necessary to protect public health, safety, and welfare within the framework of the United States and the Utah Constitutions.

**Salt Lake County Government**

Salt Lake County, as a local government within the State of Utah, has the authority to select its form of government and establish its own codes, regulations, and policies enacting the police powers delegated by the State.

Salt Lake County operates under a Mayor-Council form of government which separates executive and legislative governing powers. Below the level of the Mayor and the County Council are the zoning Board of Adjustment, planning commissions, community councils, and the citizenry at large.

The County employs a system of soliciting input from the ground-up which, if properly implemented, results in well-informed policy making. Good policy- and decision-making in Salt Lake County happens when each of the various representative and governing bodies takes time to thoroughly explore all sides of an issue and then carefully crafts an appropriate recommendation to the next superior decision-making governmental authority. Deciding and recommending bodies should be well-informed and know what is happening in the community they are governing. Participating in community events, reading local newspapers,
and reviewing minutes of official meetings are appropriate means for accomplishing this.

In order to prevent improper ex-parte communications and premature decision making, it is generally not appropriate for members of the higher levels of government to participate in or directly observe discussions that have yet to come before their body. Similarly, County legal counsel advises that attending meetings of subordinate governing bodies is not appropriate where the discussions concern a topic likely to come before the superior decision making authority when it is acting as a quasi-judicial or legislative capacity.

**Serving on a County board, commission, or council is about public service.** The role of the county-elected and appointed officials is to ensure the rights of all members of the community are protected. The County’s public servants should assist landowners and other citizens in accomplishing their intent within the framework of local plans and ordinances. Similarly, the County officials should work to protect and enhance the overall health, safety, and welfare of the community at large through the accurate application of ordinances and policies and the careful consideration of all stakeholder perspectives in making legislative decisions and recommendations.

**All County boards, commissions, and councils should respect the public process and the due-process rights of all citizens.** All council, board, and commission meetings must comply with the Utah Open and Public Meetings Act, which provides that both decisions and deliberations of these decision-making authorities must be public. A public hearing is required by law for many decisions of a planning commission or county council and may be held on other issues as deemed appropriate.

The purpose of a public hearing is to solicit input from the public and to disseminate information to the community. In contrast to a public hearing, a public meeting of a governmental body is generally for the purpose of analysis, discussion, debate, and decision by that body. The public is welcome to attend and observe public meetings but has no right of comment or other participation. Public meetings and hearings are generally not to seek approval or permission from the community on matters that are before a governmental body for decision. While individual and representative group comments and perspectives should all be given due consideration, public meetings and the submission of written comments should not be used as polling tools.
Procedural due process requires an applicant and affected parties to be given proper notice of the date, time, and place of any meeting where the application is being considered and also to be given copies of any staff reports regarding the application at least three days before the meeting or hearing.

All legislative decisions and recommendations should be based on a number of factors, including: the current and adopted goals, policies, and regulations of the County or Township; community input; and the advice of County staff and legal counsel. The County has adopted a number of plans and policy documents which should be used to guide legislative decisions. These documents have all been prepared with broad community input, and represent a unified community vision. Draft policy documents may be considered in a body’s deliberations, but decisions and final recommendations should be based largely on existing adopted policy documents.

Documents adopted by the County as guiding policy include:

- Salt Lake County Building Code
- Salt Lake County Zoning Ordinance
- Salt Lake County Cooperative Plan
- Salt Lake County Township General Plans
- Wasatch Choices 2040 - A Four County Land-Use and Transportation Vision

Legislative decisions should not be based on perceived economic climate (e.g. perceived impact of development on home values) or on perceived changes in the socioeconomic demographic of the area. Changes in these areas are not reasonable findings for approving or denying specific applications at any level of governance. These decisions should be based on the guiding document of the community, as listed above.

The County Code identifies the following elected and appointed bodies to provide recommendations and make decisions about County government:

- Mayor
- County Council
- Zoning Board of Adjustment
- Planning Commissions
- Community Councils
Mayor

There are two variations of a Mayor-Council form of government: strong and weak mayor. Salt Lake County has adopted a strong-mayor government, consisting of a popularly elected Mayor and nine County Council members. The Salt Lake County Mayor is elected at large for a four-year term in a partisan election. The Mayor cannot occupy other elective public offices at the same time, and is subject to all requirements and limitations applicable under state law and county ordinance.

The Mayor works in coordination with the County Council and other elected officials, but has no supervisory authority over them. In the strong-mayor form of government, the Mayor is given almost total administrative authority and a clear, wide range of political independence, with the power to appoint and dismiss department heads without Council approval. The Mayor acts as intergovernmental relations liaison, exercises power of veto and line-item veto, and attends and participates in County Council meetings. The Mayor may appoint a Chief Deputy to act in the place of the Mayor during absence or disability. The Deputy must be a County resident and be either a Department Director or Chief of Staff.

The Mayor's role is primarily in administration of county government, not in the formulation of policy. While the Mayor participates in policy decisions at the County Council level and carries veto powers, the Office of Mayor is not a policy-making position. The Mayor's duties include:

- Appointing necessary merit exempt staff, as provided by law.
- Carrying out and enforcing the programs and policies established by the County Council.
- Enforcing the regulations, policies, and procedures of the County.
- Faithfully executing the laws and ordinances of the County.
- Assigning employees and work in the executive branch.
- Appointing persons to serve on commissions and boards, with advice and consent of the County Council.
- Reviewing County books, accounts, and funds necessary to the executive function.
- Negotiating and executing contracts.
- Considering and adopting long-range planning.

As the administrative officer of the County, the Mayor is tasked with ensuring inter-governmental coordination and communication.
The Mayor’s Office includes a number of staff positions designed specifically for coordinating communications among various levels of the County government, and between the community at large and the County officials.

**County Council**

The Salt Lake County legislative body is a nine-member County Council. Three council members are elected at-large and six are elected by district. Council members from districts are elected for four-year staggered terms in partisan elections, and at-large council members serve staggered terms of six years. Council districts are reapportioned after each U.S. census.

The **County Council is the governing body that makes legislative decisions and sets County policy.** While the County Council takes into account the input of the Mayor, various stakeholders, boards, commissions and councils, it is the ultimate policy-making authority for the County. The County Council’s authority includes:

- Considering and adopting ordinances, rules, and regulations.
- Considering and adopting an administrative code, policies, and procedures.
- Adopting rules governing the activities, meetings, and organization of the Council.
- Establishing and adopting a budget, setting and levying taxes, and establishing fees.
- Establishing the salaries of county officers and employees.
- Supervising internal audits and investigations.
- Conducting quasi-judicial hearings including serving as the Board of Equalization for County tax issues and as the final board of review regarding planning and zoning.
- Granting franchisees over and along county roads. Advising and consenting to appointments by the executive branch.
- Overriding vetoes of the Mayor by two-thirds vote.
- Supervising the conduct of county officers in accordance with state statute.
- Providing for the development of county resources.
- Performing other legislative acts.
In its decisions, the County Council must balance county and community interests to the best of their ability. County Council decisions may not necessarily align with the recommendations of the Mayor, planning commissions, community councils, County staff, or the general public. The County Council members have the broadest perspective of what is happening in the County and have the difficult job of considering a wide range of input and making decisions which best protects and supports the overall health, welfare, and interests of the County as a whole.

Similarly, since the County Council members are all elected officials, they have specific constituencies to represent. If they feel a decision, while good for the overall county, may have serious detrimental effects on their district, they must carefully weigh all available options and vote in the manner which they feel is most appropriate.

**Zoning Board of Adjustments**

Since it is impossible to draft a zoning ordinance that will cover every conceivable combination of circumstances, the Salt Lake County Board of Adjustment has been created to provide a means to deal with unanticipated hardships as they arise. The Board of Adjustment consists of five members and three alternates who are appointed by the Salt Lake County Mayor and approved by the Salt Lake County Council. All members of the Board are residents of the unincorporated area of Salt Lake County.

The Board of Adjustment is a quasi-judicial, not a policy-making body. The Board is charged to interpret the meaning and spirit of the zoning ordinances as enacted by the County Council. It does not have the authority to make law or change zoning law. The powers and duties of the Board of Adjustment are to:

- Hear and decide appeals from administrative decisions applying a zoning ordinance.
- Hear and decide the special exceptions to the terms of a zoning ordinance.
- Hear and decide variances from the terms of a zoning ordinance.
- Determine the existence, expansion or modification of nonconforming uses.

The Board of Adjustment may only grant variances within the legal framework specified by Utah statutes. Utah Code Sec. 17-27a-702 has
identified five conditions which must all be met in order for the Board of Adjustment to grant a variance:

- Would literal enforcement of the zoning ordinance cause an unreasonable hardship for the applicant that is not necessary to carry out the general purpose of the zoning ordinance?
  (a) Is the hardship located on or associated with the property?
  (b) Is the hardship a result of circumstances peculiar to the property and not from conditions that are general to the neighborhood?
  (c) Is the hardship not self-imposed and not economic?

- Are their special circumstances attached to the property that does not generally apply to other properties in the same district?
  (a) Do the special circumstances relate to the hardship complained of?
  (b) Do the special circumstances deprive the property of privileges granted to other properties in the same zoning district?

- Is granting the variance essential to the enjoyment of a substantial property right possessed by other properties in the same zoning district?

- Will the variance not substantially affect the intent of the general plan and not be contrary to the public interest?

- Is the spirit of the zoning ordinance observed and substantial justice done?

Planning Commissions

Every Utah municipality and county is required to pass an ordinance establishing a planning commission. The ordinance should outline procedures for filling vacancies and organization and also detail the roles and authority of the planning commission. Planning commissioners are all volunteers, appointed by the Mayor. They serve out of interest in their local community and a desire to help protect or improve their community. By state law, the planning commission is required to have a role in the local government’s land-use control and policy.

The Planning Commission is intended to shape and recommend policy. Planning commissions are not an elected representative body, have no constituency, and do not represent specific neighborhoods or points of view. Planning commissions are charged with applying the local
ordinances as written, and making reasoned recommendations to the County Council on legislative decisions. However, the elected officials to whom the Planning Commission makes recommendations are under no obligation to approve those recommendations.

Conflicts may arise when a planning commissioner has a vested interest in a manner that comes before that commissioner for a decision or recommendation. In such cases, the recusal of the commissioner is necessary, with that commissioner taking no part in the discussion, final decision, or recommendation.

**The Planning Commission has a dual role as both a quasi-legislative body with broad discretion, and a quasi-judicial land use authority with limited discretion.** The responsibilities of the planning commission include making recommendations to the County Council on amendments to general plans, land-use ordinances, zoning maps, official maps, and other land-use policies. These are quasi-legislative processes, in which the Planning Commission has broad discretion and may hear and consider public input when shaping its recommendations.

Wearing its other hat, the Planning Commission functions as a quasi-judicial land-use authority tasked with administering the local ordinances, including subdivision plats. The Planning Commission does not have the authority to grant or deny permits and approvals at its discretion. Utah law entitles a landowner to approval of an application if it complies with the local government’s ordinances. A Planning Commission may be legally required to approve a land-use application that meets the requirements of the local ordinances, but is publicly unpopular. Conversely, a proposal that has broad public support and is in the overall best interest of the community but does not meet ordinance requirements, must be denied.

On a matter for which the Planning Commission makes a recommendation to the County Council, final Council decision is often the result of a public noticed process, extensive debate, and a difficult weighting of various factors. Many times the Council takes into account a broader perspective of issues than does the Planning Commission, and the elected officials’ votes will often be weighted toward their particular constituencies.

**Community Councils**

Like many other local governments, Salt Lake County Code authorizes the establishment of community council districts and community councils. Community councils serve as a mechanism by which a community makes recommendations on actions affecting them. Community council members
serve as volunteers and often take on the role of neighborhood activists and advocates. They are elected by ballot with terms not to exceed four years. The community councils meet at least monthly to discuss community issues, zoning changes, conditional use permits, and general planning activities.

The Community Councils have two roles: to develop community priorities, and to provide comments to the planning commission regarding land use policy.

**Community Councils are encouraged to develop community priorities regarding municipal services and facilities within their community.** These recommendations are communicated to the County Council and Mayor on an annual basis and are to be used in policy development and in the budget process. Direct communication with County Council occurs through the County's Community Council Liaison.

**Community Councils are encouraged to provide comments concerning land-use policy within their community.** Upon request of the Planning Commission, the Community Councils may review and respond to all legislative actions before the Planning Commission including: zoning text changes, and zoning map changes, and conditional use applications. Upon request of the Community Council, the Planning Commission should postpone a decision until the next Community Council meeting, up to a period of four weeks after the first hearing of the application by the Planning Commission.

**A Community Council’s role is primarily as an advisory body to the Planning Commission and the County Council.** It is the role and duty of the Community Council to accurately represent the views and opinions of its community district. However, the Planning Commission and the County Council are making decisions based on the existing adopted local policies, ordinances, and plans, and must take into account the broader interests of their overall constituencies. In particular, the decisions and recommendations of the Planning Commission are made with due consideration of the general plan goals and objectives and a wide perspective regarding the overall health, welfare, and interest of the Township. This may not necessarily align with the recommendations of the Community Councils.

As to the County Council and Mayor, they are under no obligation to approve the recommendations of the Planning Commission or Community Councils. Conflicts may arise when community councillors become
invested in a recommendation, and the governing board decides on a different approach.

The Association of Community Councils Together (ACCT) is an organization created to communicate and support the joint concerns of community councils to the County Council as requested by the association’s membership. The ACCT is representative of all County community councils, and each community council may elect one or more individuals to represent their community district on the ACCT. The County Council should schedule at least one meeting annually with the ACCT to receive recommendations from the community councils on policies, budget, and other priorities for each community council district.

Resources


7. Utah Code, Title 17, Ch. 27a; Title 54, Ch. 4
Corridors

Purpose
A corridor is a linear transportation route, including all parcels directly adjacent to the roadway. Corridors may have diverse land uses and functions along their length. Corridors are vital links within all communities. Serving as important transportation links, corridors connect citizens not only to other areas of the community; they also connect to the wider regional and national transportation networks. Corridors, however, should not merely be viewed as conduits for automobile traffic, but multifunctional public space. Each community should integrate efficient transportation planning, good land use planning, and quality urban design to ensure that each corridor is not only functional, but also a “livable” place. Each corridor should be planned as a “complete street,” providing facilities for all forms of transportation. Livable corridors reach their full potential when they assist in economic development, promote safety and security, improve access and mobility for all, protect and promote public health, and ensure environmental sustainability. Because of their limited access and impact on adjacent land uses, corridors considered here do not include highways, rail corridors, or other high-speed limited access roads.

Best Practices
Core Concepts
1. Envision corridors as public places that have the potential to become "great streets."
2. Link local and regional destinations together with efficient corridor planning.
3. Design corridors to be multi-modal using the “Complete Streets” approach.

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Related Best Practices:
4. Design local street networks to ensure high levels of internal connectivity and frequent connections to corridors.

5. Use corridors as transitional areas with a high potential for growth and increases in intensity of use.

6. Promote efficient and sustainable development patterns by encouraging infill and redevelopment of corridor-adjacent properties.

7. Cluster the most intense land uses in activity center nodes and in close proximity to public transit facilities.

8. Encourage the mixing of uses along a corridor, including jobs and housing in close proximity to one another.

9. Use the Three Rules of Urban Design to ensure growth along corridors preserves and creates sustainable commercial areas:
   - Build to the sidewalk.
   - Make the building front permeable with doors and windows.
   - Prohibit parking lots in front of buildings.

10. Modify existing corridor planning policy to encourage multi-modal transportation and investment in public space.

**Key Questions**

How will this proposal affect land use and mobility along the corridor?

Does this proposal increase efficiency of land use along the corridor?

How will this proposal affect the capacity of the corridor to move people and goods in the community?

Does this proposal aid in “completing” the street?

Does this proposal improve the quality of the public realm along the corridor?

Does the proposal increase the quality of public space along the street?

Does this proposal implement the Three Rules of Urban Design along the corridor? (see above, Core Concept 9)

Is this proposal sensitive to the context of this segment of corridor?
Discussion

A corridor is a linear route through the community that includes the transportation infrastructure, as well as the land parcels adjacent to the corridor. Corridors may have diverse land uses and transportation functions along their length. Corridors typically experience change over time, responding to changing market conditions and new approaches to land use and transportation planning. Because of their limited access and influence on adjacent land uses, corridors considered here do not include highways, rail corridors, or other high-speed limited access roads.

Great Streets

Envision corridors as public places that have the potential to become “great streets.” Streets are public spaces within our communities that serve many purposes. Although often thought of simply as public infrastructure, streets are more than public utilities, more than the equivalent of water lines and sewers and electric cables. They are also more than linear physical places that permit people and goods to get from point A to point B. Corridors also have the potential of becoming great streets, or great public spaces that are highly memorable. Many world cities have exemplary “great streets” such as the Champs Elysees in Paris, La Ramblas in Barcelona, or Fifth Avenue in New York City. Locally, in 2007 Salt Lake City’s South Temple Street was selected by the American Planning Association as one of America’s “Great Streets.” While not every corridor in our community can become the Champs Elysees, each community throughout the Salt Lake metropolitan region has key corridors with the potential to create great places. Whether it means revitalizing a flagging historic main street or redefining a central public street, each community has the opportunity to invest in creating great streets. In his book “Great Streets,” Allan Jacobs identifies the basic essential elements of great streets, which any community can follow:¹

A great street should help create a sense of community. This means streets should be accessible to all, regardless of age, ability, or class. They should be desirable places to live, play, work, spend time, or simply be places that bring people together.

A great street is physically comfortable and safe. Great streets are shaded by street trees “In the summer time, and protected from wind and

¹ Source: Allan Jacobs, Great Streets.
weather in the winter. One should not have to worry about being hit by a car or tripping on uneven pavement.

**A great street encourages participation.** The best streets are places where people stop to talk, or sit and watch, or gather in groups. People who occupy buildings along the street (houses or commercial spaces) participate by adding to the quality of the street through improvement of their building.

**A great street is memorable.** The best streets leave strong, lasting impressions.

**A great street can be the epitome of a great public space.** The greatest streets are artfully put together and can stand as an example for others to aspire to create.

In the United States, 25 to 35 percent of a city’s developed land is likely to be in public rights-of-way, with the majority in streets. Develop and design streets that are wonderful, fulfilling places to be, venues for community-building, attractive public places for all people. In doing so, about one-third of the city will have been successfully designed, which will have an immense impact on the rest.\(^1\)

**Transportation**

Corridors are integral components of any community’s transportation network. As such, it is essential that they are designed and maintained with the mobility of all users in mind. Pedestrians, cyclists, motorists, and transit riders of all ages and abilities must be able to move safely along and across corridors. Transportation plans must focus on moving people efficiently along a corridor, rather than the conventional focus on automobile traffic. Developing “complete” streets in each community should be a central aim of transportation planners. Streets should be planned from the “outside-in,” meaning priority should be given to the creation of community-building pedestrian infrastructure (including the associated urban amenities such as lighting and street trees) along the corridor’s edge, rather than the conventional automobile-centric “inside-out” method of corridor planning.

**Regional Connections**

**Link local and regional destinations together with efficient corridor planning.** In the 1990s, the Institute of Transportation Engineers (ITE) published the first edition of the Transportation Planning Handbook. It held that most auto-oriented suburban environments could generally handle
their traffic loads without significant congestion if developed with five-lane arterials spaced every mile, and two and three-lane collector streets between arterials at the half-mile mark.

On the whole, Salt Lake County lacks a sufficiently refined grid corridor system to handle the traffic loads expected in the future, according to the ITE recommendations. With some exceptions, there are generally fewer arterial connections in most areas in the Salt Lake County grid than recommended. East to west connections are particularly lacking in the County. With the exception of Salt Lake City and the Daybreak area of South Jordan, east-west connections are generally located every mile rather than the recommended half-mile. In some areas there are two or more miles between east-west corridor connections. Naturally, the existing corridors are over-burdened due to the lack of connections. Existing corridors are also widened to accommodate additional automobile traffic, making the corridor less and less “livable” as traffic increases.

Graphic illustrating the ideal spacing of corridors as defined by the Institute of Transportation Engineers (ITE) compared to existing corridors in Salt Lake County.
As a result of deviation from the recommended street network, traffic issues have continued to worsen across Salt Lake County. The County’s traffic problems can be grouped into three types of deficiency:

- Missing links for long trips: When regional links are missing, arterial streets, local transit, and other routes must make up the difference. Arterials then may become overloaded with longer distance trips than they are designed to handle.

- Missing links for short trips: When collector streets are missing, arterial streets also fall under pressure to serve neighborhood circulation trips.

- Missing links for all types of trips: With a combination of missing regional facilities, missing collectors, and insufficient transit or other alternatives in many areas of the County, pressure on every through street to serve both long and short trips will increase.

**Complete Streets**

**Design corridors to be multi-modal using the “Complete Streets” approach.** The *Complete Streets* movement is a relatively new approach to modern transportation planning. *Complete Streets* advocates recommend changing policies and practices of transportation planning agencies to provide mobility to all members of society, not merely those able financially and physically to own and operate an automobile. Developing complete streets on important corridors ensures that the entire right of way is designed and operated to enable safe access for all users. For a number of reasons decision makers must consider creating complete streets when issues along corridors are evaluated.²

**Complete streets make economic sense.** A balanced transportation system that includes complete streets can bolster economic growth and stability by providing accessible and efficient connections between residences, schools, parks, public transportation, offices, and retail destinations. Complete streets can reduce transportation costs and travel time while increasing property values and job growth. Research shows that building walkable streets and lowering automobile speeds can improve economic conditions for both residents and business owners, and anecdotal evidence indicates that home values increase on streets that have received complete streets treatments.²

**Complete streets improve safety.** One study found that designing for pedestrian travel by installing raised medians and redesigning intersections...
and sidewalks reduced pedestrian risk by 28%. Complete streets also improve safety indirectly, by increasing the number of people bicycling and walking. A recently published international study found that as the number and portion of people bicycling and walking increases, pedestrian and cycling deaths and injuries decline dramatically.²

**Complete streets encourage more walking and bicycling.** Public health experts are encouraging walking and bicycling as a response to the obesity epidemic, and complete streets can help. One study found that 43% of people with safe places to walk within 10 minutes of home met recommended activity levels, while just 27% of those without safe places to walk were active enough. Residents are 65% more likely to walk in a neighborhood with sidewalks. A study in Toronto, Canada documented a 23% increase in bicycle traffic after the installation of a bicycle lane on a city street.²

**Complete streets can help ease transportation woes.** Streets that provide travel choices can give people the option to avoid traffic congestion and increase the overall capacity of the transportation network. Several smaller cities have adopted complete streets policies as one strategy to increase the overall capacity of their transportation network and reduce congestion. In Portland, Oregon, a complete streets approach has resulted in a 74 percent increase in bicycle commuting in the 1990s. Implementing complete streets concepts in Vancouver, Canada enabled a reduction in the percentage of automobile trips downtown from 49% (1992) to 30% (2004) and an increase in biking and walking trips from 15% (1992) to 30% (2004) (Transitlink Trip Diary, 2004).²

**Complete streets help children.** Streets that design quality infrastructure for bicycling and walking help children get physical activity and gain independence. More children walk to school where there are sidewalks. Children who have and use safe walking and bicycling routes have a more positive view of their neighborhood. Safe Routes to School programs, gaining in popularity across the country, will benefit from complete streets policies that help turn all routes into safe routes.²

**Complete streets are good for air quality.** Air quality in the Salt Lake metropolitan area is poor and linked to increases in asthma and other illnesses. Yet if each resident of an American community of 100,000 replaced one car trip with one bike trip just once a month, it would cut carbon dioxide (CO2) emissions by 3,764 tons of per year in the community. Complete streets make choosing less consumptive forms of transportation more feasible for a wider segment of the population.²
Complete streets make fiscal sense. Integrating sidewalks, bike lanes, transit amenities, and safe crossings into the initial design of a project spares the expense of retrofits later. Jeff Morales, the Director of Caltrans when the state of California adopted its complete streets policy in 2001, said, “By fully considering the needs of all non-motorized travelers (pedestrians, bicyclists, and persons with disabilities) early in the life of a project, the costs associated with including facilities for these travelers are minimized.”

Context-sensitive street design

Any street regardless of classification can vary in section, features, and size in relation to its urban context. For example, a collector street may have a different sidewalk dimension, street tree treatment, pedestrian crossing, and lane width as it moves from a neighborhood into a center.

The elements that can vary include:
- Design speed
- Sidewalk size
- Landscaping form and scale
- On-street parking
- Bike lanes
- Traffic-calming treatments
- Transit facilities
- Pedestrian crossing treatments
- Types of street furniture and utilities (street light design, etc.)

Design local street networks to ensure high levels of internal connectivity and frequent connections to corridors. Traditional suburban street networks tend to direct all trips to arterials and major through streets, even if the trip is to a local, walkable destination. A refined grid pattern of multiple, local streets with sufficient frequency must work in conjunction with quality corridor planning in order to allow short trips on minor streets to local destinations. This network of alternate local routes along with the appropriate spacing of major corridor throughways should be designed in a manner that precludes excessive arterial and collector widths.

Circulation should be arranged in an urban network of multi-modal streets that reinforces the hierarchy of mixed-use centers and corridors while...
ensuring walkable, human-scale areas and neighborhoods. The urban network serving the community should seamlessly link neighborhoods, centers, and other destinations with streets scaled to the pedestrian, cyclist, and transit user as well as the car.³

**Dendritic Network v. Grid Network**

The suburbs of Salt Lake County generally have a “super-grid” of corridors every half mile. In some places they are spaced as infrequently as every two miles. Between this super-grid, local streets are quite often dendritic or branching in character. Dendritic street networks are characterized by cul-de-sacs and generally winding and disconnected streets. By design, dendritic networks are impractical for use by anyone other than immediate residents. Dendritic streets tend to funnel even very short local trips to major corridors, overloading these arterials even at very low suburban densities. For these same reasons, dendritic street networks are also very unwalkable, requiring long, circuitous routes, even for destinations that are close by.

The current best practice in corridor design is to coordinate major corridor spacing with a finer grid of local and collector streets. For example, in the Avenues neighborhood of Salt Lake City, streets are spaced quite densely, at 13 street per mile. This sort of grid is dense enough to disperse traffic such that no particular street is overly burdened with the neighborhood’s traffic. By comparison, the typical Salt Lake County suburb has only 1.75 streets per mile. Due to this spacing, even corridors serving low density areas of the county can experience traffic counts that exceed the much more densely populated areas of downtown Salt Lake City. Additionally, neighborhoods with a finer grid of local streets are also more walkable and friendly to bicyclists.

**Use corridors as transitional areas with a high potential for growth and increases in intensity of use.** The Wasatch Front region is growing at a rapid pace. Changes occur with some frequency along...
Land uses at important nodes, usually where two major corridors intersect, will intensify and absorb significant growth in the community. Focusing growth in centers along corridors can create walkable neighborhood or town centers, thereby also reducing traffic demand along the corridor itself.

Townships and cities in the county have grown dramatically in the last 15 years. Without an increase in viable transportation options and a reduction in automobile dependency, it is likely that future growth and densities will continue to consume available land at an increasing rate.3

Land Use

Promote efficient and sustainable development patterns by encouraging infill and redevelopment of corridor-adjacent properties. The land-consumptive patterns of development seen in the last several decades are not inevitable. Envision Utah’s Quality Growth Strategy has shown that by meeting demand for multifamily housing, redeveloping under utilized areas, and reducing the average single-family lot size by less than 10%, the total land area needed to accommodate newcomers by 2020 could be cut in half (from 324 square miles to 154 square miles). Of the total land converted to urban use, current trends would consume 143 square miles of agricultural land compared to 27 square miles under the Quality Growth Strategy (Envision Utah 2000). Recent positive policy changes related to regional growth include expansion of the transit system, encouragement of transit-oriented development, and more aggressive conservation of critical lands. These policy changes will encourage development at higher densities and the preservation of natural areas - in essence, more close-knit communities.3

Cluster the most intense land uses in activity center nodes and in close proximity to public transit facilities. Encourage transit through transit-friendly/adjacent/oriented developments near stations, and work jointly with the development community and transit agencies to achieve planning goals. Transit oriented development can be encouraged through shared parking, reduced parking overlay districts, and land banks to preserve land parcels near stations for future development. New Jersey Transit (NJ Transit) has established many Transit Villages along its rapid transit lines. These generally involve some level of cooperation between the development community, local municipality, and NJ Transit to rebuild station areas in a manner that generates more ridership for the system, and provides transit-oriented housing options for area residents.
Encourage the mixing of uses along a corridor, including jobs and housing in close proximity to one another. Centers should provide for a mix of uses and block types to create local, walkable connections between jobs, housing, and retail. Block types may include: Mixed-use blocks that make up the core of each center and combine retail with housing or office uses; Commercial blocks that contain primarily office or retail uses; Residential blocks that contain a range of housing opportunities, including multi-family buildings, town homes, live/work lofts, and/or a variety of single-family opportunities (these blocks may contain incidental retail); or civic blocks that can contain a variety of public and civic buildings, from schools and churches to libraries, community centers, or parks.3

Protect existing single-family residential areas of corridors from encroachment by focusing growth in activity nodes. Every corridor in Salt Lake County has some portion of single-family residential style development. In order to prevent corridors from becoming a long strip of commercial development, growth should be focused in important activity centers, developing nodes into commercial, employment, and housing centers. Concentration of growth in these areas will relieve pressure on single-family areas to absorb growth, as well as create more livable, walkable “centers” throughout the County. Implementation of “complete streets” design principles will improve the quality of residential areas by making them more walkable and livable.

Concentrate development in nodes in canyon areas to reduce the impact on sensitive areas. Proximity to natural areas around Salt Lake County is one of the important factors contributing to quality of life for County residents. Planning of corridors that provide access to the canyons around the County should focus on preservation of the quality and quantity of natural, sensitive areas. Growth along corridors in the canyons should be limited to small, previously developed areas, and should be achieved through higher density of development, rather than expanded land consumption.

Urban Design

Use the Three Rules of Urban Design to ensure growth along corridors preserves and creates sustainable commercial areas. Corridors are defined by the “wall” of buildings that line them. It is essential that the siting and design of buildings along a corridor serve the needs of the community and contribute positively to the corridor as a public space.
Concisely defined by David Sucher in his book “City Comforts,” the three essential rules of urban design are:

- Build to the sidewalk.
- Make the building front permeable with doors and windows.
- Prohibit parking lots in front of buildings.\(^4\)

Buildings should be oriented to the street, with primary entrances opening directly onto the public realm of the sidewalk along the corridor. When off-street parking is needed on a site, parking should always be located either to the rear or side of the building, with the primary entrance located on the front, corridor-facing side of the building. Recent conventional development patterns have made parking in front of the building the norm, or when parking is behind a building, locating the primary entrance on the rear of the building, ignoring the public space along the corridor. These practices discourage pedestrian activity and virtually mandate that all users arrive in a private vehicle.

**Create a pedestrian friendly environment.** Carefully evaluate factors such as number of travel lanes, traffic speeds, average daily traffic, existing crossing locations, and established crossing patterns when considering placement of new crosswalks. Crosswalks with highly visible marking and advanced signage are recommended. Many cities have found great success using leading pedestrian interval (LPI) signals. LPI signals give pedestrians a three second “head start” on vehicle traffic in crossing an intersection, virtually eliminating pedestrian/vehicle conflicts in most cases. Buffer between travel lanes and sidewalks with street trees, and on-street parking. Pedestrian malls or other spaces where vehicle traffic is either severely limited or prohibited could also be considered.

**Ensure livability of single-family residential areas along corridors through urban design.** Urban design patterns are equally important in residential areas along corridors as they are in activity nodes. Larger building setbacks in single-family residential areas should be required. Where possible, garages and automobile access for homes along the corridor should be from rear alleys, limiting the presence of garages along the corridor, as well as reducing the number of pedestrian/automobile conflict points and curb cuts. Rear-loaded garages are not always feasible. In these cases, homes should be constructed such that the garage has a greater setback than the rest of the house - defining the street with homes, rather than with “blank” garages. Active, interesting home facades define...
a street as a neighborhood of people and community, whereas homes dominated by garages project a feeling of community indifference and auto-centric living.

Ample front porches on homes along the corridor can also more effectively define the transition of a home from public space to private space. Sidewalks may be narrower in residential areas than they are in activity centers, given the reduced amount of pedestrian traffic, but must still meet the requirements of the ADA. Street trees should be required in residential areas, as they are in activity nodes for an added buffer from the corridor. Street lighting should be of a pedestrian scale, and as non-obtrusive as possible.

Preserve canyon accessibility through corridor design. Physical design of corridors in canyon settings should focus on preserving accessibility for all residents. Trail access, emergency pull-outs, and parking areas should all be planned to increase the quality of access without negatively impacting natural areas. Road geometry for canyon corridors should improve the recreational experience for all users, reducing automobile design speed and improving the quality of walking and bicycling facilities. Other design elements such as lighting, signage, and vegetation restoration should all be considered in canyon corridors.

Safe Routes to School

Create safe routes to school. Safe Routes to School is an international movement with a goal of making it safe, convenient and fun for children to bicycle and walk to school on a daily basis. An increase in walking and bicycling improves community and personal health, benefits the environment, increases safety, and helps to decrease traffic and congestion around schools. A Safe Routes to School program integrates health, fitness, traffic relief, environmental awareness and safety. It is an opportunity for schools, community, and local government to work together for a healthy, safer, and cleaner environment for everyone.

Safe Routes to School works to reverse the decline in children walking and biking to school. In 1969, 50% of children walked or bicycled to school; 87% of children living within one mile of school did so. Today, fewer than 15% of schoolchildren walk or bicycle to school. As a result, kids today are less active, less independent, and less healthy. Parents driving their children to schools can generate as much as 20% to 30% of morning traffic. Additionally, traffic-related crashes are the number one cause of death and major injury for U.S. children ages 1 to 17.
Cities with existing programs have experienced reduced traffic congestion, reduced collision in and around schools, and decreased speed in residential neighborhoods. Children learn valuable traffic safety skills and responsibility, and more people of all ages are able to walk and bike in the neighborhood as a result of improved access.\textsuperscript{5}

Utah state law requires each elementary, middle, and junior high school to create a child access routing plan to outline and address community concerns about walking routes. To facilitate this, the US Department of Transportation and the Utah Department of Transportation (UDOT) has created the Student Neighborhood Access Program (SNAP). The process of creating a SNAP Plan is a cooperative effort between parents, school officials, community councils, local jurisdictions, police and UDOT. Proper implementation of a routing plan will help ensure that road safety initiatives at a school reflect current safety needs.\textsuperscript{6}

**Street Trees**

Streets should be viewed as an essential element to corridor design. Street trees are a key feature of a livable and walkable neighborhood. Urban trees have significant and multiple benefits. A major transportation benefit is the favorable impact of mature trees on the pedestrian environment, particularly in urban areas. New evidence suggests roadside trees also increase traffic safety. While selecting, planting, and maintaining street trees present challenges, the benefits of trees far outweigh their costs. Cities can maximize these benefits through aggressive tree planting and maintenance programs.\textsuperscript{7}

For a planting cost of $250-$600 (including 3 years of maintenance) a single street tree returns over $90,000 of direct benefits (not including aesthetic, social and natural) in the lifetime of the tree. Street trees (generally planted from 4 feet to 8 feet from curbs) provide many benefits to those streets they occupy. These trees provide so many benefits that they should always be considered as an essential street making feature.\textsuperscript{8}

For decades, traffic engineers have treated urban street trees as dangerous collision hazards and have sought to maintain a “clear zone” should a vehicle leave the road. This may be true in densely vegetated rural areas, where tree collisions usually occur and speeds are substantially higher. Urban tree policy expert, Kate Wolf of the University of Washington, notes that the risk of being in a collision involving an urban tree is 100,000:1, about the same risk as being injured in a plane crash.\textsuperscript{7}

In fact, recent studies in urban settings suggest that trees and other roadside features actually reduce crashes and injuries on urban roadways.
Until recently, there were virtually no studies of the effect of urban trees on traffic safety. Recent studies from Texas, Florida, and Toronto showed that street trees and other landscape features reduced the incidence of crashes and injuries. The reason for this effect is poorly understood, but researchers believe trees help define the roadside edge, leading to greater caution on the part of motorists. They also provide visual “feedback” to help motorists better judge driving speed. Whatever the cause, trees have been shown to reduce vehicle speed and reduce driver blood pressure, which are believed to in turn reduce both crashes and the incident of road rage.

One reason pedestrians give for not walking in older commercial districts, particularly in the South and Western U.S., is the barren environment absent of greenery and shade. In sunny climates, the glare and heat from sidewalks is especially harsh and unpleasant. By contrast, streets in tree-lined areas are typically 10 degrees cooler and more visually appealing.

Merchants often oppose tree planting programs, fearing their signs or windows will be blocked from view. Careful species selection and trimming can maintain views and overcome these objections. One study found customers not only prefer shopping districts with trees, but are willing to pay more for products purchased there. Specifically, the study found:

- Customers traveled longer, farther, and more often to tree-enhanced shopping districts. The stayed longer, and were willing to pay more for both products and parking.
- Participants rated “Amenity and Comfort” of tree-lined sidewalks about 80% higher compared to non-shaded streets. Also, “Quality of Product” ratings were 30% higher in districts having trees, and customer service was considered better on these streets.
- When asked to estimate a price for each of 15 items in a “basket of goods,” participants consistently priced goods significantly higher in districts with trees. It did not matter what type or price range of products were being sold.
- Merchants also showed a general preference for trees, but they consistently underestimated the effect of trees on customer behavior and buying decisions.

**Lighting**

**Design lighting to meet the needs of all the corridor’s users.** Lighting serves many purposes. For many, public space lighting goals are achieved
by installing brighter or additional lights. However, harmful or negative effects of lighting such as glare and reduced visibility of the night sky are often overlooked. Lighting technology has evolved tremendously in recent years. There are now more light sources, fixtures, poles and materials available. There is also much interest in the use of decorative light poles with underground wiring along with recognition of street lighting as an important daytime as well as evening urban design element.11

Whether creating new communities or making improvements in older neighborhoods, lighting should be considered an essential element in the urban design of the corridor. Street level lighting should be spaced adequately to ensure safe travel for automobiles, cyclists, and pedestrians. Lighting levels are generally based on recommendations made by the Illuminating Engineering Society of North America (IESNA). For more information please visit http://www.iesna.org/. Other factors such as traffic volume, accident rates, nighttime pedestrian activity, crime prevention, aesthetics, and neighborhood preferences can also affect the lighting plan for a corridor.

Pedestrians typically have more specific lighting needs, and special attention should be given in pedestrian-oriented centers to ensure that the area is well-lit and safe. Human scale lighting at closer intervals is generally more desirable for pedestrian areas than taller lights, further apart.

Addressing the environmental issues of lighting design is seen as critically important to maintaining quality of life in neighborhoods. These issues go beyond the amount of light produced and include minimizing light pollution, enhancing the urban environment during the day by use of decorative poles and fixtures and at night by the provision of pedestrian level light, deterring undesirable or illegal activities, increasing safety, restricting unwanted truant light onto private property and minimizing glare, power consumption, cost and visual impacts (day and night).11

The Internal Dark-Sky Association (IDA) advocates for the preservation of a quality night-time environment and raises awareness of the impacts of light pollution. Additionally, the IDA works directly with lighting companies and communities to develop products that are energy efficient and direct light downward in order to preserve the natural night sky. All corridor lighting plans in Salt Lake County should adhere to IDA recommendations in minimizing light pollution in our communities. For more information please visit http://www.darksky.org.
Chapter 2 - Best Practices

County Policy

**Modify existing corridor planning policy to encourage multi-modal transportation and investment in public space.** In addition to the inclusion of a variety of uses, the County’s transportation and land use policy direction should encompass changes to a number of long-standing guides that have shaped arterial street design and operations. These specific shifts in policies governing arterial streets are described below:

*Recommended corridor policy shifts:*

**Street defined building-face to building-face**—Rather than seeing the corridor as just the pavement for automobiles, policy makers should view the corridor as all the area from the building face on one side of the street to the building face on the opposite side of the street. This requires decision makers to think about the quality of the pedestrian environment in their community, as well as other urban design elements such as trees, lights, and other amenities. The buildings along a corridor can define the overall character of the community, thus it is essential that the siting and orientation of buildings along a corridor be a topic of discussion during policy discussions. Considering buildings in corridor planning can also encourage orienting buildings to the street, encouraging pedestrian travel and creating a higher quality of public realm along the street.

**High degree of land-use transportation integration**—Land use and transportation are inseparable issues that are mutually dependent on each other. Too often, policies will focus only on one side of this relationship, making land use decisions with little thought of transportation issues, or making transportation changes with no regard to how land use could hinder or help transportation problems.

**Increased focus on arterial streets as public space**—With more than one-third of our cities being comprised of streets, they are our most ubiquitous public space. Focusing on developing streets as high quality public space will support community building and public involvement. Making sure that our streets are usable by all members of the public, as well as desirable places to spend time will build both the physical infrastructure of our cities and also reinforce the social networks that lie at the heart of community building.

Multi-modal capacity and quality of service—Corridor planning should focus on multi-modal capacity and quality of service. High capacity corridors have been widened and widened until they have become negative elements in the community. Each mode of transportation has different but specific needs, which must be considered in any policy affecting corridor planning. Corridors should be planned from “outside-in,” focusing on the pedestrian capacity at the edges of the corridor and working back to the center of the corridor. Pedestrian environmental quality is essential because regardless of primary mode, all trips begin and end as a pedestrian.

Multi-modal access and safety—As with quality of service and capacity, each transportation mode has specific needs in regards to access and safety. Rather than focus just on vehicle access along a corridor, vehicular interruptions to the flow of the corridor should be consolidated, and pedestrian, transit, and bike access should be anticipated. Adjacencies and spatial needs of each mode should be considered, and safety measures should be designed into the corridor itself.

Active right-of-way and curb-side management—Using the ITE’s recommended spacing, policy makers should take an active approach to preserving public right-of-way for future corridors. An active approach can influence growth patterns as well as positively impact traffic congestion in ensuring a sufficiently refined grid of streets in newly developed areas. The preservation of right-of-way should also consider the pedestrian zone above the curb in order to maintain sufficient space for a high-quality pedestrian zone.

Heightened user-provider interface—Decision makers should encourage public involvement in transportation planning processes. Many jurisdictions have also found success in daily user-provider communication systems, enabling more immediate feedback for issues that arise in dynamic transportation systems.

These changes in policy are intended to produce a more cohesive urban environment that also supports expanded non-single occupancy vehicle (SOV) travel.12

Innovative Intersection Strategies

One indication that there is an insufficiently refined transportation grid in an area is increased automobile traffic congestion at busy intersections. Many intersections in Salt Lake County are approaching a “failing” level of service due to insufficient transportation alternatives.
In newly developing areas, a refined, closely spaced grid of local streets, collectors, and arterials will mitigate against failing intersections in the future. In existing areas where developing a more refined grid is logistically unfeasible, innovative approaches to congested intersections may be part of a solution to reducing automobile traffic delays.

**Continuous Flow Intersection (CFI)**

The continuous flow intersection was first seen in Mexico more than 20 years ago. There are currently five CFIs in the United States, all rather recently implemented. The fourth opened in September 2007 in West Valley City at Bangerter Highway and 3500 South at a cost of about $8-million.

A standard traffic signal with protected left turn arrows must serve eight major movements: four left turns and four throughs, but only two movements can occur at a time (opposing lefts or opposing throughs). The advantage of a CFI is that it allows opposing lefts and opposing throughs to occur at the same time using one signal at the main intersection, and up to four interconnected mid-block signals. It has proven to be simple for drivers to become accustomed to, and in some cases can fit within the existing right-of-way. A full four-approach CFI with 2-3 lanes per approach can handle about 10,000-14,000 vehicles per hour at level of service E, as compared to the same lanes with double lefts on all approaches, which can handle about 6,000-8,000.

Though CFIs are efficient at moving vehicles, they are rather intimidating for pedestrians, due to the amount of right-of-way that they require. CFIs are more appropriate in principal arterial settings, where development patterns are less pedestrian-oriented. Particular care should be given during the design phase of a CFI to ensure that new facilities adequately meet the particular needs of pedestrians.

**Town Center Intersection (TCI)**

The town center intersection (TCI) is four separate intersections of one-way streets that merge back to a two-way street a block or two “upstream.” It can be designed as a couplet, or even a triplet as shown in diagrams on this page. A triplet has a middle alignment that is not critical for traffic, so the former pavement can be relinquished for short-term parking and/or a well-streetscaped transit & pedestrian mall. Alternatively, the middle alignment may serve through traffic, and left turns and local access can be served on the outside alignments where all streets are two-way streets. The geometry allows conversion to one-way operation if ever necessary to serve higher flows.
In one-way operation, each leg has only half the traffic of the roadway that feeds it, and can hence be much narrower, walkable, and offer more space for amenities.

The design offers an ideal platform on which to build an activity center, but it also has excellent traffic flow and bike/pedestrian safety features. Where a standard intersection with double lefts on all approaches can handle about 6,500 vehicles per hour, this design creates four smaller, simpler, safer intersections that each handles 5,000 vehicles, for a system that handles about 12,000 vehicles per hour.

In a TCI, pedestrians cross fewer lanes per signal, and have fewer conflict points with autos. Drivers are typically forced to slow in respect to the design character of the town center. They will also encounter two signals instead of just one. Despite these impediments, they will, on average have similar or faster overall speeds in part because one-way streets are very simple to synchronize, and the simpler signals will have much less delay.

**Quadrant Roadway Intersections (QRI)**

During congestion, aggressive drivers sometimes cut through a parking lot or take a back-road to by-pass a congested intersection. A quadrant roadway formalizes this creative way to make a left. The result is more capacity for vehicles as well as a more pedestrian friendly environment. Drivers enter a left-turn pocket as normal, but do so several hundred feet before the main intersection. They then follow a “back-way” which brings them to their desired street where they enter at a less critical intersection that is easier to manage.

This “back-way” can also be used for property access, allowing elimination of driveways near the main intersection. Buildings can then be placed at the edge of the right-of-way. Since there are no left turns allowed at the main intersection, there are fewer pedestrian conflicts and former left pockets can be converted to any desirable use. Quadrants come in pairs. Two quadrants would reduce a 4-phase signal to 3-phases, boosting overall capacity.
by 20% or more. The top graphic (right) shows how four quadrants achieves a 2-phase signal, with yet more green space and a potential capacity boost of 40% or more. The second diagram (right) depicts how diverting left turns on a quadrant can allow removal of driveways near the main intersection, create space for a transit way, and contribute to an overall more walkable, livable space.

**Bowtie Intersection**

The bowtie intersection uses the latest innovations emerging from roundabout and ellipse designs. Shown below is a functional diagram of a bowtie intersection, attempting to create a more walkable environment and also serve more traffic without widening the existing streets. The routing arrow shows how the northbound to westbound left is accomplished. Similar routing is possible for all other lefts. This requires drivers to make a “right-U-through” to accomplish their left. Utah’s recent experience with a continuous flow intersection at Bangerter Highway and 3500 South shows drivers are able and willing to learn something new if it saves them time. Left turns here involve more driving, but all movements will nonetheless traverse the intersection in significantly less time simply because removing left-turn arrows from the main signal allows it to serve many more vehicles per hour.

An ellipse has some clear advantages over roundabouts on high-volume corridors. The ellipse serves a traffic calming function, forcing vehicles to reduce speeds as they enter a walkable area, but it does not require entering vehicles to yield to traffic circling the ellipse, as occurs with a roundabout. Rather, a wrap-around lane allows vehicles to merge with on-coming traffic without the need to stop oncoming traffic. Placement and access control should be selected by an experienced traffic engineer.
Corridor Examples

Following are cut sheets outlining specific roadway types in Salt Lake County. Each includes a table with an example of right-of-way usage recommendations that may be appropriate for the corridor in question. The vehicle capacity shown for arterials assumes the implementation of the innovative intersection strategies noted earlier. Without these, reduce vehicle capacity by about 10,000 vehicles per day. On all streets, the multi-modal expectancy that is shown is considerably higher than would occur traditionally, as it assumes premium transit, pedestrian, and bicycle features consistent with the recommendations of this report.

Right-of-way may vary significantly even within types. For example, a Primary arterial designed as a complete street may be as narrow as 130 feet, but if designed as a Grande Boulevard, it may occupy as much as 200 feet. It may also split to two one-way couplets for a time, where each alignment has say 80 feet of space, and a sum of 160. The graphics on the next pages also illustrate that even within the same width there are many options in the actual urban design of the corridor.
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While focusing on regional transportation connections, principal arterial streets should also be designed to improve the quality of life in all the neighborhoods they traverse. With an ITE recommended spacing of 2 miles, principal arterials connect major activity centers, and serve to connect collector roads to the interstate highway system.

Because of the potential of principal arterials to have negative impacts on neighborhood quality, special care should be given to designing arterials with significant streetscape and pedestrian infrastructure. The recommended right-of-way (at left) for principal arterials includes dedicated space for transit as well as bicycle lanes.

Many of Salt Lake County’s main corridor connections are classified as principal arterials. With infrastructure improvements to these corridors, there is great potential for improved accessibility to transit for all, as well as the development of activity centers in nodes along the corridors, providing closer proximity of jobs and housing.

**Principal Arterial**

<table>
<thead>
<tr>
<th>Description</th>
<th>35-40 mph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Speed Limit</td>
<td>25-30 mph</td>
</tr>
<tr>
<td>Measured average speed</td>
<td>2 miles</td>
</tr>
<tr>
<td>Spacing (miles)</td>
<td>5-15 miles</td>
</tr>
<tr>
<td>Typical length</td>
<td>Critical</td>
</tr>
<tr>
<td>Typical access control</td>
<td></td>
</tr>
<tr>
<td>Cross-section</td>
<td>Right of way (ft)</td>
</tr>
<tr>
<td>Center left &amp; landscaping</td>
<td>18</td>
</tr>
<tr>
<td>Through lanes, each side</td>
<td>22</td>
</tr>
<tr>
<td>Curb, shoulder, parking</td>
<td>3</td>
</tr>
<tr>
<td>Dedicated bicycle lane</td>
<td>6</td>
</tr>
<tr>
<td>Dedicated transit</td>
<td>12</td>
</tr>
<tr>
<td>Frontage zone</td>
<td>2</td>
</tr>
<tr>
<td>Walk zone</td>
<td>6</td>
</tr>
<tr>
<td>Buffer zone/park strip</td>
<td>8</td>
</tr>
<tr>
<td>Total ROW</td>
<td>136 ft.</td>
</tr>
<tr>
<td>ROW for vehicles</td>
<td>68</td>
</tr>
<tr>
<td>ROW for others</td>
<td>68</td>
</tr>
<tr>
<td>Typical ROW ranges</td>
<td>130-150 ft</td>
</tr>
<tr>
<td>Streets per mile, typical</td>
<td>0.5</td>
</tr>
<tr>
<td>ROW per mile in grid pattern</td>
<td>68</td>
</tr>
<tr>
<td>Vehicle capacity per street (LOS E)</td>
<td>44,000</td>
</tr>
<tr>
<td>Multi-modal expectancy</td>
<td>15,000</td>
</tr>
<tr>
<td>Person-trips/mile, all modes</td>
<td>81,000</td>
</tr>
</tbody>
</table>
Minor Arterial streets serve as connectors between activity centers, intended for some regional travel and connections between neighborhoods. Minor arterials are ideally spaced every mile on the transportation grid, and are fed by collector and local roads.

While narrower than primary arterials, minor arterials can have nearly the same transportation capacity as primary arterials, if planned accordingly.

Due to right-of-way limitations along many of Salt Lake County’s corridors, future changes to some primary arterials may more closely follow the width recommendations for minor arterials. Some of the recommended right-of-way dimensions may need to be adjusted to minor arterial standards. In any case, pedestrian zone dimensions should be preserved as recommended in order to improve the overall pedestrian environment in the county.
Pedestrian zone dimensions

Right-of-Way (approx. 120' width)

- Frontage zone
- Walk zone
- Buffer zone
- Parking
- Curb, shoulder, parking
- Through lanes
- Dedicated transit
- Center left
- Dedicated transit
- Through lanes
- Parking
- Frontage zone

Right-of-Way (approx. 120' width)

- Frontage zone
- Walk zone
- Buffer zone
- Parking
- Curb, shoulder, parking
- Through lanes
- Dedicated transit
- Center left
- Dedicated transit
- Through lanes
- Parking
- Frontage zone

Right-of-Way (approx. 120' width)

- Frontage zone
- Walk zone
- Buffer zone
- Parking
- Curb, shoulder, parking
- Through lanes
- Dedicated transit
- Center left
- Dedicated transit
- Through lanes
- Parking
- Frontage zone

Emigration Canyon Township General Plan
Major Collector

Major collectors serve to connect local neighborhood streets to arterials. With a typical speed limit of 25 miles per hour, major collectors are ideally suited for the creation of activity centers. They have the amount of traffic needed to support commercial areas, but the slower traffic does not as impact the area as negatively as the faster speeds of an arterial.

Without a dedicated transit right-of-way, major collector corridors can provide transportation alternatives through focusing on quality bicycle and pedestrian infrastructure, as well as improved bus stops.

Spaced every half-mile, major collectors are part of every neighborhood, and should be designed such that those residential properties that front the corridor are not unduly impacted by through traffic.
Pedestrian zone dimensions

Right-of-Way (approx. 40' width)

6'  8'  8'  6'  11'  12'  11'  6'  8'  6'

Right-of-Way (approx. 66' width)

6'  8'  6'  6'  6'  22'  6'  6'  6'  6'

Right-of-Way (approx. 86' width)

6'  14'  6'  6'  22'  6'  6'  14'  6'
Minor Collector

Minor collectors are more community based corridors, focusing on local trips to neighborhood-scale activity centers, such as schools, churches, parks, and small-scale businesses. With a typical speed limit of 25 miles per hour and a typical spacing of .25 miles, minor collectors should be designed for everyday neighborhood travel.

While transit is not normally found on minor collector corridors, roadway design should make travel alternatives, such as biking and walking, comfortable for all.

Minor collectors typically may be more residential in nature than other corridors, and should be designed accordingly. Street trees, pedestrian-scale lighting, and complete sidewalk networks should be considered essential components to minor collectors.

<table>
<thead>
<tr>
<th>Minor Collector</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>Typical Speed Limit</td>
</tr>
<tr>
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<tr>
<td>Person-trips/mile, all modes</td>
</tr>
</tbody>
</table>
Chapter 2 - Best Practices

Resources


3. West Bench Master Plan, Salt Lake County.


5. National Center for Safe Routes to School www.saferoutesinfo.org


Other Resources:


Definitions

Purpose

Before a successful conversation on planning issues begins, appropriate definitions of the issues must be established. Much of the confusion and frustration regarding community planning lies in a misunderstanding of the terms and issues that are being addressed. Definitions should be developed as needed in planning documents to bring clarity to policies. They should be written to be simple and direct to assure clarity of the term and not be regulatory or an explanation of policy or regulation.

Best Practices

Core Concepts

1. Definitions seek to make clear and distinct the terms used in the public documents of the community.

2. Definitions are found as part of the adopted ordinances of the community.

3. Definitions should be publicly available and written for the understanding of the general public.

4. Some issues will require more place specific definitions, which will require the community working with planning staff to develop appropriate definitions.

5. Definitions should be concise and easily understood.

6. Definitions should also cross-reference similar or related terms.

7. A definitions glossary should cover the most commonly used phrases and terms related to community planning.
8. Communities should use the commonly held definitions for planning terms.

9. Technical terms should be avoided in definitions. If they must be used, these terms should have their own, simple definition within the definitions list.

**Key Questions:**

Does this proposal inappropriately use key terms that alter the meaning of the document?

Is it apparent that the preparer of this document is using the established definitions as recorded in the definitions portion of the Salt Lake County Zoning ordinance?

Is there a term used in this proposal or project that requires clarification?

Are there any terms in this proposal that need to be defined in order to better understand the intent of the proposal?
Purpose Statement

Energy production, use, and conservation have always been essential issues for any community. On a local level, communities can be proactive in adopting policies that will improve their energy outlook, using a multifaceted approach of conservation, diversification, and simplification. Controlling energy costs and potential impacts on environmental quality have become over-arching issues that communities have been forced to consider over recent years.

Best Practices

Core Concepts

1. Sustainable energy strategies benefit a community because they save money.

2. Energy efficient communities inherently generate less air polluting particulates and gases than energy inefficient communities.

3. Traditional suburban land-use patterns often create communities where citizens may feel detached with less sense of community.

4. Utah communities can join the nation’s leaders in sustainability by implementing progressive zoning and building energy codes.

5. Other innovative policies to include in an energy plan relate to user fees, alternative energy production, and regional cooperation.

6. Financial budgets of a community are one of the primary limitations to implementing a community energy plan.

7. People provided with facts on energy sustainability have a better

Contents:

- Core Concepts 1
- Key Questions 2
- Benefits 3
- Policy Recommendations 4
- Strategies 7
- Alternative Energy 14
- Resources 17

Related Best Practices:
understanding of energy-related issues and are more likely to become part of the solution.

8. An energy plan ensures that energy efficiency is included in all aspects of design and construction in new development as well as revitalization projects.

9. Embodied energy is the energy consumed by all the processes associated with production of a building, from the acquisition of natural resources to product delivery.

10. Communities need to adopt strategies and programs targeted toward infrastructure that reduces energy consumption.

11. Because buildings use one third of all energy consumed in the US and two thirds of all electricity (DOE 1997), using “green” building design can have a major impact on the amount of energy a community consumes.

12. Population growth and transportation should parallel in a sustainable energy planned community.

13. Public transportation provides energy efficient travel for large numbers of people.

14. Alternative energy resources can provide substantial and reliable energy supplies.

Key Questions

Does this proposal incorporate sustainable energy practices?

Does this proposal promote public education on energy use?

Are land use and transportation systems compatible for this proposal?

Are strategies incorporated that include energy efficient infrastructure?

Are “green” building techniques used for structures in this proposal?

Does this proposal encourage use of public transportation systems?

Does this proposal include the use of renewable energy sources?
Discussion

The search for innovative solutions to our energy problems in the West have developed as the political, economic, and social hot button issue of our age. The goal of this chapter is to provide communities with concepts designed to integrate energy efficiency strategies. These strategies, if implemented, help reduce energy consumption and energy related infrastructure costs, as well as increase reliable energy supplies and economic and resource sustainability. Community planning is a major step towards community sustainability. Energy sustainability is a dynamic process that supports change and encourages new ways of thinking.

Benefits

Economic Benefits

Sustainable energy strategies benefit a community because they save money. For example, sustainable community designs typically plan for narrower and shorter streets, shorter utility corridors, and fewer streetlights and traffic signals than traditionally developed areas. This type of urban design can result in less money spent and energy consumed for construction materials and follow-up maintenance. These communities then have the option to spend energy savings on parks and civic centers that contribute to a healthy and social lifestyle.

Additional economic benefits of an energy efficient and sustainable community, in comparison to more conventional urban designs, may include the following:

- Increased savings on air emissions control systems and maintenance because of reduced energy production.
- More money retained within the community because of decreased purchases for power on the open market, especially during peak energy demands.
- Increased workforce investment because of energy-savings revenue reinvested in community and economic development.
- Greater opportunities for startup and relocating high tech firms because of utilized alternative energy resources.
- More disposable dollars for education because less money is spent to heat and power schools.
Increased eligibility for affordable housing because of decreased spending for energy utilities and transportation services.

Increased discretionary income because of decreased spending for energy utilities. These financial gains can increase the quality of life for the community and boost local economies.

All of these possible economic benefits are dependent on many factors and not solely on energy sustainability. A sustainable energy community has a greater potential to experience these benefits compared to traditional communities because they can fund improvements from their own energy savings.

**Environmental Benefits**

Energy efficient communities inherently generate less air polluting particulates and gases than energy inefficient communities.

Cleaner air is a result because energy sustainable communities provide more opportunities to walk and use alternative transportation methods. Furthermore, these communities use less energy per capita for cooling and heating compared to energy inefficient communities. Informational programs, such as the Utah Department of Environmental Quality (DEQ) alert program may further reduce concentrations of air pollutants. DEQ monitors air quality around the state and provides Utah citizens with daily air particulates and gaseous concentrations as well as advisory warnings.

**Social Benefits**

Traditional suburban land-use patterns often create communities where citizens may feel detached with less sense of community. Communities that reflect the principles of energy sustainability benefit by: more citizen involvement in community affairs, increased interaction between citizens and neighborhoods, and a greater sense of community and social cohesion. These benefits occur because the recommended process for adopting and incorporating sustainable energy components in a community energy plan is citizen based. Community members willingly contribute ideas and support for community energy planning, which strengthens community spirit.

**Policy Recommendations**

**Government Policy and Energy Efficiency**

Utah communities can join the nation’s leaders in sustainability
by implementing progressive zoning and building energy codes. Communities can incorporate into the energy plan local codes that are more progressive than the State of Utah’s energy codes. Communities can suggest that local governments and bordering school districts or individual schools also follow similar progressive codes. One of the leading challenges to increasing energy sustainability in Utah is the actual enforcement of energy codes by the local enforcement agencies. One way to ensure energy codes are enforced is to heighten awareness and understanding of the codes.

Other innovative policies to include in an energy plan relate to user fees, alternative energy production, and regional cooperation. A community can implement user fee programs for infrastructure to encourage consumers to balance their needs with the real costs of services. These fees can decrease demand by consumers, which leads to energy and cost savings for construction materials and daily operations.

Another way to increase energy sustainability is to recommend local and state agencies purchase alternative energy in amounts equal to no less than a certain percent of total energy consumed. Energy sustainability can also be addressed regionally. Neighboring communities can endorse similar, up-to-date energy efficiency standards. These standards may prevent project managers from selecting development sites in communities with the lowest energy building standards. Another inter-local agreement to endorse is to share growth-driven revenues between one city that encourages development and another that protects open space.

Utility Policy and Energy Efficiency

In the state of Utah, the Utah Public Service Commission (PSC) regulates privately owned utilities. The primary responsibility of PSC is to ensure safe, reliable, adequate, and reasonably priced utility service. The PSC has supported energy sustainability by allowing utilities to sell alternative energy supplies and energy efficiency strategies. The PSC does not regulate municipal utility companies. An energy plan, therefore, may include suggestions for elected officials of the local municipality to draft regulations for publicly owned utility companies similar to those implemented by the PSC.

Financial Support Possibilities

Financial budgets of a community are one of the primary limitations to implementing a community energy plan. The actual strategizing and
writing of an energy plan may require commitment in time and resources. Implementing energy efficiency strategies into projects may not necessitate financial expenditures or may require substantial financial support. Below are recommendations for possible financial support to include in the energy plan.

Financial support is available through many different organizations including agencies from state government. The Utah Energy Office, for example, helps public and private organizations by providing technical information and financial assistance, which is primarily met with partnerships brokered by the Utah Energy Office. The Utah Energy Office helped the University of Utah secure technical expertise, as well as helped secure $44 million in private sector funding, for an energy-related project. Another state agency that provides energy funding assistance is the Utah Division of Community Development. This agency administers low-income assistance programs, as well as funding for municipal energy projects through the Community Impact Fund and Community Development Block Grant program.

The Quality Growth Commission is one more example of a state entity that offers financial incentives. The Commission has two programs to help local communities fund energy efficient growth. First is the planning grant program that is available annually to communities for quality growth planning. The commission also administers the LeRay McAllister Critical Lands Conservation Fund. This fund is available to help local communities preserve or restore lands that are critical to their quality of life. Communities working with financial partners can make a number of financing options available to homebuyers interested in purchasing a home that is energy efficient, a home that would benefit from energy efficiency improvements, or a home located near public transportation. Additional financing options are available to homeowners who are refinancing their energy efficient home, refinancing to make their home energy efficient, or financing home improvement projects that increase energy efficiency, durability, and value.

**Education Plans**

**People provided with facts on energy sustainability have a better understanding of energy-related issues and are more likely to become part of the solution.** The energy plan should include recommendations for education-related programs for the community. Workshops and conferences are probably the most direct path to inform significant
numbers of people about energy concerns. Within the state of Utah, there is a wide range of instructional programs and workshops on energy related matters. The goals of these programs and workshops range from providing technical assistance to professionals in the energy field to increasing public awareness on energy efficiency strategies. Government agencies, private corporations, nonprofit organizations, and educational institutions offer energy-related programs and workshops. News releases, newsletters, and web sites offer listings of upcoming programs and workshops.

Often, greater numbers of people receive information if groups with similar energy-related goals establish partnerships. The energy plan could include recommendations for education-based partnerships among groups within the community. Additional ideas to include in the energy plan on educating communities about energy sustainability include the following:

- Recommend training seminars on energy sustainability directed primarily toward decision-makers and government officials.
- Provide continuing education courses on energy matters. Check with Continuing Education at the University of Utah and Salt Lake Community College for any special courses on energy efficiency and renewable energy.
- Plan and build demonstration projects ranging in size from single buildings to entire neighborhoods that easily illustrate energy efficiency strategies. A great arena to showcase energy efficient housing is the local Home Builder Associations’ annual Parade of Homes.
- Recommend energy audits of residential and commercial buildings.
- Promote the use of clean fuel vehicle fleets and the opening of refueling stations.

**Strategies**

Suggestions of energy efficiency strategies and energy-related considerations for general development, building design and transportation are described below.

**Communities and Neighborhoods**

An energy plan ensures that energy efficiency is included in all aspects of design and construction in new development as well as revitalization projects. Many aspects of urban design usually show little energy-related consideration. Certain
construction elements to consider for the plan include embodied energy, urban planning and land-use pattern, infrastructure and landscape design.

**Embodied Energy**

*Embodied energy is the energy consumed by all the processes associated with production of a building, from the acquisition of natural resources to product delivery.* The Architecture League of New York reports that the most common building material requiring the least embodied energy is wood. Wood consumes about 640 kilowatt-hours per ton, mostly from the industrial drying process, and some from the manufacture of and impregnation of preservatives. In comparison, all other building products require up to many times more embodied energy than wood: for example, brick (4 times), concrete (5 times), plastic (6 times), glass (14 times), steel (24 times) and aluminum (126 times). Although some of these products may be extremely energy efficient, the embodied energy consumed for those materials must be considered when analyzing the total energy budget of a project. Energy research has shown that materials used in the construction of an average household contain about 1,000 Gigajoules of embodied energy. This amount of energy is equivalent to about 15 years of operational energy. Embodied energy for a project may be minimized by the following:

- Use local resources (within 500 miles), whose energy consumption is lower than for transported materials.
- Conserve and restore old buildings.
- Reuse old building materials: The reuse of building materials commonly saves about 95% of embodied energy.
- Use recycled products: The use of recycled products may lower embodied energy if reprocessing and transportation energy consumption is low.

**Urban Design and Land-Use Pattern**

There are two considerations to help mitigate the impacts of sprawl and decrease transportation energy consumption. One consideration is the drafting of zoning ordinances that do not isolate housing developments from employment sites and shopping centers. The second is to avoid low-density growth such as homes on large lots and widely scattered subdivisions. Both of these considerations can reduce the amount of vehicle miles traveled. Although 70% of the Wasatch Front’s population desires and supports low density...
growth, strategies to introduce energy sustainability in these areas need to be explored.

**Infrastructure**

**Communities need to adopt strategies and programs targeted toward infrastructure that reduces energy consumption.** Counties could establish a program guiding annexation policy to guarantee sufficient and sustainable energy infrastructure. To accomplish this program, governments can require that future developments analyze and compare the costs of infrastructure as it relates to distance and accessibility between existing and future developments.

Other strategies related to infrastructure that may reduce energy consumption include recycling and partnering. Recycling saves energy by reducing the transportation fuel used to haul materials to a landfill and by reducing embodied energy in recycled finished products. Reusing and reducing save energy by reducing the amount of energy used for production and consumption. Partnering with other organizations or government entities to share facilities may also reduce energy consumption for construction materials and daily operations.

**Landscape Design**

The installation and maintenance of landscaped areas can be immensely energy consumptive. In the Intermountain Region, more than half of all residential water use is for landscaped areas. By implementing simple water-efficiency measures, a community can significantly reduce the demand for water resources and construction of new water facilities.

**Commercial Buildings**

**Because buildings use one third of all energy consumed in the US and two thirds of all electricity (DOE 1997), using “green” building design can have a major impact on the amount of energy a community consumes.** This type of approach focuses on the whole building system as well as on the building process. Matters such as site placement, building materials, indoor air quality, and construction clean-up are all considered in order to reduce energy and resource consumption during and after construction. Many architects and building engineers are turning to the LEED (Leadership in Energy and Environmental Design) rating system to design and construct commercial buildings. LEED provides a definitive standard for what constitutes a...
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“green” building. It also provides detailed requirements, basic technologies/strategies, and information for each of the categories. It is designed to rate new and existing commercial, institutional and high-rise residential buildings. Buildings that meet the terms of LEED are rated as certified, silver, gold or platinum. In Utah, many new buildings have been LEED-rated, and several municipalities, including Salt Lake City and Salt Lake County, have mandated LEED-rating on new construction projects receiving public funding. Details and recommendations for a green building design and construction are well covered in LEED and other documents, such as the Salt Lake City “High Performance Building Plan” (http://www.slcgreen.com/pages/hpb.htm).

Residential Building Considerations and Strategies

Residential energy programs usually include a mix between voluntary standards and mandatory codes. Under voluntary standards, new and existing homes are rated for energy efficiency. In Utah, voluntary standards are set by the Utah Energy Conservation Coalition. That group provides “Home Energy Ratings” for residence based on the nationally recognized and accredited Home Energy Rating standards adopted by the Residential Energy Services Network, Mortgage Bankers Association, and the National Association of State Energy Offices. The incentive to build homes, voluntarily above the energy code, is customer driven with some incentives from lenders who take energy cost savings into account when underwriting mortgages. Although mandatory codes set the standard and are enforceable, they can hinder implementing innovative energy efficiency strategies.

An energy plan could recommend that mandatory codes provide flexibility for energy efficiency, yet assure compliance. Under the U.S. Department of Energy Building Standards and Guidelines Program there are four energy code compliance packages that can be used to demonstrate code compliance for residential structures; they are the following:

- Prescriptive compliance package- using a predetermined “package” of energy efficiency measures.
- Points compliance package- using simple trade-offs of various energy efficiency measures, which are assigned point values.
- Performance compliance package- by modeling on a computer a proposed building’s heating and cooling energy needs.
• Enforcement strategies that include financial penalties (DOE/GO-10095-073). The energy plan should recommend building residential developments to the EPA Energy Star HOMES Program standard.

**Transportation**

*Population growth and transportation should parallel in a sustainable energy planned community.* However, the building of transportation facilities often does not keep pace with population growth, and the result is significant traffic congestion. The transportation sector includes surface transportation, federal highway system, aviation, motor carriers, railroads, maritime, and Coast Guard. These sectors account for 79% of all oil consumed in Utah. Because this consumption is so significant, it is necessary to form a sub-committee of the Energy Task Force (ETF) to address energy efficiency specific to transportation. This sub-committee should recommend strategies for sustainability and automobile reductions for their community. The Transportation ETF can also suggest a variety of transportation choices that reduce dependence on unpredictable petroleum sources.

**Transportation Planning**

When the public helps plan for transportation issues, they provide input to the local association of governments, in rural areas, or to the metropolitan planning organization (MPO) in urbanized areas with populations over 200,000. The current Long Range Transportation Plan (LRTP) from the Wasatch Front Regional Council (WFRC) includes the following goals:

- Provide a balanced, interconnected transportation system with a range of convenient, efficient and economical choices.
- Increase transportation mobility and accessibility for persons and freight that promotes economic vitality in the region.
- Increase transportation safety and security for all modes of travel.
- Provide a transportation system that protects and enhances the environment, promotes conservation of energy, and improves the quality of life.
- Protect existing and future transportation systems through ongoing maintenance, preservation, or reconstruction.

The WFRC has a number of objectives to achieve the transportation goals.
in the LRTP, which include the following:

- Provide a system that integrates multiple modes of transportation by connecting them for efficient transfer between modes.
- Use transportation system technologies that are innovative.
- Minimize travel time for both passenger travel and freight.
- Increase accessibility to employment districts, commercial and industrial sites as well as education, medical, and recreation centers for all persons in the region.
- Provide access to nearby developing areas.
- Improve safety for pedestrians and bicyclists.
- Provide a transportation system that serves and complements desired community development standards.
- Reduce the degree of air, water, noise, and visual pollution.
- Minimize the disturbances to the natural aesthetics and wildlife habitat of the region.
- Identify and protect corridors for future highway, transit, freight, or other transportation system requirements.

Additional strategies that reduce vehicle miles traveled (VMT) and urban impact, include:

- Build high-density developments with access to existing public transit.
- Establish a job-to-resident ratio that reduces VMT.
- Add to past investments through infill and brownfield redevelopments.
- Develop residential areas close to existing amenities.
- Institute incentive programs that increase public transit ridership and reduce VMT.
- Install Intelligent Transportation Systems to keep traffic moving.

**Road and Parking Lot Design**

Sustainable communities use road and parking lot design strategies that reduce VMT and environmental impact. The transportation subcommittee of the ETF may want to consider some of the following energy efficiency
strategies for roads:

- Minimize the length of streets and highways.
- Design road width and configuration for specific needs, such as maintenance and snow removal, emergency vehicle access, and evacuation routes.
- Incorporate bikeways, walkways, carpooling links, and transit into roadway planning.
- Anticipate interconnectedness of future development to minimize road building.
- Include pedestrian accommodations whenever possible to encourage walking.
- Design facilities for business and trucking operations for maximum transportation efficiency.
- Plan road construction activities and detours to limit congestion and reduce fuel consumption.
- Use energy saving materials and techniques during road construction, such as concrete and asphalt recycling.

For example, a bank whose peak hours of business are during the day might arrange to share parking with an adjacent apartment complex that primarily requires parking from dusk until dawn. Communities that implement energy-efficient transportation strategies can also save energy used for lighting. Shorter roads and smaller parking lots naturally require fewer lighting fixtures than longer road and larger lots. Fewer fixtures mean less energy consumed for lighting. Building managers and road departments can also increase energy savings by eliminating unneeded lighting fixtures and reducing 20-30 light candle fixtures to 2-10 light candle fixtures. Increases can also come from using motion sensors to illuminate parking lots after hours as patrons approach and selecting energy efficient light fixtures that direct light source only where needed.

**Public and Traditional Transportation, and Alternative Fuels**

Public transportation provides energy efficient travel for large numbers of people. The viability of public transit, however, is highly dependent on population density. Areas of higher density usually have more reliable and adequate public transportation service compared to areas of lower density.
The community members of high-density areas that use public transportation save money and time. The community energy plan could recommend development patterns that are higher density to decrease transportation energy use. For families that are unable to take advantage of public transportation, employers may be able to offer energy efficiency strategies for the daily commuter. These strategies can include offering premium parking spaces to employees that carpool, arranging for employees to work outside the office, and compressing workweeks. Another strategy is to offer the Utah Transit Authority Rideshare program. Alternative fuel vehicles are another option for the daily commuter.

**Alternative Energy**

**Alternative energy resources can provide substantial and reliable energy supplies.** Communities can implement strategies to increase the reliance on renewable energy sources by adopting solar easements. These easements guarantee that as new developments arise, the preexisting structures that depend on the sun for heating or power are not shaded and do not lose access to the sun’s rays. Communities can also adopt special green pricing programs where citizens voluntarily subscribe and purchase a portion of their monthly electrical consumption from renewable sources. Another strategy is for communities to adopt performance standards for new buildings that require a percentage of a building’s annual energy use to be from renewable sources. Finally, some communities have also set a renewable portfolio standard where a percentage of the total power grid is derived from renewable sources.

Utah offers an incentive in the form of a state income tax credit for renewable energy systems, such as solar, wind, biomass, and hydropower. Recent Utah legislation also requires electric utilities to allow customers to connect generation systems to the grid for their own use and to supply excess electricity to the electric grid, called “net metering.” The utility would “net” the customer’s electricity use and production over a defined period of time, in essence, paying the customer retail price for the electricity they produce.

**Definitions of Alternative Resources**

Below are definitions of resources that may be encouraged in the community energy plan. Careful surveying and analysis helps determine whether alternative energy resources are available and economical for individual communities.
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Wind

Wind turbines convert the kinetic energy of the wind into mechanical power that runs a generator to produce clean, nonpolluting electricity. Wind energy can provide a practical and economical source of electricity if:

- Property has a good source of wind.
- Building is located on at least one acre of land in a rural area.
- Local zoning codes or covenants allow wind turbines.
- Average electricity bills are $150 per month or more.
- Building is in a remote location without easy access to utility lines
- Finances can absorb long-term investments.

Geothermal

Geothermal energy is an enormous, under used heat and power source that is clean and reliable. This resource is converted into heat and electricity with little or no greenhouse gas emission, and is released or generated domestically, making us less dependent on foreign oil. One technology that uses geothermal energy is geothermal heat pumps. In winter, heat from the relatively warmer ground is pumped through the heat exchanger into the house. In summer, hot air from the house is pumped through the heat exchanger into the relatively cooler ground. Heat removed during the summer can be used as no-cost energy to heat water.

Electricity use is reduced by 30% to 60% compared to traditional electric resistance heating systems, allowing system payback in 2 to 10 years. These low-maintenance systems can remain operable for 30 years or more. Where natural gas fired heating is used, the total energy bill may not be reduced by changing to a geothermal heat pump.

Photovoltaic

Photovoltaic (PV) panels convert sunlight to electricity, directly. PV panels vary in size ranging from a few square inches to the size of a door. These systems have several advantages including no moving parts, low maintenance, and providing an alternative to utility line extensions. Photovoltaic arrays may be preferred even in areas with utility service because electricity is produced without polluting the environment.

Solar thermal

The sun heats solar collectors, which transfers gained energy to water or
Because Utah has a high amount of solar radiation due to high elevation and many cloudless days, a solar thermal heating system can meet a majority of a home’s water and interior heating needs.

**Passive solar**

A passive solar design is one that permits direct sunlight to enter through windows to warm interior spaces. This design is intended to not overheat the building and to minimize heat lost through windows at night. Solar radiation passes through windows and is absorbed by interior materials such as stone and brick. These materials temporarily store the infrared radiation (heat) until the interior temperatures drop, then they reradiate heat back into the interior space.

**Small-scale hydropower**

Hydropower plants convert the energy of flowing water to electricity and do not necessarily require large dams such as Glen Canyon. Diversion hydropower channels a portion of the water to a canal and through a turbine, from which power is generated. The water is later returned to the river, minimizing the environmental impact. The economics of small-scale hydropower are site specific and can be very competitive with traditional electricity sources. The electric output is site specific and can vary from a few hundred watts to a megawatt or more. Utility connected hydropower can be a practical and cost-effective addition to the energy mix.

**BioEnergy**

Biomass to Energy (BioEnergy) is energy produced from any renewable organic matter including forest residues, agricultural crops and wastes, wood and wood wastes, animal wastes, livestock operation residue, aquatic plants, and municipal wastes. BioEnergy is successful primarily because it converts waste into usable forms of energy. New demonstration projects are coming on line as the need for energy rises.

**Follow-up and Analysis Measures**

Actual inclusion of energy efficiency strategies into a project may not occur even though officials and those involved in the project support the plan. The ETF, therefore, may want to revisit project managers during the implementation phase of the energy plan to monitor progress of development and individual projects. The ETF can provide suggestions or technical assistance to speed the process along.
Conclusion

The dawning of the last century in the United States saw the introduction of new products and technology, most of which are energy consuming. As these products and technologies became an integral part of our Utah communities, the entire economic health of each community and the quality of life of the citizens became dependent on the reliability, cost, and availability of energy sources. Events of the last decade show that no community is immune from regional or national energy changes – these changes precipitate local problems. Rapid growth only exacerbates and compounds potential energy problems for our communities.

This Best Practice has discussed how each community can address present and future energy issues through “sustainability” – using resources wisely and efficiently in the context of community to create certain economic, environmental, and social benefits. Steps that Utah communities can take to becoming “sustainable” have been presented along with the organizational elements needed for development of customized community energy plans. As each community develops a plan, this chapter can serve as a valuable resource for delineating strategies needed to meet the goals of the community energy plan. The key to any community achieving sustainability is the synergy that develops as local officials, citizens, business, developers, and industry work together toward common energy goals. No great society was built upon the status quo. As individuals representing each of these sectors embark on this quest for sustainability, they will exemplify the best in leadership with vision for change and a commitment to success. We can make a difference for the better in Utah’s communities and energy future.

Resources


2. Environmental Protection Agency
Housing

Purpose Statement

Because quality housing is critical to a society, it is a primary responsibility of communities to enable housing development that is safe, makes efficient use of infrastructure, promotes a feeling of community, allows for diversity and affordability, and enhances quality of life. The type and location of housing available in a community significantly impacts opportunities for jobs and economic development, as well as the amount and cost of infrastructure and municipal services required. The type of residential development that occurs in a particular locality will be influenced by government regulations and policies, zoning, existing land uses, and market forces. A housing element that includes a vision for the future, with a realistic assessment of needs, is a critical element of a community’s general plan.

Best Practices

Core Concepts

1. In order to plan for appropriate housing, a community should focus on identifying the needs of the future population, as well as the future housing types that will best meet that need.

2. Based on demographic data statewide, Envision Utah suggests a mix of 60% single-family homes; 26% apartments; and 14% town homes and duplexes.

3. A community’s housing inventory should offer a spectrum of options and costs that is proportional to the makeup of its residents and employees and their ability to pay for housing.

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Related Best Practices:
4. Housing affordability is evaluated by comparing home values and rent rates in a local community to incomes in the larger countywide or metropolitan area.

5. Communities should carefully review their zoning ordinances and regulations in order to ensure that they are not adversely impacting true market demands with unnecessary regulations and policies that do not reflect the true needs of their community.

6. Envision Utah does not recommend detailed architectural guidelines but instead suggests site design standards that will make a community both pedestrian-friendly and compatible with the character of the neighborhood.

7. Promote development of accessory units, workforce housing, live-work units and lifecycle housing as needed and appropriate.

Key Questions

What mix of housing types will best serve the needs of our community?

Are we meeting the diverse housing needs of our community, including all stages of the life cycle?

What policies and regulations do we need to put in place in order to encourage and enable a proper mix of housing?

Do we have any policies in place that are limiting the type of housing development that our community needs?

How affordable is housing in our community?

How well do our housing plans encourage the use of mass transit and the efficient use of infrastructure?

How can we make our community more pedestrian friendly?
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Discussion

Determining the Appropriate Mix of Housing in a Community

In order to plan for appropriate housing, a community should focus on identifying the needs of the future population, as well as the future housing types that will best meet that need. Demand is influenced by many factors, including household size, number of children, age, etc.

In order for supply to reflect demand, it is important to evaluate the demographic characteristics of a community, to make projections of the types of housing that will be needed to accommodate various household types and incomes, and then to incorporate regulations and policies that will allow the market to meet these needs.

Utah has unique demographic characteristics, and therefore unique housing needs. For example, Utah has significantly larger household sizes and is substantially younger than most of the nation. The average household size in Utah is 3.1 persons, compared to 2.6 persons nationally. This represents 0.5 persons more per household in Utah, on average. The median age in Utah is 27.1 years, compared to 35.3 years nationally.

General demographic trends statewide in Utah are for an increase in senior households, decreasing household sizes, and more single-person and single-parent households. These characteristics, combined with stricter requirements for obtaining financing, will result in the demand for smaller, less expensive housing, and for more attached units as compared to detached units.

Based on demographic data statewide, Envision Utah suggests a mix of 60% single-family homes; 26% apartments; and 14% town homes and duplexes. Of course, each community will need to compare its demographic characteristics to those statewide, and make necessary adjustments in order to fulfill its unique needs. Further, the kind of housing that is optimal for each person or family changes over time, is different for individuals, and is affected by market innovation.

An analysis of the residential building permits issued since the year 2000 suggests that 69% of units built in Salt Lake County, including incorporated cities, are single-family, with the remaining...
31% multi-family.\(^3\) This suggests that the needs of the multi-family, or attached unit market, have been under served.

Based on the population forecasts prepared by the State of Utah (Governor’s Office of Planning and Budget), the household mix of the Greater Wasatch area will change during the next 20 years. There will be a rise in senior households (head of household over 60 years) from the current 21% to 27% in the year 2020. Household size will decline from 3.15 people per household in 1990 to 2.78 in 2020. This trend will affect the type of housing needed.\(^2\)

**A community’s housing inventory should offer a spectrum of options and costs that is proportional to the makeup of its residents and employees and their ability to pay for housing.** A successful housing spectrum will include ample options. The beneficiaries are not only community residents, but also employers that are able to draw from a broader spectrum of potential employees. Employers will be able to fill a diverse set of jobs, ranging from clerical to executive, and will include positions for manufacturing, industrial, retail, services, and others.\(^4\)

Decreasing household sizes mean the number of new households will increase proportionately faster than the population. Household sizes are expected to decrease as a result of more single-person and single-parent households and fewer two-parent families with children. Assuming that real incomes will remain more or less the same, smaller households mean there will be less demand for large-lot, single-family homes and more demand for smaller, less expensive housing. There also will be more demand for housing types that require minimal maintenance.\(^2\)

**How Much Affordable Housing Do We Need?**

**Housing affordability is evaluated by comparing home values and rent rates in a local community to incomes in the larger countywide or metropolitan area.** Utah law (Utah Code 10-9-307) states that the availability of moderate income housing is an issue of statewide concern. Therefore, all municipalities “should afford a reasonable opportunity for a variety of housing, including moderate income housing.” Affordability is defined as being accessible to moderate-income households (those earning 80% of annual median income [AMI]) who, according to HUD guidelines, should spend no more than 30% of their incomes on housing.\(^5\)

Housing analysis should identify the percentage of dwelling units in the local community that are affordable to those making 80% of AMI in the countywide or larger metropolitan area. Finally, the community needs to
determine if this percentage affords a “reasonable opportunity” to either own or rent in the local area. Utah law provides no specific guidelines regarding the percentage of units that must be affordable; rather, there must be a “reasonable opportunity” for moderate-income households to live in the local area.

Housing price appreciation has been strong in the eight-year period from 2000 to 2008. The median price of homes sold in the Salt Lake Valley in 2000 was $166,670; the median price of homes sold in 2008 was $264,926, an increase of 59% over the 7 ½-year period, or an average annual appreciation rate of 6.4 percent. In comparison, wage increases in the Salt Lake Valley from 2001 to 2007 have only averaged a 2.7% annual increase. Therefore, wages have not kept up with home price appreciation, and affordability has become a greater challenge for more households. When asked if they could afford to purchase their current home at its current market value, the majority of Utahns report they could not.

However, achieving and maintaining housing affordability presents many challenges. The challenges relate to increasing density, diversifying the product mix, and providing the full range of price points and options for renters and owners.

Traditional methods used to increase affordability are to increase density and/or to increase the number of attached units, thus decreasing per unit land costs and construction costs (i.e., shared walls and utility & road infrastructure). Other measures used to improve affordability include the utilization of government programs (listed in the Resources section) and waiving or decreasing impact fees.

**Zoning Regulations**

**Communities should carefully review their zoning ordinances and regulations in order to ensure that they are not adversely impacting true market demands with unnecessary regulations and policies that do not reflect the true needs of their community.** In the early days of zoning, the intent was to divide residential uses from potentially hazardous industrial uses. However, over time, zoning eventually began to separate different residential classes from each other. Envision Utah’s Urban Planning Tools for Quality Growth recognizes that a good portion of housing development today may unfortunately be driven by zoning regulations rather than by market demand. In the last decade, as the demand for smaller, more affordable housing options has increased, many
communities have redoubled efforts to further tighten zoning regulations, despite apparent market demand for wider housing options. The Envision Utah report does not speculate on what housing choices would be like without zoning regulations, nor does the report advocate the removal of zoning. Rather, the report’s recommendation “is that each community look at the overall effects of its zoning code and adjust regulations to meet the needs of both those who already live there and those who would live there if appropriate housing choices existed.”

Promoting Good Design and a Sense of Community

Envision Utah does not recommend detailed architectural guidelines but instead suggests site design standards that will make a community both pedestrian-friendly and compatible with the character of the neighborhood. Utahns say that living in a safe community with low crime is the most important factor in assessing their quality of life in their community. Therefore, safety should be a primary focus in housing development and the design of neighborhoods. One option for increasing neighborhood safety is to create mixed use neighborhoods that allow for the presence of a population at all hours of the day and night. Neighborhoods that are centered around schools, parks and community centers also help provide a safe and secure environment where families can live and recreate together. Special consideration should also be given to identifying safe walking routes to schools and other civic centers, and landscaping should be open along major pedestrian routes.

How will residential neighborhoods be designed as more accessible and inclusive habitats? How can we foster connections across age, income, tenure, and class, and provide opportunities to keep families together? Opportunity is provided through a diversity of blended housing types, including single-family homes, town homes, patio homes, condominiums, accessory dwelling units, and apartments, which will allow for a range of housing affordability and lot sizes. Higher densities can provide the critical mass necessary for the provision of commercial services in proximity to most homes.

While it is important for communities to have a range of housing types, neighborhoods should also include a variety of home styles and sizes in order to support a diverse population and allow people of different ages and cultures to live in the same neighborhood. The variety in unit type
will allow for a range of housing affordability according to the countywide Housing Plan and provide a balance of housing for a broad spectrum of ages and income levels. Housing types that are affordable and accessible will be geographically dispersed throughout the community to avoid creating over-concentration in any neighborhood.

**Basic Best Practices**

**Promote development of accessory units, workforce housing, live-work units and lifecycle housing as needed and appropriate.** The following are basic best practices for housing development:

*Accessible Housing*

Construct housing with practical features that provide basic access and functionality for people of all ages and various mobility and ambulatory capabilities. Housing design should include options for current and future accessibility needs of family members and friends by utilizing the minimum requirements of the Fair Housing Act Design Manual. Encourage opportunities to include housing that is visitable by people of all levels of ability.

*Accessory Dwelling Units*

Allow the development of carriage houses (secondary structure apartments) and accessory dwellings to increase density and affordability while maintaining character. These units are typically built over garages and can be used as a studio, a teenager’s bedroom, or rented as a separate apartment to help offset the cost of a mortgage.

*Blended Communities*

Housing development should seek to provide a variety of housing types that includes distinct architecture, density, scale and type, as well as different income levels of households within neighborhoods.

*Design Guidelines*

Create a variation in housing mix (architectural styles, lot sizes and building types and sizes) in walkable communities. This creates greater visual interest along sidewalks for pedestrians. In contrast, streets lined with identical homes and blank garage doors make walking less appealing. Design guidelines should require housing forms that improve community quality by reducing total percent of garage frontage on the street. In new residential areas, a mix of housing models and architectural treatments are recommended.

Encourage opportunities to include housing that is visitable by people of all levels of ability.

In new residential areas, a mix of housing models and architectural treatments are recommended.
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Distribution

Promote more affordable housing opportunities distributed across communities to avoid concentration in any one area. Encourage multi-family housing throughout the region and community, using a variety of styles that are attractive and blend in with the local character.

Inclusionary Approach

Address housing affordability using an inclusionary approach that allows for a mixture of housing types and prices, recognizing that housing affordability is integral to the long-term success of the region.

Life-Cycle Housing

Plan for housing suitable for different stages of life, including smaller, more affordable units for first-time buyers, singles, young couples, families with many children, and older homeowners, as well as opportunities for senior citizen housing and long-term care/assisted living facilities. Create opportunities for people to live and grow in the same community. This will enable young couples, families and the elderly to live near relatives. Children may grow up knowing people from different ages, walks of life and from different socioeconomic groups.

Live-Work Units

Zoning to accommodate a live-work unit must permit certain businesses to operate and, unlike zoning provisions for "home-occupations," must allow office use by non-resident employees and customers. While retailing typically is prohibited, everything from professional services to small manufacturing can be home-based. The total non-residential work space in live-work units usually is limited to between a few hundred square feet and roughly 2,000 square feet.

Mixed-use Housing

Provide mixed use housing above retail to encourage human activity at night and on weekends, resulting in healthier commercial areas. When a diversity of users are present in a neighborhood, a wider variety of services can be supported.

Transportation

Design communities in a manner that is conducive to walkable and transit friendly neighborhoods, to reduce the demand for additional road
capacity. Encourage greater choice in housing to reduce demand on infrastructure. Greater choice in housing would reduce land consumption and increase redevelopment, thus reducing demand for new sewer, water and transportation infrastructure significantly.

Workforce Housing

Workforce housing is a housing type for public and private employees that aims at developing residences that can be purchased or rented by schoolteachers, firefighters, police officers, nurses and other medical practitioners, and other employees who are critical to a community and who work in places where real estate costs are high and wages for these industries are not high enough to allow these workers to find housing within the community. The purpose of workforce housing is to increase the options and supply of good quality, low- to moderate-income housing.

Options for increasing the supply of rental housing for low to moderate income households include:

- Establish a development fund to supplement existing public and private resources for the development and redevelopment of workforce housing. The fund should provide a flexible source of financing and subsidy to offer incentives for the development, redevelopment, and rehabilitation of low and moderate income rental housing.

- Encourage the preservation of the existing rental housing stock through the local enforcement of building codes.

Options for increasing the supply of owner-occupied, low-to moderate-income single-family housing include:

- Establish a development fund to supplement existing public and private resources for the development and redevelopment of workforce single-family housing. The funds would provide flexible sources of financing and subsidies to provide incentives for the development of new low-to moderate-income owner occupied housing.

- Encourage employer-assisted home buyer programs.

- Establish a public-private consortium of manufactured housing representatives, state and local officials, lenders, developers and community leaders to provide incentives for the development of affordable housing.
and others to create a strategy to encourage the development of well-planned manufactured housing developments and to develop recommendations regarding the removal and recycling of dilapidated and abandoned manufactured housing units.

Options for fostering locally based housing solutions include:

- Establish a technical assistance program that will provide on-site technical expertise to local leaders and employers in the identification and development of local plans and partnerships to address housing needs in the community.

- Urge local entities such as housing authorities, city and county governments, downtown development authorities, and others to publicize creative efforts to address housing issues in their communities that could serve as models for others.

Options for increasing the consumer literacy and awareness of the targeted workforce include:

- Create a coordinated statewide network to provide home buyer pre-purchase education, one-on-one credit counseling, and post-purchase homeowner skills training.

**Resources**

2. Envision Utah, Urban Planning Tools for Quality Growth
3. University of Utah Bureau of Business and Economic Research
4. Salt Lake County, West Bench General Plan
5. Federal Department of Housing and Urban Development (HUD)
7. Envision Utah and Harris Interactive, Utah Values and Future Growth, November 2007
8. Workforce Housing in Georgia, Housing and Demographics Research Center, The University of Georgia, September 2001. [http://www.fcs.uga.edu/newfacshace/docs/Workforce%20Housing%20in%20Georgia.pdf](http://www.fcs.uga.edu/newfacshace/docs/Workforce%20Housing%20in%20Georgia.pdf)
## Chapter 2 - Best Practices

### Home Ownership/Improvement Assistance Programs

<table>
<thead>
<tr>
<th>Services Offered</th>
<th>Organization</th>
<th>Contact Information</th>
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</thead>
<tbody>
<tr>
<td>Homebuyer education classes</td>
<td>CDC</td>
<td>(801) 994-7222</td>
</tr>
<tr>
<td>Pre-purchase counseling</td>
<td>CDC</td>
<td>(801) 994-7222</td>
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<tr>
<td>Post-purchase counseling</td>
<td>CDC</td>
<td>(801) 994-7222</td>
</tr>
<tr>
<td>Mortgage counseling</td>
<td>CDC</td>
<td>(801) 994-7222</td>
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<tr>
<td>Homebuyer education classes</td>
<td>Salt Lake Community Action Program</td>
<td>(801) 359-2444</td>
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<tr>
<td>Home maintenance counseling</td>
<td>Salt Lake Community Action Program</td>
<td>(801) 359-2444</td>
</tr>
<tr>
<td>Independent living skills education for the seniors with disabilities</td>
<td>Utah Independent Living Center</td>
<td>(801) 466-5565</td>
</tr>
<tr>
<td>Pre-ownership counseling</td>
<td>NeighborWorks Salt Lake</td>
<td>(801) 539-1590</td>
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<tr>
<td>Rehabilitation loans</td>
<td>HUD 203k Rehab Program</td>
<td><a href="http://www.hud.gov/offices/hsg/sfh/203k/203kabou.cfm">http://www.hud.gov/offices/hsg/sfh/203k/203kabou.cfm</a></td>
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<tr>
<td>Emergency home repairs for low income</td>
<td>ASSIST</td>
<td>(801) 355-7085</td>
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<tr>
<td>Low cost loans for low-income families with a member who is disabled</td>
<td>HomeChoice Loan Program</td>
<td>(866)-493-4500</td>
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<tr>
<td>Below market, first-time home loans (below $155,000)</td>
<td>Utah Housing Corporation (Firsthome)</td>
<td>(801) 521-6950</td>
</tr>
<tr>
<td>Down payment and closing cost assistance</td>
<td>Utah Housing Corporation (CHAMP)</td>
<td>(801) 521-6950</td>
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<tr>
<td>Lease-to-own financing</td>
<td>Utah Housing Corporation (CROWN)</td>
<td>(801) 521-6950</td>
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<tr>
<td>Household cleanup</td>
<td>NeighborWorks Salt Lake</td>
<td>(801) 539-1590</td>
</tr>
<tr>
<td>Accessibility design assistance</td>
<td>ASSIST</td>
<td>(801) 355-7085</td>
</tr>
<tr>
<td>Assistive devices, services and home modification for disabled</td>
<td>Utah Assistive Technology Foundation</td>
<td>(800) 524-5152</td>
</tr>
<tr>
<td>Low-cost construction household cleanup removal</td>
<td>Salt Lake County Public Works Sanitation Division</td>
<td>(801) 562-6435</td>
</tr>
<tr>
<td>Lead safe housing program (removal of lead paint)</td>
<td>Salt Lake County Division of Community Resources and Development</td>
<td>(801) 468-3246</td>
</tr>
<tr>
<td>Residents against graffiti (free paint and solvent)</td>
<td>Salt Lake County Division of Community Resources and Development</td>
<td>(801) 468-3246</td>
</tr>
<tr>
<td>Paint-a-thon</td>
<td>Neighborhood Housing Services</td>
<td>(801) 539-1590</td>
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<tr>
<td>Materials and supplies for low-income</td>
<td>Affordability Project (CDC)</td>
<td>(801) 994-7222</td>
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<tr>
<td>Lawn care, yard clean-up and snow shoveling for elderly</td>
<td>Services for Seniors</td>
<td>(801) 887-1275</td>
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<td>Weatherization programs for low-income</td>
<td>Salt Lake Community Action Program</td>
<td>(801) 359-2444</td>
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<tr>
<td>Heating assistance</td>
<td>Home Energy Assistance Target Program (HEAT)</td>
<td>(801) 359-2444</td>
</tr>
<tr>
<td>Referral service for volunteers</td>
<td>Salt Lake County Division of Community Resources and Development</td>
<td>(801) 468-3246</td>
</tr>
<tr>
<td>Youth employment programs</td>
<td>Salt Lake County Division of Youth Services</td>
<td>(801) 269-7500</td>
</tr>
<tr>
<td>Youth employment programs</td>
<td>NeighborWorks Salt Lake</td>
<td>(801) 539-1590</td>
</tr>
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</table>
Land Use & Mobility

Purpose Statement
Land use and mobility are elements of a community that are inseparable. They each affect the other in many ways. The density and distribution of places where we live, work, and play impacts the mode of travel we choose and the length of trips we make. Housing that is far from employment and shopping centers results in longer trips and more traffic on our streets. Proximity of housing and shopping and a well-designed street and pathway network encourages walking and cycling, which in turn fosters healthy lifestyles. Homes and jobs within a short walk of transit encourage residents to use the bus or train. Changes to a community’s land use patterns and transportation facilities often take years or even decades to achieve desired results; however, many cities find that thoughtful coordination of land use and mobility, when implemented appropriately, help reduce traffic congestion and improve quality of life.

Best Practices
Core Concepts
1. Coordinate land use and transportation plans.
2. Mix housing types within neighborhoods to ensure availability of housing throughout the lifecycle.
3. Develop communities as a network of neighborhoods with distinct activity centers, with multimodal connections.
4. Encourage parking policies that will reduce the overall amount of paved areas in activity centers as well as in residential neighborhoods.
5. Balance zoning to respond to market demands on housing.
6. Provide alternatives to the single-occupant automobile, such as transit, bicycling, and walking.

7. Create pedestrian-friendly streets through road diets, “Complete Streets” policies, and neighborhood traffic management.

8. Work to reduce greenhouse gas emissions related to transportation and vehicle miles traveled.

9. Use innovative strategies such as high-capacity intersections, reversible lanes, and hard-shoulder usage to improve vehicle mobility.

10. Support transit to make it a viable and competitive alternative to the single-occupant vehicle.

11. Adopt land use policies that support transit and increase ridership.

12. Plan for all modes of transportation (vehicles, transit, bicycles, and pedestrians) when considering the impacts of transportation and land use decisions.

13. Provide safe, connected, and attractive networks for bicycles and pedestrians.

Key Questions

How does this proposal strengthen the activity centers of the community?

Does this project create a public community space, accessible to all?

How does this proposal respond to current housing needs?

Does the project appropriately correlate with available transportation systems?

How might this proposal provide transportation options to a range of people?

Does this project connect to bicycle and pedestrian networks? What should be included to do so?

How might this project impact greenhouse gas emissions for the area?

How could those emissions be reduced through transportation policies?

What is the level of service for automobiles, transit users, bicycles and pedestrians surrounding this project?
Discussion

Land Use

The Wasatch Front Region is growing at a rapid pace. Appropriate land use and transportation planning must be in place in order to accommodate this era of change. To give a sense of the magnitude of change, the population of the region is projected to increase from 1.9 million people in 2000 to 3.1 million by 2030. This increase of 1.2 million people is roughly equivalent to the number of people living in the City of San Diego, California in 2005 (2005 Census Population Estimates). According to the Governor’s Office of Planning and Budget, Salt Lake County is expected to increase by nearly 500,000 - from a population of 898,387 in 2000 to 1,381,519 by 2030 (GOPB 2005).¹

At a local scale, this transformation is changing the face of Salt Lake County as small-town life gives way to suburbs and highways. Townships and cities in the county have grown dramatically in the last 15 years; for example, both South Jordan City and the City of West Jordan have more than doubled their populations during this period (US Census data), and are expected to double in population again. Without an increase in viable transportation options and a reduction in automobile dependency, it is likely that future growth and densities will continue to parallel I-15, I-215, I-80, State Highways, and the future Mountain View Corridor.¹

However, the land-consumptive patterns of development seen in the last several decades are not inevitable. Envision Utah’s Quality Growth Strategy has shown that by meeting demand for multifamily housing, redeveloping under utilized areas, and reducing the average single-family lot size by less than 10 percent, the total land area needed to accommodate newcomers by 2020 could be cut in half (from 324 square miles to 154 square miles). Of the total land converted to urban use, current trends would consume 143 square miles of agricultural land compared to 27 square miles under the Quality Growth Strategy (Envision Utah 2000). Recent positive policy changes related to regional growth include expansion of the transit system, encouragement of transit-oriented development, and more aggressive conservation of critical lands. These policy changes will encourage development at higher densities and the preservation of natural areas - in essence, more close-knit communities.¹

**Coordinate land use and transportation plans.** In order for a community to function efficiently, land use and transportation plans must work in concert with one another. Land use decisions have a direct impact
on transportation systems, and transportation plans directly affect the appropriateness of certain land uses. It is absolutely vital that these two plans are compatible.

**Land Use Concepts**

**Accessory dwelling units**

**Accessory dwelling units should be considered on parcels occupied by single-family homes in centers.** Accessory dwelling units, such as garage apartments or carriage houses, are an opportunity to provide much more affordable housing within a predominantly single-family neighborhood without impacting the overall character of the area. Not only will these types of units provide more rental housing in these neighborhoods, but can make housing more affordable as well for those owning the primary unit by adding rental income to their mortgage qualifications.

**Building character and orientation**

**The primary entrance for buildings should be located on the street, improving the quality of the pedestrian environment in our communities.** The character, massing, and orientation of buildings will play a critical role in defining the public realm of centers. In general, fronting the edges of buildings at the sidewalk is encouraged to create a continuous “street wall” and a comfortable pedestrian environment. Providing interesting building details at a human scale also creates visual interest and pedestrian comfort. Visual diversity can be created through variations in setback, massing, and architectural details.

**Center core**

**Centers should feature a core area that acts as the central gathering place for the center and surrounding communities.** The core should accommodate the most intensive retail, employment, civic, and pedestrian activity in each center. The design of streets and buildings in the core area should emphasize pedestrian comfort and visual interest.

**Civic buildings**

**Civic buildings should anchor many centers and should typically be located in the core area.** Where feasible, these will feature distinctive building details, entry features, and varying setbacks to provide a unique identity, with entrances facing onto public rights-of-way and parks.
Chapter 2 - Best Practices

Edges

The outer edges of centers should be compatible with adjacent open spaces, neighborhoods, and core uses. Edge treatments may vary depending upon the surrounding context. For example, the perimeter of an Urban Center bounding a wide open space might feature taller residential buildings to emphasize the urban edge and create views. In contrast, the face of a Village Center block across the street from a Village Residential block could consist of town homes to achieve consistency with the scale and density of this adjacent area.¹

Employment within Neighborhood Centers

A limited amount of local-serving commercial activity should be located in neighborhood centers around their core. Ideal neighborhood center retail uses include, but are not limited to, small grocery stores, cafes, restaurants, and personal services. Ideal locations for retail uses include corners and the edges of parks and other community spaces.¹

Gathering spaces

The overall design of the town and neighborhood centers should link gathering spaces and open spaces in a sequence or network. Squares, greens, and plazas are gathering places that may provide visual relief and passive recreation. A square or green is intended to act as the central feature of neighborhood centers, and should be surrounded by civic buildings and/or commercial or mixed-use buildings located in the center. They should be accessible to all, and connected by transit facilities. All community residents should be within walking distance of a public community space or park.¹

Large format retail

Large format retail (i.e., “big box” retail) uses should be designed in scale with surrounding uses and parking areas in keeping with the standards of the area. Large format retail uses are most suited to automobile oriented areas, close to large arterials or highways, in areas of regional scale commercial. In most cases, such uses would not be suited to the town center or neighborhood centers.¹

Live-work units

Buildings and portions of buildings that combine commercial and residential uses within single units are encouraged throughout town and neighborhood centers. Good locations for individual live-work units
are on the ground floor of residential buildings along connector and local streets. In neighborhood centers, good locations for live-work units are in the core area.¹

**Mix of housing types**

**Mix housing types within neighborhoods to ensure availability of housing throughout the lifecycle.** In general, centers should include a mix of rental and for-sale housing units, and can include a vertical mix of uses, where residential units are located above ground floor retail and office uses. Residential areas should incorporate a variety of housing types and ownership to meet the current and future needs of residents of the Salt Lake County. By mixing types and ownership models, residents can find comfortable, affordable housing in their community throughout their life cycle, and as their needs change over time. This kind of housing mix also makes it possible to provide quality, affordable workforce housing for key occupations, such as service workers, teachers, policemen, firemen, etc.¹

**Mixed-use within centers**

**Centers should provide for a mix of uses and block types to create local, walkable connections between jobs, housing, and retail.** Block types may include: Mixed-use blocks that make up the core of each center and combine retail with housing or office uses; Commercial blocks that contain primarily office or retail uses; Residential blocks that contain a range of housing opportunities, including multi-family buildings, town homes, live/work lofts, and/or a variety of single-family opportunities (these blocks may contain incidental retail); or civic blocks that can contain a variety of public and civic buildings, from schools and churches to libraries, community centers, or parks.¹

**Network of centers**

**Develop communities as a network of neighborhoods with distinct activity centers, with multimodal connections.** Centers form a network of complementary employment, retail, cultural, and civic opportunities linked by multi-modal transportation systems. Communities without a distinct center should work toward developing a recognized town center, along with smaller, neighborhood centers serving a variety of purposes. Centers should be arranged in a spatial hierarchy based upon proximity to: (a) regional rapid transit connections; (b) population density in surrounding communities and adjacent portions of the region; and (c) other centers.¹
Off-street parking

Encourage parking policies that will reduce the overall amount of paved areas in activity centers as well as in residential neighborhoods. Although surface parking lots are permitted in town centers and neighborhood centers, other parking options, such as structured parking and underground or semi-depressed garages, are encouraged. Where surface parking lots are used, they should be located behind buildings and occupy only a very limited portion of the street frontage.

The location and design of off-street parking facilities in residential areas should minimize visual intrusion into the public right-of-way and community spaces. Locating parking for multi-family, civic, and commercial buildings in structures, underground facilities, or in locations obscured from street view by buildings or landscaping is strongly encouraged.

On-street parking

On-street parking, which generally reduces traffic speeds and provides easy access for quick-stop shopping, is encouraged within most centers. Local streets may include on-street parking to accommodate visitors and serve as a buffer between street and sidewalk.

Pattern of streets, blocks, and buildings

Centers should have a clear pattern of streets, blocks, buildings, and community spaces scaled to the pedestrian. Block sizes should be kept to walkable distances (300 feet in length or less) to promote pedestrian activity, particularly in neighborhood centers. Retail, community spaces, and civic buildings can be arranged to create a network of active spaces of varying intimacy, size, and function. The massing and design of buildings can be designed to create a sense of intimacy and visually distinguish the center from surrounding communities.

Residential areas should maximize street connectivity, consisting of a coherent pattern of streets and blocks scaled to the pedestrian and discouraging street patterns that prohibit physical connectivity. The design of streets and blocks should respect topography and natural features.

The orientation and character of buildings contribute to a cohesive built environment that reinforces community spaces, creates a sense of intimacy on streets, and links residential areas to surrounding centers and communities. Parks, plazas, and greens should form a continuous network linked physically and visually through streetscape, building, and open space design.1
Scale and density transitions

Transitions in scale and density within residential areas should be gradual. Sharp distinctions in scale and density on different sides of a street typically should be avoided. Identifiable edges should be defined by natural features, transitions in development density, and/or changes in building style, scale, buffering, or massing. For example, a transition can be created through the placement of an open space or civic feature such as a park or small civic building in the area of transition. Most residential areas should achieve appropriate densities to support walkable communities that can support transit and other key infrastructure investments.

Shared parking

Land uses with different periods of peak activity should use shared parking strategies to accommodate parking demand. Excessive, unused parking lots reduce the density of urban centers and detract from the urban fabric during off-peak hours. Sharing parking areas so that they are utilized 24-hours a day improve efficiency of land use and allow for more productive and active uses of urban land.

Transit station location

Appropriate locations for transit stations and stops in centers should be considered. Appropriate locations include the following: (1) within the core areas of centers, (2) within or adjacent to blocks featuring major concentrations of commercial space, (3) major community places, and (4) convenient locations within or adjacent to residential blocks, especially high density residential areas. To encourage transit use, stations should be designed to provide accessibility and feature convenient pedestrian connections to the surrounding street network and transit transfer points. Multi-modal transfer stations can be incorporated as focal points of centers through distinctive design and a location in a center’s core.

Arrange transit stations and stops so that residential areas are conveniently linked to one another and to town and neighborhood centers. The frequency and nature of transit stations and stops within residential areas should be calibrated to population density, proximity to mixed-use centers, and topography. Average minimum densities for high frequency bus routes are approximately 7 units per acre (supports 30 minute headways) up to 30 units per acre (supports 10 minutes headways). Densities higher than this can successfully support light rail systems.
Stations and stops encourage transit use by featuring convenient, clear pedestrian connections to major destinations and the area’s primary streets.¹

**Residential Land Use & Mobility Needs**

Planning and land-use regulations are necessary components of modern cities. However, the current process of planning and zoning often conflicts with the proper functioning of the housing market. In the Greater Wasatch area, the market distortion has artificially increased the supply of housing toward large lot, single-family housing. If zoning remains as-is the mismatch between housing market demand and supply will become further skewed. This section has outlined tools to enable zoning to be more flexible while maintaining control over development impact and ensuring quality design. Providing people with a range of housing choices has many positive aspects – both for the community in general and for individual families. For the community, a market approach to housing consumes relatively less land and provides housing types that can serve as the backbone for communities that are walkable and support transit use. As individuals and families move from one stage of life to the next, a market approach enables them to live in housing that suits their needs and desires while allowing them to maintain their neighborhood bonds and live close to extended family members.²

Not surprisingly, neighborhood and civic design influences community involvement. Careful implementation can ensure that new development creates whole communities – not just “bedroom communities” that are isolated from employment and cultural centers. Careful planning can overcome the great divide of distance, allowing families to spend more time playing, vacationing, and simply being together. Urban form can encourage social interaction and community relationships by locating shared community activity areas for education, religion, recreation, and local governance as centers of each community. Residential communities can be designed to support intergenerational and extended family relationships.¹

Complete elimination of zoning is not recommended. Utahns should continue to benefit from the way in which zoning protects property values and ensures predictable future land use. However, much of today’s zoning must become more flexible and inclusive. Some proposals run counter to some of the current practices of local land-use agencies. However, they are feasible and will work to improve dramatically the available selection
Generally, the recommendation is to develop zoning that allows a variety of housing types in each neighborhood, defined as about a one-half square mile area. Following are some recommendations that will help address housing issues for residents of Salt Lake County.  

**Balance zoning to respond to market demands on housing.** This recommendation supports a fundamental provision of Utah State law, UCA 10-9-307, that each community should provide sufficient choices for all kinds of housing. While the current state law focuses on moderate income housing, a diversity of housing should be permitted and encouraged by local zoning. Density limits should be placed on development projects. Limits on gross density help a community control impacts on infrastructure and local services. The best strategy is to advocate for quality city-scale design while aiming to meet housing needs. A community should mix and arrange the various uses and densities so that an optimal city-scale design emerges, complete with quiet neighborhoods, parks and busy business districts. Height, bulk and design regulations can be used to control the densities in any given area. Cities would continue to have their own unique character and design emphasis. In general, an accurate estimate of the capacity of local existing zoning, categorized by housing type, is compared with the local share of the countywide forecast for housing demand by type. Zoning is then adjusted to eliminate any disparity between future supply and future need. This allows the full range of desired housing types to occur in each city, according to the long-term preferences of present and future residents. With periodic monitoring and updating, cities and counties can be well planned and be flexible enough to meet future housing needs as they may arise.  

**Adopt basic design standards for small-lot, townhouse and multi-family development.** One reason that large-lot, single-family zoning is often adopted in lieu of performance standards is that the design of low-density, single-family areas is fairly predictable and in line with community standards or comfort levels. The design of higher-density housing types often is much less predictable and often unacceptable to nearby residents. While detailed design standards for architecture are not recommended, simple, effective design standards should be adopted to ensure that diverse housing types will meet the community’s design expectations. Small lots less than 6,000 to 7,000 square feet, attached housing, zero lot line housing and the various forms of multi-family housing are often better accepted by residents when basic standards for landscaping, building placement and materials are adopted.  

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*A community should mix and arrange the various uses and densities so that an optimal city-scale design emerges, complete with quiet neighborhoods, parks and busy business districts.*

*Basic standards for landscaping, building placement, and materials should be adopted.*
Commercial Land Use & Mobility Needs

The design of transportation facilities such as roads, driveways, sidewalks, and bike routes have a major impact on a community’s character. These facilities are the result of land use decisions.

How land is used (i.e., for agriculture, residential, commercial, and industrial development) impacts transportation facilities, modes of travel (i.e., cars, buses, bicycles or walking), services and vice versa. Improved integration of land use and transportation planning can reduce the need for highway expansion and can help maintain the quality of communities.

Four cost-effective strategies integrating land use with transportation are: Nodal development/Nodal zoning, livable walkable communities, access management, and transit-oriented developments. Individually or together, these strategies can significantly improve the quality of a community.

- Nodal development/Nodal zoning concentrates development (e.g., creates a village) to encourage walking and bicycle use, and to establish a neighborhood community. Land use mixes promote shorter trips and higher walking and biking mode shares.

- Livable walkable communities are developments that provide and enhance facilities to promote walking, bicycling, services, and activities for a healthier lifestyle.

- Access management is the ability to control the number and location of access points to a property. Limiting the number of accesses reduces curb cuts, promoting a safer environment for pedestrians and bicyclists.

- Transit-oriented developments focus dense, mixed-use land use around transit stops. TODs create compact, walkable neighborhoods with easy access to transit systems.

Employment/Industrial Land Use & Mobility Needs

Areas that are primarily employment or industrial centers have specific land use and mobility needs to be viable centers of commerce. Large employment centers need the ability to transport a large number of people quickly and efficiently to and from the work site. These areas should be in close proximity to residential areas. Industrial areas need to be accessible for workers, but also need easy transportation access, either by heavy rail or by interstate highway. The following recommendations should be followed to ensure fulfillment of these needs for job centers:
• Provide transportation systems that will make job sites more accessible to labor markets over time, thus decreasing commute distances and times.

• Develop transportation plans that include multi-modal options for commuting to make job and industrial centers easily accessible.3

• Adopt measures to ensure that there is an efficient reuse of industrial brown field sites to prevent leapfrogging of activity in urban centers.

• Prioritize development of areas with excellent truck or heavy rail access for major employment/industrial operations that most directly rely on these modes of transporting.

Mobility

The Wasatch Front Regional Council is responsible for assessing and managing transportation needs in the region. Flexible policies such as shared parking and transit incentive programs will be utilized to reduce unnecessary trips and development costs while making the most efficient use of land and streets. By carefully customizing the approach to managing transportation demand, unnecessary travel can be minimized, enhancing air quality and reducing the impact on roadways throughout the Salt Lake Valley.

Mobility Concepts

Context-sensitive street design

Any street regardless of classification can vary in section, features, and size in relation to its urban context. For example, a connector street may have a different sidewalk dimension, street tree treatment, pedestrian crossing, and lane width as it moves from a neighborhood into a center. The elements that can vary include:

• Design speed.

• Sidewalk size.

• Landscaping form and scale.

• On-street parking.

• Bike lanes.
• Traffic-calming treatments.
• Transit facilities.
• Pedestrian crossing treatments.
• Types of street furniture and utilities (street light design, etc.)

**Function and location of bicycle travel lanes**

**Dedicated bicycle travel lanes within streets typically should be designed to connect to major activity centers.** These may include schools, commercial centers, transit centers, and community gathering places. In addition, bike lanes should integrate seamlessly with the dedicated network of recreation trails connecting open space, parks, and recreation facilities.

**Function of sidewalks**

**Sidewalks should provide an accessible route of travel for people of all abilities, especially those with disabilities who must rely on pedestrian facilities.** These designs will incorporate guidance from the Federal Highway Administration, the Americans with Disabilities Act, the United States Access Board, and applicable County ordinances and guidelines.

**Function of trails**

**Trails should provide safe, convenient routes for pedestrians and bicyclists to both urban and open space destinations.**

**Local street types**

**Provide a full range of local street types to serve the needs of various centers, areas, and educational facilities.** Other street types may be utilized, including County-provided street types or street types set forth in developer design guidelines or approved development standards.

**Location of multi-modal transfer points**

Primary transfer points between major transit lines and other transit modes and routes are likely to be located in central locations within town centers. Secondary transfer points should be located within neighborhood centers.

**Multi-modal Transportation Corridor**

In appropriate locations, a multi-modal transportation corridor can influence the location of mixed-use centers and major concentrations of commercial and civic activity. These major corridors should connect to existing transit networks throughout the county.
Multiple routes

Traditional suburban street networks tend to direct all trips to arterials and major through streets, even if the trip is to a local destination. A refined grid pattern of multiple, local streets with sufficient frequency allows short trips to local destinations, such as centers and transit nodes, on minor streets. This network of alternate local routes along with the appropriate spacing of major throughways should be designed in a manner that prevents excessive arterial and boulevard widths.\(^1\)

Right-of-Way Preservation

Create a comprehensive transportation plan that emphasizes right-of-way preservation and transportation improvements. This plan will implement a key component of the core concepts of this plan and provide a road map for sustainable development. The County’s Right-of-Way Preservation Plan, the County Transportation Master Plan and the Wasatch Front Regional Transportation Plan are required tools to implement a coordinated and efficient transportation system.\(^1\)

Urban network

Circulation should be arranged in an urban network of multi-modal streets that reinforces the hierarchy of mixed-use centers and corridors while ensuring walkable, human-scale areas and neighborhoods. The urban network serving the community should seamlessly link neighborhoods, centers, and other destinations with streets scaled to the pedestrian, cyclist, and transit user as well as the motorist.\(^1\)

Multi-modal Mobility

I. Automobile Circulation

Daily life in urban America is often characterized by a mismatch between travel demand and transportation supply. Clogged freeways, road rage, and the need for traffic calming are all evidence of peak hour travel demand that exceeds available transportation capacity. Utah is not immune from the peak hour congestion experienced by other metropolitan areas. While Salt Lake County does not currently experience the massive delays of many large metropolitan regions, Utah motorists have become familiar with recurring congestion on major freeways and arterials. Travel demand has grown substantially over the past decade, resulting in peak hour/peak direction congestion on significant segments of Interstate 15 and Interstate 215. In addition, east/west travel between I-15 and surrounding...
communities continues to grow, and expansion or new construction of east/west corridors may be needed. While TRAX light rail has been successfully operating since 1999, and FrontRunner commuter rail has been operating since 2008, additional transit investment will not keep pace with transit demand. Additional high-capacity, north-south transit lines will likely be necessary to accommodate increased travel demand.\(^1\)

Avoiding the fate of other congested metropolitan areas and enhancing the quality of life for residents of the Salt Lake Valley presents a major challenge. Although major milestones have been accomplished, the region’s overall dispersed land use pattern limits the choice to walk, bike, or use transit. There are many questions that decision makers throughout the region will continue to grapple with. Which transportation improvements will more efficiently move more people? How can new, walkable communities be built to include transit and a variety of non-motorized transportation options? How do we build additional transportation facilities efficiently and economically? How do we plan for right-of-way preservation more effectively?\(^1\)

**Alternatives to the single-occupant vehicle**

Provide alternatives to the single-occupant automobile, such as transit, bicycling, and walking. Transportation Demand Management (TDM) means providing travelers with effective choices to improve their travel reliability, whether that entails choices in work location, travel mode, routes, or time flexibility. Establish city-wide and development-specific TDM plans, including elements such as reduced-cost transit, congestion pricing, passes, carpooling, biking, walking, flex time, telecommuting, or shuttle service from park-and-ride lots. As a case study to look at, the City of Portland’s Office of Transportation provides information to travelers on a wide range of options, including walking, bicycling, transit, and carsharing, through its SmartTrips program.

**Pedestrian-friendly streets**

Create pedestrian-friendly streets through road diets, “Complete Streets” policies, and neighborhood traffic management. Reducing minimum street widths to accommodate narrower travel lanes, thereby lowering traffic speeds, create more livable streets. Consider “road diets”, which reduce the number of lanes on a given street and allow more space to accommodate bicycle or pedestrian features. Seattle has completed road diets on several streets, and FHWA’s research on the Seattle road diets indicates a
lower rate of vehicle collisions in addition to improved pedestrian safety. Several states and municipalities have adopted “Complete Streets” policies. These incorporate policy language at a state or city level supporting the inclusion of facilities for all transportation users in streets. California has statewide Complete Streets policies. Establishing city-wide Neighborhood Traffic Management Programs will address traffic calming concerns and improve pedestrian safety.

**Tolerance for congestion**

Planning agencies and road authorities should consider their level of tolerance for congestion. In many urban areas, congestion is unavoidable during at least some portion of the day, and building more road capacity is infeasible due to construction costs and right-of-way needs. In these areas, municipalities and road authorities accept that some roads may experience a failing level of service (LOS) during peak hour commutes. Other areas specify variable LOS thresholds for different environments: a downtown can experience a failing level of service, but rural areas’ LOS must be higher.

**Reduce transportation-related greenhouse gas (GHG) emissions**

Work to reduce greenhouse gas emissions related to transportation and vehicle miles traveled. Establish a Climate Action Plan. Determine current greenhouse gas (GHG) emission levels related to vehicle miles traveled, establish reduction goals, and identify actions needed to achieve the GHG reductions. Portland and Denver (as well as many other cities and states) have completed Climate Action Plans. The Portland and Denver examples quantify their current GHG emissions compared to the estimated 1990 GHG emission levels (as per national standards and agreements regarding climate change), establish reduction targets, and identify strategies the cities can take to meet those targets.

**Improving Vehicle Mobility**

Use innovative strategies such as high-capacity intersections, reversible lanes, and hard-shoulder usage to improve vehicle mobility. Innovative strategies can be used to manage traffic congestion in town centers and other use-intensive areas. One example is the Town Center Intersection (TCI). The TCI can be designed as a one-way...
couplet (or even a triplet), and can have multiple interior blocks. A triplet has a middle alignment that is not critical for traffic, so the former pavement can be relinquished for short-term parking and/or a well streetscaped transit & pedestrian mall. Each one-way leg has only half the traffic of the upstream roadway that feeds it, and can hence be much narrower and offer more space for amenities. In addition to reducing traffic, a TCI can benefit non-motorized users as well. Pedestrians only have to look one way, cross fewer lanes per signal, and have fewer conflict points with autos. TCIs have been used successfully for many decades in other cities. A half-TCI triplet is at the foundation of Denver’s highly acclaimed success of the 16th Street transit/pedestrian mall. This mall and the triplet that makes it possible is a key feature of Downtown Denver’s ability to attract the type of development envisioned for activity centers.

Other innovative vehicle mobility strategies include continuous flow intersections (CFI) that can accommodate high volumes of traffic at major arterials. The CFI eliminates the left turn phases of a signal by transitioning the left-turning vehicles to the other side of the opposing traffic at an upstream signalized location. By eliminating the left turn phases, additional green time can be added to the other heavy volume approaches and reduce the overall intersection delay. These can be used in locations where a grade-separated intersection is ideal from a traffic operations perspective, but where right-of-way and cost constraints limit grade separation options. CFIs are used in Juarez, Mexico; Baton Rouge, Louisiana; and at the intersection of 3500 South and Bangerter Highway in West Valley City, Utah. Additional vehicle mobility strategies include reversible lanes (used during I-80 re-construction in Salt Lake City), in which a center lane alternates direction based on peak hour traffic demand; and use of the hard shoulder (used in the United Kingdom and the Netherlands), where the emergency shoulder of a highway is used as a travel lane but only during peak traffic periods.

The “5-D’s”: Reducing the Need to Drive within Activity Centers

Dr. Robert Cervero of the University of California at Berkeley has produced a significant amount of research regarding the magnitude to which vehicle miles traveled (VMT) generated by an area can be altered based on the level and type of density, diversity, design, destinations, and distance to transit that exist within the area.

1. Density: An area may experience roughly a 5% reduction in per capita VMT every time the total density of the location doubles.
2. Diversity: A good mixing of dwellings and jobs tends to make a 4% reduction in sub-area VMT.

3. Design: Considering those features easiest to measure, such as block sizes, completeness of sidewalks, and route directness, expect roughly a 4% effect for a place that “significantly improves” these quantifiable measures.

4. Destinations: This is a recognition that location matters. Suburban places that have many of the above features still perform far under what other similar but centrally located places would achieve (e.g. like the traditional central business district, or a major rail stop). Locating destination employment in traditionally central areas will also more effectively boost efficiency than if the same employment was located in a less central area.

5. Distance to transit: People are typically willing to walk up to half a mile to/from a premium transit station (Commuter Rail, Light Rail, Streetcars, Bus Rapid Transit – not regular buses). Thus the more trip origins or destinations that can be concentrated in that radius, the more likely people are to use transit. This element alone can affect a 3-5% reduction in VMT.

II. Transit Systems

Accessible and competitive transit

Support transit to make it a viable and competitive alternative to the single-occupant vehicle. Provide transit options for different trip purposes, such as local destinations and regional destinations, with a range of transit types. Utilize national guidelines to provide safe, secure, convenient, and comfortable transit stops. Connections between transit and destinations should be direct and inviting. Bulb-outs and bus turn-ins can help better accommodate transit and enhance transit stops. The Central Train Station (Hauptbahnhof) in Berlin is an excellent example of an integrated and inviting transit facility. The newly-built structure provides connections between local bus, regional light rail, and intra-regional commuter rail under one roof, using different levels for different transit modes. Station amenities include wireless internet and laptop workstations, retail and service stores, and eateries. The Denver 16th Street Mall is another example of an integrated pedestrian/transit environment. The 16th Street Mall has a free-fare streetcar along several blocks of a pedestrian mall. Pedestrian spaces are incorporated along
the sidewalks as well as in between the streetcar tracks. The streetcar operates at relatively slow speeds and utilizes a human operator, who can respond appropriately to pedestrians in the trackway.

**Technology-enhanced transit**

Use ITS strategies such as bus priority signalization and real-time bus route and transfer information to increase attractiveness and competitiveness of transit as a travel mode, and to reduce perceived waiting times. Cornell University allows cell phone users to subscribe to its transit notification service. Users can select a transit route, time, and stop location, and receive a text message notifying them when the bus is within a specified time of arriving at the desired stop. In 2001 Utah’s CommuterLink system launched 511, a telephone assistance system that provides users with real-time traffic conditions, along with transit options.

**Support transit ridership through land use planning.**

Adopt land use policies that support transit and increase ridership. Work jointly with the development community and transit agencies to achieve planning goals. TOD’s can be encouraged through shared parking, reduced parking overlay districts, and land banks to preserve land parcels near stations for future development. New Jersey Transit (NJ Transit) has established many Transit Villages along its rapid transit lines. These generally involve some level of cooperation between the development community, local municipality, and NJ Transit to rebuild station areas in a manner that generates more ridership for the system, and provides transit-oriented housing options for area residents.

**Analyze impacts to all modes of transportation.**

Plan for all modes of transportation (vehicles, transit, bicycles, and pedestrians) when considering the impacts of transportation and land use decisions. Davis, California has used multi-modal level-of-service analysis to determine impacts of intersection construction to pedestrian routes and crossing times. Other municipalities, such as Fort Collins, Colorado and Seattle, Washington have adopted their own standards for evaluating pedestrian and bicycle level of service.

**III. Cyclists & Pedestrians**

**Safe bicycling systems**

Provide safe, connected, and attractive networks for bicycles and pedestrians. Consider factors such as average daily traffic volumes,
shoulder widths, traffic speeds, presence of parking, and drainage grates when selecting bicycle lane locations. Provide safe, accessible bicycle parking at trip generators and mode transfer points. Consider innovative strategies such as sharrows, painted bicycle lanes or bicycle boulevards to raise driver awareness of cyclists and provide cyclists with the right-of-way over vehicles. Change local zoning ordinances to require bicycle parking based on land use or total automobile parking spots. Cities with excellent and comprehensive bicycle systems include Portland, Oregon; Davis, California; and Berkeley, California. Innovative treatments being used in these cities include bicycle boxes, colored bicycle lanes, cycle tracks, bicycle boulevards, bicycle-only signals, and bicycle-detection hardware at signalized intersections.

**Integrate bicycle and transit systems**

As much as possible, integrate existing bicycle facilities with transit to support safe access to stations, and encourage construction of more bicycle facilities connecting to transit. At locations of high bicycle volume provide stations which offer maps, valet bike parking, repair and accessories, food service, bike sharing programs, and locker rooms. The Bay Area Rapid Transit (BART) system around San Francisco, California has several bicycle station locations. Seattle, Washington also has excellent examples of bicycle stations. Consider bicycle travel patterns when evaluating the feasibility of bicycle stations, to be sure that bicyclist’s needs are met. At a minimum, work with local transit providers to ensure that bike racks (or, ideally, covered lockers) are available at transit stations for cyclists who wish to access transit. Several cities around the world have also successfully created short-term bike rental, further improving transportation options in congested areas. Transportation planning should also accommodate bicycles on various modes of transportation.

**Safe pedestrian crossings**

Carefully evaluate factors such as number of travel lanes, traffic speeds, average daily traffic, existing crossing locations, and established crossing patterns when considering placement of new crosswalks. Consider crosswalks with highly visible marking and advanced signage, and increased travel information and education. Use pedestrian signals where feasible and appropriate. Tucson, Arizona has pioneered the use of the HAWK (high-activity walk) beacon as a pedestrian signal that minimizes driver delay, and this will be included in the 2009 edition of the Manual of Uniform Traffic Control Devices. Provide visual
warning to drivers entering pedestrian areas through alternative paving surfaces, materials, or surface design. Provide buffers between travel lanes and sidewalks through street trees, tree lawns, or on-street parking. Consider "woonerfs", pedestrian malls, or other spaces where vehicle traffic is either severely limited or prohibited. Examples of woonerfs or pedestrian malls can be found in the Netherlands, on Denver’s 16th Street Mall, and in Asheville, North Carolina.

Resources

1. West Bench General Plan, Salt Lake County, Planning and Development Services Division, August 2007
2. Envision Utah: Urban Planning Tools for Quality Growth
3. Wasatch Choices 2040
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Maps

**Purpose Statement**
Maps are an essential element in community planning. When referencing a plan, often the first step is to orient yourself with the Official Map, determining where the property or area in question is located in the community. For this reason, it is vital that community maps are accurate, current, and understandable. In order for maps to be consistent throughout the community, it is also important that all communities in Salt Lake County follow the same standards for all mapping.

**Best Practices**

**Core Concepts**
Maps must have a graphic scale.

1. All maps should have a legend, giving detail concerning the map's symbols and elements.
2. North arrows should always point to the top of the page.
3. All maps should either be dimensioned 8.5” x 11” or 24” x 36”. These are two standard sizes that are easily reproduced, and are easily scaled between the two sizes.
4. Maps should be legible, accurate, and current.
5. Once adopted, maps become legal documents, and should be treated as such when updating or editing.
6. All maps should follow a standard system of naming conventions.
7. All GIS maps should use information from a centrally located and accessible database.

8. Specific GIS data should be preconfigured as layer files.

9. All GIS data in Salt Lake County should be based on the following coordinate system: NAD_1983_UTM_Zone_12N

10. All GIS maps should originate from a standard template file that includes basic file formatting information such as fonts, symbol libraries, graphic conventions, and graphic styles.

11. All GIS mapping should be in appropriate projection.

**Key Questions**

Is the map current and does it accurately reflect the area in question?

Does the map follow established Salt Lake County mapping standards?

Is the map complete?

Does the map clearly identify all potential issues?

Can the clarity of the map be improved?

Is the map produced with the County software package?
Chapter 2 - Best Practices

Discussion

Official Map

Utah State Code Titles 10 & 17 require all cities and counties to have a General Plan that includes a variety of topics, as well as an Official Map. This Official Map is often referenced, as it serves as one of the local government’s most useful tools in guiding future decision-making. The State Code does not specify what the Official Map should contain, or how it should be used, but simply states that each General Plan should contain such a map.

The Official Map included with this plan essentially focuses on what degree of change residents can expect in the community. This map simplifies the anticipated changes in the community, and requires that decision makers pursue more information about proposed changes.

The Official Map uses just a few basic colors to categorize different areas of the community. Map colors indicate specific areas’ ability to absorb growth as described by their “level of stability.”

Level of Stability: The level of stability anticipated within specific areas of the County, as represented on this Official Map, is measured in terms of the following:

- Transitions in the intensity, diversity, and distribution of land uses,
- Changes in the level of private or public investment,
- Changes to the function or design of mobility networks.

TAZ

A traffic analysis zone (TAZ) is a geographical area constructed from census block information, most commonly used in transportation planning modeling. TAZ sizes vary, but are typically populated by less than 3000 residents. TAZ information is used in the Official Map to provide more localized information on anticipated growth absorption in each neighborhood of the Township.

Projects

Projects included in the Projects section of the Township General Plan are labeled on the Official Map, except those that do not have a physical location. Numbering of the project labels on the Official Map should be updated annually with the addition of new projects to the Projects section of the General Plan.
Corridors

Important transportation corridors are labeled on the Official Map. A Corridor is a linear transportation route, including all parcels directly adjacent to the roadway. Corridors may have diverse land uses and functions along their length. Corridors typically experience change over time, responding to changing market conditions and new approaches to land use and transportation planning. Because of their limited access and impact on adjacent land uses, corridors on the Official Map do not include highways, rail corridors, or other high-speed, limited access roads.

Zoning Map

Admittedly, the Official Map does not make specific parcel recommendations. Parcel-specific information is available in the Zoning Map, a part of the County’s official ordinance. While the Official Map is intended to provide decision makers with a community-wide vision of areas where growth should be absorbed, the Zoning Map gives property owners specific information about allowed and conditional uses permitted on their property.

Additional Maps

In addition to the Official Map and Zoning Map, some communities find it useful to develop additional maps to aid in planning coordination. These maps may include a parks and trails map, a transportation map, an open space map, etc. These maps should all follow the same recommendations of this Best Practice document.
Chapter 2 - Best Practices

Open Space

Purpose Statement
Designation of open spaces can provide a number of community benefits including preservation of wildlife habitat; avoidance of natural hazards; recreational opportunities; views; agricultural products; reduction of storm water runoff; community cooling; green spaces; and others. Effective protection and long-term maintenance of open spaces are necessary to their success in providing these benefits.

Open Space is a term that encompasses a broad variety of land uses. The most useful open spaces are those designated and managed in accordance with a comprehensive community open space plan that is a part of, or supplements, the community’s general plan. A community should distinguish among the various types and purposes of open space that are important to it, and address its objectives for open space in its general plan. Standards for size, location, use, development, and maintenance should be established for each category of open space. Strategies for designation, acquisition, ownership, and preservation of open spaces should also be established.

Best Practices
Core Concepts

1. A community’s objectives with regard to open space should be clearly articulated in the goals and objectives of their general plan.

2. Open space can be categorized into three types: natural, recreational, agricultural.
3. Only specified uses should be allowed in each open space category.

4. Appropriate size and location of open space is driven by the purpose of the open space.

5. A community should work strategically to identify and acquire desired open space areas.

6. Improvement, management, and maintenance plans for open space should be established during the planning process.

Key Questions

Does this project/proposal create open space in appropriate areas?

Does this project/proposal create the types of open space the community needs?

Do these open space areas further the community’s objectives for open space designation, acquisition, ownership, and preservation?

What are the recreational opportunities in the designated open space?

What category would the open space area be designated as?

Are sensitive or hazardous areas appropriately designated as open space?

Do we have capital improvement, management, and maintenance plans for new open space areas?
Discussion

Planning for Open Space

A community’s objectives with regard to open space should be clearly articulated in the goals and objectives of their general plan. In addition to the environmental, quality of life, and aesthetic benefits of open space, the general plan objectives for open space relate to the health, safety, and welfare objectives that underlie the community’s authority to regulate land use. The community’s open space plan includes connections and adjacency to open spaces in neighboring communities, and on public lands, and supports creation of an interconnected system of open spaces.

The community’s open space plan provides for a variety of different benefits, and should clearly define the purpose of the space. The objectives of the open space in question are clearly articulated.

Open space can be categorized into three types:

- **Natural open space:**
  Managed primarily to: sustain ecological functions such as habitat conservation; protect environmentally sensitive areas; avoid hazards; and provide opportunities for appropriate public use, such as passive recreation, and similar low-impact purposes;

- **Recreational open space:**
  Managed primarily for active recreation; and

- **Agricultural open space:**
  Managed primarily for crop production and animal husbandry.

The community’s open space plan describes the open spaces in the community as an integrated system of open spaces that have significant inter-relationships and, together, meet the community’s goals. Each proposed open space contributes to the objectives of the open space system in terms of size, location, uses, and purpose. The community’s open space system will be designed so that residents will have easy, walkable access to the open space network while respecting the natural resources. Additions to a community’s open space should be consistent with their established open space plan.

**Only specified uses should be allowed in each open space category.**

Each type of open space has appropriate uses. The types of uses that
are allowed in each category of open space are specified. Recommended allowable uses for open space categories include:

**Natural Open Space:**
Habitat preservation and maintenance; passive recreational activities (non-motorized trails, bird-watching, etc.); cultural resource protection and interpretation; flood protection; underground utilities.

**Recreational Open Space:**
Parks, trails, playing fields, golf courses, riding arenas, etc.

**Agricultural Open Space:**
Crop production, animal husbandry, bee keeping, open-air markets, etc.

Uses that are generally disallowed as contributing to open space include private yards, park strips, entry monuments, road divider strips, and similar privately owned areas that are too small and/or disconnected to contribute to the overall objectives of the open space plan.

**Design of Open Space**

Appropriate size and location of open space is driven by the purpose of the open space. General standards include:

**Natural Open Space:**
Sizes and locations are driven by the purposes for which the open space is created. For habitat protection, the open space is located where valuable habitat exists, and is large enough to support naturally functioning ecosystems at the site. For large animal habitat, the open space is large enough to provide cover and forage and is connected to other functional habitat areas. The connections are wide enough and vegetated to provide cover for animal movements, and avoid road crossings. For bird and small animal habitat, the open space is large enough to provide cover and is proximate to other habitat areas.

**Recreational Open Space:**
Recreational Open Space is generally included in a
community’s parks system, so that size, location, and amenities are driven by the desired service areas and populations served established in the parks and recreation plan. Linear recreational open spaces provide connectivity between destinations and to other trails and sites.

**Agricultural Open Space:**

Successful agricultural open spaces are large enough for agricultural operations and are not broken up with residential or other uses. For dry farming, contiguous areas of no less than ten acres are established. For beekeeping and truck farming, open space areas of no less than two acres are established. Larger contiguous areas for agricultural open space facilitate movement of machinery and are buffered from other uses to avoid use conflicts.

**Development Standards for Open Space**

Because the purposes of, and uses allowed in, each open space category differ, specific standards for construction and maintenance should be applied.

**Natural Open Space:**

Grading and vegetation removal is limited to that necessary for flood control, invasive species control, and construction of passive recreational facilities like trails and paths. Paving is disallowed, unless necessary for trailhead parking, hardened trails, and similar purposes. If utilities are allowed in natural open space, all facilities are placed underground.

**Recreational Open Space:**

Development standards for recreational open space are driven by the objectives of the community’s parks and recreation plan.

**Agricultural Open Space:**

Development is limited to that necessary to the agricultural operations on the site. Permitted agricultural retail commercial activities (fruit stands, etc.) take up no more than 10% of the open space area. Animal husbandry operations are buffered from adjoining uses, where necessary, to mitigate smell, insects, and

Trails can be incorporated into all types of open space.

Natural open space.
dust impacts, and to minimize interactions between farm animals and household pets.

**Designation and Management of Open Space**

A community should work strategically to identify and acquire desired open space areas. Three fundamental steps in creating open space are: 1) designation of the desired future open spaces, 2) selecting the acquisition technique for the open space that is suited to its long-term protection and maintenance, and 3) identifying the resources and parties necessary for a successful acquisition. The community designates areas where future open space is desired on the community’s plan maps, and requires creation of appropriate open space within development projects though conservation subdivisions, transfer of development rights or other similar mechanisms.

The techniques selected for acquisition or establishment of an open space are driven by the open space’s purpose category:

**Natural Open Space:**

Established by purchase or dedication of property ownership or a conservation easement, or by a combination of these techniques. The open space or conservation easement is owned by the community or a non-profit entity that has a record of successfully managing natural open space.

**Recreational Open Space:**

Acquired by purchase or dedication of ownership to the community or an agency of the community.

**Agricultural Open Space:**

Established by purchase or dedication of a conservation easement on the property. Ownership of the property remains with the landowner. The conservation easement is owned by the community or a non-profit entity that has a record of successfully managing natural open space.

The resources and parties necessary to establish open space are driven by the purposes of the open space and the ownership and zoning of the property. Communities should identify desired open space early in the planning process, and secure commitments to sell or dedicate the open space before development entitlements attach to the property.
is important to establish relationships with land trust and other non-profit entities that have a record of successfully managing open space, and can assist with landowner tax and estate planning for acquisition of conservation easements.

**Improvement, management, and maintenance plans for open space should be established during the planning process.** A community should require preparation of a resource management plan for Natural Open Space that addresses policing, management of invasive species, flood control, and wildlife management as appropriate to the open space. The management plan assigns responsibility and identifies the resources for implementation, and provides for remedies in the event of default in performance. For Recreation Open Spaces, the community has allocated adequate staff and budget to maintain the open space and associated facilities. For Agricultural Open Space, the community requires an operations and management plan that addresses activities and mitigation of nuisances, where appropriate. The management plan also provides remedies in the event of default.

A community should build partnerships and identify advocates to assist in the long-term maintenance and policing of open space, including other agencies, citizen’s groups, and nearby neighborhoods.

**Resources**


2. Salt Lake County Open Space Committee. [http://www.openspace.slco.org](http://www.openspace.slco.org)


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Parks

Purpose Statement

Parks and recreation opportunities serve as important benchmarks against which the quality of life within a community can be measured, and are important elements in creating a balanced living environment. Recreation is increasingly viewed as an important factor in maintaining adult health – both physical and mental; it is perceived as more than just a weekend activity. Recreation is an integral and necessary element of life which needs to be incorporated into a daily routine. In addition to sports, recreation for both adults and children includes physical activities, social contact, experiences in natural environments, and intellectual and cultural experiences. Overall the goal of a park and recreation system is to create a diversity of recreational opportunities for a variety of different age groups with facilities and amenities located in close proximity to users.

Best Practices

Core Concepts

1. New parks should be developed as outlined in the Salt Lake County Parks and Recreation Master Plan.

2. Park facilities must meet National Recreation and Park Association standards.

3. All amenities must meet the applicable guidelines and policies for development, including but not limited to handicap accessibility, crime safety, and playground safety.

4. The Level of Service (LOS) guideline sets the community’s standard for

Related Best Practices:
5. Parks are to be located central to a neighborhood or development and within a 15 minute walk of all residents.

6. Parks are the major focal point of each neighborhood and serve as a community gathering point.

7. Regional parks vary in size and in function but are generally greater than the standard size and scale of community parks.

8. Park development should coordinate with existing and planned trail networks, improving regional and community connectivity through trails, greenway connections, and paths.

9. Public acquisition efforts focus on sites that are at risk for development for other than recreation uses.

Key Questions

Does this proposal further our community’s goals for parks?

Is this proposal connecting well with the existing parks and trails network?

Do the parks in this proposal serve as the center of the community, not just as “left over” space?

Is this park accessible by foot or another mode of transportation that will accommodate all ages of the lifespan?

Do the proposed parks meet national safety and design standards?
Discussion

In establishing a parks and recreation plan for a community, it is important to provide a variety of recreation experiences through various sizes of parks intended for different types of use and users. It is also important to achieve equitable distribution of basic park lands, recreation facilities, and programs throughout the community by applying standards uniformly and consistently.

A well planned system of local and regional parks and recreational facilities can provide a range of active and passive recreational activities for future residents. Active recreation encompasses a functional system of developed sites, including organized, scheduled activities such as soccer and soft ball. Passive recreation is also important and includes activities such as informal play, picnicking, walking, horseback riding, and jogging. Community centers may be incorporated into selected parks, providing residents with a system of parks, recreational activities, and trails.

New parks should be developed as outlined in the Salt Lake County Parks and Recreation Master Plan. Citizens should have access to a variety of regional parks, community parks, neighborhood parks, open space and trails. Parks that are dedicated to Salt Lake County should be consistent with the County Park standards contained in the Salt Lake County Parks and Recreation Master Plan. Regional Parks that are dedicated to the State or Federal government should be consistent with the operating park standards for these entities.

Park Standards

Park facilities must meet National Recreation and Park Association (NRPA) standards. The NRPA has set guidelines to determine land requirements for various kinds of parks and recreation facilities. These standards can be used during the planning process to accommodate the minimum acceptable facilities for various recreation needs. These guides are applicable nationwide, and should be seen as the minimum standard only. NRPA standards give specific requirements and dimensions for a variety of recreational facilities, including swimming pools, trails, tennis courts, etc.

All amenities must meet the applicable guidelines and policies for development, including but not limited to handicap accessibility, crime safety, and playground safety. The Americans with Disabilities Act
(ADA) requires accessibility for people of all abilities, including standard ramp specifications, parking accessibility, and other design features. Crime Prevention Through Environmental Design (CPTED) standards ensure the physical design of the park encourages natural surveillance, access control, lighting, and activity support. American Association of State Highway and Transportation Officials (AASHTO) policies set the standards for transportation control and access for parks, and the National Playground Safety Institute (NPSI) sets standards for safety in playground construction and design. All these standards should be met when planning for new park facilities.

Adequate lighting should be provided to meet CPTED safety requirements and all light fixtures and poles resistant to vandalism. All site lighting is designed and operated as an automatic dusk-to-dawn system. Light sources should be shielded to reduce glare to nearby properties. Site furniture such as benches, trash receptacles, and picnic tables, should be durable, easy to maintain and be consistent with the theme of the park.

**Level of Service**

The Level of Service (LOS) guideline sets the community’s standard for a minimum amount of park space required to meet recreation demand once the community’s infrastructure has been identified. The LOS addresses infrastructure concerns in particular and links the systems approach to the actual planning process.

In calculating the LOS, the new guidelines suggest five considerations:

- Collective LOS for the entire park and recreation system.
- Individual LOS for each park.
- Present supply of activities and facilities.
- Activity and facility choices based on population and demand.
- Implementation plan based on LOS needs.

To illustrate the process, a tennis courts supply can be calculated by multiplying its expected use (number of visits per day per unit) by its availability (number of days available per year).

The expected use is determined as a combination of average daily use and peak use. Once the supply is determined, planners then determine the number and types of users, from light users (one visit per year) to medium users (one visit per month) to heavy users (one visit per week).
The recreation facility demand can then be calculated by adding the products of the three types of users and dividing the total by the number of people in the community. From there, the facility classification can be determined.

While the process includes a complex formula, it does represent a fresh perspective on an issue that has not been revisited by the National Recreation and Park Association (NRPA) in many years. The new standards are dependent on the specific characteristics of individual communities.

### Recommended Park Level of Service Standards

<table>
<thead>
<tr>
<th>Type</th>
<th>Service Area Radius</th>
<th>Acreage per Population</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neighborhood Park</td>
<td>½-1 miles</td>
<td>2:1,000</td>
<td>7-15 acres</td>
</tr>
<tr>
<td>Community Park</td>
<td>1-2 miles</td>
<td>5:1,000</td>
<td>40-120 acres</td>
</tr>
<tr>
<td>Regional Park</td>
<td>Countywide</td>
<td>5:1,000</td>
<td>50+ acres</td>
</tr>
</tbody>
</table>

Source: Salt Lake County Parks and Recreation Master Plan

#### Park Types

**Neighborhood Parks**

Parks are to be located central to a neighborhood or development and within a 15 minute walk of all residents. Neighborhood parks are smaller than community parks in size and should be primarily focused on accessibility via walking or biking. Where possible they should be located adjacent to schools. They are generally developed areas of lawns and trees, often providing minimal small park amenities such as individual picnic tables, small group picnic pavilions, basketball courts, sand volleyball courts, and children’s playground equipment. Other parks may also be included in neighborhoods. For example, pocket parks may be located near or within residential neighborhoods and may provide limited recreational facilities within close proximity of homes to increase park accessibility by foot.

**Community Parks**

Parks are the major focal point of each neighborhood and serve as a community gathering point. Community parks provide the greatest variety of recreational opportunities and generally include a wide array of amenities, such as athletic fields, group picnic facilities, recreation centers, swimming pools and expanded children’s playgrounds. Because of their size...
and design, community parks draw a large number of park users and should be located near transit stops.

**Regional Parks**

Regional parks vary in size and in function but are generally greater than the standard size and scale of community parks. Frequently they incorporate a unique design or have specialized function intended to serve the entire county population. Ideally, urban regional parks should be located near transit stops. Built facilities may include athletic fields, group picnic facilities, recreation centers, swimming pools, expanded children’s playgrounds, and restrooms, amphitheaters, campgrounds, shooting sport facilities, concessionaire facilities, trails, nature interpretive centers, equestrian trails and ancillary facilities, dog parks, skate parks, golf courses, multi-purpose hard-courts, and tennis courts, etc. Parks may incorporate natural amenities such as creeks and wetlands.

Regional Nature Parks are predominantly large tracts of aesthetically pleasing land in a natural condition, unaltered by human activity and development. Natural or historic points of interest may be included as well as wetlands, natural drainages, riparian corridors, meadows, forest lands, etc.

**Trail Connections**

Park development should coordinate with existing and planned trail networks, improving regional and community connectivity through trails, greenway connections, and paths. Connectivity is essential to developing a well-used and functional park system. Parks are intended to be used by all segments of the population, and connecting parks to trail networks ensures that they are conveniently accessed by foot or by bike. The Wasatch Front region has worked to develop trails and park systems that serve the entire region. Whenever possible, trail connections to these regional trails, such as the Bonneville Shoreline Trail or the Jordan River Parkway, should be prioritized, thereby expanding the amount of park and recreation space accessible to the residents of the Township.

**Parks Financing**

Public acquisition efforts focus on sites that are at risk for development for other than recreation uses. Options for funding new parks can come through a variety of mechanisms, but should all ultimately
come from the developers of the surrounding lands. Impact fees charged at the time of development can help meet the additional demand for park space created by expanding the population of an area. Alternatively, the community may require a developer to set aside a certain portion of land for a park in their development master plans. A third option is to require developers to pay a fee in lieu of the setting aside of a specific parcel for the development of a park.

For the past decade Salt Lake County has collected one additional penny on every ten dollars spent within Salt Lake County for the Zoo, Arts and Parks Program. Through an application process, the funds are distributed to local organizations and projects deemed qualified for funds by the Advisory Boards and Salt Lake County Council. More information is available at: http://www.slcozap.org/.

Regardless of the type and size of parks developed, the County should work to provide a mixture of park space opportunities within the community as it grows.

**Resources**

2. Salt Lake County 2007 Park and Recreation Master Plan.
Subdivisions

Purpose Statement
Subdivision of property for development must be done in such a way that it supports a community’s goal of being an orderly, planned, efficient, and economical community. Land use regulations should be flexible and accommodate multiple needs relative to community demographics or anticipated demand from an aging and diverse population. Overall, the goal of subdivisions should be to provide a regulatory framework for flexible design. Residential subdivisions should provide a broad range of housing types to meet needs of all income levels, family types and stages of life. In commercial areas, subdivisions should be designed to become part of the community, creating nodes of activity within our neighborhoods. Preservation of open space should also be a priority when subdividing parcels.

Best Practices

Core Concepts

1. New subdivisions must maintain a street network that provides multiple routes and connections that will serve a variety of modes, providing access to many destinations.

2. Require the formation of blocks, with a minimum street spacing standard.

3. Promote cross access for adjacent sites.

4. Because of the large scale of housing subdivision across the Salt Lake region, small changes made in individual subdivisions can have large scale effect on the livability of the region as a whole.

Contents:

Core Concepts 1
Key Questions 2
Connectivity 3
Housing 4
PUD 5
Commercial/Mixed Use 6
Public Facilities Impact 13
Resources 16

Related Best Practices:
5. Planned unit developments (PUDs) provide the opportunity to achieve flexibility in architectural design, a mix of compatible land uses as well as the preservation of key natural or historic features, that are otherwise difficult to achieve using traditional, lot-by-lot zoning.

6. Reexamine land use plans and policies for commercial development and provide incentives for infill and redevelopment within designated areas.

7. Require shadow plans to coordinate future development.

8. Provide flexible, performance-based zoning standards and allow mixed-use development when possible.

9. Adopt appropriate standards for pedestrian access, safety, and comfort.

10. Require design compatibility between automobile-dependent uses and pedestrians in all commercial areas.

11. Adopt site and building design guidelines or standards that promote safety and security.

12. Consider using regulatory and parking management tools to minimize the amount of land used for surface parking.

13. Require developments to integrate usable public space whenever possible, and require that they recognize and respond appropriately to existing or planned public spaces on or near the site.

14. Use design guidelines and standards that provide options and incentives for quality design.

15. Impact of the new subdivision on public facilities and city maintenance budgets must be considered during the planning process.

**Key Questions**

Does this subdivision proposal maximize connections to existing roads?

Does this proposal provide cross access for adjacent sites?

Does this subdivision plan adequately for pedestrian access, safety, and comfort?

Does this proposal minimize the amount of land dedicated to automobile parking?

Does this proposal plan adequately for impacts on public facilities?
Chapter 2 - Best Practices

Discussion

Connectivity

New subdivisions must maintain a street network that provides multiple routes and connections that will serve a variety of modes, providing access to many destinations.

Access to a piece of property is an essential element to its value. In order to maintain high quality access within a community, it is essential that subdivision of property maximizes connections, both internally and with the wider neighborhood. When subdivisions are planned in a cellular manner, with limited connections, the traffic generated by a new development is often born by a few arterial roads, decreasing the quality of life of other residents.

New streets must align as closely as possible with existing streets.

Direct, logical access should be provided to surrounding areas. Cul-de-sacs and other closed-end street designs, while appropriate when there are specific barriers to connectivity, are inappropriate in most neighborhoods where there are no inherent barriers. Street connections should be spaced at regular, predictable intervals, except where prevented by barriers (i.e. topography, waterways, highways, etc.) When full street connections are not possible, provide bike and pedestrian access ways on public easements or rights-of-way. The desirable range for block sizes is between 300-600 feet.

When closed-end or cul-de-sac style road design is required due to the existence of connectivity barrier, these streets should be no more than 200 feet in length or have more than 25 dwelling units.

Require the formation of blocks, with a minimum street spacing standard.

Local governments can plan ahead by stipulating maximum block lengths and perimeters in their codes, and designating vital public street connections that must be made as the land develops. The development of secondary or parallel streets along highways can also help in meeting community-wide transportation needs. Where public street connections are not practicable, local codes should require the development of bicycle and pedestrian connections and internal private shopping streets that mimic public streets and meet the block standard.  

Illustration showing the network of a coherent, connected neighborhood (lower left) compared to a conventional suburban pattern of disconnected pods (upper right).
Establish maximum block sizes for future development to ensure a minimum street connectivity standard. To handle traffic, the maximum block size should be inversely related to density: higher density should have smaller blocks. In commercial areas, smaller blocks are appropriate to encourage the walkability of the area, also promoting a “park once” mindset in users. In residential areas, block size can be larger in lower density areas, but closed-end streets should be kept to a minimum. When street connections are not plausible, a pedestrian connection can be preserved to maximize the connectivity of the neighborhood and maintain a regular network.

To improve the pedestrian connectivity network in newly planned subdivisions, building placement is a key component. Placing building entrances near the street, whether commercial or residential, maximizes pedestrian connections and enhances the pedestrian network of destinations within a walkable range. Surface parking lots should also be located behind buildings to minimize pedestrian/automobile conflicts in the connectivity network.

Require cross access for adjacent sites. A service drive and walkway connecting two or more adjacent sites reduces out-of-direction travel, relieves traffic congestion on the public street, reduces traffic conflicts caused by turning movements, and allows people to walk from use to use once they arrive at the commercial center.  

Other issues to consider including when appropriate in connectivity planning of subdivisions include narrow street alternatives, short and direct public routes, consideration of opportunities to incrementally extend street from nearby areas, and consideration of traffic calming measures.

Housing

Because of the large scale of housing subdivision across the Salt Lake region, small changes made in individual subdivisions can have large scale effect on the livability of the region as a whole. The most common form of subdivision of property is in relation to creation of smaller parcels for single family housing development. During design of new housing subdivisions, special care should be given to ensure that the new neighborhood is an asset to the existing community and does not unduly impact neighboring residents negatively.
One of the most effective regulatory provisions in mitigating accelerating land consumption by new single family homes is a density transfer system. With density transfers, a property owner has the right to the same number of units and allowable uses, but the units are transferred on the same parcel from more sensitive land to less sensitive land, preserving key open space corridors, as illustrated in the graphics on this page. With density transfers, the owner’s overall development rights are not subject to approval through a discretionary decision-making planning process. While the outcome of the density transfer system is usually smaller housing lots, there can be a significant increase in the amount of open space for the community, improving quality of life for the new residents, as well as the existing neighborhood.  

PUDs

**Planned unit developments (PUDs) provide the opportunity to achieve flexibility in architectural design, a mix of compatible land uses as well as the preservation of key natural or historic features, that are otherwise difficult to achieve using traditional, lot-by-lot zoning.** Most PUD local laws seek to achieve greater design flexibility and economies of scale in the development of particular land areas within the community. Above all, PUD provisions target specific goals and objectives included in the municipality’s comprehensive plan. Generally, PUD local laws anticipate projects that develop a tract of land as a unit (relatively large scale, but not always) in a unified manner. For example, a community that anticipates receiving a rezoning or site plan application for the development of a large shopping mall could use a mixed-use PUD law to negotiate significant design and use changes instead of ending up with yet another commercial strip.  

Similarly, a community faced with the prospect of uniform single-lot subdivisions, could instead encourage some on-site shopping and services for homeowners and a mix of housing types and styles. Likewise, a rural community could adopt PUD provisions in advance of development in order to indicate the areas it feels are appropriate for mixed-use and more intense development.  

Although PUD development is designed primarily for larger-scale projects, its use is not strictly limited to communities with one or more large lots under single ownership. PUDs are among the most flexible of zoning techniques because their provisions are set by local law. Whereas...
standard zoning may promote lot-by-lot development in which the entire tract is covered with lots of uniform size, PUD local laws can include the possibility of several medium-sized or smaller lots where the owners work together in using the PUD development options provided by the community. 6

Before they can be implemented, PUD provisions must be added to the community’s zoning ordinance. The process of adding PUD provisions to the local zoning law is identical to adopting any local zoning law or amendment. The PUD ordinance must be drafted, published, presented for public hearing, adopted, and amended. The challenge is to choose appropriate methods for designating sites for PUD development, providing appropriate guidelines and establishing a process by which applications are approved by the municipality. 6

The current PUD ordinance has been used by Salt Lake County since the mid 1970s. The purpose of this PUD ordinance is to encourage innovative design and amenities. Infill developments, in contrast, need to be more in keeping with what has been built on surrounding properties to blend into the existing neighborhood.

The Planned Community Development (PCD) designation generally applies to larger undeveloped residential tracts. The objective of the PCD classification is to master plan these larger undeveloped parcels as planned communities that can include a mix of development types (potentially including limited commercial activities). As part of these developments, the Plan recommends that the developer be required to provide amenities, trails and/or other open space features. This is best accomplished with a planned unit development process that allows clustering so that open space can be preserved. These developments should have a low to medium density residential component, the majority of which is single-family detached housing. As a rule, the gross density should be equivalent to an R-1-8 subdivision (3.2 to 3.5 units per acre).

**Commercial and Mixed Use Development**

At their best, commercial places such as traditional downtowns and well-planned centers, give us choices – choices in how we get there, what we buy, where we work and dine, and the types of recreation and entertainment we enjoy. At their worst, they are isolated, homogeneous, automobile-dependent places with few choices, and no relationship to their surrounding environment. The following best practices will aid
communities in ensuring that commercial development projects create places that provide choices and amenities that residents will value and support.

Reexamine land use plans and policies for commercial development and provide incentives for infill and redevelopment within designated areas. Urban renewal districts, infill ordinances, and overlay zones can encourage development in designated areas by providing incentives, such as fee waivers or reductions, development process timeline streamlining, and density bonuses. This can be translated into reduced road system development charges for mixed-use developments in core areas, when the development is likely to result in fewer vehicle miles traveled as compared to single-use developments. Locations with high employment densities, high-density housing, and frequent transit service are most likely to result in a reduction.  

For example, the City of Austin, Texas, has designated “desired development areas”, within which the City evaluates projects using a “Smart Growth Matrix”. The Matrix is a point system that the City Council uses to measure how well a development project meets the City’s Smart Growth goals. The evaluation criteria include: 1) the location of development; 2) proximity to mass transit; 3) urban design characteristics; 4) compliance with nearby neighborhood plans; 5) increases in tax base, and other policy priorities. If a development project, as measured by the matrix, significantly advances the City’s goals, financial incentives may be available to help offset the cost of developing in existing urban areas. These incentives may include waiver of development fees, and public investment in new or improved infrastructure such as water and sewer lines, streets or streetscape improvements, or similar facilities. Incentives available under the Smart Growth Matrix require City Council review and approval. 

Require shadow plans to coordinate future development. Shadow plans illustrate future development potential on a site when a proposed development leaves room for additional building space. For example, if the zoning ordinance allows a floor area ratio (FAR) of up to 2:1, but the applicant proposes a FAR of 0.25:1 (e.g., a 2,500 square foot building on a 10,000 square foot lot), the shadow plan would show how building space can be added in the future. The shadow plan provides a nonbinding, conceptual plan for buildings, parking, circulation, landscaping, and other features.
Provide flexible, performance-based zoning standards and allow mixed-use development when possible. Make sure the zoning ordinance allows residential uses integrated with commercial, employment, and civic uses in appropriate locations (e.g. downtown, main street, neighborhood center and other core areas). Look for opportunities to provide flexibility in building height, housing density, floor area, lot coverage, yard setback, landscaping, and other zoning provisions for mixed use developments. For example, where mixed-use development is permitted, codes should allow residential uses above or behind permitted commercial or civic uses, and the combination of compatible commercial uses (retail, office, services, entertainment, etc.).

Consideration should also be given to allowing small-scale commercial uses in residential neighborhoods to allow people to walk rather than “drive for a gallon of milk.”

Lowering barriers to mixed-use is only part of the solution. Another part is putting the necessary controls in place. Areas may need to be designated for mixed-use in the jurisdiction’s comprehensive plan to facilitate rezoning the land, and the zoning ordinance may need to provide different restrictions for mixed-use. Typically, ordinances limit the types of uses that can be mixed, provide design standards, and, depending on location, limit or boost allowable density.

Adopt appropriate standards for pedestrian access, safety, and comfort. Communities can use land use regulations to provide for a peaceful coexistence among automobiles and pedestrians. First, identify any areas where automobile-dependent uses (i.e., drive-up facilities; automobile sales lots; warehousing and distribution; storage, servicing or repair of heavy equipment; gas service stations, etc.) should not be permitted. These uses may be inappropriate in the core areas of a downtown or main street, where there is the greatest concentration of pedestrians.

Next, consider designating areas outside the core where automobile-dependent uses can be permitted. For example, a transition zone between the downtown and an adjacent industrial area can help protect both districts, while providing needed services nearby. In some cases, it may be appropriate to combine highway commercial and light industrial zones and provide appropriate design and development standards to control strip-commercial development.
Require design compatibility between automobile-dependent uses and pedestrians in all commercial areas. The level of pedestrian accessibility will vary depending on the zone or land use pattern, so site and building design standards for different zones may vary. Downtowns, main streets, and neighborhood centers should be designed to be highly pedestrian-friendly (i.e. street-oriented storefronts); walkers and wheelchair users often have priority over cars in these core areas. Automobile-oriented areas (corridors or large community commercial centers) may not have the same high percentage of pedestrian trips to the site, but need to accommodate walking on the site and to adjacent uses. In either situation, it is necessary to have a safe network of sidewalks and walkways.

Where automobile-dependent uses are permitted, zoning, subdivision and engineering standards can help to reduce conflicts between pedestrians and vehicles. For example, drive-up windows should not be allowed between the street and a building entrance. Vehicle access should be taken from an alley or interior driveway where possible, and conflicts between vehicles and pedestrians should be minimized. Local codes should address the number, location, and width of new curb cuts and driveways, and ensure adequate buffering between vehicles and pedestrians. For example, site plans and building designs should include:

- Sidewalks with a street furnishing zone (e.g., street tree well cutouts, and space for outdoor seating, bus waiting areas, trash cans, newspaper vending machines, mail boxes, sidewalk displays, etc.) on both sides of every street whether public or private.

- Building entrances oriented to streets; corner buildings should have corner entrances where appropriate.

- Parking and vehicle drives located away from building entrances, and not between building entrances and streets with pedestrian activity.

- Surface parking oriented behind or to the side of a building, with access from shared driveways or alleys when possible, and not on street corners.

- Landscape buffering between parking lots and adjacent sidewalks.

- Pedestrian walkways through sites, connecting entrances, buildings, and the public sidewalk, with safe crossings of streets, drives, and parking areas.
Adopt site and building design guidelines or standards that promote safety and security. Important crime prevention elements include:

- Territoriality.
- Natural Surveillance.
- Access Control.
- Activity Support.
- Maintenance.

Consider using the following regulatory and parking management tools to minimize the amount of land used for surface parking:

- **Inventory parking.** First, take stock of existing parking spaces. As cities grow, they find that parking spaces need to be managed to ensure that available spaces are used efficiently and overflow parking does not impact neighbors. For example, upon conducting an inventory of downtown parking use, one community found that most of the on-street parking in front of businesses was being used by employees of those businesses. By encouraging employees to park behind the buildings in a shared parking lot or a few blocks away the businesses were able to open up prime (visible) parking in front of their stores for customers.

- **Parking management plans.** A parking management plan can address supply and demand, as well as pricing, way finding (signage), intermodal connections, maintenance, and capital improvements for public parking.

- **Share parking.** “Shared parking” means that multiple uses share one or more parking facilities. Parking demands for different uses “peak” during different times of the day. For example, if a theater typically has peak parking demand during evening hours, the owner may be able to lease parking spaces to other uses during daytime hours. Shared parking can be allowed regardless of whether the zoning ordinance requires any off-street parking, or whether public parking is available.

- **Add on-street parking when possible.** On-street parking slows traffic, creates better pedestrian environments by buffering sidewalks from moving vehicles, increases the viability of retail shops and services, and reduces the amount of land used for off-street parking lots, thus decreasing impervious surfaces.
Typical barriers to on-street parking are street standards that prohibit backing movements onto major streets. These standards should be reviewed and revised, as appropriate, in the context of encouraging economic vitality, traffic calming, pedestrian accessibility (e.g., buildings oriented to streets), and human-scale design.

- **Reduce or waive minimum off-street parking standards.** Many cities find it necessary to reduce parking ratios and waive parking standards altogether for downtown development. In all commercial districts, parking minimums should ensure adequate parking without requiring excessive parking. Depending on location, population density, and availability of transit service, some retailers can live with less than three parking spaces per thousand square feet of leasable space. More commonly, a minimum of four spaces per thousand square feet of retail space is used.

- **Allow applicant to request a reduction in parking standards based on a parking impact study.** The impact study allows the applicant to propose a reduced parking standard based on estimated peak demand, reductions for likely transit and car pool riders, and adjacent on-street parking. The parking study is subject to review and approval or modification by the reviewing body.

- **Establish a maximum parking ratio.** Where public parking and frequent transit service are provided, local governments should consider putting a lid on how much parking can be developed on a property. Similar to minimum parking ratios, the maximum ratios are based on land use type. Exemptions to the standard can be provided for parking structures, shared parking, valet parking spaces, market-rate parking, or similarly managed parking facilities.

- **Use parking districts (in-lieu fee for off-street parking).** Local ordinances can authorize payment of in-lieu fees to help support downtown parking programs and construction of new public parking facilities. The City of Corvallis, Oregon uses a parking district for their downtown core.

- **Encourage structured parking.** The best place to provide parking in high-density core areas, from an urban design and functional standpoint, is in underground or multi-story parking.
garages. However, these facilities are expensive and may not be financially feasible in some communities. When structured parking is not economically feasible, communities can look at other alternatives such as shared parking.

- **Allow valet parking.** Valet parking may be feasible for some hotels, restaurants and meeting/event facilities. Valet parking allows stacking of smaller parking spaces with less space devoted to drive aisles.

- **Create free parking zones for shoppers, with a maximum time limit and merchant validation.**

- **Create public parking lots/structures, with good signage to make them easy to find.** Providing ground-floor commercial as part of a public-private partnership can help ensure a positive return on the public’s investment in parking.

**Require developments to integrate usable public space whenever possible, and require that they recognize and respond appropriately to existing or planned public spaces on or near the site (e.g., parks, civic buildings and spaces, transit stops, sidewalks, plazas, and similar spaces).** Public spaces should be clearly recognizable as “public” (e.g., a plaza within view of a street or other public space), publicly accessible (i.e., a pedestrian can get there), and can be occupied by a person (i.e., a person can stand there). These spaces can be as simple as an expanded sidewalk for outdoor dining, to a large plaza with public art and entertainment. They can be created voluntarily by the developer, or can be a condition of approval when findings of proportionality to the project’s impact can be made per Dolan v. City of Tigard (US S Ct 1994).  

The same design principles that apply to main streets and downtowns, with some adaptation, can apply to other commercial areas. For example the “height-to-width” ratio referred to by architects and urban designers is a useful concept. The most human scale is achieved when the building height-to-street width ratio is between 1:2 and 1:3. Typically, width is measured horizontally between opposing building fronts. Height is measured from the sidewalk to the building eaves.  

For example, a typical main street (60-80 feet wide) would have buildings about 35 feet tall (2 to 3 stories) which are next to the sidewalks. It is no coincidence that the width-to-height ratio of the space inside many malls has the same proportions: the pedestrian streets are about 35 feet wide and the shop fronts (floor to ceiling) are about 15 feet high. It should be
noted, however, that this principle does not apply to signs. Downtowns and main streets should have signs that are within the field of vision for pedestrians (i.e., typically window or awning height). For shopping centers with private, internal driveways, the width/height ratio can be measured between opposite building fronts (pads) along an internal street, or between one building front and street trees on the opposite side of the street. The internal drive or “shopping street” should have sidewalks and amenities similar to a public street (e.g., seating, trees, lighting, etc.). Ordinances can help support human-scale design by requiring building entrances placed close to the street, ground floor windows, articulated façades, appropriately scaled signs and lighting, and awnings and other weather protection. For example, in downtowns, main streets, neighborhood centers, and other strategic locations (e.g., at transit stops), it is often appropriate to require a maximum front building setback, or a “build-to” line, for a minimum percentage of the building front. ⁵

Use design guidelines and standards that provide options and incentives for quality design. While it may not be possible to legislate good design, communities can adopt design guidelines or standards to help steer developments in the right direction. Design criteria should clearly specify “intent” and provide examples of acceptable solutions, while leaving flexibility for design. The transition to compact, pedestrian-friendly design will occur over time, and this will require a flexible approach to design control. This is particularly important in core areas whose appeal is often tied to a particular aesthetic or historical context. It is possible to apply site design and architecture standards without creating something that appears contrived, or that stifies development altogether. Even large regional and national retail businesses have shown they can adapt when communities demand locally sensitive architecture. ⁵

Public Facilities Impact

Impact of the new subdivision on public facilities and city maintenance budgets must be considered during the planning process. In order to minimize impact and provide services in an economical and efficient way, the following measures should be used.

Roads ¹

Many jurisdictions spend a great deal of their operating budgets on the maintenance of their road system. During subdivision planning, the
appropriate design of roads can have a major impact on the public cost of maintaining new neighborhoods. A few best practices should be followed in planning new road systems:

- Minimize the length of streets and highways.
- Design road width and configuration for specific needs, such as maintenance and snow removal, emergency vehicle access, and evacuation routes.
- Incorporate bikeways, walkways, carpooling links, and transit into roadway planning.
- Anticipate interconnectedness of future development to minimize road building.
- Include pedestrian right-of-way whenever possible to encourage walking.
- Design facilities for business and trucking operations for maximum transportation efficiency.
- Plan road construction activities and detours to limit congestion and reduce fuel consumption.
- Use energy saving materials and techniques during road construction, such as concrete and asphalt recycling.

**Storm water**

Consider Low Impact Development (LID) for storm water management. LID is an approach to land development (or re-development) that works with nature to manage storm water as close to its source as possible. LID employs principles intent on preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat storm water as a resource rather than a waste product.

Some practices that have been used to adhere to these principles include bio-retention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements. By implementing LID principles and practices, water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed.

Applied on a broad scale, LID can maintain or restore a watershed’s hydrologic and ecological functions. LID has been characterized as a
Sustainable storm water practice by the Water Environment Research Foundation and others.

**Schools**

Schools should be integrated into the fabric of a neighborhood: a place where kids can walk to school or a community gathering place that is also available for adult education programs, evening civic events, or weekend sports competitions. By doing so, auto trips are made shorter and are reduced in number. In addition to having an impact on travel patterns within a community, the location of schools affects home-buying decisions, which, in turn, affect travel patterns more broadly. Schools that are located beyond existing development can encourage inefficient leap frog growth.

To be at the heart of neighborhood life, elementary schools must be sited or renovated as part of a complete neighborhood plan. Unfortunately, the large minimum acreage requirements for new schools established by many school districts are often in conflict with the goal of a neighborhood-friendly school. These standards, together with a reluctance to consider renovation of existing schools, often leave little choice but to build schools on the fringe of existing communities and in such a way that they are difficult to walk to. These efforts result in a school that has less of an integral relationship to neighborhood life.

Jurisdictions must plan ahead for school sites to preserve their locations at the center of neighborhoods. Doing so improves pedestrian safety, encourages more active transportation, reduces needed automobile travel, which in turn improves air quality, and provides a greater sense of community.

These site location principles provide guidance for locating schools in areas that are served by existing public facilities and that provide amenities for existing communities. The overall purpose is to ensure that school placement does not encourage new growth in locations where governmental agencies are not prepared to provide necessary services. Furthermore, this principle encourages schools to serve as multi-use community centers.

Principles for school site locations:

- Place schools adjacent to or near the center of communities.
- Emphasize the location as a walkable site.
• Place schools so as to create community centers.
• Provide good access throughout the community.
• Ensure available and adequate utility service.
• Select sites that can reinvigorate declining areas.

Emergency Services

Response time is the key indicator of providing effective emergency services. In the event of an emergency, the speed at which emergency personnel can reach their destination can literally be a matter of life or death. Basic planning decisions made during the subdivision process can have significant impact on how effective these services are. In areas with many dead-end roads and winding, circuitous roads, response times are greater than in areas with a predictable network of streets. When emergency personnel have a multiplicity of routes to choose from, they can avoid any potential obstacles to arriving quickly.

Width of streets can also have an impact on emergency services in a community. While there is a minimum road width that emergency vehicles must have in order to access a neighborhood, roads that are excessively wide can actually make a neighborhood less safe due to the speed of automobiles moving through.

Resources

3. Wasatch Front Regional Council, Wasatch Choices 2040
5. Oregon Commercial and Mixed Use Development Code Handbook


Sustainability

Purpose Statement

Achieving sustainability is now a defining principle of good planning practice. The field of sustainable development can be conceptually broken into three parts: economic sustainability, environmental sustainability, and social sustainability. Sustainable development also includes two important themes: environmental and social protection do not preclude economic development, and economic development must be ecologically and socially beneficial, now and in the long run. Common use of the term “sustainability” began with the 1987 publication of the World Commission on Environment and Development report, Our Common Future. This document defined sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” This concept of sustainability encompasses ideas, aspirations and values that continue to inspire public and private organizations to become better stewards of the environment and that promote positive economic growth and social objectives.

Best Practices

Core Concepts

1. Every community should have a plan for economic development that strives to achieve a good balance between basic and non-basic employment.

2. Communities should actively pursue employers that will broaden their economic base.

3. Communities should promote educational attainment in alignment with the employers they have or hope to attract to their area.

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Related Best Practices:
4. Environmental sustainability makes it possible for present day human needs to be met without compromising the ability of future generations to do the same.

5. Moving towards environmental sustainability must be a common goal among all community leaders, citizens, employers, and other organizations.

6. Communities should promote appropriate densities, local food systems, reduction of heat islands, open space preservation, multi-modal transportation infrastructure improvements, walkable neighborhoods, reduction in waste production, energy conservation, and reduction in water use.

7. Social sustainability seeks equality among all socioeconomic groups, promoting long-term as well as near-term social stability.

8. Communities should promote adequate early-childhood and adolescent education and development.

9. Communities should seek to provide services and improve mobility for all groups in the community.

Key Questions

How do we compete in basic economic infrastructure: access to freeways, airports, railroads; technology infrastructure; and public transit?

What is the community’s supply of development-ready land, appropriately zoned and with existing utilities and infrastructure?

How does this proposal improve our community’s quality of life, such as parks, recreation, and schools that will attract businesses to locate in our community?

How does this proposal reduce the ecological footprint of our community and its residents?

What is the environmental impact of this proposal, both long-term and near-term?

How does this proposal affect all socioeconomic groups of the community?

Does this proposal disproportionately negatively affect one socioeconomic group?
Discussion

Sustainable communities embody the principles of sustainable development. They balance and integrate the social, economic, and environmental components of their community, meet the needs of existing and future generations, respect the needs of communities in the wider region, and preserve and enhance natural ecological functions.

Environmental responsibility in the design, construction, and operation of communities is paramount in building enduring communities. For private development, careful and innovative design, construction methods, and use of materials will help protect the natural setting and ecosystems. 3

Economic Sustainability

The Wasatch Front has been growing rapidly, with an average of 28,600 new jobs per year since 1990 for an annual growth rate of 3.2% (GOPB 2005). This is four times the national average of 0.8%. However, growth in some primary or basic employment sectors that import dollars into the region has been relatively flat.

The largest employment sectors (Government, Retail Trade, and Professional Services), which account for 27% of total employment, are non-basic sectors serving the local market, but not generating new wealth for the region. Although employment forecasts may change every year, in 2005 the Governor’s Office of Planning and Budget anticipated a 1.6% annual growth through 2050 for the Wasatch Front, with more than half of the regional activity occurring in Salt Lake County (GOPB 2005). Over the long term, the region will be able to provide attractive career opportunities to Utah’s high school and college graduates, enabling them to deepen their roots in the region.

Creating an Economic Development Plan

Every community should have a plan for economic development that strives to achieve a good balance between basic and non-basic employment. Basic industries export goods and services out of an area, and thereby import new capital into an area. Non-basic industries are then needed to provide support services (such as grocery stores, restaurants, etc.) for the demand created by the basic industries. When a basic sector industry enters an area, the size of the economy increases. When a non-basic business enters a local economy, the size of the economy does not change, it is just divided up into more pieces.
Therefore, a good economic development plan should focus on how to attract basic sector industries into the local area. The steps to create a plan can be summarized as follows:

**Step 1. Develop a vision statement and goals**

Solicit community input regarding core values regarding economic development.

**Step 2. Conduct economic baseline analysis**

Inventory the strengths and weaknesses of your community. Evaluate the status of economic infrastructure, available land, retail sales leakage, tax burden, revenue sources, amenities and quality of life.

**Step 3. Identify economic development issues**

Identify potential issues such as affordable housing, available land, access, labor force, etc.

**Step 4. Develop policies**

Develop policies regarding public incentives, public assistance, development process, regulations, etc.

**Step 5. Develop an action plan**

Develop a specific implementation plan, with time lines and responsible parties.

**Employment Base**

**Communities should actively pursue employers that will broaden their economic base.** Location quotients provide a way to compare the industrial activity levels among different areas of the state and the country. In general, location quotients are ratios that compare the concentration of a resource or activity (such as employment) in a defined area to that of a larger area. For example, location quotients can be used to compare state employment by industry to that of the nation; or employment in a city, county, metropolitan statistical area (MSA), or other defined geographic sub-area to that in the State. The Bureau of Labor and Statistics provides a location quotient calculator that uses the Quarterly Census of Employment and Wages (QCEW). A location quotient above “one” indicates a higher concentration in a local area than nationwide; a
location quotient below “one” indicates less activity in this industry sector than national averages. Location quotient analysis is helpful in assisting communities to identify their relative strengths and weaknesses in terms of employment.

**Infrastructure Investment**

Appropriate sites for employment must be preserved while residential and retail uses are developed. Employment sites should be near public transit and high-technology infrastructure, and should capitalize on the educational resources of the region. Economic development opportunities can be enhanced by linking jobs with good transportation and by offering a variety of housing options.

Infrastructure investment can be financed through a combination of public and private investment. A community needs to establish clear policies regarding its level of assistance for various types of projects. Potential funding for capital infrastructure needs is discussed in more detail in Best Practices – Capital Facilities. In short, a variety of funding mechanisms should be used that will best match infrastructure costs to those receiving the benefits.

**Educational Attainment**

Communities should promote educational attainment in alignment with the employers they have or hope to attract to their area. Regional economic planning requires that educational levels and vocational training correspond to the demands of the job market. Several communities in Utah have created councils to better understand and correlate the needs of the job market with educational programs offered. Members of these councils include representatives from community colleges, local school districts, workforce services, and members of the business community.

**Environmental Sustainability**

Environmental sustainability makes it possible for present day human needs to be met without compromising the ability of future generations to do the same. Many factors contribute to the environmental sustainability of a community, but incremental changes in municipal policy and incentives can influence sustainability on a community as well as household scale.
Moving towards environmental sustainability must be a common goal among all community leaders, citizens, employers, and other organizations. Natural systems such as watersheds, soils, landforms, wind, air masses etc. traverse political boundaries and affect regions larger than the boundaries of any one jurisdiction. A coalition between cities and regions is essential. A coalition based on bio-regions would focus on natural systems rather than political boundaries for building effective and sustainable policies.

**Community Scale Sustainability Concepts**

Communities should promote appropriate densities, local food systems, reduction of heat islands, open space preservation, multi-modal transportation infrastructure improvements, walkable neighborhoods, reduction in waste production, energy conservation, and reduction in water use.

**Density**

Strategically increasing density in key population centers can increase walkability and reduce the environmental impacts of vehicular travel. Higher population densities can lead to the increased use of mass transit systems and boost the local economy with better access to local retail stores. Increasing population density also allows more transportation options to schools and other services closer to residential areas. Focusing growth within higher-density areas permits the preservation of farmland, riparian and natural habitat areas, in addition to other key uses on the edges of the community.

Dense development and multifamily residences can be significantly more energy efficient than single-family homes as they share walls and often support more efficient building-scale heating systems. Also, through the use of green roofs, courtyards, and other exterior elements, well-designed density can provide strategic opportunities for outdoor space and urban locations to grow food. In addition, many of the “green” system technologies such as district heating systems are highly dependent on higher densities and can not be used for single family homes.

**Food Systems**

A sustainable community includes food stores and restaurants, along with the provision of community garden space in neighborhoods. Some studies have suggested that as much fuel is used in a year to get a family’s food to
the table as is used by that family for all their other activities put together. Furthermore, the visibility and celebration of food in a neighborhood is an excellent source of social and cultural vitality—an important aspect of sustainability that should not be overlooked.

Dense developments support local food stores and restaurants, community gardens, and other creative food-producing ventures, thereby offering residents convenient access to basic provisions. 5

Heat islands

Minimize the “heat island” effect common to urban areas through tools such as light-colored paving and roofing to reflect solar radiation, and trees and landscaping in parking lots to provide shade and improve air quality. Lowering ambient air temperatures will reduce the amount of energy needed to cool structures, both public and private.

Infrastructure

Encourage compact development and infrastructure systems. In addition to providing low impact and on-site means of providing necessary infrastructure and creating jobs within the community, these systems lower consumption of land, reduce fossil fuel usage, and minimize impacts to air quality.

Landscape maintenance

Evaluate ways to reduce the use of pesticides, fungicides, and herbicides and promote less-polluting, safer products. Low-water use landscaping not only reduces the amount of water needed to maintain community parks and facilities, but also reduces the frequency of landscape maintenance. An area of a park that is appropriately landscaped need only been weeded or maintained a few times a year, rather sprayed with chemicals, mowed, and watered more frequently.

Open Space

The preservation or creation of open space within a community has implications for the quality of life for its residents, the health of local and regional ecosystems, as well as the
economy of the area. Open space in a sustainable community should accommodate both community and ecological needs, including protecting key environmental areas or functions, enhancing habitat through urban landscape design, offering significant recreation opportunities for people of all ages, and providing places to grow food in the city.

Site grading

Design developments to respect the existing topography and historic drainages, and conserve existing mature trees and significant vegetation, where feasible.

Transportation

The transportation systems in a community can have far reaching impacts on the natural environment it occupies. Transportation systems should make efficient use of land, as well as other natural resources, while ensuring the preservation of habitat and maintaining biodiversity. Transportation plans must reduce the need for travel while protecting social and economic needs for access by changing urban form and promoting new communications technologies.

Communities can improve the environmental sustainability of transportation systems by minimizing transportation-related air emissions as well as discharges of contaminants to surface and ground water. Toxic emissions from transportation systems threaten public health, global climate, biological diversity, and the integrity of essential ecological processes. Communities should seek to reduce the amount of pollution generated throughout the lifecycle of transportation vehicles, vessels, and infrastructure, and should also seek to follow land use patterns that reduce the need for travel to meet daily needs.

Walkability

Diverse transportation options such as better walkability and bicycle infrastructure can give community members more choices in how to travel, which can minimize introduction of waste and contaminants into natural areas.

Improving walkability in a community can be especially effective in reducing demand for transportation infrastructure, as well...
as reducing a region’s air pollution from vehicle emissions. A neighborhood that gives priority to pedestrians and allows residents a place to work, live, play, shop, and learn within walking distance can significantly reduce the overall impacts of travel on the area’s natural systems.

Waste Management

A comprehensive “Green” infrastructure waste management strategy should be created for every sustainable community to address the reduction, re-use, recycling and disposal of wastewater, storm water, as well as solid and toxic wastes.

Minimizing the quantity of waste produced is the first and most effective tier in the waste management hierarchy. Reducing waste saves not only on disposal costs but also reduces the use and cost of raw materials. The adoption of wide ranging education on waste minimization and awareness of how waste disposal impacts the environment is crucial to the reduction of waste. 4

The second element in a comprehensive waste management strategy is the re-use of waste products. For example, heat harvested from a wastewater pumping station can be used to heat buildings. Waste energy from mixed uses can also provide opportunity for efficiency and utility investments, such as harvesting waste heat from a supermarket’s freezers on a ground floor to heat residences above. Since a significant amount of greenhouse gas emissions can be attributed to heating systems, any opportunity to establish district heating systems (combining building systems) should be pursued in cities, and density and mixed uses make these uses more viable and profitable. Recent advancements in waste energy technology such as bio-fuels, methane extraction from land fills and cow manure could help curb dependence on non-renewable resources.5

Finally, community supported and maintained recycling programs are an essential part of a comprehensive waste management strategy. Taking waste products (e.g. used glass bottles, discarded plastic packaging, cardboard and office materials, etc.) and making them into new products significantly reduces the consumption of non-renewable resources, and the energy needed for extraction and production. An integrated education program would also encourage consumers to purchase products made from recycled materials to further facilitate the market for recycling efforts.

Water efficiency

Encourage conservation strategies for potable water in common or public landscaped areas through techniques such as water-wise or native plants,
minimal turf areas, high efficiency irrigation technology, or the use of rainwater harvesting or water recycling.

**Individual Household Scale Sustainability Concepts**

On the individual scale, sustainability can be achieved through design and further education on the environmental and social implications of lifestyle choices and product selection decisions made every day. The main objectives of sustainable design are to avoid resource depletion of energy, water, and raw materials; prevent environmental degradation caused by facilities and their infrastructure throughout their life cycle; and create built environments that are accessible, secure, healthy, and productive. By promoting sustainable lifestyle choices, a community can reduce demand on many of its utility facilities, as well as develop an overall public ethic of respect for natural systems.

**Conservation**

Many communities have found that an important element to addressing community utility needs is through promoting resource conservation programs. Active conservation by a community can significantly delay the need for a new facility, or render the facility no longer needed. Stemming demand can make renovation or capacity improvements to existing facilities a much more economical or practical option. Many conservation programs are already in place across the State. Community leaders should actively promote existing conservation programs to cultivate an ethic of resource conservation across the community.

**Energy Efficiency**

Assemble an energy advisory committee to develop an overview of issues and recommendations with respect to community energy-use patterns and transportation. Promotional conservation programs are run by many utility companies in the valley. Questar Gas offers extensive energy saving tips and rebates through their “ThermWise” program. This program offers rebates to customers that upgrade to more energy efficient appliances as well as make home improvements that will reduce their demand on the utility. More information is available at [www.thermwise.com](http://www.thermwise.com). Rocky Mountain Power operates a similar electricity conservation program, offering tips and rebates for customer participation. More information is available at [www.coolkeeper.net](http://www.coolkeeper.net) and [www.rockymtnpower.net](http://www.rockymtnpower.net). Townships
should also consider involvement in other resource conservation programs sponsored by the Utah Transit Authority, EnergyStar, and other organizations.

**Home Construction**

**Optimize Site Potential**—Creating sustainable buildings starts with proper site selection, and the location, orientation, and landscaping of a building that affect the local ecosystems, transportation methods and energy use.

Use **Environmentally Preferred Products**—A sustainable home should be constructed of materials that minimize life-cycle environmental impacts such as global warming, resource depletion, and human toxicity. In a material context, life cycle raw materials acquisition, product manufacturing, packaging, transportation, installation, use, and reuse/recycling/disposal are a large part of the energy footprint of the building.

**Optimize Operational and Maintenance Practices**—Incorporating operating and maintenance considerations into the design of a home will greatly contribute to improved work environments, higher productivity, and reduced energy and resource costs. Designers are encouraged to specify materials and systems that simplify and reduce maintenance requirements. These materials require less water, energy, toxic chemicals and cleaners to maintain, and are cost-effective and reduce life-cycle costs.

**Indoor Air Quality**

Enhance **Indoor Environmental Quality (IEQ)**—The indoor environmental quality of a building has a significant impact on occupant health, comfort, and productivity. Among other attributes a sustainable building should maximize daylighting, provide appropriate ventilation and moisture control, and avoid the use of materials that are high in emissions.

**Waste Management**

**Reduce the waste hauled to and disposed of in landfills.** Any encouragement for residents to recycle and reduce waste will ease pressure on the current Salt Lake County landfill as well as delay the need to open future landfills. Promote proper disposal of office and household hazardous waste. Townships should promote participation in the Salt Lake County recycling program, which has significantly reduced the amount of solid waste taken to the County landfill. More information can be found at www.sanitation.slco.org.
Water Use

Water-efficient strategies include installing low-flush toilets, low-flow shower heads and faucet sensors; using recycled greywater or captured rainwater; and planting native and drought-tolerant species for landscaping to save water. Regardless of the method of practice, decreased water and energy needs result in reduced costs.  

Minimize water use in buildings and for landscape irrigation to reduce the impact to natural water resources and reduce the burden on municipal water supply and wastewater systems. Townships should promote the actions recommended by the Jordan Valley Water Conservancy District’s “Slow the Flow” campaign, sponsored by the Governor’s Water Conservation Team. More information is available at www.slowtheflow.org. The Utah Rivers Council has also spearheaded the “Rip Your Strip” program to encourage replacing water-intensive sod in parking strips with low water use plants. More information is available at www.ripyourstrip.com.

Social Sustainability

Social sustainability seeks equality among all socioeconomic groups, promoting long-term as well as near-term social stability. The principles of social sustainability clarify the role of the individual and the organization in society. These principles are also directed towards the goal of a stable present society, as future generations also profit from the preservation of social order.

Culture & Education

Cultural and educational aspects play a significant role in sustainability. Culture embodies the basic principles of society and its way of living. Education helps individuals to strengthen their intellectual and social capabilities; in this manner, it enables people to solve problems, behave autonomously, and secure their existence. In the end, education has proven to be the foremost prerequisite for social and political engagement. Sustainability of community life and planning processes will depend on and the public’s understanding of the political, economic, environmental, and sociocultural landscape.  

Early Childhood and Adolescent Development

Communities should promote adequate early-childhood and adolescent education and development. Solid education in the early
years is the prerequisite for later being able to fulfill one’s needs and be socially engaged. This is why society bears the perpetual responsibility of educating its youth. Adequate room to develop includes appropriate structures for children, a minimum standard of living, attention, unity, justice, tolerance, and freedom from aggression. Basic social values, such as freedom, tolerance, and justice must be anchored in the entire society, and in particular are to be conveyed to children and adolescents. The fundamental order and function of society must be conveyed, including the existing correlations to all members of the community.  

**Employment Opportunity**

Create a vibrant local economy that gives access to satisfying and rewarding work without damaging the local, national, or global environment. Ensure that employment opportunities are inclusive and not based on racial, ethnic, age, income or other like factors. Make sure that industrial, business and retail activity today does not jeopardize opportunities for future generations to secure jobs or continue to make income for basic needs.  

**Services and Mobility**

Communities should seek to provide services and improve mobility for all groups in the community. A socially sustainable community must be well connected, with good transport services and communication linking people to jobs, schools, health and other services in a way that minimizes the need for and impacts of the car. Opportunities for culture, leisure, and recreation need to be readily available to all as well as access to the skills and knowledge needed to play a full part in society. The community should also be well run - with effective and inclusive participation, representation and leadership.  

In addition, it is important to protect human health and amenity through safe, clean, pleasant environments and ensure access to good food, water, housing and fuel at reasonable cost.

**Resources**


Chapter 3 Projects

Core Concepts

1. The Projects section is intended to serve as a catalyst, moving the township between its existing Context and the ideal Best Practice.

2. The Projects section is specific to each township general plan.

3. The Projects section is a community-driven wish listing of proposed improvements or programs to be implemented within the Township.

4. The Projects section is the appropriate location for specific plans, ideas, or concepts for a particular township or neighborhood, rather than a Best Practice.

5. The Projects section is organized alphabetically, and projects are not fiscally or politically restrained.

6. The Projects section should be updated annually in coordination with the Salt Lake County budgeting cycle and a public input process.

7. When allocating funds, priority should be given to projects based on community impact and safety issues.

8. Funded projects will move to a list of Implemented Projects within the General Plan.

9. Non-funded projects will remain in the Projects section of the General Plan until funded or until the project is determined to no longer be feasible.

The following icons appear on each project sheet, in reference to the area of change shown on the Official Map:

- Project located in an area of no change, no growth.
- Project located in an area of minor change, low intensity growth.
- Project located in an area of moderate change, more intense growth.
- Project located in an area of significant change, most intense growth.
- Project located in a corridor area of change.
Purpose Statement

The projects outlined in this document are those specific actions on which the township wishes to focus their time, attention, and resources. They have been identified by a wide range of groups, including planning commissioners, community council members, as well as through direct public input. While a majority of the projects will be attached to a physical location, some are more program-related (i.e. development of neighborhood watch programs or the creation of a compatible residential infill ordinance).

It is intended that these projects be evaluated on an annual basis in coordination with the Salt Lake County budgeting schedule. At that time additional projects could be added to the document, and community leaders will prioritize expenditure of the township’s financial resources for the following year. This annual evaluation period should also be used to analyze how the previous year’s projects were implemented, and where improvements can be made.

Community council members, planning commissioners, and members of the public should all be made aware of the project evaluation process. When new projects arise throughout the year, stakeholders should keep them in mind for the annual evaluation and seek to add potential new projects to this document.

Prioritization of these projects should be determined based on the amount of impact to the community, or the amount of support expressed by the community. Particular priority should be given to projects that deal with issues of health and safety (e.g. quality of sidewalks around schools or in key areas, improvement of dangerous intersections, etc.).
Projects
Specific Projects, Programs, Codes & Ordinances

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1. Abandoned Property Inventory

Project Category
Land Use

Location
Canyon-wide project

Objective
To identify existing properties and structures in the canyon that are not maintained, are in disrepair, and are essentially abandoned.

Potential Stakeholders
Salt Lake County, Emigration Township Planning Commission, Emigration Community Council and Emigration Canyon property owners

Recommendations
Salt Lake County will analyze and explore alternatives to enforce the upkeep of properties. The County would pursue alternatives to deal with neglected properties in Emigration Canyon and come up with required standards for maintenance and property upkeep. This would include developing regulations to deal with property infrastructure such as septic tanks, and if those items would be required to be removed or properly abandoned to prevent pollution and to avert health and safety issues.

Timeline

Project added March 2012.
2. Bicycle Best Practice for Canyon Areas

Project Category
Policy

Location
Applicable to canyon areas of Salt Lake County

Objective
Cycling has exploded in popularity in the Wasatch Canyons in recent years. The extreme popularity of this activity in Emigration Canyon has led to conflicts with traffic and residents who share the road, and increasing concern about safety issues. Emigration Canyon, as well as other canyons in the county present some unique challenges to the mix of cycling and traffic due to the physical parameters, natural hazards, and road conditions. The unique elements of canyon cycling issues should be considered and represented in the Bicycle Best Management Practice.

Potential Stakeholders
Salt Lake County, Emigration Township Planning Commission, Emigration Community Council, Emigration Canyon property owners, recreation users and equipment suppliers

Recommendations
Integrate a voice from canyon residents into the Bicycle Best Management Practice under development by Salt Lake County and the Salt Lake County Bicycle Advisory Committee.

Timeline
Project added March 2012.
3. Dark Sky Lighting Provisions and Best Practice

Project Category
Policy

Location
Canyon-wide project

Objective
Address nighttime lighting that is appropriate in Emigration Canyon.

Potential Stakeholders
Salt Lake County, Emigration Township Planning Commission, Emigration Community Council and Emigration Canyon property owners and residents

Recommendations
Establish an ordinance for appropriate nighttime lighting. The setting of Emigration is rural in nature and the dark night sky is an amenity in and of itself within the canyon environment. Intrusive lighting negatively impacts this setting. The establishment and adoption of guidelines for night lighting would serve to preserve an aesthetic characteristic of the canyon environment that many citizens enjoy and value.

Timeline
Project added March 2012.
4. Emergency Preparedness Planning & Communication

Project Category

Policy

Location

Canyon-wide project

Objective

To create a canyon-wide plan for residents and first responders in the event of an emergency event that will create an action plan for an orderly response. Enhance communication and information sharing among Emigration Canyon residents.

Potential Stakeholders

Salt Lake County, Emigration Township Planning Commission, Emigration Community Council and Emigration Canyon property owners and residents

Recommendations

The Wasatch Canyons lie in an area where geologic hazard events occurring such as an earthquake are a possibility. In addition, Emigration Canyon, like many canyon areas of the County faces occasional danger from flooding, wildfires, and, extreme snow and ice storm events. The development of an emergency plan would help responders and citizens to better deal with such an event for the protection of lives and property. Given the spread-out and more rural nature of Emigration Canyon, the development of a communication method or tool among canyon residents would facilitate more efficient information sharing than that which currently exists. This information sharing is critical during emergency events.

Timeline

Project added March 2012.
5. Public Restroom Facility Project

Project Category
Infrastructure

Location
To be determined

Objective
Examine the feasibility and possibility of establishing a public restroom(s) facility in the canyon for recreational users and canyon visitors, and, identify suitable locations for the establishment of such facilities.

Potential Stakeholders
Salt Lake County, Township Planning Commission, Emigration Community Council and Emigration Canyon property owners and recreational users.

Recommendations
Emigration Canyon has become a popular destination for cyclists and recreational users, many of whom reside outside of the township. These users may spend considerable time in the canyon on a given day, and there are no convenient public restroom facilities located within the canyon for use by visitors. Currently the only available restroom facilities are those at Little Mountain at the top of the canyon and those at Rotary Glen Park, a Salt Lake City park, at the canyon’s entrance. It is widely believed that some visitors may simply go discreetly off-trail “in the woods” so to speak which is not only unsanitary, but also poses a public health risk through pollution. This project will explore the possibility of establishing a public restroom(s) in the canyon in a suitable and convenient location.

Timeline
Project added March 2012.
6. Public Transit Feasibility

Project Category

Infrastructure

Location

Canyon-wide project

Objective

Examine the feasibility and possibility of public mass transit options and connections to and for Emigration Canyon Township.

Potential Stakeholders

Salt Lake County, Emigration Planning Commission, Emigration Canyon property owners, canyon recreational users, the University of Utah

Recommendations

Examine the possibility and feasibility of mass transit options to, within and from Emigration canyon. For example, a bus could connect the canyon to the TRAX Line by the University of Utah and the canyon population might use this as an alternative transportation method. This may also be utilized by recreational users of the canyon which could alleviate some traffic and parking issues.

Timeline

Project added March 2012.
7. Road Safety & Drainage Improvements

Project Category
Infrastructure

Location
Localized canyon areas where problems exist - to be determined upon additional field research and coordination with SLCo Public Works.

Objective
Loose road debris creates a hazard for all vehicles and pedestrians using Emigration Canyon Road. Many hillside areas are unstable and contribute to loose debris that ends up on the canyon road, creating a traffic hazard. The canyon road was re-surfaced in recent years using a Slurry-Seal process and product that many residents feel was not very durable. This road surface also chips off and contributes to the traffic hazards. Poor drainage in some areas of the canyon creates road icing in the winter and creates a traffic safety issue.

Potential Stakeholders
Salt Lake County, Emigration Township Planning Commission, Emigration Community Council and Emigration Canyon property owners and recreational users.

Recommendations
Identify problem areas and engineering solutions that would improve drainage issues in select areas to enhance traffic safety. Explore solutions to address hillside stabilization issues in problem areas. Identify solutions to improve the road surface of Emigration Canyon Road to make it safer for vehicles, bicycles and pedestrians.

Timeline
Project added March 2012.
8. Trail and Trailhead Development

Project Category

Parks

Location

Various canyon locations.

Objective

Work with Salt Lake County Parks and Recreation to implement the adopted Emigration Canyon Trails Master Plan and explore the development of additional formal trailheads.

Potential Stakeholders

Salt Lake County, Emigration Planning Commission, Emigration Canyon property owners, canyon recreational users.

Recommendations

Explore the development of additional formal trailheads and associated parking areas to help alleviate current parking issues and problems in some popular areas that see concentrated use.

Timeline

Project added March 2012.
9. Wastewater Disposal Best Practice

Project Category
Policy

Location
Canyon-wide project.

Objective
Ensure that septic systems are monitored and maintained at safe operating conditions to protect the public water quality and Emigration Creek. Explore the feasibility of developing small sewer systems in parts of the canyon, including smaller localized systems that service a limited number of houses.

Potential Stakeholders
Salt Lake County, Emigration Planning Commission, Emigration Canyon property owners, Salt Lake Valley Health Department, Emigration Improvement District.

Recommendations
Establish guidelines and a monitoring programs and standards for septic systems in the canyon. This may be most critical in stream-side areas. Identify areas where small localized sewer systems may be feasible in Emigration Canyon.

Timeline
Project added March 2012.
10. Wildland-Urban Interface Standards & Education

Project Category

Policy

Location

Settled areas of Emigration Canyon Township that abut undeveloped land areas.

Objective

Many developed parts of Emigration Canyon share a boundary with natural and undeveloped areas or wild lands. It has been recommended that Salt Lake County adopt a set of planning standards for these “wildland-urban interface” areas to plan for wildfire protection of developed areas from adjacent undeveloped lands. In addition, homeowner education about effective vegetation management and other methods that would help to protect their property in the event of a wildfire are critical elements to protect the built environment.

Potential Stakeholders

Salt Lake County, the U.S. Forest Service, the Bureau of Land Management, State of Utah Institutional Trust Lands, University of Utah, and private landowners and developers.

Recommendations

Development of a set of wildland-urban interface standards (WUI) that regulate development near these areas, and establish standards for the management of County-owned and managed natural areas is the goal of this project. Foothills and Canyons Overlay Zone (FCOZ) regulations should be coordinated with WUI regulations to eliminate any regulatory conflicts and inconsistencies in terms of vegetation management for the purposes of facilitating fire protection. A homeowner education program for fire prevention should be supported to maximize the effectiveness of this project.

Timeline

Project added March 2012.
11. Wildlife Management Best Practice

Project Category
Policy.

Location
Canyon-wide project.

Objective
Human interference into critical wildlife habitat areas and the feeding of wildlife can create a host of unwanted and unintended problems and consequences. The object of this project would be to discourage the feeding of wildlife through an education campaign or other general information. This will encourage more healthy natural wildlife populations, and reduce unintended consequences from human interference into natural systems.

Potential Stakeholders
Salt Lake County, Emigration Township Planning Commission, Emigration Community Council and Emigration Canyon property owners

Recommendations
The establishment and adoption of guidelines and information for wildlife management and discouraging wildlife feeding is the focus of this project.

Timeline
Project added March 2012.
Chapter 4 General Plan Map

Core Concepts

1. The General Plan Map is intended to serve as a guide to areas of anticipated and desired stability or growth absorption.

2. The General Plan Map should be used in conjunction with the Best Practices and the Context sections of the General Plan when making planning decisions.

3. The colors shown on the General Plan Map indicate a range in the level of stability and intensity of and activity within the Township.

4. The colors shown on the General Plan Map do not relate to any particular land use or zoning designation.

5. The Zoning Map, rather than the General Plan Map, should be used to make changes to specific land uses.

6. This General Plan Map format does not allow Planning and Development Services staff to suggest whether or not a proposed zone change will be approved.

7. When making planning decisions:
   a. Locate the proposed change on the General Plan Map.
   b. Determine the anticipated level of stability and intensity of the area in which the proposed change occurs (Green, Blue, Yellow, Red, Corridor).
   c. Determine if the proposed change would result in a level of change that is consistent with the General Plan Map.
   d. Determine if the proposed change is consistent with
Salt Lake County understands that population growth is inevitable along the Wasatch Front. Statistics reveal that in the coming years, this metropolitan area will increase annually by the equivalent population of Murray City, at approximately 34,000 people. Growth absorption is the only way to accommodate the population. This General Plan Map illustrates a new approach that will help plan effectively to focus growth absorption in key areas while still maintaining open space and other valuable assets within the community.

Utah State Code Titles 10 & 17 require all cities and counties to have a General Plan that includes a variety of topics, as well as an Official Map. This Official Map is often referenced, as it serves as one of the local government’s most useful tools in guiding future decision-making. The State Code does not specify what the Official Map should contain, or how it should be used, but simply states that each General Plan should contain such a map. The General Plan Map is the “Official Map” per State Code in the context of this General Plan and future Salt Lake County General Plans.

Many communities have interpreted this requirement to mean that the General Plan must contain a map that identifies preferred future land uses for various parts of the city or county. These maps closely resemble a zoning map, and have historically given landowners and government officials a sense for how land uses should transition over time, or remain as built.

While this form of an Official Map is widely used and familiar, it has some inherent challenges:

First, by identifying a specific land use on a map, making a change to an area becomes difficult. These maps are often confused with zoning maps, and many people feel that a future land use map entitles them to a particular land use. Property owners often purchase land speculatively because of an assumption that it will either be rezoned, or will remain as currently zoned.

A second challenge is that planning commissions and planning staff often rely too heavily on future land use maps, and use the map as a shortcut to the relevant Best Practice(s) Core Concepts and Key Questions.

e. Determine whether or not to recommend or approve the proposed change.
more thoroughly examining and evaluating a proposed land use change or planning recommendation.

Finally, planners and communities are beginning to experience challenges caused by the traditional (Euclidian) zoning practices that have dominated community planning for the last century. Separating our communities into individual compartments of homogenous land uses has resulted in increased traffic congestion and accidents, poor air quality, an unsustainable dependence on fossil fuels, increasing obesity and health problems, the erosion of a “sense of community,” loss of local businesses in favor of big box stores with highway access, and loss of open space and habitat.

The General Plan Map included with this plan essentially focuses on what degree of change residents can expect in the community. This map simplifies the anticipated changes in the community, and requires that decision makers pursue more information about proposed changes.

The General Plan Map uses just a few basic colors to categorize different areas of the community. Map colors indicate specific areas’ ability to absorb growth as described by their “level of stability.”

Level of Stability: The level of stability anticipated within specific areas of the County, as represented on this General Plan Map, is measured in terms of the following:

- Transitions in the intensity, diversity, and distribution of land uses,
- Changes in the level of private or public investment,
- Changes to the function or design of mobility networks.

**Definitions**

Green – A Green area is one that has very limited or no potential for the future absorption of growth. Green areas will experience virtually no changes to land use or overall character over time. The level of stability of Green areas is defined as follows:

1) Very limited or no changes in land use may occur. Overall, land uses in the area/corridor will exhibit little diversity and very low intensity, with the majority of the area being undeveloped. Changes will be limited to existing nonconforming uses, leaving the majority of the area/corridor undeveloped and unchanged.
2) Few improvements will occur, and will be limited to maintenance or improvement to pedestrian and recreational facilities (trails, parking area resurfacing, signage, etc.).

3) Mobility networks are limited to access and through roads, trails, and parking areas. These areas are primarily visited by foot (including skis and snowshoes), bicycle, or horse, or traveled past by vehicle. Public transit may exist on existing established routes.

Blue – A Blue area is one that has limited potential for the absorption of growth, and is likely to experience only minor changes in overall character over time. The level of stability of Blue areas is defined as follows:

1) Subtle changes in land use may occur. Overall, land uses in the area/corridor will exhibit less diversity and less intensity. Changes will be limited to a small number of dispersed sites, leaving the majority of the area/corridor unchanged.

2) Improvements may occur which subtly alter the appearance, economics, or sustainability of the area/corridor. Most improvements will consist of individual projects, and may not require coordination with parcels beyond their immediate vicinity.

3) Mobility networks are less formalized and will remain largely as built, but minor changes may occur. Public transit typically will have no dedicated right-of-way.

Yellow – A Yellow area is one that has modest potential for the absorption of growth, and is likely to experience moderate change in overall character over time. The level of stability of Yellow areas is defined as follows:

1) Moderate changes in land uses will occur, and may represent reasonable changes to the typical land uses for the area/corridor. Changes may occur in clusters, while the land uses of the overall area/corridor will remain largely consistent. Growth in these areas will begin to trend upward, allowing for a transition to more intensive land uses.

2) Improvements are likely to occur which will moderately alter the appearance, economics, or sustainability of the area/corridor.
Improvement will be coordinated, and will begin to create identifiable places.

3) Mobility networks will become more formalized and connectivity will become more critical to the success of the area/corridor. Public transit may have a dedicated right-of-way. Consideration to connectivity and walkability will become increasingly important in these areas/corridors.

Red – A Red area is one that has obvious potential for the future absorption of growth, and is likely to experience significant change in overall area character over time. The level of stability of Red areas is defined as follows:

1) Major changes in land use will occur, and represent a significant diversion from the typical land uses in the area/corridor. Growth in these areas will increase, significantly raising the intensity of land uses. Changes in land uses may affect the majority of the area/corridor, and are not limited to a specific cluster.

2) Improvements are likely to occur which will significantly alter the appearance, economics, or sustainability of the area/corridor. Improvements will have a theme, and will create a destination or attraction. Development of this area will likely require consolidation of land and coordinated planning.

3) Mobility networks will be redesigned and will include highly connected, formalized, and multi-modal facilities. Public transit will have dedicated or fixed rights-of-way. Walkability and connectivity are critical to the success of the area/corridor.

Corridor – A Corridor is a linear transportation route, including all parcels directly adjacent to the roadway. Corridors may have diverse land uses and functions along their length. Corridors typically experience change over time, responding to changing market conditions and new approaches to land use and transportation planning. Because of their limited access and impact on adjacent land uses, corridors considered here do not include highways, rail corridors, or other high-speed limited access roads.

1) Changes occur with some frequency along important corridors.
Land uses at important nodes, usually where two major corridors intersect, will intensify and absorb significant growth in the community. Focusing growth in centers along corridors can create walkable neighborhood or town centers, thereby also reducing traffic demand along the corridor itself.

2) Corridor capacity may change over time, thereby affecting adjacent land uses. Roadway redesign may be recommended to increase capacity, either for transit improvement, automobile use, or other transportation modes. Reducing capacity may be recommended on some corridors in order to reduce speeds where appropriate.

3) Mobility is a key function of corridors. Corridors will change over time to include more modes of transportation, improved transit service, capacity for safe use by cyclists, and improved pedestrian infrastructure. Each corridor has the goal of becoming a “complete street,” accommodating all modes of travel.
Emigration Canyon Township General Plan

Projects: Alphabetized

Specific Projects, Programs, Codes and Ordinances (Canyon-wide)

1. Abandoned Property Inventory
2. Bicycle Best Practice for Emigration Canyon
3. Dark Sky Lighting Provisions and Best Practice
4. Emergency Preparedness Planning and Communication
5. Public Transit Feasibility
6. Road Safety and Drainage Improvements
7. Trail and Trailhead Development
8. Wastewater Disposal Best Practice
9. Wildland-Urban Interface Standards and Education
10. Wildlife Management Best Practice

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2. The General Plan Map should be used in conjunction with the Best Practices and the Context sections of the General Plan when making planning decisions.
3. The colors shown on the General Plan Map indicate a range in the level of stability and intensity of activity within the Township.
4. The colors shown on the General Plan Map do not relate to any particular land use or zoning designation.
5. The Zoning Map, rather than the General Plan Map, should be used to make changes to specific land uses.
6. This General Plan Map format does not allow staff at the Planning and Development Services desk to suggest whether or not a proposed zone change will be approved.
7. Review Steps:
   a. Locate the proposed change on the General Plan Map.
   b. Determine the anticipated level of stability and intensity of the area in which the proposed change occurs.
   c. Determine if the proposed change would result in a level of change that is consistent with the General Plan Map.
   d. Determine if the proposed change is consistent with the relevant Best Practice(s) Core Concepts and Key Questions.
EMIGRATION CANYON TOWNSHIP RIDGELINE PROTECTION AREAS

The ridgeline protection areas identified on this map were originally adopted as part of 1999 Emigration Canyon General Plan produced by Salt Lake County Public Works. At that time, designated ridgelines were identified by the Emigration Canyon Advisory Committee, Ridgeline Identification Sub-Committee. These identified Ridgeline Protection Areas have officially been included for adoption the 2012 Emigration Canyon Township General Plan as identified in the Goals section of this document.

Ridgelines and protection areas are explained in further detail in the Salt Lake County Zoning Ordinance, Chapter 19.72 Foothills & Canyons Overlay Zone and 19.73 Foothills & Canyons Site Development and Design Standards.

Cartographer: Thomas C. Zumbado
Salt Lake County Planning & Development Services
Ridgelines and protection areas are explained in detail in the Salt Lake County Zoning Ordinance, Chapter 19.72 Foothills & Canyons Overlay Zone and 19.73 Foothills & Canyons Site Development and Design Standards.

Data Sources:
Emigration Canyon Advisory Committee, Ridgeline Identification Sub-Committee and the 1999 Emigration Canyon General Plan (Salt Lake County Public Works).
Appendix

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Best Practices Topic List

The following is a draft list of Best Practice topics to be explored for inclusion in future Salt Lake County plans. As with the Best Practice document itself, this list will continue to change and grow over time, as new issues arise within the County.

RELATIONSHIPS

County Citizens Community
Councils
Planning Commissions
Board of Adjustment
Redevelopment Authority
Governor’s Office of Planning and Budget
County Council
Stakeholders
Property Owners
Developers
Mayor’s Office (or local jurisdiction services)
  Public Works
  Community Development Department
  Other County Departments and Elected Offices
Planning and Development Services
  Utah Department of Transportation
  Utah Transit Authority
  Wasatch Front Regional Council
PRINCIPLES AND BEST PRACTICES

A

ACCESSORY STRUCTURES
ADA INCLUSIVE ENVIRONMENT
AGRICULTURE
AIR QUALITY
AIRPORTS
ANIMALS
ANNEXATION
APPLICATIONS
ARMY CORPS OF ENGINEERS
ARTS

B

BICYCLE TRANSPORTATION
BILLBOARDS
BOARD OF ADJUSTMENT
BROWNFIELD DEVELOPMENT
BUILDING CODE – INTERNATIONAL
BUS TRANSIT
BUS RAPID TRANSIT
BUSINESS-RETAIL-COMMERCIAL DEVELOPMENT
BUSINESS LICENSE

C

CANALS
CAPITAL FACILITIES
CENSUS- DEMOGRAPHICS (history and projections)
CHAMBER OF COMMERCE
CLEAN-UP (program)
COMMERCIAL ZONES (new names based on function not zoning )
COMMUNITY ACTION TEAM (program)
COMMUNITY DEVELOPMENT
COMMUTER RAIL
COMPLETE STREETS
CONDITIONAL USES
CONNECTIVITY
CONVENTION CENTERS
COOPERATIVE COUNTY PLAN
CULTURAL RESOURCES

D
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DEFINITIONS
DENSITY
DESIGN GUIDELINES AND REVIEW
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FLOOD PLAIN
FOOD PRODUCTION
FOREST SERVICE
FRONT COUNTER

G
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GEOLOGY
GEOGRAPHIC INFORMATION
GREAT SALT LAKE
GRADING
GREEN FIELD DEVELOPMENT

H
HEALTH
HISTORIC PRESERVATION AND CONSERVATION
HOME OCCUPATIONS
HOME OWNERSHIP
HOME OWNER ASSOCIATIONS
HORSE TRAILS
HOSPITALS
HOTELS
HOURS OF OPERATIONS
HOUSING (Affordable, Job-Housing Ratio)
HYDROLOGY

I
IMPACT FEES
IMPLEMENTATION
INFILL SUBDIVISIONS

J K L
JORDAN RIVER PARKWAY
KEARNS RIVER GAS TRANSMISSION LINE
LAND USE REGULATIONS
LANDFILL
LANDSCAPE ARCHITECTURE
LANDSCAPE REGULATIONS
LEED CERTIFICATION
LIGHT RAIL
LIBRARIES
LIGHTING OUTDOORS
LIVE THEATER

M
MIXED USE DISTRICT
MANUFACTURING (not based on zoning)
MARKETING
MARKETS (open air, kids)
MEDICAL SERVICES
MOBILITY: LAND USE-TRANSPORTATION MANAGEMENT
REDEVELOPMENT
RESIDENTIAL ZONES (new names based on function not zoning)
REUSE
RIGHT OF WAY PRESERVATION
ROCKY MOUNTAIN POWER

S
SANITATION
SCHOOLS
SCHOOL SITES-PRESERVATION
SENIOR CENTERS
SENSITIVE LANDS
SEPTIC TANKS
SEWER SERVICE PROVIDERS
SHERIFF
SHOPPING DISTRICT
SIDEWALKS
SIGNS
SMART GROWTH - GROWTH MANAGEMENT
SPECIAL EXCEPTIONS
STORM WATER
STREAM CORRIDORS
STREETS-STREETSCAPES
SUSTAINABILITY
SUBDIVISIONS

T
TELECOMMUNICATIONS
TEMPORARY USES
TOWN CENTER
TRAFFIC MANAGEMENT-CALMING
TRAILS
TRANSPORTATION ANALYSIS ZONE (TAZ)
TRANSIT ORIENTED DEVELOPMENT
TREES (Urban Forest/National Forest)
TRUST FOR PUBLIC LANDS

U V W
UNIVERSAL DESIGN
URBAN CENTER
URBAN HEAT ISLAND
URBAN VITALITY
VARIANCES
VILLAGE CENTER
WATER
WATER SERVICE PROVIDERS
WETLANDS
WILDLIFE HABITAT
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Completed Projects

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AASHTO: American Association of State Highway and Transportation Officials. Sets construction and design standards for ground, air, rail, water, and public transportation systems.

Accessible housing: Housing designed to be accessible and livable for all people, regardless of physical ability.

Accessory dwelling unit: A second dwelling unit on a lot zoned single-family residential. Usually found attached or above a garage or secondary structure.

ACCT: Association of Community Councils Together. Local organization created to communicate and support joint concerns of community councils to the Salt Lake County Council.

ACS: American Community Survey. A project of the United States Census Bureau, replacing the long form of the decennial census. It is an ongoing statistical survey, thus providing more current information than the US Census.

Activity center: A community node where important services are available, such as employment, retail, housing, education, recreation, worship, and transportation. Activity nodes may have any variety of uses, and can develop a distinct character that may focus on one or two uses (such as employment and housing).

ADA: Americans with Disabilities Act of 1990. Civil rights law
that prohibits discrimination based on disability in certain circumstances.

AMC: Air Monitoring Center. In the Utah Division of Air Quality, the AMC is responsible for operating and maintaining an ambient air monitoring network that protects the health and welfare of the citizens of Utah. The AMC provides air pollution information for the daily Air Quality, health advisories, winter season woodburn conditions, and summer season “Ozone Action Day “(Choose Clean Air Day) alerts. The AMC data is used to determine the relationship of existing pollutant concentrations to the National Ambient Air Quality Standards, to assist in the development of strategies to reduce pollution levels where necessary, and track the effectiveness of those strategies.

AMI: Area median income. The income level that divides the population into two equal groups (i.e. 50% exceed AMI, 50% fall short).

BRT: Bus rapid transit. A transportation system that incorporates the benefits of light-rail systems, such as designated right-of-way and limited stops, while using less expensive bus vehicles.

CDA: Community development area. An RDA area that focuses on general municipal development. Tax increment is limited to the use of municipal sales and property tax, unless the other taxing entities choose to opt-in through interlocal agreement.

CDC: Community Development Corporation of Utah. A non-profit organization created by the Salt Lake City Council to develop affordable housing for low income residents.

CDP: Census designated place. A geographical area identified by the US Census Bureau for statistical purposes. CDPs are communities that lack separate municipal governments, but which otherwise physically resemble incorporated cities.

Cluster Development: Clustered development is a land
use tool to preserve open space within individual developments. The basic principle of cluster development is to group new homes onto part of the development parcel, so that the remainder can be preserved as unbuilt open space. Typically requires new construction to be located on only a portion, typically half, of the parcel. The remaining open space is permanently protected under a conservation easement co-signed by a local conservation commission or land trust, and recorded in the registry of deeds.

CNI: Capital needs inventory. An analysis to determine future community needs for infrastructure improvements.

Conservation Easement: Conservation easements are a useful legal tool to preserve farmland by limiting land uses. They are used to prevent development or to preserve scenic, natural, or other values the land may hold. Once in place, an easement runs with the deed, and, therefore, future landowners need to abide by the terms of the agreement. Landowners either donate or sell a conservation easement to a recipient that holds the easement and is responsible for monitoring the terms of the easement for compliance.

COP: Community oriented policing. Police deputies working directly with citizens, businesses owners, and schools to reduce crime.

CPTED: Crime Prevention Through Environmental Design. A multidisciplinary approach to deterring criminal behavior through environmental design. CPTED implements design strategies to promote natural surveillance of the public realm, aiming to deter criminal behavior from the earliest design phase of development.

DEQ: Department of Environmental Quality. Governmental organization dedicated to preserving nature, including air, land, and water.

DU/AC: Development units per acre.

EDA: Economic development area. RDA focusing on value-
added job creation. Retail development is excluded from tax increment.

EDCU: Economic Development Corporation of Utah. A public/private partnership to attract and grow competitive, high-value companies and spur development of Utah businesses.

EPA: United States Environmental Protection Agency. Federal agency established in 1970 to protect human health by safeguarding the natural environment, specifically air, land, and water.

ETF: Energy task force. A local task force created to create and implement community energy policy.

FAR: Floor area ratio. The ratio of the total floor area to the size of parcel.

FCOZ: Foothills and Canyons Overlay Zone.

FEMA: Federal Emergency Management Agency. US federal agency created in 1979 to respond to disasters that overwhelm the resources of local and state authorities.

FHWA: Federal Highway Administration. Division of the US Department of Transportation that specializes in highway transportation.

GHG: Greenhouse gases. Gases in the atmosphere that absorb and emit heat. These include water vapor, carbon dioxide, methane, nitrous oxide, ozone, and chlorofluorocarbons.

GO bonds: General obligation bonds. A municipal bond that is secured by a state or local government to use tax revenues to repay bond holders.

GOPB: Governors Office of Planning and Budget. Office of the Governor of Utah that provides leadership for the Governor’s initiatives. Services provided by the GOPB facilitate the responsible use of the taxpayer’s money, provide efficient public services, and empower Utah communities to protect private property rights.
Historic District Overlay Zone: An Historic District Overlay Zone is a land use tool established by a local government. The purpose of an historic district overlay zone is to give local governments additional tools to ensure the protection of its local historical resources. An overlay zone, described below, typically applies additional regulations and restrictions to properties falling within its boundaries than those originally required by the base zoning. The actual restrictions and requirements of an historic district overlay zone are determined by the local government and adopted into the zoning code.

HUD: United States Department of Housing and Urban Development. US federal department created in 1965 to develop and execute policy on housing and cities.

IEQ: Indoor environmental quality.

ISB: Intermountain Seismic Belt.

ITS: Intelligent transportation systems.

KID: Kearns Improvement District. A water and sewer utility serving Kearns Township.

LEED: Leadership in Energy and Environmental Design. A building rating system developed by the U.S. Green Building Council to provide standards for environmentally sustainable construction practices.

LID: Low impact development.

Lifecycle housing: A development strategy to provide housing choices in each community for people at each stage of the lifecycle. The goal is to provide a sufficiently diverse housing stock to allow those who chose to remain in their community with their established social networks, regardless of age, ability, or family situation.

Live-work units: Housing units that provide a commercial workspace (usually ground floor), with an attached living space (usually above the workspace).
LOS: Level of service. A measure of effectiveness traffic engineers use to determine the quality of service of transportation infrastructure. The system ranks infrastructure from A to F, with A being the highest level of service, and F being a failing level of service.

MBA: Municipal building authority lease revenue bonds.

Mixed-Use Development: Mixed use refers to the combining of retail/commercial and/or service uses with residential or office use in the same building or on the same site in one of the following ways:

1) Vertical Mixed Use. A single structure with the above floors used for residential or office use and a portion of the ground floor for retail/commercial or service uses.

2) Horizontal Mixed Use – Attached. A single structure, which provides retail/commercial or service use in the portion fronting the public or private street with attached residential, or office uses behind.

3) Horizontal Mixed Use – Detached. Two (2) or more structures on one (1) site which provide retail/commercial or service uses in the structure(s) fronting the public or private street, and residential or office uses in separate structure(s) behind or to the side. Mixed use is a key component of many current development trends, including Transit Oriented Development (TOD), Traditional Neighborhood Development (TND), Livable Communities, and Smart Growth principles. The benefits of Mixed Use include: activating urban areas, increasing housing options, reducing auto dependence, increasing travel options, and creating a local sense of place. Mixed use can be developed at a variety of scales, from building, to parcel, and walkable or transit area.

MLS: Multiple listing service. The electronic database that includes real estate property sales listings.

MPO: Metropolitan planning organization. The transportation policy-making organization for a metropolitan area.
made up of representatives from local government and transportation authorities, mandated by the US Congress in 1962 for any urbanized area with a population greater than 50,000. Salt Lake County is a member of the Wasatch Front Regional Council MPO.

MSA: Metropolitan statistical area. A geographical area of high population density.

NEPA: National Environmental Policy Act of 1970. Law that established federal policy promoting enhancement of the environment and evaluation of environmental impacts on proposed federal agency actions.

NRHP: National Register of Historic Places is the United States’ official list of districts, sites, buildings, structures, and objects worthy of preservation. Administered by the National Park Service, the Register was authorized under the National Historic Preservation Act of 1966. Its goals are to coordinate and help groups such as the National Trust for Historic Preservation identify and protect historic sites in the United States.

NHD: National Historic Districts are neighborhoods, or districts, that contain a certain percentage of contributing historic structures, that have been nominated and federally accepted as part of the National Register of Historic Places. Districts are typically designated when there are too many historic structures to realistically nominate them all individually for the National Register of Historic Places.

NRPA: National Recreation and Park Association. Organization that provides information and services to communities to raise awareness of the environment, focusing on construction of parks and recreational facilities.

Overlay (Floating) Zone: The overlay, or floating, zone concept allows for districts that are not delineated on the zoning map. The boundaries of these zones are somewhat flexible, and allow the City to identify additional allowable
land uses in areas to be determined as long as they meet certain criteria. The most common use of the concept of the overlay zone is the over-laying of standards that change or are added to the standards of the underlying district. This concept works well in areas in which there may be sensitive lands, natural hazards, and other characteristics of merit such as historical architecture. Areas in which the potential for such conditions to exist are graphically identified on the zoning and comprehensive plan land use maps, showing both the base zoning and the area over which the overlay regulations apply.

PCD: Planned community development.

Performance Zoning: Performance zoning differs from all other forms of zoning (Euclidian, Conditional, and Form-Based) because it is based on standards designed specifically to meet a wide range of established goals. For instance, rather than using a conventional land use map with well intended transition districts or a conditional approval process in an attempt to avoid land use conflicts through rezoning, and lengthy use restrictions, or public hearing processes, performance zoning directly addresses conflicts in use by implementing design standards that eliminate and/or mitigate such conflicts. Performance zoning is designed to evaluate the context and compatibility of uses within their environment, as opposed to whether or not a use should be permitted. The premise of performance zoning is that land use is irrelevant when it is designed to respect the built and natural environments. In fact, it is not the use itself that determines compatibility; instead, it is the design and intensity of the use, which may be effectively addressed by performance standards.

PM10: Particulate matter sized 10 micrometers or less. Tiny particles suspended in the air, generated most commonly from the burning of fossil fuels. Prolonged exposure can lead to asthma, cardiovascular disease, and permanently reduced lung capacity.

POP: Problem oriented policing.
PSC: Public service commission. In Utah, the PSC regulates privately owned utilities.

PUD: Planned unit development. A means of land regulation promoting large scale, unified land development, including the clustering of residential land uses with access to common open space.

PV: Photovoltaics. Technology converting sunlight directly into electricity.

Q-R

QCEW: Quarterly Census of Employment and Wages.

RDA: Redevelopment agency. Local governmental body using public funds to redevelopment blighted areas of the community.

Receiving Area: Part of a Transferrable Development Rights program. The receiving area is an area identified by a governmental body for potential increased development. This is the area to which development rights are transferred in order to achieve greater development densities and intensities.

S

SAA: Special assessment area. Financing mechanism that allows governmental entities to designate a specific area which will be benefited by public improvements.

Sending Area: Part of a Transferrable Development Rights program, the sending area is an area identified by a governmental body for preservation. This is the area from which development rights are transferred in order to protect the resources and desirable values of the area (e.g. open space, wetlands, forests, scenic areas, agricultural value).

SID: Special improvement district.

SNAP: Student Neighborhood Access Program.

T

TAZ: Traffic analysis zones. Unit of geography used in transportation planning models, constructed using census
block information. Size of TAZ may vary, but usually are inhabited by no more than 3,000 people.

TCI: Town center intersection.

TDM: Transportation demand management.

TEC: Taxing Entities Committee.

TIF: Tax increment financing. A public funding mechanism used for redevelopment in a community, using future gains in property tax value to finance current improvements. TIF dedicates tax revenue from added property values due to publicly funded improvements to pay for the cost of those improvements.

TOD: Transit-oriented development. A development pattern focused on transit-supportive community building, promoting walkability and transit connections, rather than automobile based development patterns.

TDR: Transferrable Development Rights is defined as, the transferring of development rights from one parcel of land to another through a program created by a government body intend to preserve certain undeveloped areas, stimulate growth and development in other areas, and compensate the owners for the transferred value of their lands.

U – Z

UDOT: Utah Department of Transportation.

Universal design: Universal design strives to be a broad-spectrum solution that produces buildings, products and environments that are usable and effective for everyone, not just people with disabilities.

URA: Urban renewal area. RDA focusing on the renewal of a blighted area through the removal of blight conditions. Use of eminent domain is permitted under certain circumstances.

UTA: Utah Transit Authority. The operator of the public transportation system along the Wasatch Front, operating buses, light rail trains, and commuter rail.
VMT: Vehicle miles travelled.

WaQSP: Water Quality Stewardship Plan. A Salt Lake County plan intended to enhance and support watershed functions of the region.

Watershed: The extent of land where water from rain or snowmelt drains downhill into a body of water, such as a river, reservoir, lake, or ocean.

WFRC: Wasatch Front Regional Council. The local metropolitan planning organization for the Wasatch Front area.

Workforce housing: Housing designed and constructed to be affordable to the local workforce, particularly those in public service, such as policemen, firemen, or school teachers.

ZAP: Zoo, Arts, and Parks. Fund created by Salt Lake County to fund local cultural organizations and projects.
Template: Best Practices

Purpose Statement
The Purpose Statement of each Best Practice is a short paragraph of text explaining the importance of the Best Practice topic, and why it is of relevance for local planning processes and decision-making processes.

Core Concepts
The Core Concepts section is a numbered listing of the most important elements in implementing the Best Practices for the topic. They are the top five to fifteen things a decision-maker or planner needs to know about the topic. Core concepts should be concise, to the point, and quickly summarize the Discussion section.

Key Questions
The Key Questions section is a series of questions to be relied upon by Planning Commissioners, County Council members, Community Council members, developers and applicants, and the all County administrators and staff when making planning decisions. This “cheat sheet” identifies the questions to be asked when reviewing any proposal or plan to determine whether it meets the intent of the Best Practice Core Concepts. A single list of questions, which every stakeholder and decision-maker responds to, evens the communication playing field and facilitates good decision-making.

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Related Best Practices:
Any Best Practices with additional information on any of the subsections of this Best Practice should be included here.
Discussion

The Discussion section of each Best Practice is a brief primer on the Best Practice topic. It explains the various components of planning for the Best Practice topic, and elaborates on each of the Core Concepts.

This section exists to offer the reader or decision-maker the rationale behind each of the Core Concepts; an explanation of additional concepts, strategies, and best practices; and to direct the reader toward additional sources if they would like more information.

Key graphics, diagrams, and images are an important piece of the Best Practice discussion section. An overall goal of the General Plan is to provide a plan that is accessible, easy to understand, and simple to use. In that vein, diagrams and photographs are useful to help explain more complex concepts, as well as provide model places to emulate.

The actual text of the Core Concepts should be included in the Discussion section. In most cases, the individual Core Concepts should serve as the first sentence of a section of text explaining the ideas behind the Core Concept.

Resources

The Resources section is a numbered list of works cited and additional resources pertaining to the Best Practice topic. The Resources should be organized into two sections of endnotes (listed in order of reference), and additional resources (organized alphabetically).

1. Endnote citation

Other Resources:

  Additional resource citation.
Template: Projects

Project Category

This section notes the type of project. Categories have been defined as Corridors, Development, Land Use, Parks Recreation and Open Space, Policy, and Infrastructure.

Location

This section notes the physical location of the proposed capital project. For plans, studies, and ordinances that may cover a larger area, or the Township as a whole, this section refers to the scope of the project.

Objective

This section defines the purpose of the proposed project, or why it is needed.

Potential Stakeholders

This section identifies any potential stakeholders that may be involved in project planning or implementation. Planning Commissions and the County Council are considered decision-making bodies.

Recommendations

This section includes any additional information needed to explain the ideas behind the proposed project. Simple suggestions or recommendations may be offered, but this section is not intended to replace further study and analysis. Each project sheet should be kept to a single page whenever possible, so lengthy discussions about the project should be developed when the project is initiated.

Timeline

This section denotes the anticipated timeline of the project, near term, mid term, or long term.

Project added (adoption month and year).