

# GRANITE COMMUNITY MASTER PLAN

PREPARED BY GRANITE COMMUNITY  
COUNCIL AND SALT LAKE COUNTY  
PUBLIC WORKS DEPARTMENT,  
PLANNING DIVISION

FEBRUARY, 1993

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# Summary

Granite has change dramatically in the past 30 years. A sleepy agricultural community of 265 in 1960, it has become a residential suburb of 3,300. While the growth rate has slowed, the population is still increasing.

Community needs and issues discussed in this master plan are an outgrowth of that transformation. Presently, Granite has very limited developed park facilities, and most public facilities are outside the community. However, many park and recreation needs could be met if neighborhood park facilities on both the north and south sides of the park were provided as part of the development plan of the 655-acre Dimple Dell Regional Park, 80 percent of which lies within community boundaries. Neighborhood parks are needed in Council Districts four and five. These districts are in the areas that are generally north of South Little Cottonwood Road and west and east of Wasatch Boulevard respectively, and are remote from the Dimple Dell Regional Park.

Meanwhile, traffic continues to increase on roads not designed to handle it, creating needs for road construction, road widening, traffic improvements, and sidewalk/walkway construction. Dimple Dell Regional Park will increase the need for traffic improvements.

Perhaps the overriding planning issue is the community's desire to maintain a country setting by limiting development to single family homes on 1/3-acre or larger lots. Residents want no commercial or industrial development. This plan expresses those desires while encouraging maintenance of existing housing, including preservation of older and historic homes.

## The Granite Community

Granite covers about 5 square miles in the southeast part of Salt Lake County at the mouth of Little Cottonwood Canyon. It is generally bounded on the north, west, and south by Sandy City and on the east by the Wasatch National Forest Boundary. It also adjoins the Cottonwood Heights Community on the north.

The community was settled by Mormon pioneers beginning in the early 1850's. They built several saw mills in Little Cottonwood Canyon to take advantage of the timber there. In 1859, quarrymen began cutting granite for the Salt Lake Temple from a quarry at the mouth of the canyon. In 1861, farmers moved in, and in 1865, the first ore deposits were discovered in Little Cottonwood Canyon and Alta, attracting mining and ore hauling operations.

The original town of Granite was founded in 1870 at the mouth of the canyon but was moved to the 3100 East and 9800 South area after the mines were worked out in 1883.

Extensive residential development began in the early to mid-1970's. Between 1960 and 1990 the population increased by 1,245 percent. The 1990 population is 3,300, with population projected to grow to 4,900 by 2010.

The population is dominated by younger families with elementary- and older-aged children. Average family income is substantially above the poverty rate and well above the county average.

## **Housing**

Housing is the dominant land use in Granite, although this will change when Dimple Dell Regional Park is completed. Single family subdivisions occupy about 56 percent, and multi-family structures about 1 percent, of developed land. The number of housing units increased from 65 in 1960 to 905 in 1990. Most housing is in good condition and, if maintained by owners, will remain so for a number of years. The only homes needing repairs are a few older ones.

Several areas zoned for both single family units and duplexes contain predominantly single family homes. In accordance with community desires, the plan recommends down-zoning these areas to allow single family homes only. It also suggests down-zoning some undeveloped R-1-10 zones to require larger lots. Only limited additional medium-density housing is proposed.

## **Parks and Public Facilities**

Presently Granite has very limited park and recreation facilities. Eventually, however, Dimple Dell Regional Park will partially meet the community's park and recreation needs. A development plan for Dimple Dell is being finalized by Salt Lake County Parks and Recreation Division with input from the Dimple Dell Park Advisory Board.

In addition, each of the five Council Districts within the community needs and desires a neighborhood park. However, under the Park Development Plan for Dimple Dell Regional Park, a neighborhood park is proposed in the northeast section of the park. Also the County Parks Master Plan proposes that land for another neighborhood park be acquired and developed to serve the residents in the community north of 9400 South. Where multiple use is feasible and sites are accessible, detention basins could also be considered for use as neighborhood or mini-parks in areas of the community not close to one of the proposed neighborhood parks.

The plan also calls for a new three bay fire station to be built, preferably, on northwest corner of South Little Cottonwood Road and Wasatch Boulevard. Furthermore, if it is feasible to acquire and renovate the old Granite Church on the northeast corner of 3100 East and 9800 South, it should be converted to a community center and museum.

## **Commercial and Industrial Development**

Granite has limited and scattered commercial and industrial development. In fact, only one commercial or industrial property is zoned for the use -- the LaCaille at Quail Run Restaurant. No future commercial or industrial uses are proposed. Other pre-existing commercial and industrial uses should be phased out over time.

## **Transportation**

The major traffic carriers that bisect portions of the community are Wasatch Boulevard, South Little Cottonwood Road, 2000 East, and 10600 South. Several collector streets, namely Dimple Dell Road, Mt. Jordan Road, and 9800 South, carry traffic between the major streets.

The major traffic improvements needed are completion of 2000 East from 9400 South to 12400 South including crossing the Dry Creek Wash; completion of Wasatch Boulevard from South Little Cottonwood Road (about 9800 South) to Lostwood Drive (about 11200 South); widening of South Little Cottonwood Road; constructing a re-aligned section of the north end of Wasatch Boulevard to intersect with North Little Cottonwood Road south of Canyon Place Condos and the widening of Wasatch Boulevard from about 9125 South to 9400 South; and the widening of 10600 South from 1300 East to 2000 East.

The plan also proposes several smaller capital projects (new roads, road widening) as well as intersection realignments, and other traffic system improvements (semaphores, directional islands, turn lanes, etc.) to meet present and future needs.

In addition, the community needs a sidewalk/walkway/jogging/ bicycle path system to provide safer passage for children walking to and from school and for others who want to walk, jog and ride bicycles.

## **Natural Constraints**

The Granite Community has significant seismic and other natural hazards. Geologic and engineering studies should be required on any proposed development in or adjacent to the Wasatch Fault Zone or Hillside Protection Zone, or in any other situation covered under the Natural Hazards Ordinance. Developers should be required to design buildings to handle site-specific natural hazards.

The plan also calls for protection of wildlife habitat, stream environment, wetlands, water quality, flood plains and restoration and maintenance of minimum stream flows.

## **Role of the Plan**

This plan is the result of a comprehensive study of the Granite Community by the citizens of the community with broad base participation. The Master Plan establishes the intent of the residents as it relates to current and future development.

Until revised, the Plan serves as a framework in formulating land use policy and implementing that policy. The Plan cannot provide an answer to every question that arises, but in the absence of specific provisions, the spirit of the plan is evident and should be administered accordingly. It is the desire of the citizens of Granite that the Plan's provisions will be carefully considered in all land use decisions.



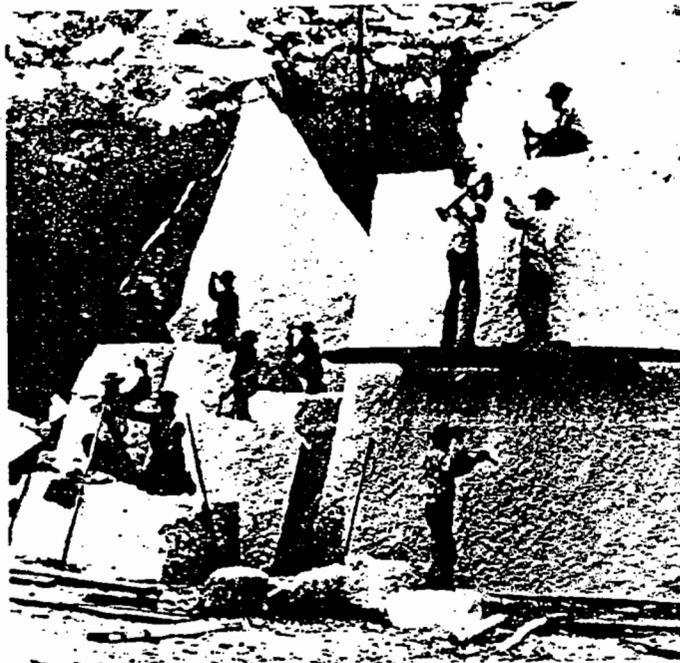


Illustration 1

Granite quarries at the mouth of Little Cottonwood Canyon provided work for scores of men during the construction of the Salt Lake LDS Temple and Assembly Hall.  
Source: "Utah Ghost Rails", Western Epics Publishing Company, 1989.

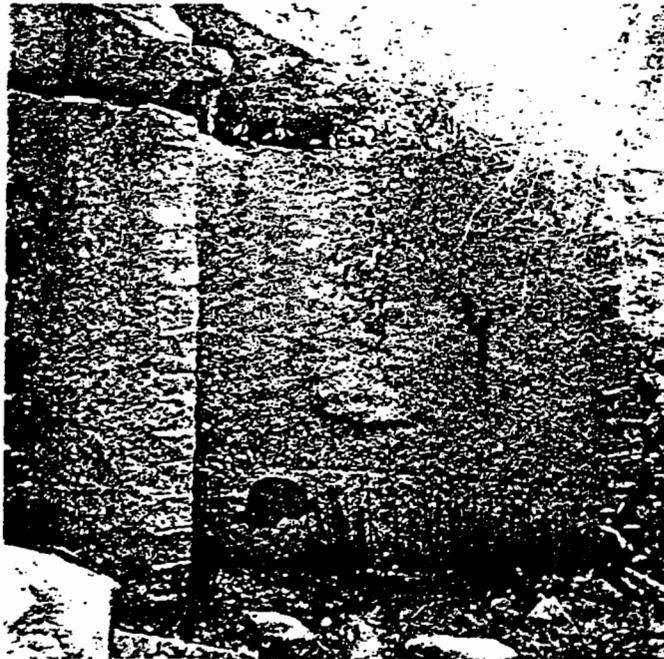


Illustration 2

Blocks and boulders with straight lines of drill holes can still be seen after 130 years.  
Source: "Utah Ghost Rails", Western Epics Publishing Company, 1989.

Completion of the transcontinental railroad at Promontory Summit on May 10, 1869, and subsequent construction of branch lines from Ogden to Salt Lake City in June 1870, and to Provo and beyond starting in May 1871, opened up an efficient and economical means of tapping Utah's mineral and agricultural resources.

The Utah Southern Railroad, linking Salt Lake City with Utah County, was completed to Sandy September 6, 1871, to Provo November 25, 1873 and to Payson January 23, 1875. The purposes of the rail line were to help develop mining in southern Salt Lake County, primarily in Bingham and Little Cottonwood canyons, and to transport the agricultural bounty of Utah Valley to Salt Lake City and beyond.

The Wasatch and Jordan Valley Railroad, a narrow-gauge (3-ft.-wide) branch line serving mines at Alta, was incorporated in October 1872 by both Mormon and non-Mormon interests. Non-Mormons main interest was in getting ore out of the canyon faster and more economically, while the Mormons main interest was in speeding up granite shipments to the Salt Lake Temple site.

Construction began in Sandy on November 4, 1872. The line reached Granite and the quarry in April, 1873 and was finished to Fairfield Flat in the fall of 1873. The line to Alta was not completed until September 12, 1875 because of financial problems as well as construction difficulties resulting from the steep terrain.

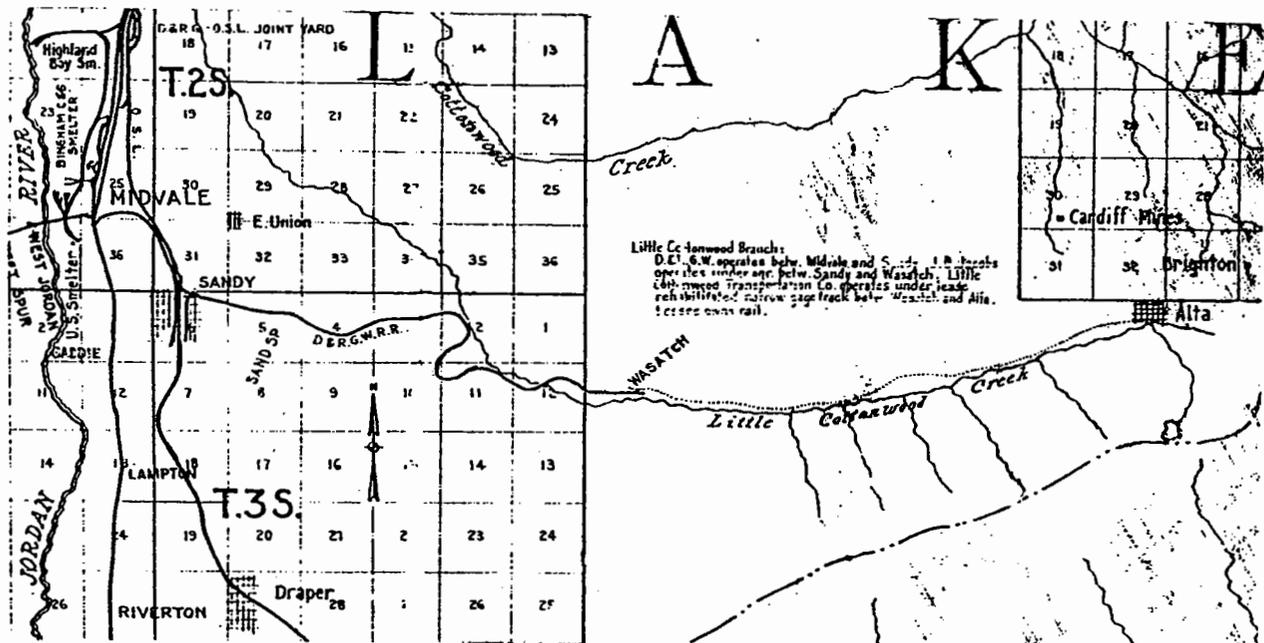


Illustration 3

Map showing route of Wasatch and Jordan Valley Railroad which was taken over by Denver and Rio Grande Western Railroad in 1881. Source: "Utah Ghost Rails", Western Epics Publishing Company, 1989.

In 1881, the Denver & Rio Grande Western Railroad bought out the Wasatch and Jordan Valley Railroad and operated it until the Salt Lake Temple was finished in 1893. However, by 1883, most of the mines had closed, and Granite was deserted.

While all this activity was occurring at the mouth of and in Little Cottonwood Canyon, Mormon farmers were moving into the area. Solomon Despain, who homesteaded a farm in 1861 near the mouth of the canyon, was one of the first such settlers. Much of the land acquired by Solomon Despain was received by a land grant from President Ulysses S. Grant in about 1870. When the Granite LDS Ward was organized in 1877, he was the first bishop. He also donated the land for many of the early community facilities in Granite, among them were the Granite Community School located at about 3200 East and 9800 South, the Granite Church located on the northeast corner of 3100 East and 9800 South and the small cemetery located at about 3000 East and 9800 South. He sold the land for a church camp area in the Glacio Park area around the intersection of North and South Little Cottonwood Roads to the LDS Church for \$3,000.

After the mines closed, a new town of Granite was established a mile west of the former town in the area around 3100 East and 9800 South. In 1891-92, the Granite Community School was built. The school was also used for LDS Church meetings and civic events.

In 1905, a new school was built west of 3100 East and a church was built on the northeast corner of 3100 East and 9800 South. After the old school was abandoned, it was converted to a house, which is still in use. The school built in 1905 has been replaced by a newer building, but the original church is still standing. Part of the church is presently used as a residence.

Granite remained a quiet farming community from the mid-1880's to the mid-1970's when extensive residential development began. This development is continuing today, although much of the area that was once part of Granite has been annexed by Sandy City.

Sources of information in this section include:

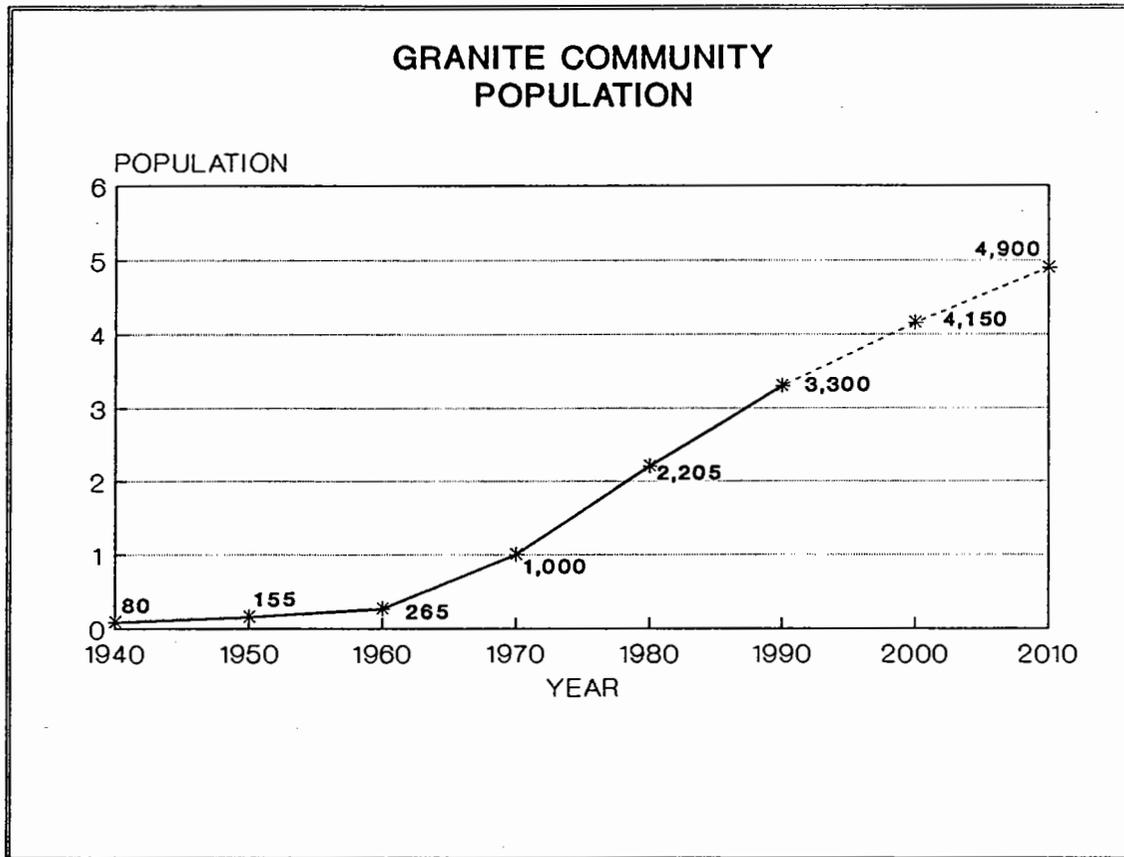
John Ralph Ferrin, Historical Site Survey of Southeast Salt Lake County, Department of History, University of Utah, June 1981.

Wallace Alan Raynor, History of the Construction of the Salt Lake Temple, Manuscript. Church Historian's Office.

Stephen L. Carr and Robert W. Edwards, Utah Ghost Rails, Western Epics Publishing Company, Salt Lake City, Utah, 1989.

# Population

Population analysis is very important in determining the future needs of a community and in determining future land use allocations. As shown in Figure 2, Granite experienced steady growth from 1960 to 1990. According to the latest census, the 1990 population was 3,300, an increase of 3,035 from the 1960 total of 265.



**Figure 2**

The Granite Community experienced dramatic population growth between 1960 and 1990. Population projections show that growth in the 1990's and beyond will be at a slower rate. Sources: U.S. Census of Population 1940-1990, Salt Lake County Public Works Department, Planning Division.

The fact that Granite's population has grown steadily since 1940 is no guarantee that the growth will continue. But historical trends can aid in predicting the direction the population will take in the future. Figure 3 shows projections of the population and the number of dwelling units to the year 2010.

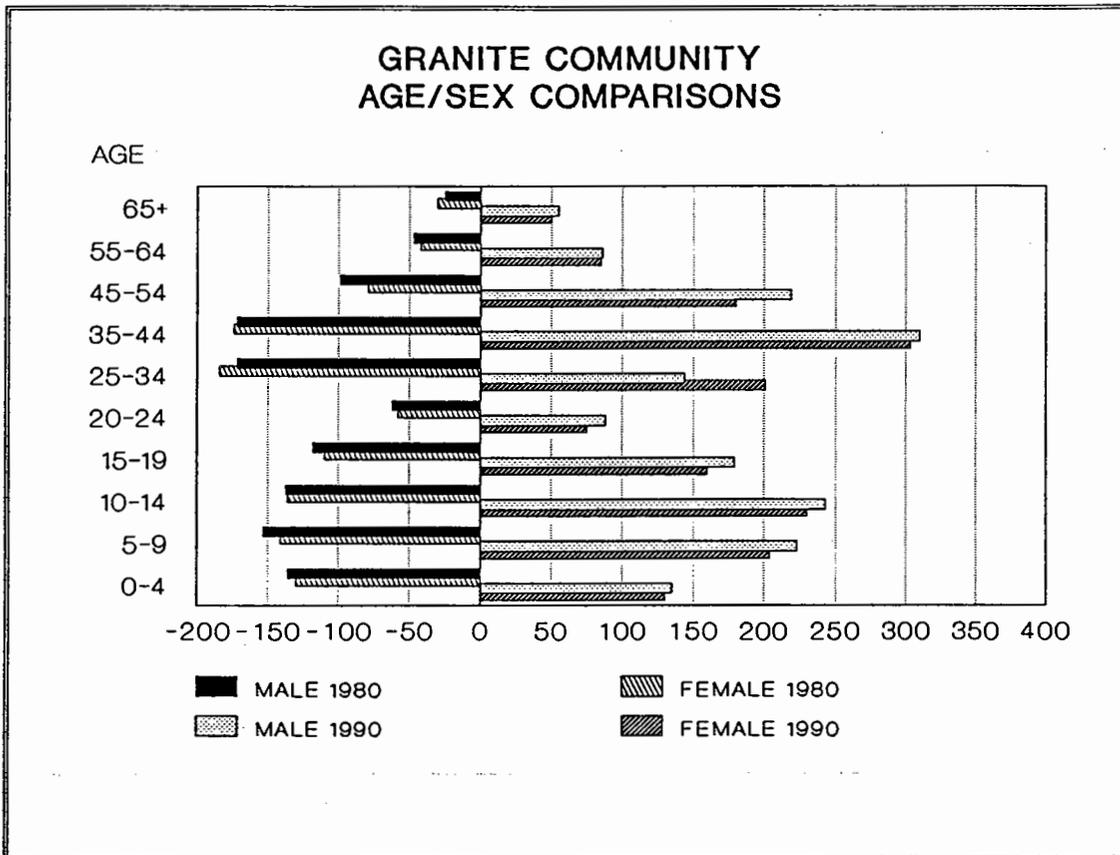
GRANITE COMMUNITY POPULATION TRENDS AND PROJECTIONS				
YEAR	SALT LAKE COUNTY POPULATION	GRANITE POPULATION	% SALT LAKE COUNTY POPULATION	GRANITE HOUSING UNITS
----	-----	-----	-----	-----
1940	211,623	80	.04	20
1950	274,895	155	.06	40
1960	383,035	265	.07	65
1970	458,607	1,000	.22	250
1980	619,066	2,205	.36	575
1990	725,956	3,300	.45	905
2000	840,000	4,150	.49	1,160
2010	950,000	4,900	.52	1,365

**Figure 3**

Between 1960-1990 Granite's population increased much more rapidly than total Salt Lake County population. Granite's percent of Salt Lake County population has increased from .04 in 1940 to .45 in 1990.  
Sources: U.S. Census of Population 1940-1990, Salt Lake County Public Works, Department, Planning Division.

Characteristic of Utah generally, Granite's population in 1990 was 98.2 percent white. All other races represented 1.8 percent of the total. The median age of the population was 24.4 years. This average was somewhat lower than the median age for Salt Lake County, which was 27.8 years.

Figure 4 shows age-sex pyramids for Granite in 1980 and 1990. The most noticeable changes over the 10-year period are the increases in all age groups except 0-4, which remained about the same size. This indicates in-migration of young and some older families, plus aging of the existing population. The average household size for 1990 in Granite was 3.65, compared to an average household size in the county of 2.98.



**Figure 4**

The age groups registering the largest increases of population were the 35-44 year-olds, 45-54 year-olds, 10-14 year-olds and the 5-9 year-olds. Granite's median age was 24.4 years, compared with 27.8 years in the whole county. Sources: U.S. Census of Population 1980-1990, Salt Lake County Public Works Department, Planning Division.

## Land Use

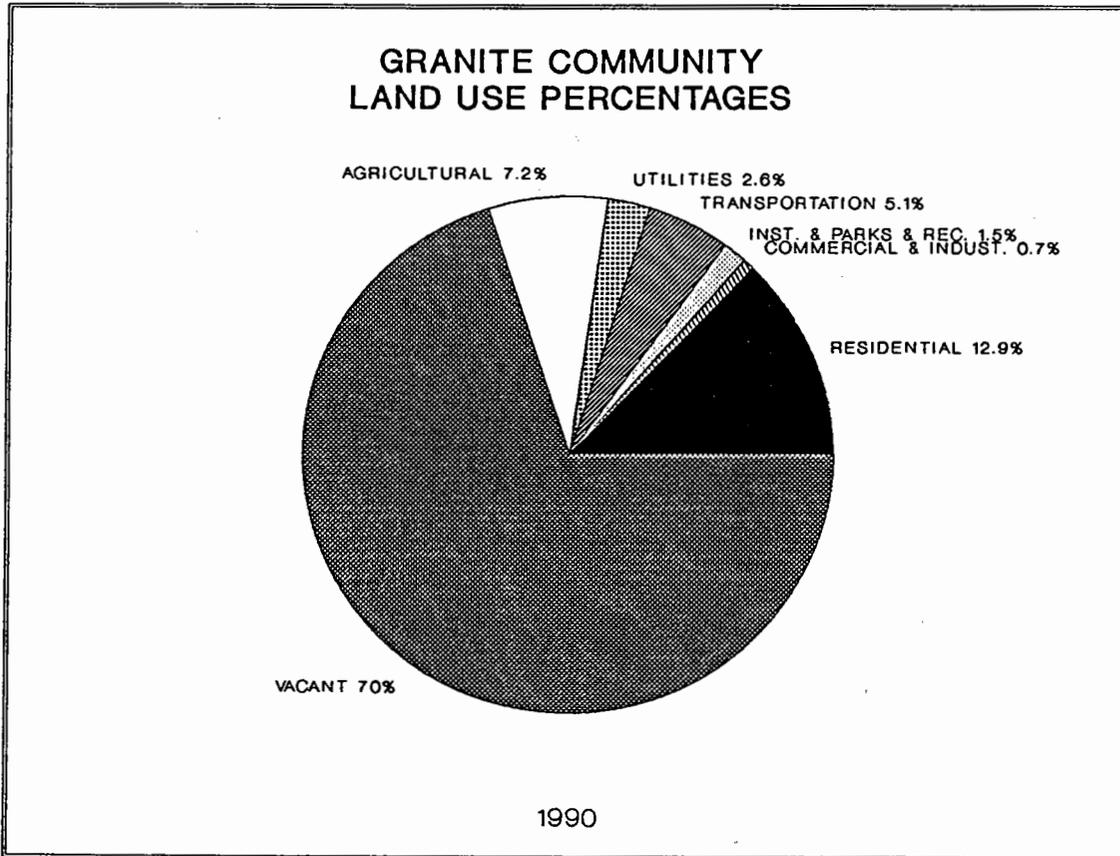
The study area includes approximately 3,060 acres. At present, roughly 695 acres (23 percent of the total area) are developed into seven land use categories, leaving over 75 percent of the surface vacant or in agricultural use. As will be discussed later, many undeveloped parcels can only be developed if major environmental and other constraints can be overcome. Figure 5 shows a comparison of 1980 and 1990 land uses.

<b>GRANITE COMMUNITY LAND USE COMPARISONS</b>				
LAND USE	1980		1990	
	ACRES	% of TOTAL	ACRES	% of TOTAL
Residential	310	9.4	395	12.9
Commercial	12	.4	14	.5
Industrial	6	.2	6	.2
Institutional	5	.2	10	.3
Parks & Open Space	34	1.0	37	1.2
Transportation	139	4.2	155	5.1
Utilities	76	2.3	79	2.6
Agricultural	271	8.2	221	7.2
Vacant	2,447	74.2	2,143	70.0
Total	3,300	100.0	3,060	100.0

**Figure 5**

Granite's predominant use other than vacant land is housing. Much of the vacant land is in the area of the proposed Dimple Dell Regional Park.  
 Source: Summary of Population, Housing, and Land Use by Traffic Zones and Census Tracts 1980-1990, Salt Lake County Public Works Department, Planning Division.

Figure 6 shows that residential uses occupy approximately 400 acres or 12.9 percent of the study area. The dominant form of residential development is single family homes. Commercial and industrial uses comprise less than 1 percent of the study area. Institutional, park and recreation land uses take up 1.4 percent of the land. Transportation land uses account for about 5 percent, while utilities make up 2.6 percent of the total study area. The balance of over 77 percent of the Granite Community is either vacant or in agricultural uses. Much of the vacant land is programmed for use as Dimple Dell Regional Park.



**Figure 6**

Only 23 percent of Granite's land area is developed. The most prevalent developed land use is residential. The development of Dimple Dell Regional Park and other recreational and open space could make institutional and park uses the largest category.  
Source: Salt Lake County Public Works Department, Planning Division.

## Economic Development

Commercial: Commercial activity in the Granite Community is scattered and limited. The six commercial properties are: (1) the LaCaille at Quail Run Restaurant off Wasatch Boulevard at about 9600 South, (2) Larkin's Sunset Gardens Mortuary at 10600 South and 1700 East, (3) Dimple Dell Floral along Dimple Dell Road at 10216 South, (4) Rocky Willows Kennels and Stables at 10700 South 1700 East, (5) Progressive Plants at 9180 S. Wasatch Boulevard and (6) the Despain Tree Farms at 3700 East just off North Little Cottonwood Road. Only the LaCaille is located on commercially zoned land. The other businesses are pre-existing uses that pre-date zoning. All other commercial services for residents are provided outside of Granite.

Industrial: Industrial uses in Granite are limited to Timberline Construction Company at 3170 East Little Cottonwood Road, an equipment repair and storage area at about 10600 South off Dimple Dell Road and a construction equipment storage area on the north side of 10600 South just east of 1700 East.

Employment and Income: Lifestyles and career choices of Granite residents are diverse. As of the 1990 Census, 42 percent of the work force was in management and professional specialty occupations; 36 percent in technical, sales and administrative support positions; 7 percent in service-related occupations; 3 percent in farming, forestry and fishing occupations; 5 percent in precision production, craft and repair occupations; while 7 percent were working as operators, fabricators and laborers. Career choices in 1990 showed an increase in management and professional specialty occupations and in technical, sales and administrative support services, while all the other occupation groups showed a decrease from 1980.

The 1990 Census shows that Granite's 1989 median household income was \$62,179, while the median household income in the county was \$30,149. The median household income in Granite was also higher than in surrounding communities.

Employment demographics from the 1990 Census shows Granite's labor force had a 97.3 percent employment rate. About 99 percent of Granite workers commute to their jobs. The mean travel time to work, according to the 1990 Census, was 24.4 minutes, while a majority of the work destinations were in Salt Lake City and unincorporated areas of the county. There was little local employment, the census counted 13 people who worked at home.

The employment rate remained the same as 1980, but the commuting rate of Granite residents in 1990 increased by about 4 percent. Local employment opportunities will continue to be limited but could be enhanced with the development of Dimple Dell Regional Park.

## Housing

Most of the housing in Granite is single family homes, primarily in conventional subdivisions. There are also a number of homes on estate lots accessed by private roads and rights-of-way. Most of the community's housing has been built since 1970 in the area east of Wasatch Boulevard and 3100 East, and east and south of Dimple Dell Road. Homes are mid-sized to large, have 1/3-acre or larger lots and are generally well maintained.

The only multi-family housing is located at three sites along or just off Little Cottonwood Road, and in two developments along Wasatch Boulevard.

## Transportation

Automobile Traffic: Since nearly all Granite's residents commute to work and travel outside the community for services, efficient traffic circulation is vital. The layout of Granite's arterial and collector streets emphasizes movement north toward Salt Lake City, west to Sandy and other communities, and east to the ski resorts in Little Cottonwood Canyon.

However, there are two missing links in the street system: (1) 2000 East needs to be extended from 9400 South to 12400 South, including bridging the Dry Creek Wash; (2) Wasatch Boulevard needs to be completed from Little Cottonwood Road (about 9800 South) to Lostwood Drive in Sandy (about 11200 South). The additions to Wasatch Boulevard should be designed as sensitively as possible to address the needs of the residents with homes fronting on the street. Presently, Wasatch Boulevard does extend into two areas between Little Cottonwood Road and Lostwood Drive, namely Majestic Canyon Estates and Seven Springs-Deer Hollow areas.

Streets in Granite fit into three categories: arterials, collectors and local streets. Arterials are urban streets designed to carry large volumes of traffic from one point to another with few interruptions. Collector streets carry traffic from local streets to the arterials and also provide access to adjacent properties. Local streets provide access to adjacent properties, generally residential dwellings, and should not accommodate high volumes of traffic. Major streets, categorized according to width and average daily vehicle counts, are shown in Figure 7.

## GRANITE COMMUNITY STREET CATEGORIES, TRAFFIC COUNTS & PROJECTIONS

ARTERIAL STREETS -----	WIDTH		AVERAGE VEHICLES PER DAY	
	EXISTING	PROPOSED	1990	2006
S. Little Cottonwood Rd. 2450 E. to Wasatch Bl. Wasatch Blvd. to N. Little Cottonwood Rd.]	66'	106'	9,047	17,000
N. Little Cottonwood Rd.	66'	66'	4,835	8,000
2000 East Street	66'	106'	5,042	20,000
10600 South Street	66'	80'	8,214	16,000
COLLECTOR STREETS -----				
Wasatch Boulevard N. Little Cottonwood Rd. to 9400 S.]	66'	80'	8,507	16,500
9400 S. to 9800 S.	80'	80'	7,419	16,500
10000 S. to 10200 S. (Majestic Canyon Est.)	80'	80'	N/A	14,500
10400 S. to 10625 S. (Seven Springs)]	80'	80'	N/A	14,500
10625 S. to 10700 S. (Deer Hollow)]	60'	80'	N/A	14,500
Dimple Dell Road	50'	66'	3,081	8,500
3100 East Street	50'	60'	1,412	3,500
Mt. Jordan Road	50'	66'	2,507	4,000
9800 South Street	50'	60'	2,657	4,000
Danish Road	50'	66'	651	2,500

**Figure 7** Proposed widening and other improvements to arterial and collector streets in Granite would facilitate traffic movement through and within the community now and in the future.  
Sources: Salt Lake County Public Works Department, Traffic Engineering Department; Wasatch Front Regional Council; Utah Department of Transportation.

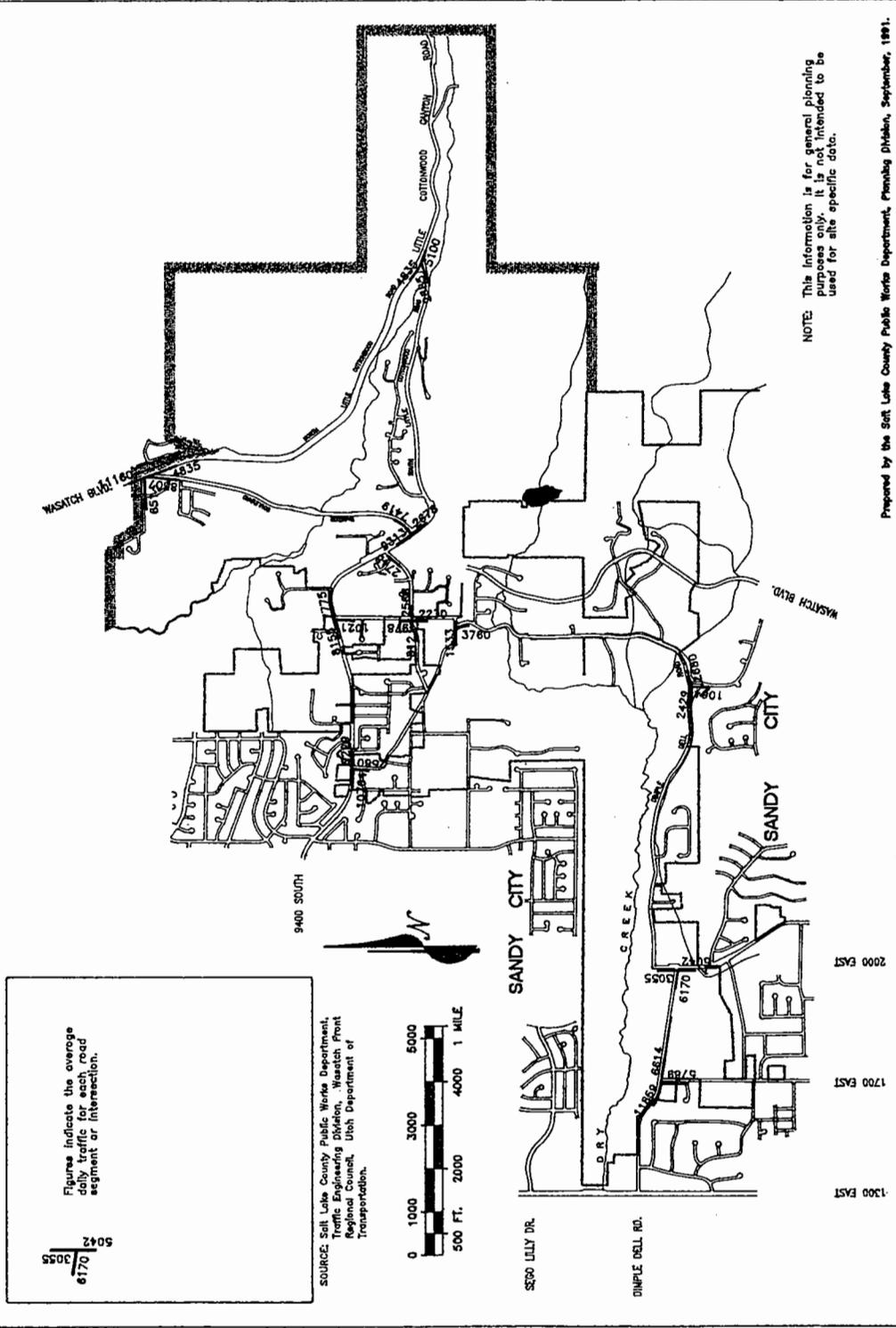
Figures 8 and 9 show traffic circulation patterns and proposed improvements. Several actions are necessary before the street system that serves and/or transverses the Granite community can handle existing and future traffic demands. Besides the 2000 East and Wasatch Boulevard extensions mentioned above these include:

- Widening and, where necessary, improving Little Cottonwood Road (U-209)
- Finishing the widening and improvements to the north end of Wasatch Boulevard including the construction for the intersection re-alignment with North Little Cottonwood Road (U-210) south of Canyon Place Condos
- Widening and improving 10600 South Street from 1300 East to 2000 East
- Widening and improving Dimple Dell Road
- Widening and improving 3100 East Street, Mt. Jordan Road, 9800 South Street, and Danish Road

Past development in Granite has resulted in some neighborhoods that have limited or no traffic connections to other nearby neighborhoods. Such situations are particularly found in locations east of 3100 East, and east, west and south of Dimple Dell Road. In these neighborhoods, many homes are on dead-end streets, private lanes and rights-of-way that have no turnarounds or connecting streets.

These island neighborhoods have been created by topography, the desire for privacy and inadequate planning under which even turnarounds for emergency equipment were not required. Where possible, such problems should be corrected. Meanwhile turnarounds or other localized circulation systems should be required in future developments.

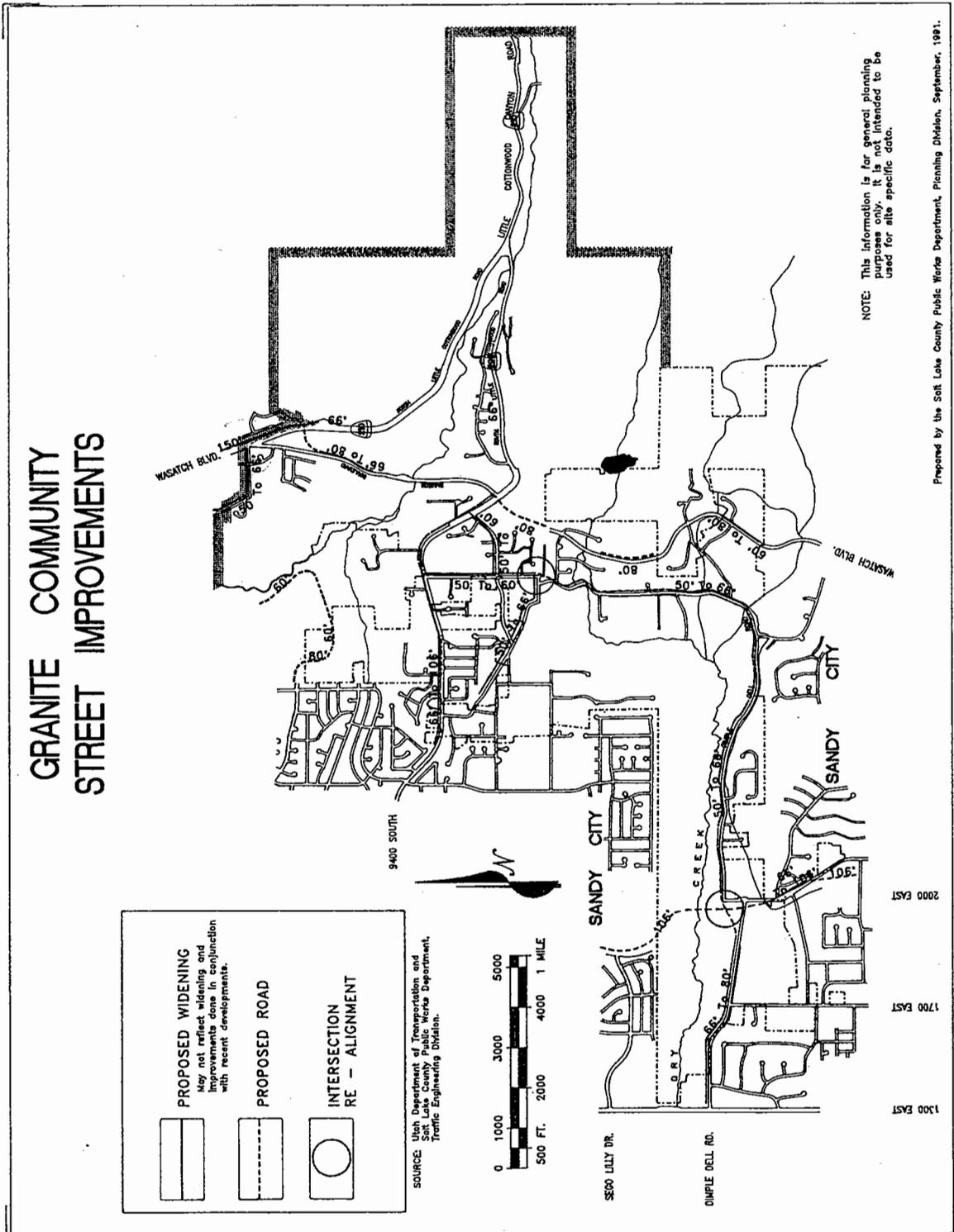
# GRANITE COMMUNITY TRAFFIC CIRCULATION



**Figure 8**

Present traffic volumes on major streets in the community support the need for road widening projects on Little Cottonwood Road, Wasatch Boulevard and Dimple Dell Road; the completion of Wasatch Boulevard south of 9800 South; and the construction of 2000 East.





**Figure 9** Map shows present arterial and collector widths, and describes widening and construction width recommendations.



The numbers and locations of traffic accidents and injuries in Granite have been relatively consistent over the past ten years. The majority of accidents have occurred on Wasatch Boulevard, South Little Cottonwood Road and Dimple Dell Road. Many of them have occurred at or near the intersections of arterial and collector streets, but a number have been at intersections with local streets, private lanes or driveways. Accident prevention features will be incorporated into the planned improvements already discussed. Among these will be semaphores, stop signs and improved lane markings.

Pedestrian Traffic: There is a critical lack of curb, gutter and sidewalk in Granite, both along major streets and in residential areas.

Most of the arterials and collectors in the community have remained in a rural state. Although sidewalks have been required in connection with scattered, recent development, most major roads don't have them. The most common form of pedestrian travel in Granite is children walking to and from school. It is evident from analyzing the pedestrian walkways map, Figure 10, that children are often forced to walk in the street or on a very limited street shoulder -- a clear safety hazard.

Meanwhile, due to the country-type setting, even many dedicated streets within subdivisions lack curb, gutter and sidewalk. And none of the private lanes have sidewalks. Pedestrians on these residential streets must also walk either in the roadway or along a very limited shoulder.

Residents want to maintain a rural atmosphere in Granite. This can be done while still providing an adequate pedestrian system. One mechanism might be to incorporate combined walking/jogging and bicycle paths on at least one side of the road into proposed street-widening projects. In the meantime, curb, gutter, sidewalks and/or biking/jogging/pedestrian path must be required in any new development.

Immediate steps should be taken to identify and prioritize particularly dangerous areas. The county should use safe sidewalk funds; submit requests to federal, state and local governments for funding; and use any other funds that become available to get these serious problems corrected.

Public Transportation: The Utah Transit Authority operates two bus routes into Granite area, plus ski buses up Little Cottonwood Canyon during the winter. During summer, there is a workers route that goes to Snowbird (Route 98) each morning and back down in the evening.

The two regular routes into the community (Routes 21 and 45) plus the workers route (same as the existing ski route) and a proposed additional ski route are shown in Figure 11. Routes 21 and 45 are referred to as tripper routes. In the morning between 6:30 and 8:00, four buses travel along each route into Salt Lake City. Three buses return to Granite via the same routes in the afternoon from 4 to 5:30.

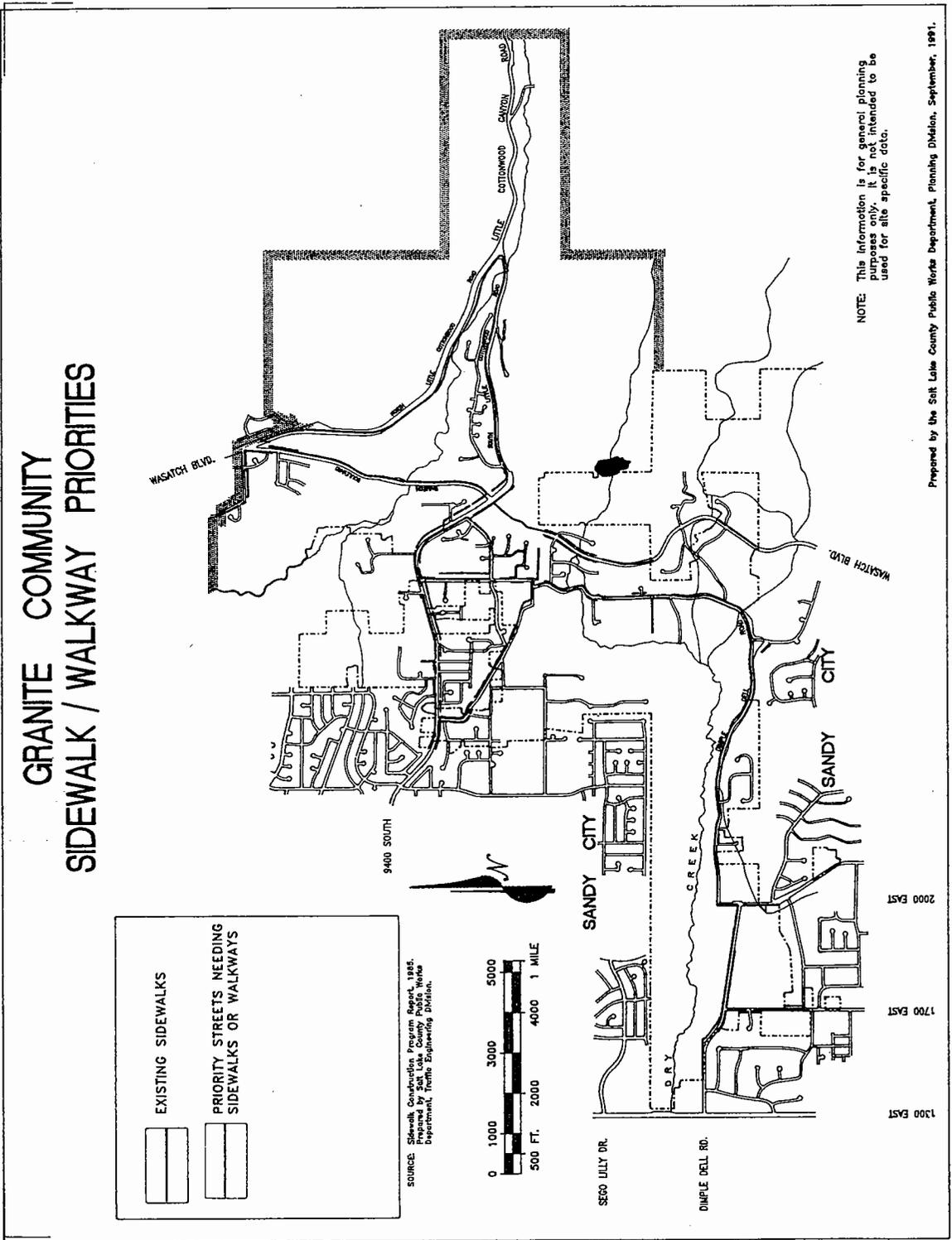
As shown in Figure 11, only part of the community is served. Public transportation is not adequate in either routes or schedules at the present time to entice many residents' to leave their cars at home and ride the bus.

There are two other routes near the community (Routes 8 and 33) that run every half-hour or hour into and out of Salt Lake City. The various routes running through and near to the community provide connections to all areas of the valley, and to Davis, Utah, and Weber Counties.

Transit ridership has increased about one percent in the last three years, but incentives within the last six months has increased ridership by six percent. Improved service could have an influence on Granite's travel patterns. Also, if social, environmental and economic conditions change, mass transit could be a bigger factor in the future.

A new Park-and-Ride parking lot has been constructed north of the U-209 and U-210 intersection at the mouth of Little Cottonwood Canyon. This will eliminate the current parking area along the north side of U-210 that has been the source of complaints from nearby residents. Besides being larger, the new lot will have areas where cars can safely pick up and drop off passengers who are using buses to complete their trips up or down the canyon.

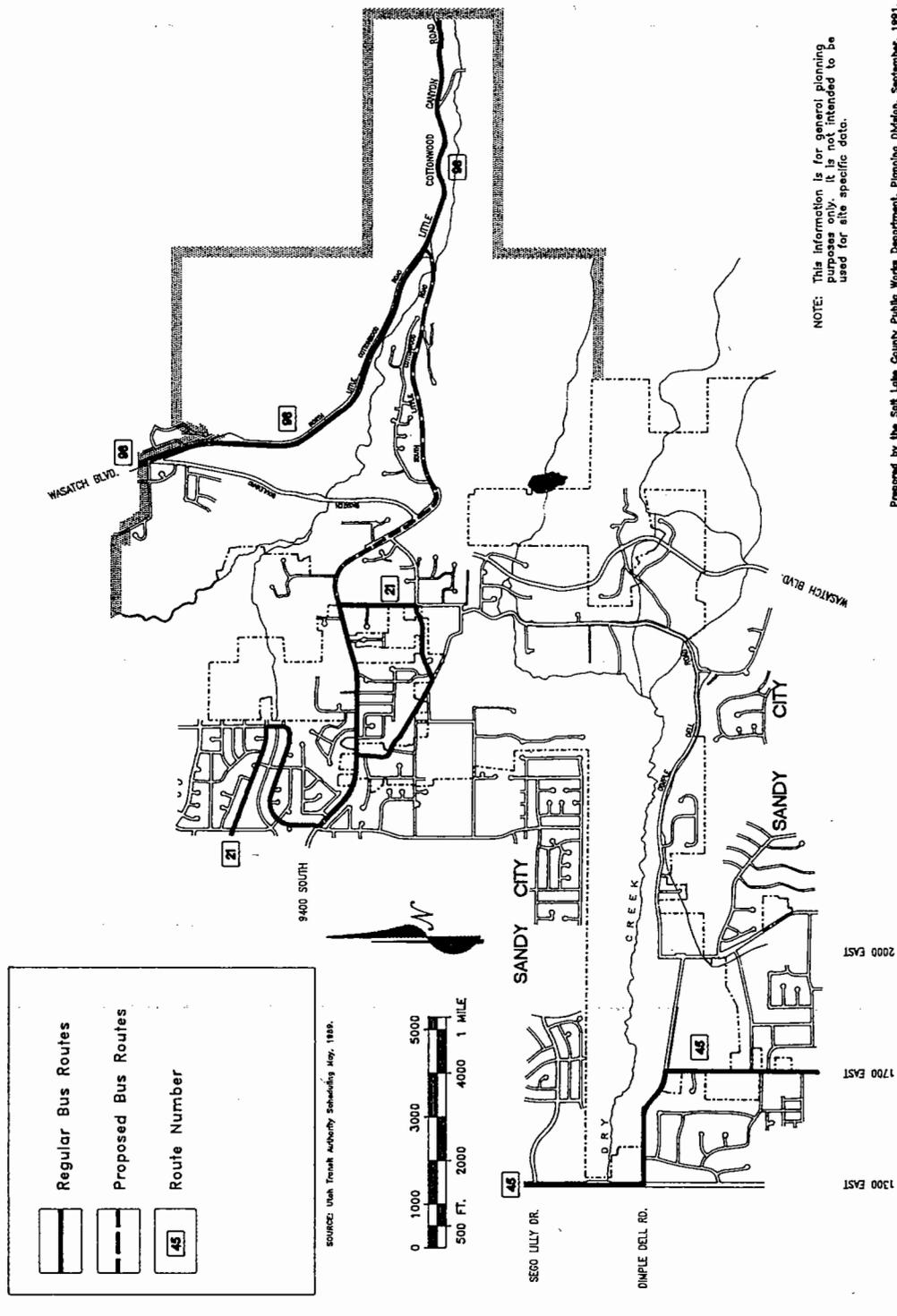
The citizens of Granite oppose any additional or expanded park and ride facilities. However, this view must be analyzed with respect to the overall County need for Park and Ride lots. Residents should have input to any additional park and ride lot proposals in the community. Hitchhiking by those using the new Park and Ride Lot and by those parking illegally continue to pose a safety problem. Enforcement and education (posting no hitchhiking and no parking signs) concerning the hitchhiking ordinance and illegal parking needs to take place.



**Figure 10** Map shows existing sidewalks in the community. Proposed sidewalks/walkways/jogging/bicycle paths are also shown.



# GRANITE COMMUNITY PUBLIC TRANSPORTATION



**Figure 11** Three Utah Transit Authority bus routes serve the Granite Community. A Park-and-Ride lot has been constructed north of the intersection of North and South Little Cottonwood Roads.



## Public Facilities

**Schools:** The Granite Community is served by the Jordan School District and has students attending 14 schools. Elementary schools include Brookwood, Granite, Lone Peak, Park Lane, Quail Hollow, Ridgecrest, Sunrise and Willow Canyon. The middle schools include Albion, Butler, Eastmont and Indian Hills. High school students attend Alta or Brighton.

Student population (Kindergarten - 12th Grade) from the Granite Community for 1990-1991 school year was 1,130. Projections in Figure 12 show that elementary school enrollment will increase by approximately 97 students during the next five years, while the middle and high school enrollment will increase by approximately 45 and 33 respectively. If the pace of home building exceeds expectations, enrollment growth could outpace these projections.

<b>GRANITE COMMUNITY SCHOOL ENROLLMENT AND PROJECTIONS</b>					
<b>ELEMENTARY SCHOOLS</b>	<b>90-91</b>	<b>91-92</b>	<b>92-93</b>	<b>93-94</b>	<b>94-95</b>
-----	-----	-----	-----	-----	-----
Brookwood	6	9	10	10	11
Granite	357	363	370	378	386
Lone Peak	173	175	180	190	195
Park Lane	66	68	72	77	85
Quail Hollow	2	2	2	5	10
Ridgecrest	17	17	17	18	20
Sunrise	26	26	27	31	35
Willow Canyon	1	2	2	2	3
<b>MIDDLE SCHOOLS</b>					
-----					
Albion	147	150	155	160	165
Butler	9	10	10	10	11
Eastmont	28	29	30	34	39
Indian Hills	81	82	85	90	95
<b>HIGH SCHOOLS</b>					
-----					
Alta	89	91	95	100	105
Brighton	128	131	135	140	145
<b>Total</b>	<b>1,130</b>	<b>1,155</b>	<b>1,190</b>	<b>1,245</b>	<b>1,305</b>

**Figure 12**

The enrollment of Granite residents in Granite area schools will grow at a slow, steady rate for the next five years based on the growth of the community.  
Sources: Jordan School District, Salt Lake County Public Works Department, Planning Division.

Many of the students in the Granite Community who attend Granite Elementary and Park Lane Elementary walk to school. Students attending the other elementary schools, the middle schools and the high schools are generally bused. Figure 13 shows boundaries of the schools serving the Granite Community.

Any future schools serving Granite will likely be built outside the community. Most students attending such schools will be bused.

All the existing schools have gymnasiums and other indoor facilities. The school grounds have playground equipment as well as playing fields that can be used for soccer, football and softball. Some of the schools are within a short walking or driving distance from neighborhoods and thus serve some of the community's recreational needs.

Post Office: Granite's postal service is provided by the Cottonwood Branch Post Office located at 6890 South 2300 East and the Sandy Post Office at 8850 South 700 East. A post office is scheduled to be built in the next year or two in the area around 2000 East and 9400 South. This proposed facility will handle any of Granite's future needs.

Library: Library service for the Granite Community is provided from the new Sandy Library at 10100 South Petunia Way (1450 East) that opened in June, 1991. The Whitmore Library at 2197 East 7000 South is fairly close by as is the Draper Library at 12441 South 900 East. With its 26,000 square feet and space for a 10,000-square-foot expansion, the Sandy facility will meet Granite's library needs for the foreseeable future.

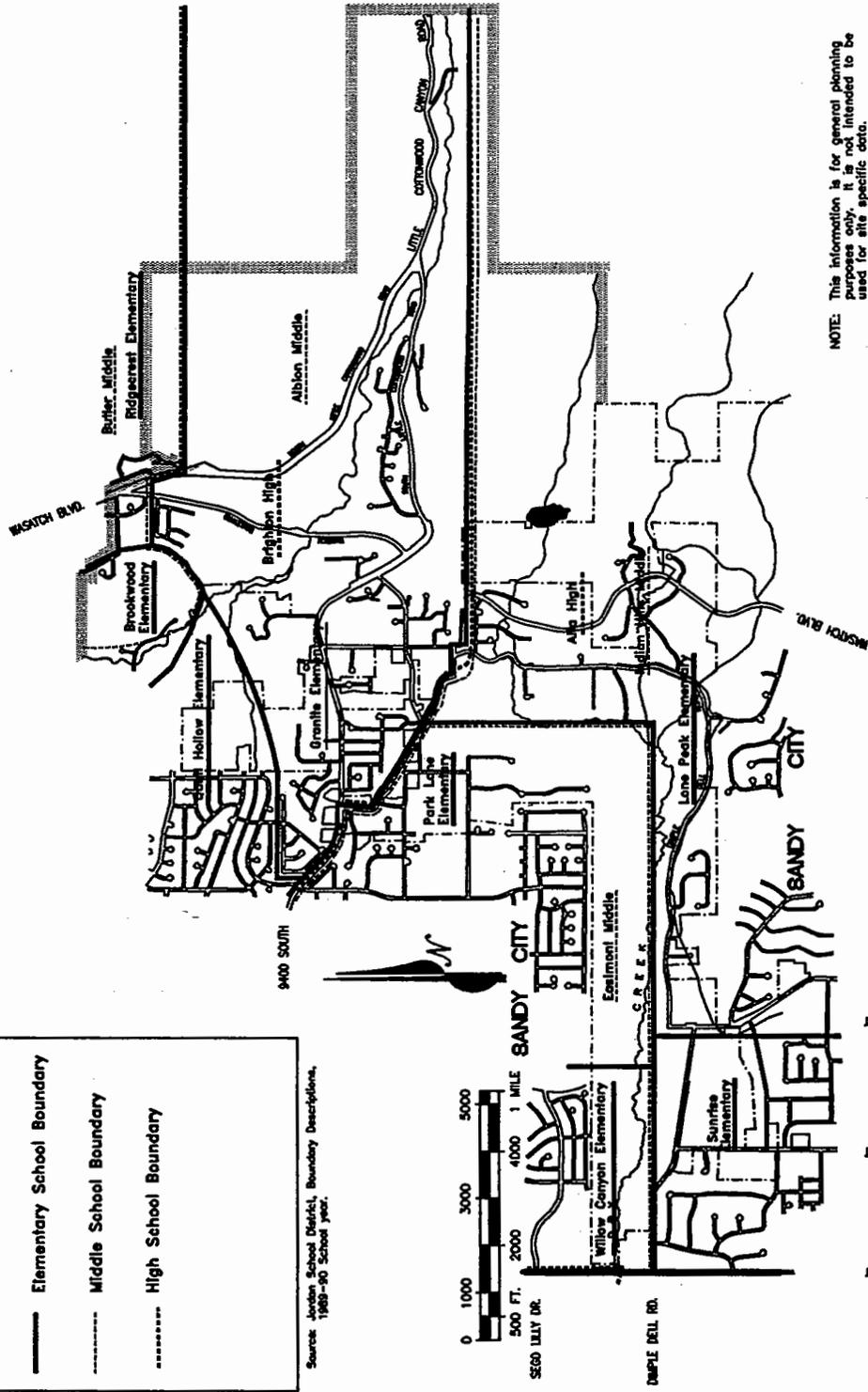
Law Enforcement: The Salt Lake County Sheriff Department provides police services for Granite residents. The community is served out of the South Valley Division Office at 1400 West 12800 South in Riverton. At present, the sheriff's office is looking for a substation site around 7000 South between 1300 East and 3000 East. When such a facility is established, Granite will be served from that location.

Fire Protection: Fire protection for the Granite Community is provided by the Salt Lake County Fire Department from Butler Station located at 7480 South 2700 East and Union Station at 6500 South 1300 East. The county also has an inter-local agreement with Sandy City to provide backup for the county out of its Pepperwood Station at about 2000 East 11400 South. These stations all should have modern fire fighting equipment, but due to the age of some of the equipment, there is a need for new equipment to more adequately meet present and future needs of the community.

# GRANITE COMMUNITY SCHOOL BOUNDARIES

——— Elementary School Boundary  
 - - - - - Middle School Boundary  
 ······ High School Boundary

Source: Jordan School District, Boundary Descriptions, 1989-90 School year.



NOTE: This information is for general planning purposes only. It is not intended to be used for site specific data.

Prepared by the Salt Lake County Public Works Department, Planning Division, October, 1992.

**Figure 13** Map shows the boundaries of the 14 schools that serve the Granite Community.



However, because of distance from stations, response times for fire protection and paramedic services, not only in Granite but also in Little Cottonwood Canyon, are generally too long. The County Fire Department plans to build a new three bay station for two fire engines and a paramedic unit, preferably, at the northwest corner of Wasatch Boulevard and South Little Cottonwood Road (3400 East and 9800 South) as soon as funds are available. However, because this site is near a fault, construction requirements for critical facilities in fault zones should be followed. Funds have been proposed but not approved for this station the past few years. Funds will be proposed again for 1993.

Health Care Facilities: The most comprehensive health care facility serving Granite is Alta View Hospital located at 9660 South 1300 East in Sandy. This facility meets all types of medical and emergency needs for the residents of Granite. In addition, medical offices housing a wide selection of doctors are adjacent to the hospital, and a wide range of other doctors' offices and health care facilities are within fairly short driving distances from the community.

Parks, Recreation, and Open Space: At present, the only developed public park lands in the Granite Community are three trailhead parking areas and some trails in Dimple Dell Regional Park. These parking areas are located at about 10500 South just east of 1300 East, at about 2850 East off the north side of Dimple Dell Road, and at about 3020 East off Mt. Jordan Road. These areas are used mainly as embarkation points for horseback riding and walking in the park. The park has several trails which are used by horseback riders as well as hikers, joggers and mountain bikers.

There is a private neighborhood park with playground equipment, tennis courts and a swimming pool in the Dimple Dell Ranchettes subdivision at about 10775 South 2300 East for use of subdivision residents.

Recreational needs are largely being met at schools, in parks in adjoining communities or in private yards. In addition, nearby Big and Little Cottonwood Canyons have abundant picnicking, camping and hiking areas for summer use as well as skiing and other winter sports facilities.

When fully improved, the huge Dimple Dell Regional Park will fulfill a wide range of park and recreation needs for the Granite Community as well as southeast Salt Lake County. The park should be developed according to the Park Development Plan being prepared by the Salt Lake County Parks and Recreation Division with input from the Dimple Dell Park Advisory Board, and as approved by the Planning Commission.

The location of the proposed Nature Center, pedestrian, bicycle and equestrian trails, and other recreational facilities such as picnicking, playgrounds, ball fields, etc. are identified in this Park Development Plan. Funding for park development will come from public funds as they become available, from donations or from other public or private sources.

The Park Development Plan for Dimple Dell Regional Park shows that some of the existing and future neighborhood park deficiencies will be mitigated by developing approximately seven acres in the northeast section of the park into neighborhood park facilities and amenities. These facilities and amenities include: an informal ball diamond, open space for soccer and football practice, two tennis courts, basketball courts, volleyball courts, playground equipment and picnic pavilion and tables, etc. The County Parks Master Plan proposes that another seven acre parcel be acquired and developed north of 9400 South. The suggested location for this park is in the Green Hills Drive area.

Although, there is the desire by residents to have neighborhood parks in each of the five council districts, the lack of funds, the high cost of land etc. will limit neighborhood parks to the ones proposed in the County Parks Master Plan for the foreseeable future. Where accessible and feasible, detention basins could be considered for use as neighborhood or mini-parks in areas not close to the proposed neighborhood parks.

The Little Cottonwood Creek area west from Wasatch Boulevard has two existing pedestrian trails used also by mountain bikers which follow a ditch and a water line along the south hillside to the Salt Lake Aqueduct siphon over the Creek. These trails should be preserved and improved to County trail standards.

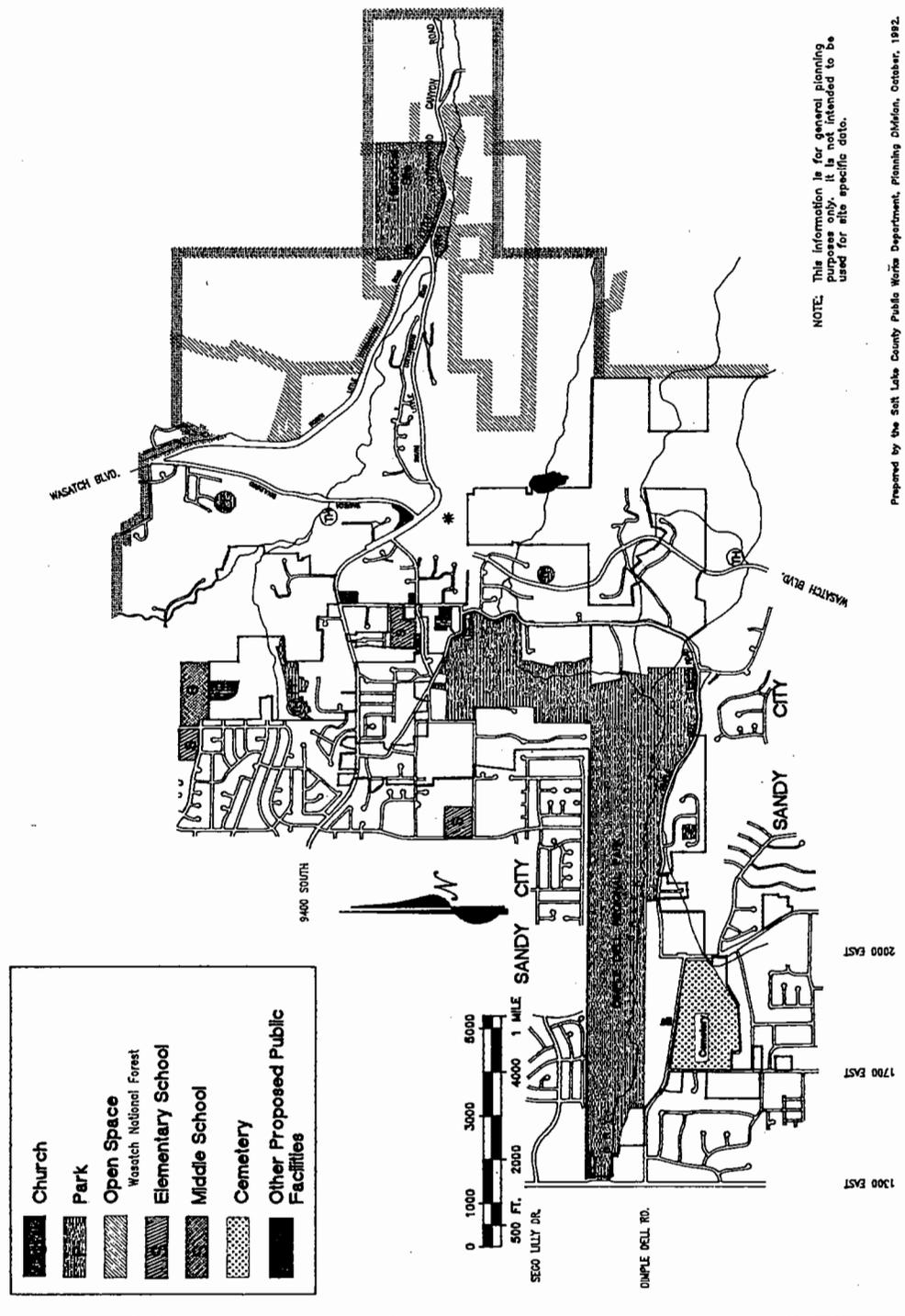
In addition, the old Granite Church located on the northeast corner of 3100 East and 9800 South should be acquired and renovated, if feasible, for use as a community center and museum. Also, the Utah Museum of Science and Industry, a privately funded, non-profit facility, should be encouraged provided it is feasible to build at its proposed location near the southeast corner of Wasatch Boulevard and South Little Cottonwood Road.

There is need to provide adequate access to hikers and others who want to enjoy the beauty of the mountains and the area around the Bell Canyon Reservoir. The Salt Lake County Parks and Recreation Division, Sandy City and the U.S. Forest Service are working together with property owners to provide an access trail to the mountains and thence to the reservoir by way of the wash north of Lostwood Drive. The trailhead parking area in the southeast corner of Dimple Dell Regional Park will serve as the parking area for hikers using the access trail. There is also an access easement through the Stone Ridge Subdivision at about 10050 South which is just below and north of the reservoir. The trailhead in the northeast corner of Dimple Dell Regional Park will provide parking for the trail which will go south crossing Dry Creek and Dimple Dell Road to link the new trailhead at Wasatch Boulevard south of Majestic Canyon Estates with the Bell Canyon Reservoir and Bell Canyon-Lone Peak Wilderness Trails.

These trails will also connect to the proposed Bonneville Shoreline Trail which will traverse the Community. The Bonneville Shoreline Trail is proposed as a multi-county recreation trail from Box Elder County to Utah County using the bench line of ancient Lake Bonneville.

Figure 14 shows location of existing and proposed public facilities serving the Granite Community.

# GRANITE COMMUNITY EXISTING AND PROPOSED PUBLIC FACILITIES



**Figure 14** Map shows existing and proposed public facilities, including parks, schools, churches, cemeteries, etc.



## Utilities

Granite residents receive the following public utility services: (1) wastewater disposal, (2) solid waste disposal, (3) culinary water, (4) natural gas, (5) electricity and (6) telephone.

The Salt Lake County Cottonwood Sewer District, the Sandy Suburban Improvement District and the Salt Lake County Little Cottonwood Sanitary Sewer District provide wastewater disposal service. The South Valley Water Reclamation Facility located at 7495 South 1300 West in West Jordan serves the wastewater treatment needs. This facility, built six years ago, was designed to handle the wastewater treatment needs for the next 20 years. However, at the time the facility was built future growth was underestimated significantly, and now it appears the facility will need to be expanded starting in 1995 or 1996.

Solid waste disposal is provided by Salt Lake County. According to the Salt Lake County Sanitation Division, the system runs efficiently, and all future demands for service can be met.

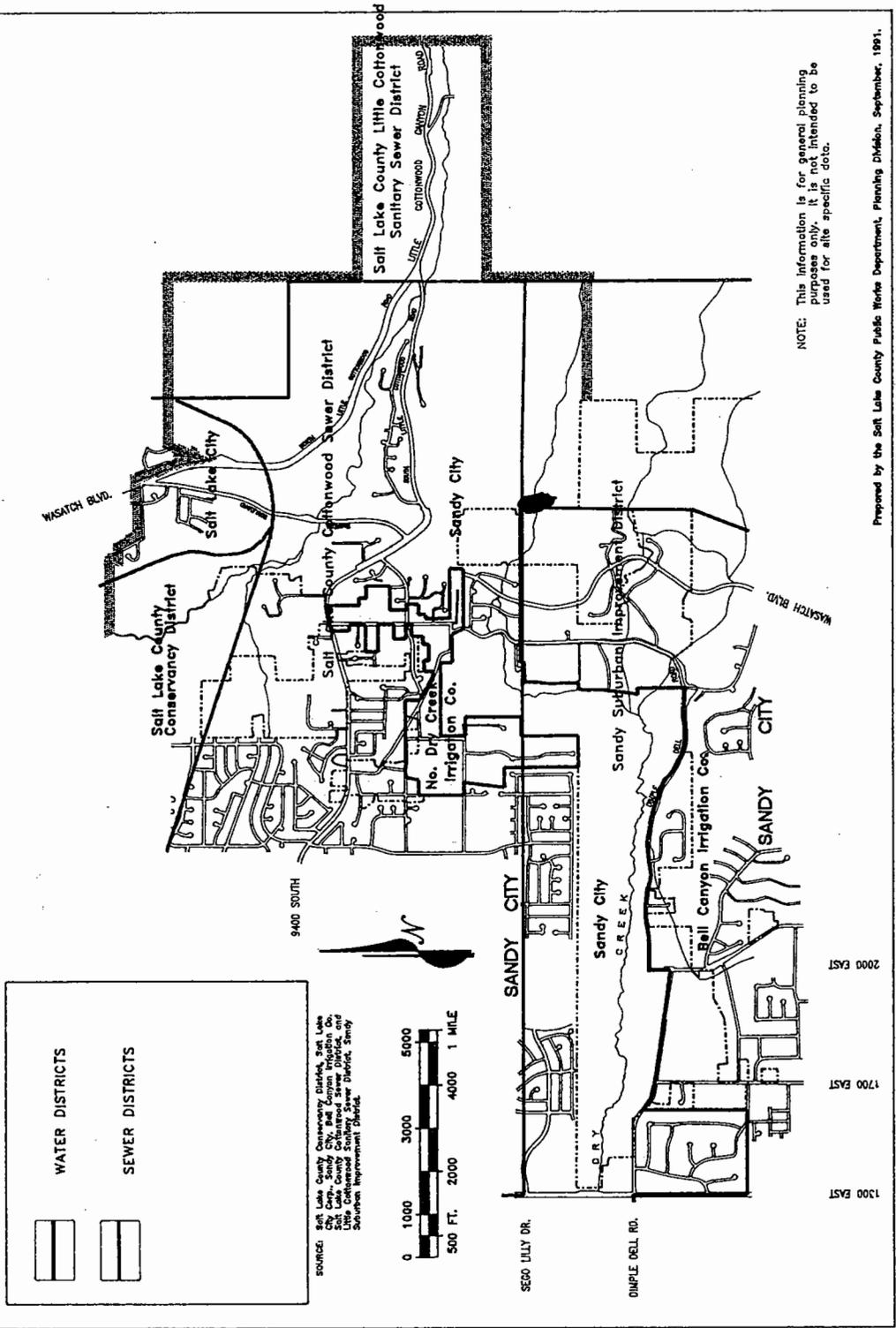
Bell Canyon Irrigation Company, North Dry Creek Irrigation Company, Salt Lake City and Sandy City provide culinary water to the community. The primary sources of water for the Bell Canyon and North Dry Creek Irrigation Companies are Dry Creek and Bell Canyon Reservoir. The primary sources for the Salt Lake City system that serves the Granite Community are Little Cottonwood Creek and Deer Creek Reservoir in Provo Canyon. The water sources for Sandy City are wells, Salt Lake City and the Salt Lake County Water Conservancy District. These systems, combined with water from the Central Utah Project when the CUP is completed, will amply meet future culinary water needs of the Granite Community.

Electrical, gas and telephone service are provided by Utah Power & Light Company, Mountain Fuel Supply Company and U. S. West Communications respectively. Each company expects to be able to handle any future requirements of the Granite Community.

Figure 15 shows the service area boundaries of the water and sewer districts serving the Granite Community.



# GRANITE COMMUNITY WATER & SEWER DISTRICT BOUNDARIES



**Figure 15** This map shows boundaries of the water and sewer districts serving the Granite Community.



## Storm Drainage

The present storm drainage system, maintained by the Flood Control and Highway Division of the Salt Lake County Public Works Department, serves only portions of the community. The main areas served are shown on Figure 16.

The present storm drainage system needs to be expanded in several areas. These include:

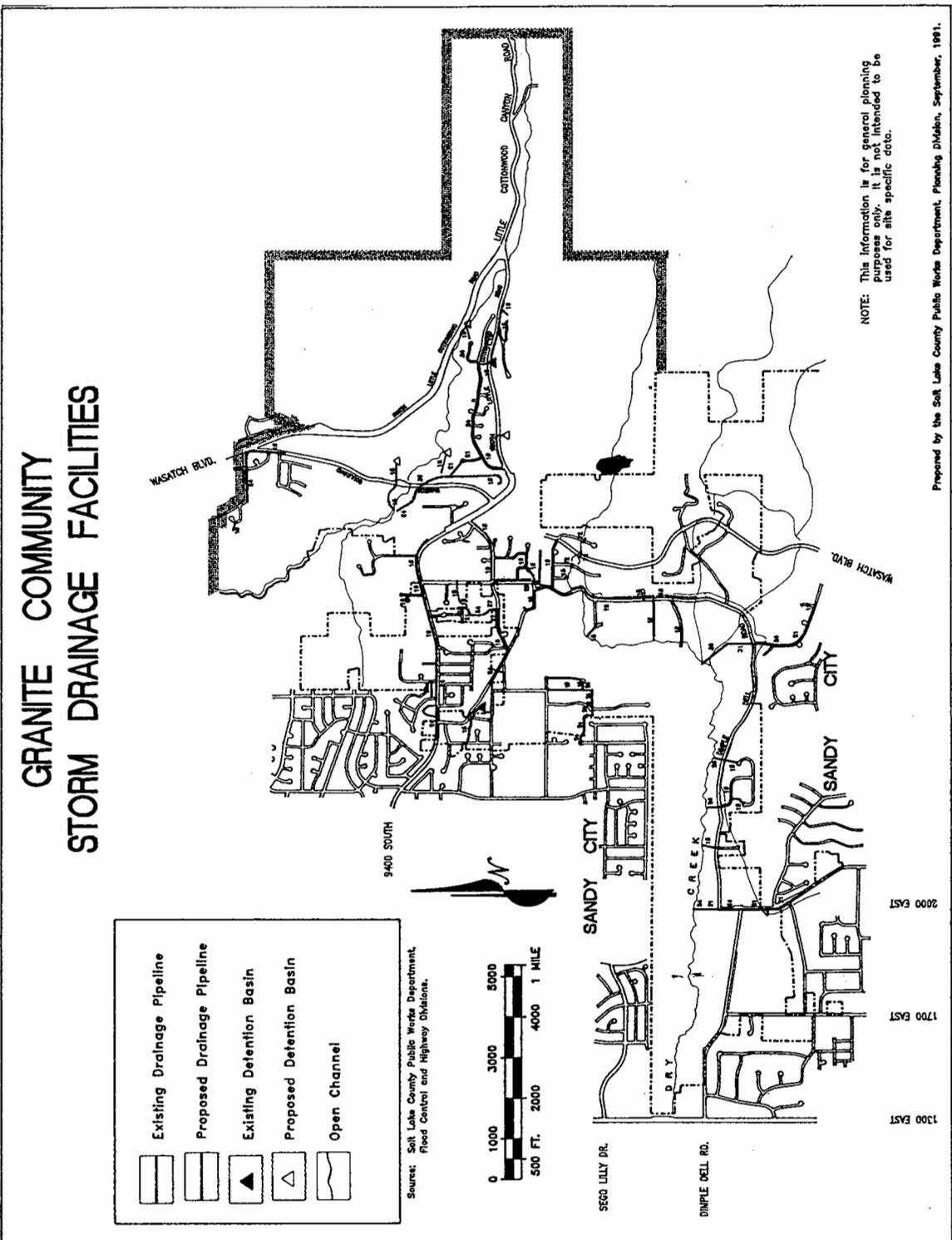
- 3100 East from 10000 South north to 9800 South
- 3100 East from Little Cottonwood Road south to about 9600 South, west-southwest to existing storm drain on 9690 South, and south through the west end of the Granite Elementary School property to existing storm drain on 9800 South
- Little Cottonwood Road from Mt. Jordan Road east to about 3300 East
- 9800 South from 3100 East east to Ruskin Circle
- Dimple Dell Road south from Dry Creek to Middle Fork of Dry Creek (about 10550 South) (Note: This would be handled either by a storm drain from Dry Creek south to the Middle Fork of Dry Creek or by lateral drains along existing private lanes and rights-of-way west to the Dry Creek)
- Wasatch Boulevard from the proposed re-aligned intersection with North Little Cottonwood Road south the Canyon Place Condos (about 9075 South) south to about 9400 South, and from South Little Cottonwood Road (9800 South) south to about 10700 South, except for Majestic Canyon Estates and Seven Springs subdivisions (Note: These improvements would be drainage ways along the side of the road like the ones along the portion of Wasatch Boulevard north of South Little Cottonwood Road to about 9400 South)
- Mt. Jordan Road from 2600 East to tie into the present line at about 9800 South, then east to the line at about 3000 East
- 10600 South east from 1400 East to 2000 East

These improvements should be made in conjunction with the new construction, street widening and other improvements proposed or determined in these areas.

Detention basins have been constructed when engineering studies show the need because of down stream capacities or conditions and a cost benefit. Where possible, the county should design detention basins to function also as small parks or open spaces. Due to limited funds and the high cost of land for parks, it may be necessary to consider the use of detention basins, where accessible and feasible, for such a dual purpose.

Figure 16 shows the existing storm drainage facilities and proposed additions and improvements.





**Figure 16**

Map shows the community drainage system, including recommended new pipelines and detention basins.



## Development Suitabilities

Topography: The topography in the Granite Community ascends from the lowest point, 4,600 feet above sea level in the Dry Creek Wash at 1300 East, to a high of 5,600 feet above sea level at Wasatch Resort. The average slope of the land in developing areas of the community varies from 2 to 10 per cent on the north, 2 to 15 per cent on the south, and 2 to 30 percent on the east. These slope figures exclude the ridges above Dry Creek in the proposed Dimple Dell Regional Park.

Slope Considerations: There is always a danger that significant slope cuts or land fills for individual homes, subdivisions and roads, if not designed properly, will become unstable, triggering a landslide. This danger particularly exists in the foothills east of Wasatch Boulevard. Chapter 70 of the Uniform Building Code, the Hillside Protection Zone and the Natural Hazards Ordinance contain criteria describing when special soils engineering and engineering geology reports are required to verify the safety of proposed hillside grading.

Wetlands: Section 404 of the Federal Clean Water Act of 1977 generally defines wetland areas as:

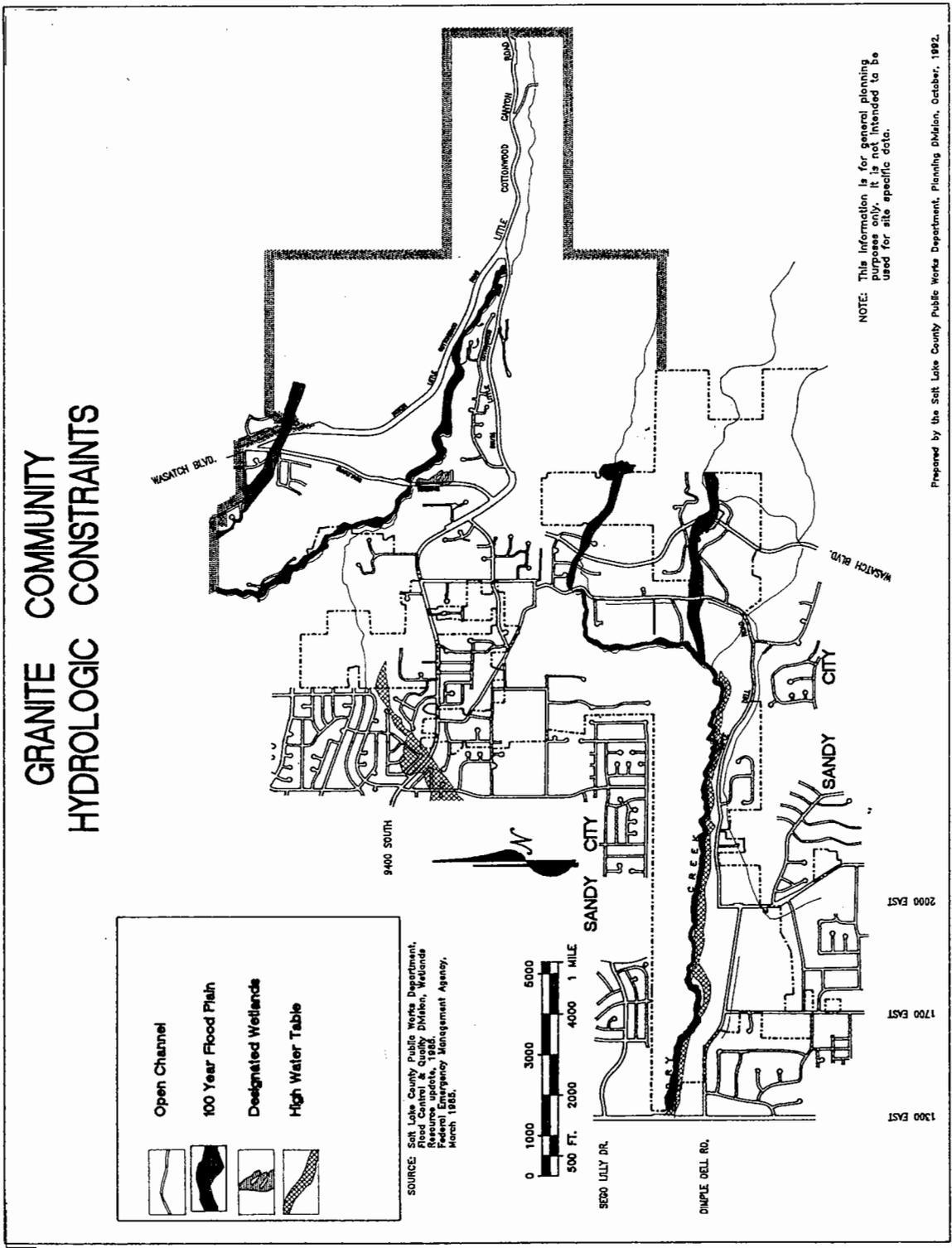
Those areas that are inundated or saturated by ground or surface water at a frequency and duration sufficient to support, and which under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Wetlands are divided into various classifications based on such characteristics as vegetation, soils, water quality benefits, satisfaction of a wildlife niche requirement and suitability for development.

As development encroaches, the value of wetland areas must be addressed. Considering all the functions a wetland performs -- flood control, wildlife habitat, education, recreation, water quality and pollution control -- its intrinsic value may outweigh development values.

Wetland areas in the Granite Community are: (1) the Beaver Ponds Springs, located along the east side Wasatch Boulevard just south of Little Cottonwood Creek at the entrance to LaCaille at Quail Run Restaurant, (2) the Dry Creek Wash along the creek from 1300 East to about 2800 East, (3) at the base of the ridge north of Little Cottonwood Road at about 2700 East and 9400 South and (4) the springs and the stream fed by the springs that drain into Little Cottonwood Creek west of the stone bridge over the creek just west of the South Little Cottonwood-North Little Cottonwood Roads intersection. These wetland areas are shown on the Hydrologic Constraints Map, Figure 17.





**Figure 17**

Map shows 100-year flood plain areas along Little Cottonwood Creek, areas with a high water table and the wetland areas. The areas with past flash flood problems are also shown.



Hydrology: The two natural streams in the community are Little Cottonwood Creek, which flows through the north central part, and Dry Creek, which flows through the south central section of the community. Both streams generally flow in a westerly direction to the Jordan River. Figure 17 shows the two streams, including two forks of Dry Creek, with their 100-year flood plains; one potential flood hazard zone; and man-made waterways. About the only time the flood hazard zone might be subject to flooding or other problems would be during spring runoff and after heavy rainstorms.

There are only four man-made waterways in the community. They are the Sandy Ditch, the Bell Canyon Irrigation Ditch, an irrigation or runoff ditch along the south side of 10600 South, and an irrigation ditch on the south side of the east-west portion of Dimple Dell Road.

Maintaining irrigation flows, preserving water quality and creating recreational areas are critical in the continued development of Granite. Consequently, adequate buffers should be created between waterways and development. A buffer can: (1) provide additional flow capacity during peak flows, (2) offer recreational opportunities, (3) facilitate growth of vegetation which will stabilize the banks and slow the erosion and (4) reduced damage from flooding.

Site-specific engineering geology reports may be required in some areas to address such hazards as slope wash, debris flow, debris-triggered flooding and rockfall. If potential problems areas are found, mitigation (such as debris basins or rockfall catch fences) may be required. Another alternative is to require developers to design projects so as to avoid placing structures in risk zones.

Soils: The Granite Community is located on alluvial deposits from the Wasatch Mountains, ancient Lake Bonneville deposits and lateral moraine deposits that were left from the glacier that formed Little Cottonwood Canyon.

Soil type in specific locations is a vital consideration in construction and development. Characteristics such as drainage, depth to water table, texture, kind and amount of clay, permeability, contents of salts and alkali and degree of slope establish criteria for determining any development limitations. These characteristics and qualities are described in more depth in Appendix 2.

Areas where the soil type poses moderate or severe limitations to development are identified in Figure 18. The rating "moderate" denotes that the soil has constraints severe enough to make its use questionable, and careful planning and management is needed. The rating "severe" indicates that extreme measures would be required to make the location developable, and that use of the soil for construction of buildings or as a road material is not practical.

Chapter 29 of the Uniform Building Code contains regulations as to when a soils report may be required for excavations, foundations and retaining walls. The Hillside Protection Zone also provides for soil reports when there are possible erosion or soil stability problems.







Seismic Hazards: Earthquakes pose a great potential threat to all residents along the Wasatch Front, and by ordinance seismic hazards must be considered in all new development in Salt Lake County. Earthquake information and seismic building standards are periodically updated and Salt Lake County's hazard maps and ordinances are also periodically updated as new information becomes available. Seismic hazards of concern in the Granite Community include:

Ground Shaking - Salt Lake County is located near the center of the Intermountain Seismic Belt, a broad band of seismic activity extending from near Las Vegas, Nevada, north into Yellowstone National Park and Montana.

There are many active faults in this zone besides our own Wasatch Fault that are capable of generating large-magnitude earthquakes. Because earthquake seismic waves radiate outward in all directions from the epicenter and are capable of traveling long distances, ground shaking presents perhaps the greatest long-term seismic hazard to residents of the Granite Community.

The average recurrence interval for a major earthquake along one of the segments of the Wasatch Fault is about 444 years. The last such seismic event occurred near Nephi 300-500 years ago. These facts suggest that northern Utah is within the window in which a major seismic event could occur at any time.

The most effective way to deal with ground shaking is to design buildings to withstand it. Therefore, all new buildings in the Granite Community must be built in accordance with Uniform Building Code Seismic Zone III requirements. (See Chapter 23, 1988 Uniform Building Code for details). Renovation provides an excellent opportunity to increase seismic survivability of older structures.

Development plans for large or critical facilities should be prefaced by detailed studies addressing the ground amplification hazard at the proposed site and, as necessary, describing additional steps, beyond general code requirements, needed to ensure the structure's stability.

Liquefaction - Sometimes ground shaking during an earthquake can trigger liquefaction. Liquefaction occurs when fine-grained, ground water-saturated, loosely compacted sands and silts are strongly shaken. During liquefaction, sediment particles lose their grain-to-grain cohesion and begin to "float" in the ground water.

During strong ground motion, liquefied sediments temporarily behave like quicksand. Buildings, buried pipelines and underground storage tanks located in such soils may collapse, damaging the structure and potentially causing loss of life. Liquefaction on slightly sloping ground can also cause lateral-spread landslides.

The liquefaction potential in the Granite Community is shown on the county-wide Liquefaction Potential Special Study Area Map as ranging from low to very-low. (See Figure 19.) This means there is generally less than a 10 percent probability in a 100-year period that ground shaking from an earthquake would be strong enough to cause soils in the Granite Community to liquefy.

The liquefaction map is a general-scale map. It is based on subsurface data from selected sites, not on study of every parcel in the community. Conceivably, the liquefaction potential at some sites may be different (higher or lower) than depicted on the map.

Because of this, the Natural Hazards Ordinance requires that a site-specific liquefaction study be conducted in low and very-low liquefaction potential areas prior to approval of critical or special occupancy structures (such as hospitals and fire stations). Special studies are not required for residential, commercial or industrial development within low and very-low liquefaction potential areas.

Surface Fault Rupture - Surface fault rupture presents a severe hazard to buildings or other structures (buried utility lines, roads, etc.) built on active faults. A fault is considered active if it has ruptured the surface in the past 10,000 years. The Salt Lake Segment of the Wasatch Fault has been the site of several major earthquakes in the past 10,000 years and thus is definitely considered to be active.

The best way to deal with the hazard of fault rupture is simply to avoid locating structures on faults. Since rupture tends to recur along fault traces from past earthquakes, placing structures a safe distance from such sites can help minimize deaths, injuries and structural damage during an earthquake.

The Wasatch Fault with its maze of branching fault strands forms a wide fault zone running through the Granite Community. (See Figure 19.) Due to the variability of the fault and the fact that, because of erosion and urban disturbance, many small faults are no longer visible, a "special study area" has been developed surrounding known active faults. The study area boundary extends from 250 feet east of the nearest fault on the upthrown side of the fault, to 500 feet west of the nearest fault on the downthrown fault block.

Salt Lake County's Natural Hazards Ordinance requires that all commercial, industrial and residential subdivision development proposed within the special study zone be prefaced by a site-specific fault investigation and review by the county geologist.

Such fault studies should accurately locate all active faults and recommend safe set-back distances from the faults. Facilities that must be built in or pass through the fault zone (i.e., natural gas lines) should be designed to withstand fault rupture. Or they should be the type of structure (i.e. roads) where the consequences of cracking apart are minor and which can be put back into service fairly rapidly.

Special studies aren't required for single- or multi-family dwellings where the density is four units per acre or less. However, a recorded disclosure statement informing purchasers of the hazard is required.

# GRANITE COMMUNITY SEISMIC HAZARDS

**WASATCH FAULT ZONE**

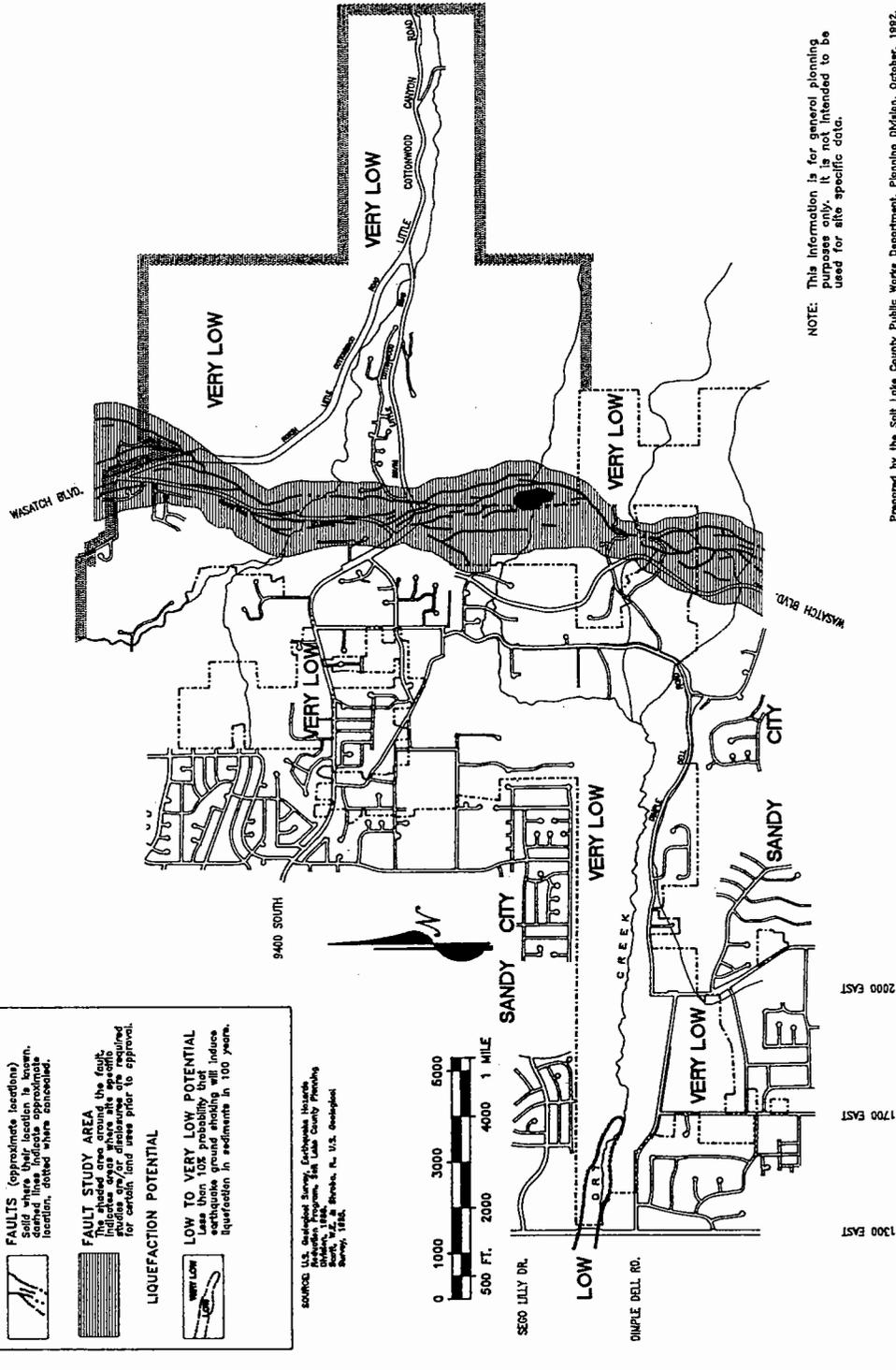
**FAULTS** (approximate locations)  
 Solid lines indicate where their location is known.  
 Dashed lines indicate approximate location, dotted where conjectured.

**FAULT STUDY AREA**  
 This shaded area around the fault indicates areas where site specific soil conditions should be determined for certain land uses prior to approval.

**LIQUEFACTION POTENTIAL**

**LOW TO VERY LOW POTENTIAL**  
 Less than 10% probability that earthquake ground shaking will induce liquefaction in sediments in 100 years.

SOURCE: U.S. Geological Survey, Earthquake Hazards Division, 1987. Modified by Salt Lake County Planning Dept., U.S. & S. Streets, Ft. U.S. Geological Survey, 1988.



NOTE: This information is for general planning purposes only. It is not intended to be used for site specific data.

Prepared by the Salt Lake County Public Works Department, Planning Division, October, 1992.

**Figure 19**

The Wasatch Fault cuts through the eastern half of the community. The map shows that there is a very low liquefaction potential in the community.



# Goals and Policies

In order to reflect the desires of Granite's residents, the master plan must be based on goals and policies established by them. If any master plan is to be of value and be used, it must reflect the opinions of community residents and be understood by them.

The Granite Community Council appointed a master plan committee to assist the staff in preparing the plan. The committee spent many hours studying, discussing and preparing goals and policies to reflect the desires of various groups and individuals.

The Salt Lake County Commission and Planning Commission together have developed and approved county-wide goals and policies. They are included in Appendix 1 for general information and reference.

## General Goals

Since continued growth can be expected, the committee believes it is important to preserve the qualities and traditions of the Granite Community while providing for orderly residential development. Development should proceed in a manner that will extend community assets to future residents and improve the quality of life for all. This includes providing appropriate locations for necessary land uses, preserving the low density neighborhoods and maintaining the country-type setting.

## Residential Goals

1. Provide areas for new single family homes on 1/3-acre, 1/2-acre and larger lots and discourage medium-density residential development.
2. Preserve existing and future low-density residential neighborhoods by:
  - a. Facilitating all types of maintenance and, where necessary, sponsoring rehabilitation programs to assist owners to improve their properties. Particular emphasis should be placed on the older homes in the community. Incentives could be devised to encourage residents to maintain, enhance, and beautify their homes and yards.
  - b. Upgrading landscaping and preserving the natural vegetation as much as possible.
  - c. Improving existing curb, gutter, sidewalks, street lighting and drainage facilities. Where necessary, streets should be resurfaced.
  - d. Providing walking/jogging paths where possible along residential streets that lack sidewalks.
  - e. Encouraging storage of recreation vehicles, including mobile homes, ORV's, travel trailers, etc., in garages or rear yards rather than in front or side yards.
  - f. Providing adequate off street parking for all uses.
  - g. Providing appropriate buffers around more intense uses.

- h. Requiring all new utilities to be installed underground and working with Utah Power & Light Company and U.S. West Communications to develop a plan to put present above-ground utilities underground.
3. Undeveloped areas should be rezoned R-1-15 or R-1-21 based on the existing land use patterns of the area. Rezoning should not be done on an individual-lot basis.

#### Commercial Goals

1. Allow no new commercial uses as residents believe the need for commercial uses should be met outside of the community. Limited expansion of existing uses may be allowed when within the permitted zone.

#### Industrial Goals

1. Require clean-up and screening of existing industrial uses and provide for the eventual elimination of these uses.

#### Recreation Goals

1. Develop Dimple Dell Regional Park as recommended by the Park Development Plan, which is being developed by Salt Lake County Parks and Recreation Division with input from the Dimple Dell Regional Park Advisory Board. (This board is made up of local and area residents recently appointed by the County Commission.)
2. Provide, as indicated in the Park Development Plan, for some of the existing and future neighborhood park deficiencies by developing approximately seven acres in the northeast section of Dimple Dell Park into neighborhood park facilities and amenities. Also, according to the County Parks Master Plan another seven acre parcel of land should be acquired and developed as a neighborhood park to serve the area north of 9400 South. The proposed location for the park is in the Green Hills Drive area.
3. Provide trail access to the Bell Canyon Reservoir and to the Bell Canyon-Lone Peak Wilderness Trail from Dimple Dell Park.
4. Encourage the development of the proposed hiking/bicycle/and equestrian trails that will either traverse or originate in the Granite Community.
5. Explore the possibility of using existing and proposed detention basins as neighborhood or mini-parks, if feasible and accessible, in areas not close to one of the proposed neighborhood parks.

#### Transportation Goals

1. The following new streets or section of streets should be constructed as soon as possible:
  - a. 2000 East south from 9400 South to 12400 South, including bridging the Dry Creek Wash.

- b. Wasatch Boulevard south from Little Cottonwood Road (9800 South) to Lostwood Drive (about 11200 South). If feasible, complete and open Wasatch Boulevard and 2000 East simultaneously.
  - c. Re-align the north end of Wasatch Boulevard to intersect with North Little Cottonwood Road south of the Canyon Place Condos as approved by UDOT and Salt Lake County Flood Control and Highway Division. (Federal funding being sought.)
  - d. Newcastle Drive from its present east terminus south, east and north to Tracy Drive.
2. The following streets should be widened and improved to better meet present and future traffic needs, as well as to provide a safe walking/jogging and bicycle path on at least one side, and preferably both sides, of the street: (In the case of 3100 East Street from South Little Cottonwood Road to 9800 South Street, curb, gutter and sidewalk should be installed on both sides of the street.)
- a. Wasatch Boulevard from where its proposed re-aligned intersection connection with North Little Cottonwood Road leaves the existing road (about 9125 South) south to where the existing widening and improvements start (about 9400 South).
  - b. South Little Cottonwood Road from about 2450 East to Wasatch Boulevard.
  - c. 3100 East from 9800 South to 10000 South (Mt. Jordan Road-Dimple Dell Road intersection).
  - d. Dimple Dell Road south from Mt. Jordan Road and then west to 2000 East.
  - e. Mt. Jordan Road east from 2600 East to 3100 East Street.
  - f. 9800 South Street east and north from 3100 East to Little Cottonwood Road (about 3300 East).
  - g. 10600 South from 1300 East to 2000 East.
  - h. Wasatch Boulevard through the Seven Springs-Deer Hollow area.
  - i. 3100 East Street south from South Little Cottonwood Road to 9800 South Street.
3. The following roads should be improved to provide a walking/jogging and biking path on at least one side of the road:
- a. North Little Cottonwood Road from its intersection with Wasatch Boulevard (8900 South) south and east to the South Little Cottonwood Road intersection (4300 East).
  - b. South Little Cottonwood Road east from Wasatch Boulevard to North Little Cottonwood Road (4300 East).
  - c. Wasatch Boulevard from the proposed re-aligned intersection with North Little Cottonwood Road west and south where the road will tie into the existing roadway (about 9125 South).

- d. Wasatch Boulevard from about 9400 South to Lostwood Drive (about 11200 South). Note: Walking/Jogging path is not needed in Majestic Canyon Estates because of existing curb, gutter and sidewalk. However, a bicycle path should be marked on one side of the street.
4. The should study, develop, and implement intersection improvement plans at the following locations:
    - a. Re-align the intersection of 3100 East Street, Dimple Dell Road and Mt. Jordan Road.
    - b. Re-align the intersection of 2000 East Street, Dimple Dell Road and 10600 South Street.
    - c. Provide a signal light at the proposed re-aligned intersection of North Little Cottonwood Road and Wasatch Boulevard.
    - d. Provide a signal light at South Little Cottonwood Road and Wasatch Boulevard when warranted.
    - e. Provide a signal light at Little Cottonwood Road and Mt. Jordan Road when warranted.
    - f. Provide a signal light at Little Cottonwood Road and 3100 East Street when warranted.
    - g. Provide a signal light at the proposed intersection re-alignment of 2000 East, Dimple Dell Road and 10600 South when warranted.
    - h. Improve after study with either a flashing light, four-way stop signs, or signal light and improved visibility at the 9800 South-3100 East intersection.
  5. In accordance with state guidelines, provide school flashing lights at designated crosswalks on streets where children walk to school. Use all means possible to provide safe passage for children walking to school or riding buses.
  6. Provide an asphalt-type curb at storm drains where there is no curb and gutter and none is proposed. Provide appropriate storm drain grating that will not be hazardous to bicyclists.
  7. Provide for or encourage the installation of berms, medians and landscaping, including trees, along arterial and collector streets to enhance the appearance of the community and reduce traffic noise.
  8. Provide a bus route east from 3100 East and Little Cottonwood Road up Little Cottonwood Canyon, especially during the ski season.
  9. Where necessary and feasible, encourage installation of adequate turnarounds at the ends of existing dead-end streets, private lanes and rights-of-way to improve access for emergency equipment.
  10. Require developers of future dead-end streets, private lanes and rights-of-way to have adequate turnarounds for emergency equipment.

### Historical Preservation Goals

1. If feasible, acquire the Granite Church on the northeast corner of 3100 East and 9800 South, which was built in 1905. Help preserve the area's historic flavor by restoring it for use as a museum and community meeting place.
2. Appoint a subcommittee of the Community Council to watchdog historical preservation.
3. Other historic sites or facilities in the community, including homes, should be identified for listing on historic preservation registers if owners desire. Historic sites should be identified with markers. If buildings and other sites are eligible, designation of historic status should be encouraged.

### Public Facilities

1. A new fire station with three bays for two fire engines and a paramedic unit should be built, preferably, at the northwest corner of South Little Cottonwood Road and Wasatch Boulevard as soon as possible. Seismic safety requirements for building a critical facility near a fault zone should be followed.
2. Develop a community center and museum in the old Granite Church. (Also mentioned under "Historic Preservation.")
3. Encourage development of the Utah Museum of Science and Industry, a privately funded, non-profit facility, at its proposed site in the community if feasible.

### Ways and Means

1. To maintain the quality of homes in the community, property owners should be encouraged to keep their homes in good repair and upgrade them when needed.
2. Where appropriate, undeveloped, residentially zoned land that has not been subdivided should be down-zoned to a lower density.



# Plan and Implementation

## Plan

The purpose of the Granite Master Plan is to maintain the community's predominant low density residential development and to promote land uses that are compatible with community goals and policies. This plan is the result of a comprehensive study of the Granite Community by citizens of the community with broad base participation. The plan was then completed by the Planning Division with this input of the citizens. Major focuses of the plan are:

- Preserving the low-density residential character of the community and maintaining its country-type setting
- Discouraging any new commercial development and restricting expansion of existing commercial uses
- Eventually eliminating industrial uses
- Widening and improving streets and roads to improve both automobile and pedestrian circulation but still maintaining the existing rural setting
- Constructing new or extending existing streets to improve traffic flow
- Fully improve Dimple Dell Regional Park and develop other recreation facilities to meet community and neighborhood needs
- Providing public facilities in locations where the community will have greater access to them, i.e. neighborhood parks and a new fire station with a paramedic unit
- If feasible, acquire and preserve the old Granite Church as a community center and museum
- Establishing pedestrian, bicycle and equestrian trails where proposed in this plan
- Requiring new developments along arterial and collector streets to provide the proposed street improvements (including walking/jogging/and bicycling paths) adjacent to their properties
- Acquiring as many available shares of Dry Creek and Bell Canyon water as necessary to meet the needs of Dimple Dell Regional Park
- Developing trail access from Dimple Dell Park to Bonneville Shoreline Trail, Bell Canyon Reservoir and Bell Canyon-Lone Peak Wilderness Trail
- Encouraging the development of the proposed hiking, bicycling and equestrian trails that will either traverse or originate in the Granite Community.

## Residential

Low Density: Low-density housing will continue to fill vacant lots in existing subdivisions and larger undeveloped parcels. There are a few areas where substantial tracts are available for residential development. These areas are mainly as follows:

- The area below or north of the ridge at about 9400 South from about 2700 East to 2950 East
- The area west of Wasatch Boulevard and south of the Golden Hills subdivisions, including the agricultural open space (Progressive Plants)
- Developable areas along the east and north sides, and the west and south sides, of North Little Cottonwood Road
- The area along the south side of South Little Cottonwood Road at about 3600 East
- The remaining area between Majestic Canyon Estates and Seven Springs.

Medium/Density: No new medium-density developments should be approved in the community except for the area immediately north of the Canyon Place Condominiums (the southeast corner area of the current Wasatch Boulevard and North Little Cottonwood Road intersection).

## Commercial

Additional commercial development in Granite should be discouraged. Commercial facilities in the park should be discouraged. Expansion of existing commercial facilities should be limited to those in a permitted zone.

## Industrial

It is anticipated there will be no new industrial development in the community and that existing uses will be phased out over a period of time.

## Transportation

Granite requires an adequate, efficient transportation system serving automobile and pedestrian needs. A comprehensive circulation system for the community should be multi-useable, i.e. include provisions for access by automobiles, public transit, handicapped citizens, bicycles and pedestrians.

Granite has the potential to solve present problems (circulation and capacity) and prevent future problems. Present streets and roads cannot accommodate the traffic volume, especially during peak times. The main reason is that two major traffic corridors that are proposed to transverse the community have not been completed or constructed, namely Wasatch Boulevard and 2000 East. As a result, traffic that would use these roads is diverted onto roads which are not designed for such volumes.

Improvements to arterial and collector streets, and completion of Wasatch Boulevard and 2000 East, will alleviate existing and most future problems and provide better access to new development, especially Dimple Dell Regional Park.

A transportation and circulation plan should concentrate on improved systems management and capital improvements. "Transportation Systems Management" strategies include improving or providing traffic signals or signs; intersection realignment; improving or providing left-right turn lanes; and creating traffic-channeling islands on heavy-use streets. Capital improvements include all street construction, widening improvements and developing rights-of-way for mass transit. Mass transit service rights-of-way should include provisions for a valley-wide mass transit system.

The community requests that a program be implemented to construct landscaped borders along both sides of arterial and collector streets. These borders can include, but are not limited to, berms, native shrubs, trees, ground cover and special landscape features. These borders are to provide visual and audible buffering from traffic and are to provide an aesthetic quality to the community's thoroughfares. Emphasis should be placed on using plants and trees that require minimal water, that can be irrigated with either collection basins (natural watering) or low pressure micro-irrigation and that can be properly maintained by the County in cooperation with volunteers organized by the Granite Community Council.

This plan recommends that improvements described in Figure 20 be implemented. Dates and funding have not been established for most of the proposals.

## GRANITE COMMUNITY CAPITAL IMPROVEMENTS

STREET SEGMENT -----	TYPE OF IMPROVEMENT -----	YEAR FUNDED -----
2000 E., 9400 S. to 12400 S. Wasatch Blvd., remaining segments from 9800 S. to Lostwood Dr. (11200 S.)	1, 2	N/A
Wasatch Blvd., re-align intersection with N. Little Cottonwood Rd. to 9400 S.	1, 2	N/A
Dimple Dell Rd., 10000 S. to 2000 E.	1	N/A
Mt. Jordan Rd., 2600 E. to 3100 E.	1	N/A
3100 E., Little Cottonwood Rd. to 10000 S.	1	N/A
9800 S., 3050 E. to Little Cottonwood Rd.	1	N/A
S. Little Cottonwood Rd., 2450 E. to N. Little Cottonwood Rd.	1	N/A
N. Little Cottonwood Rd., Wasatch Blvd. to S. Little Cottonwood Rd.	1	N/A
10600 S., 1300 E. to 2000 E.	1	N/A
Danish Rd., 7800 S. to Wasatch Blvd.	1	N/A
Newcastle Dr., 2700 E. South, east & north to Tracy Dr.	1	N/A
<b>INTERSECTIONS</b> -----		
Wasatch Blvd. at N. Little Cottonwood Rd.	2, 3, 4, 5, 6	N/A
Wasatch Blvd. at S. Little Cottonwood Rd.	3, 5, 6	N/A
3100 E. at Little Cottonwood Rd.	3, 5	N/A
3100 E. at 10000 S. (Mt. Jordan & Dimple Dell Rds.)	2, 3, 4, 5, 6	N/A
Dimple Dell Rd. & 10600 S. at 2000 E. 3100 E. at 9800 S.	2, 3, 4, 5, 6	N/A
Mt. Jordan Rd. at 9800 S.	3, 5	N/A
N. Little Cottonwood Rd. at S. Little Cottonwood Rd.	3, 5, 6	N/A
Mt. Jordan Rd. at Little Cottonwood Rd.	3, 5	N/A
Danish Rd. at Wasatch Blvd.	4, 5, 6	N/A
<b>IMPROVEMENT TYPE</b> -----		
1. Street widening and/or improvement		
2. Street construction		
3. Signal and/or signage improvement		
4. Intersection alignment changes		
5. Right-left turn lane improvements		
6. Channelizing islands		

N/A - Not Available

Figure 20

The table gives a summary of recommended capital improvements in Granite including street widening, new streets, street connections, intersection improvements, sidewalks/walkways, etc.  
Source: Salt Lake County Public Works Department, Planning Division.

The Granite Community should develop a high-quality pedestrian circulation system. Development of pedestrian pathways along arterial and collector streets will make walking to school easier and safer for students, as well as accommodate residents who want to walk or jog for health purposes, or just to commune with nature. It will also enable residents who want to visit neighbors, attend school and church functions, or go to community facilities to walk rather than use automobiles. Pedestrian improvements can be installed in conjunction with proposed street widening and other improvements, and when new development occurs.

Bicycling for recreation and as a transportation alternative is increasing throughout Salt Lake County. To respond to this trend and to increase bicycle safety, a system of Class III bikeways could be established through the community. These bicycle paths can share the road with automobile traffic but should be designated with special signs and pavement markings. Such bikeways should adjoin walking/jogging paths along at least one side, and where possible, both sides of arterial and collector streets proposed for construction, widening and/or improvements. Bikeways and walking/jogging paths, along with additional equestrian trails, should also be provided in Dimple Dell Regional Park.

## **Parks, Recreation and Open Space**

At present, public or quasi public-type open space within the boundaries of the Granite Community is provided by the Larkin Sunset Gardens Cemetery, two churches, Dimple Dell Regional Park, Wasatch National Forest Land and other land owned or controlled by public entities. The amount of open space will be enhanced as Dimple Dell Regional Park is developed and Larkin Sunset Gardens Cemetery space is fully developed.

Full development of Dimple Dell Regional Park as proposed in the Park Development Plan could meet many future recreational needs for some of Granite residents.

According to the Park Development Plan for Dimple Dell Regional Park, some of the existing and future neighborhood park deficiencies will be mitigated by developing approximately seven acres in the northeast section of the park into neighborhood park facilities and amenities. The facilities and amenities include an informal ball diamond, open space for soccer and football practice, two tennis courts, basketball and volleyball courts, playground equipment and picnic pavilion and tables etc. The County Parks Master Plan proposes another seven acre parcel of land should be acquired and developed north of 9400 South. The suggested location for the park is in the Green Hills Drive area.

Also a linear-type park is proposed along the ridge at about 9400 South from about 2700 East to 2900 East and will be developed when the area below the ridge develops. When that area develops it will be annexed by Sandy City.

A regional park is defined as a park designed to be used by all residents in the Salt Lake Valley. Therefore funding for Dimple Dell Park could come from a combination of sources, including County General Funds as they become available, donations from local residents, donations from individuals and businesses in other areas of the County, and other alternative sources outside the County's General Fund such as a County-wide tax. The neighborhood park proposed north of 9400 South could be funded by County General Funds, donations from residents and from local businesses.

Although residents desire neighborhood parks in each of the community's five council districts, the lack of funds and the high cost of land will likely limit neighborhood parks to the ones proposed in the County Parks Master Plan for the foreseeable future. However, where feasible and accessible, flood control detention basins could be considered for use as a neighborhood or mini-parks in areas not close to one of the proposed neighborhood parks. Another alternative if the community feels slighted and determined to have a park in each council district, the council might approach property owners in the districts to donate land for a park.

The areas designated on the Master Plan as Forest Service/Open Space are so designated because the land is either Forest Service land, other public land or private land. The private land is either too steep to develop (over 30 percent slope), has severe soil constraints or has fault problems. Some of these areas are also designated as being in the Hillside Protection Zone. The private land in the Hillside Protection Zone may be developed if the land can meet the criteria of the zone as well as the Zoning Ordinance. There may be limited development of some of the private land in the Forest Service/Open Space that is not in the Hillside Protection Zone provided there are no geologic hazards or other environmental constraints. The Plan proposes to rezone many of those areas in the Forest Service/Open Space area to FR-20 (Forest Recreation on 20 acres). This includes one home per 20 acre parcel.

Adequate access needs to be provided for hikers and others who want to enjoy the mountains and access Forest Service land, the area around the Bell Canyon Reservoir and the Bell Canyon-Lone Peak Wilderness Trail. Presently, The Salt Lake County Parks and Recreation Division, Sandy City and the U.S. Forest Service are in the process of working together with property owners to provide a wildlife corridor and access trail to the mountains and thence to the reservoir and trail by way of the wash north of Lostwood Drive. The trailhead parking area in the southeast corner of Dimple Dell Regional Park will serve as the parking area for the people using the access trail. There is also an access easement to the reservoir through the Stone Ridge Subdivision located at about 10050 South and east of Wasatch Boulevard, which is below and north of the reservoir. The trailhead in the northeast corner of Dimple Dell Regional Park will provide parking for the trail which will go south crossing Dry Creek and Dimple Dell Road to link the new trailhead at Wasatch Boulevard south of Majestic Canyon Estates with the Bell Canyon Reservoir and Bell Canyon-Lone Peak Wilderness Trails.

A trailhead park is proposed by the Forest Service at the southeast corner of the intersection of highways 209 and 210 in the mouth Little Cottonwood Canyon. This trailhead will include parking for people using the handicapped accessible nature trail which will open in the Spring of 1993 and the trail which will follow the old roadbed of the Wasatch and Jordan Valley Railroad and later the Denver and Rio Grande Western Railroad to Alta. This trail will connect with the existing National Forest trails in the Canyon.

The Bonneville Shoreline Trail is proposed to extend the length of the valley along the Wasatch Mountains at approximately the level of old Lake Bonneville. It is also being considered by Box Elder, Weber, Davis and Utah Counties. The main trail will transect the Granite Community following Wasatch Boulevard. An unpaved upper trail will connect to the trailhead in the mouth of Little Cottonwood Canyon, then proceed over the ridge to Bell Canyon Reservoir Road, then to the Reservoir and then south above Seven Springs and Deer Hollow where it will link with the proposed wildlife corridor and trail coming out of Dimple Dell Park.

The Sandy City Trails Plan shows an equestrian trail along the Salt Lake Aqueduct traversing the Community about 2600 East, but the numerous encroachments on the right of way prohibit its development unless residents are willing to work with Sandy City to remove their improvements. The Sandy Plan also shows other equestrian trails through Dimple Dell Park, going south on 2000 East from the Park and south on Wasatch Boulevard.

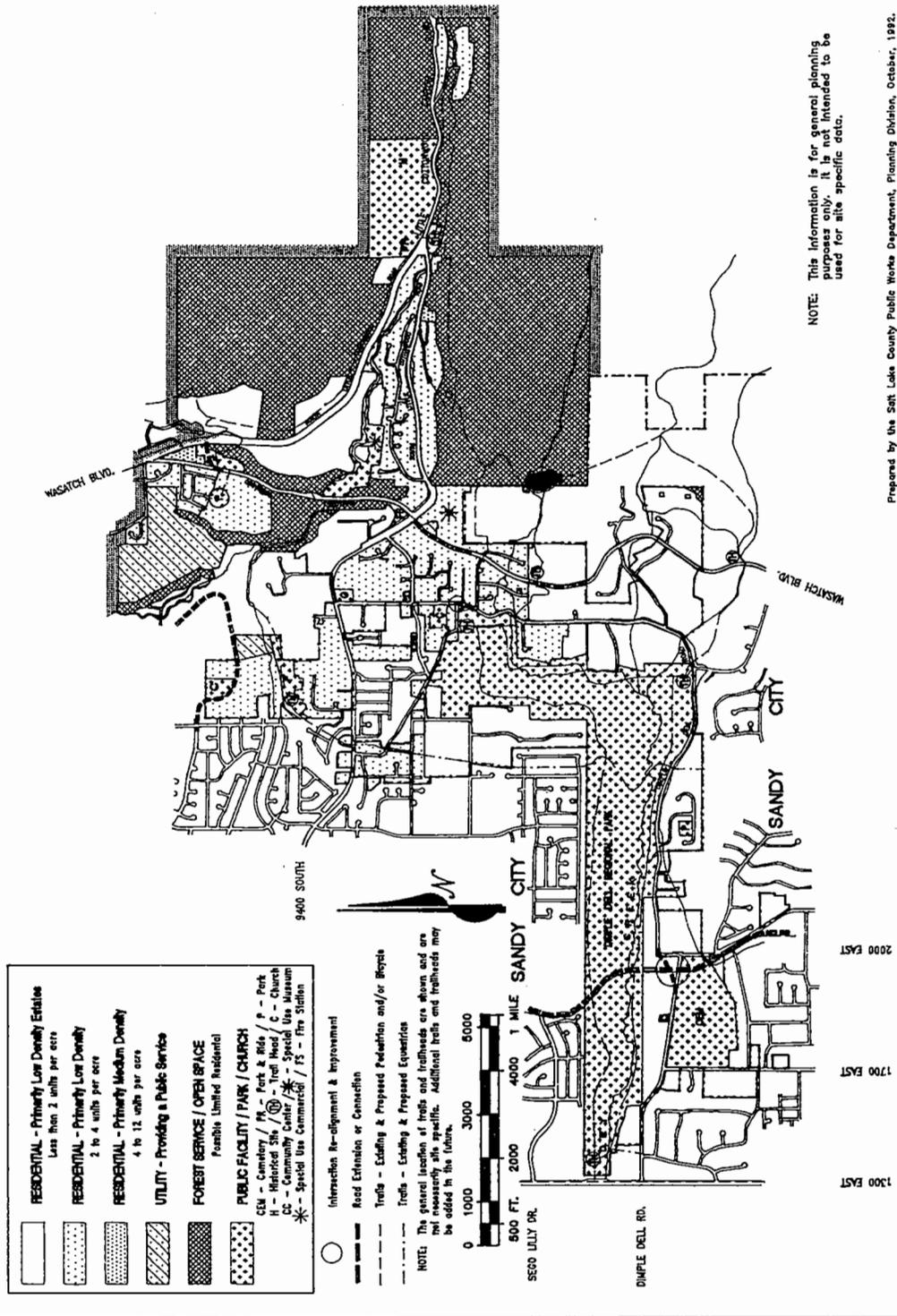
The Sandy City Trails Plan shows bike routes along 1300 East, 2000 East and Wasatch Boulevard traversing through the Granite Community. These routes could link with the Dimple Dell Park pedestrian/bicycle trail going east and west.

The general location of trails and trailheads are shown on the Land Use Plan map and are not necessarily site specific. As growth continues and future opportunities for trail development occur additional trails and trailheads may be added.

The proposed Land Use Plan for the Granite Community is shown in Figure 21.



# GRANITE COMMUNITY LAND USE PLAN



**Figure 21** Map shows the proposed land use distributions and densities in the Granite Community.



## Public Facilities

Fire Station: Salt Lake County Fire Department plans to build a new three bay fire station for two fire engines and a paramedic unit, preferably, at the northwest corner of Wasatch Boulevard and South Little Cottonwood Road (3400 East and 9800 South as soon as possible. Since the proposed station is near a fault zone, construction requirements for critical facilities in or near fault zones should be followed. Funds have been proposed but not approved for this station the past few years. Funds will be proposed again for 1993.

Community Center and Museum: The old Granite Church on the northeast corner of 3100 East and 9800 South should be acquired and renovated, if feasible, for use as a community center and museum. This would help preserve the historical nature of the building and the community.

Utah Museum of Science and Industry: The development of the Utah Museum of Science and Industry on its proposed site in the area of the southeast corner of Wasatch Boulevard and South Little Cottonwood Road should be encouraged provided its feasible to build at that site. The museum will be privately funded and a non-profit facility.

## Flood Control

As shown in Figure 16, the plan recommends flood control planning, expansion of the storm drainage system and construction of up to four detention basins.

The most significant storm drain or drainage construction projects are:

- Little Cottonwood Road from Mt. Jordan Road to 3300 East
- Wasatch Boulevard from the proposed re-aligned intersection with North Little Cottonwood Road south of the Canyon Place Condos (about 9075 South) to about 9400 South, and from South Little Cottonwood Road (9800 South) to about 10700 South, excluding Majestic Canyon Estates and Seven Springs subdivisions (Note: These improvements would be drainage ditches along the sides of the road like the ones along the portion of Wasatch Boulevard north of South Little Cottonwood Road to about 9400 South)
- 3100 East from Little Cottonwood Road south to about 9600 South, west-southwest to existing storm drain on 9690 South, and south through west end of the Granite Elementary School property to existing storm drain on 9800 South
- 3100 East from 10000 South north to 9800 South
- 9800 South from 3100 East east to Ruskin Circle
- Dimple Dell Road from Dry Creek south to Middle Fork of Dry Creek (about 10550 South) (Note: This would be handled either by a storm drain from Dry Creek south to the Middle Fork of Dry Creek or by lateral drains along existing private lanes or rights-of-way west to Dry Creek)
- 10600 South Street from 1400 East to 2000 East

Storm drains should also be constructed along Mt. Jordan Road from 2600 East east to connect to existing storm-drain segments. That work can be done as part of proposed street widening and improvement.

## **Annexations**

In the past few years, contrary to the wishes of many property owners, Sandy City has annexed much of the traditional Granite Community. Most annexations have been "forced" either because of the "half-mile" provision of Utah Code 10-2-418 which allows cities to extend proposed annexation boundaries by up to a half-mile under certain circumstances, or because Sandy City controlled the water supply to the property. In many cases, the annexations have created illogical boundaries between the Granite Community and Sandy City.

Sandy should be discouraged from further annexations into the Granite Community especially where the annexation is forced upon a property owner and/or does not create a logical boundary between Sandy City and the Granite Community.

## Implementation

If any master plan is to be successful or viable, its recommendations must be implemented insofar as possible. This plan indicates the type, quality, pattern and density of development that should occur in the Granite Community. The plan is intended as a guide to citizens, developers, community organizations, the planning commission and the county commission in making land use decisions.

The plan's greatest value is informational and educational. Its benefits derive mainly from the fact that it is based on comprehensive land use study and input from residents. Every time the plan is used, it becomes more beneficial because development has been steered in the right direction. However, the plan must be flexible and not be considered the final word on every land use question. If the needs of the community or circumstances change, exceptions may be appropriate.

Some regulatory measures may be needed to implement the plan. These include:

Zoning: The Granite Master Plan is a general guide. The Salt Lake County Zoning Ordinance and accompanying maps, by contrast, are specific, immediate and focused on control of private land development.

Since it provides controls over almost every aspect of development, the zoning ordinance is the most important tool for carrying out the plan. It must ensure high development standards without restricting private initiative or creating undue costs for developers or to the public.

Zoning is enforced by the Salt Lake County Development Services Division. Applications for variances or special exceptions to existing zoning may be made to the Salt Lake County Board of Adjustment. Zoning amendments are enacted by the Salt Lake County Commission based on Planning Commission recommendations.

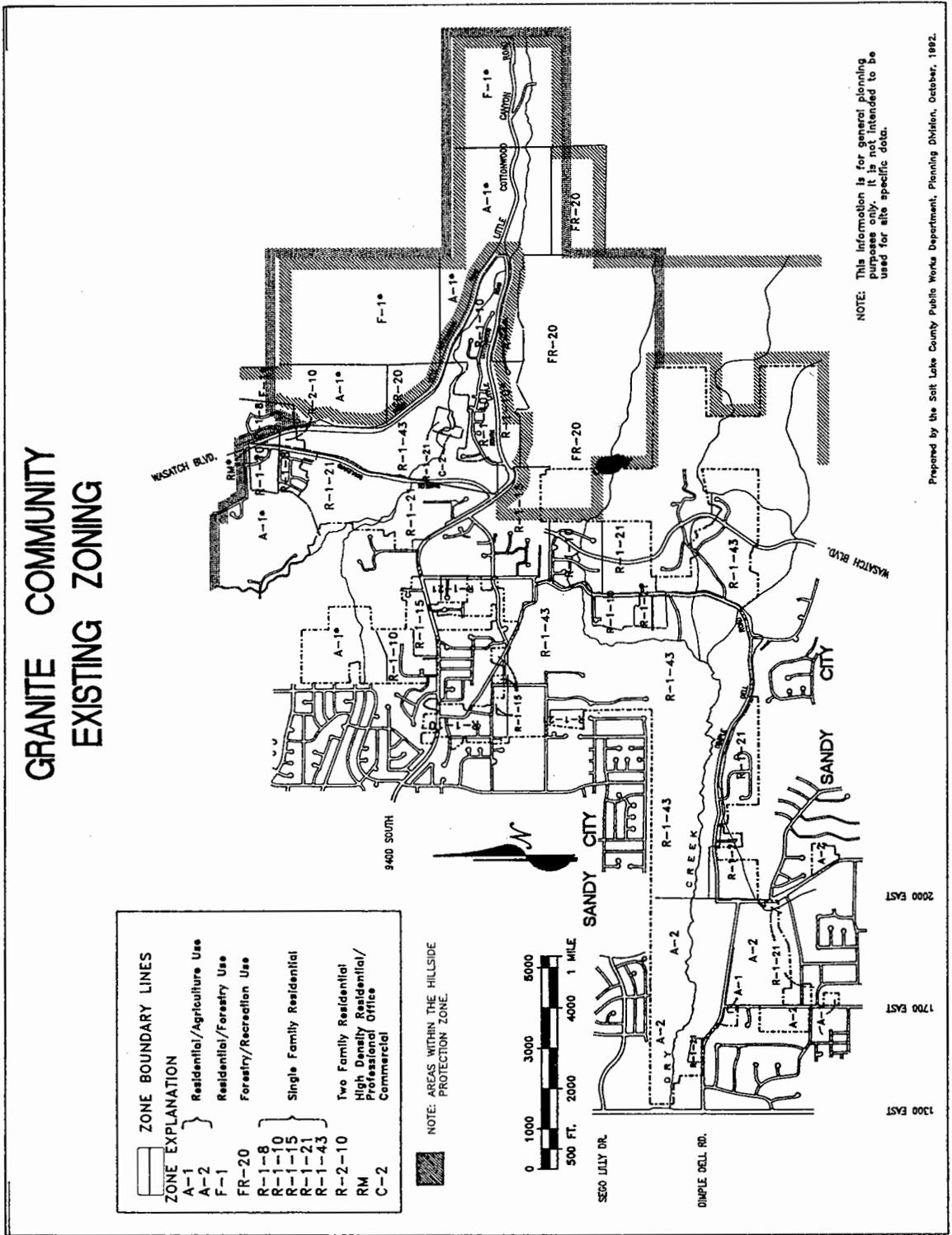
There are several areas in the Granite Community that may need to be re-zoned to better implement the provisions and recommendations of the plan. Figure 22 shows the residential zones along with the lots sizes and densities of zones presently in the Granite Community. Figure 23 shows the existing zoning and indicates which areas may need to be down-zoned.

**GRANITE COMMUNITY  
STANDARD DENSITY ALLOWED IN RESIDENTIAL ZONES**

ZONE	MINIMUM LOT SIZE (SQ.FT.)	GROSS UNITS PER ACRE	NET UNITS PER ACRE (-ROADS)
<b>Low Density Residential</b>			
R-1-43	43,000	1.00	0.75
R-1-21	21,000	2.00	1.50
R-1-15	15,000	2.70	2.18
R-1-10	10,000	4.35	3.29
R-1-8	8,000	5.44	4.08
A-1 (sf)	10,000	4.35	3.29
A-2	43,000	1.00	0.75
F-1	43,000	1.00	0.75
<b>Medium Density Residential</b>			
R-2-10	10,000	8.70	6.58
A-1 (dp)	10,000	8.70	6.58
<b>High Density Residential</b>			
RM	(Determined by the Planning Commission)		

**Figure 22**

The table describes density limits for various residential zones in the Granite Community. The Granite Plan encourages basically low-density single family homes (1/3 acre or larger lots).  
Source: Salt Lake County Zoning Ordinance.



**Figure 23**

Map shows existing zoning classifications and boundaries in the community. Some areas will have to be down-zoned to implement the land use plan. These areas are indicated with an asterisk \*.

Source: Salt Lake County Public Works Department, Planning Division.



Subdivision Review: As discussed earlier, Granite has a number of vacant tracts that will be developed into new subdivisions. Such developments are subject to the Salt Lake County Subdivision Ordinance. As subdivisions are submitted for review, the ordinance should be followed to ensure that any special problems connected with the sites can be handled. The Salt Lake County Natural Hazards Ordinance will also be a prominent reference, especially when development is proposed in the vicinity of the Wasatch Fault Zone.

Amending the Plan: The master plan cannot be an effective guide over a long period of time unless it is flexible. It must respond to changing conditions and changing ideas of the citizens as to what they want the community to become. A review and amendment process should occur every five years. Amendments, and eventually a comprehensive revision, should be approved by the same process used in creating the plan itself. Input should be received from community representatives and changes approved by the Planning Commission and the County Commission.

Citizens Participation: The citizens of Granite are encouraged to participate in the hearings and provide input on this master plan--and on the plans and proposals growing out of this document. Active citizen support will be a great impetus for county departments and officials to act expeditiously on the various recommendations.



# Appendix

## County Wide Goals and Policies

The following goals and policies are to be used as a guide to development and master plans decisions by the Planning Commission and County Commission. No goal or policy is overriding but must be weighed against other goals that also relate to a particular application or decision.

### GENERAL GOALS

1. The health and well-being of residents and the physical safety of property shall be projected by compliance with air and water pollution control standards and by identifying and avoiding areas of physical or geologic hazard or mitigating the hazards or development in relation to the hazard if possible based on "State of the Art" design.
2. The County should continue to allow a diverse range of housing in each community (price, type, size and location of dwellings) and also encourage and also encourage a continuing high level of home ownership.
3. Salt Lake County Governments should encourage rational and orderly economic development to provide a stable tax base and stimulate employment opportunities consistent with maintaining community desired lifestyle and environment.
4. Cooperation should be encouraged between the public and private sectors to obtain mutually beneficial objectives, i.e. co-development, density incentives, mixed use projects, etc.
5. Employment centers should be concentrated in locations which maximize the use of the existing transportation and utility systems, encourage the development of an efficient transit system, and encourage energy conservation.
6. The open space system should be expanded to provide varied recreational areas, natural open spaces and definition of neighborhoods.
7. Productive agricultural areas should be conserved and protected.
8. A reasonable balance between public costs of providing services and revenues to support these services should be promoted by protecting against untimely or poorly located developments.
9. The natural beauty and resources of the Wasatch and Oquirrh Mountains should be protected and preserved by 1) prohibiting development in hazardous or environmentally sensitive areas; 2) encouraging transfer of those areas to public ownership and 3) mitigating adverse effects of development.

## RESIDENTIAL POLICIES

1. The traditional single family neighborhood should remain as the predominant housing style. Neighborhood is defined as a primarily residential area that shares common characteristics such as housing style, dwelling density, common lifestyle, natural or man-made boundaries, etc. that distinguishes it in the minds of the residents from other areas of the community.
2. Low density residential neighborhoods should be protected from incompatible uses. Amenities such as mini parks, street lighting, shade tree planting, etc. should be added as funds permit.
  - a. Vacant land in the interior of low density areas should be developed with housing of similar design, mass and density.
  - b. More intense uses or traffic from more intense uses should not intrude into low density neighborhoods.
  - c. Residential areas should be provided with complete pedestrian and vehicular circulation facilities, i.e. curb, gutter and sidewalks, as well as landscaping, underground utilities, street lights and drainage facilities.
  - d. Adequate off-street parking should be provided for all uses. Storage of recreation vehicles (including mobile homes, ORV's, travel trailers etc.) should be discouraged in front and side yards.
  - e. Schools and parks should be developed as community recreational and social centers.
  - f. Small conveniently located open areas should be provided in residential neighborhoods where feasible especially in high density areas and areas of lots less than 8,000 square feet.
  - g. Individual property owners should be encouraged to maintain and/or improve their properties through revitalization, rehabilitations and redevelopment programs, building and health code enforcement, zoning enforcement and neighborhood self help programs as appropriate.
  - h. Neighborhood revitalization efforts should include capital improvement projects such as curb, gutter and sidewalks, storm water drainage systems, street resurfacing, stormwater pollution control facilities, etc.
  - i. Assessment policies should be changed to encourage rather than discourage home improvements.
  - j. Housing should be provided for persons with special needs in residential areas subject to development and location guidelines designed to permit the residents to be successfully integrated into the neighborhood.

3. In order to provide a wide variety of housing types and styles, medium and high density residential uses should be allowed in appropriate areas and dispersed throughout the county in a logical pattern.
  - a. Higher density residential uses should be located along major thoroughfares and transit corridors near retail and personal service establishments that supply the needs of the residents.
  - b. Higher density residential uses must be made compatible with adjacent uses through detailed review of building mass, height and orientation, landscaping, setbacks, walls, building materials, location of parking and circulation areas, open space, recreation and other amenities which should be governed by development standards and site plan review.
  - c. Traffic from higher density residential areas should have direct access to major traffic arterials which have adequate capacity to accommodate traffic volumes as well as appropriate ingress and egress as determined by detailed traffic analysis.

#### COMMERCIAL POLICIES

1. Commercial development should generally be clustered in neighborhood, community and regional shopping or activity centers (including where appropriate a combination of retail, service commercial and professional offices) primarily at the intersection of major streets.
2. New commercial areas should generally not be permitted to occur in scattered or "strip" form of development but should be aggregated in attractively designed developments.
3. Community and regional shopping centers should incorporate or become the center of a broad range of goods and services and community activities to reduce the necessity of driving to separate destinations and to provide a social focus for communities.
4. In those cases where auto-oriented commercial areas front on major arterials, they should present a high quality of design including sensitive signage and be adequately screened from adjacent uses. Access to these areas should be controlled and consolidated to assure safety and minimize traffic conflicts.
5. Any new or expanded commercial area should be planned in a high manner which protects nearby low density neighborhoods through buffering with landscaped areas, transition uses, separation by streets or other barriers, limitation of hours, etc.
6. All commercial areas should be sensitively designed subject to approved development standards and site plan review of parking setbacks, access, sign control, landscaping, screening walls, building scale, height, orientation and mass, directional lighting, etc. to insure that the commercial uses are compatible with nearby land uses.
7. Owners of existing marginal or deteriorating commercial properties should be encouraged to improve their developments through code enforcement, redevelopment and revitalization projects, and beautification projects.

## INDUSTRIAL POLICIES

1. Industry should be dispersed throughout Salt Lake County in planned districts to take advantage of the transportation system and promote energy conservation and convenience of the employment force.
2. Industries based on extraction of mineral resources should be protected to allow full utilization of the natural resources and should utilize a rehabilitation plan provide a second generation use compatible with the surrounding neighborhood. Where slopes and other considerations preclude second generation use, property should be re-vegetated and protected from erosion.
3. Heavy industries should be located where they can be economically and practically served by rail facilities, highway transportation, and utilities.
4. The development of industrial parks with a full range of site amenities should be encouraged.
5. Exclusive industrial zones and buffer areas to provide for a transition from industrial use to other uses should be provided.
6. There should be an inventory of the county's industrial land. This should be updated periodically to facilitate the development of sufficient quantities of industrial land for future years.
7. Existing zoning ordinances should be amended to include performance requirements for new heavy commercial and industrial uses which abut or can adversely impact adjacent residential or recreational uses. There should be specific criteria for approval or enforcement relating to odor, dust, smoke, noise, vibration, drainage, landscaping, building bulk and heights, etc.
8. Adverse impacts of industrial development on adjacent uses should be mitigated through landscaped buffer areas, visual screening, code enforcement, etc.

## RECREATION POLICIES

1. A wide variety of recreation opportunities should be available to county citizens and visitors.
2. Recreation facilities in canyon areas should be increased at a scale compatible with conservation of natural resources and environmental quality. The county should recognize and integrate the Forest Service land use plan for canyon areas with plans of local governments.
3. Recreation areas should be provided along the Jordan River, around the Great Salt Lake, and in the canyons on the East and West sides of the valley.
4. The recreation and park system should be expanded primarily through the provision of mini and neighborhood parks.
5. To the maximum extent possible, components of the regional and local park systems should be linked by rights-of-way, easements, dedications or other agreements to provide a network of greenways for hiking, biking and horseback riding.

6. The needs of specialized recreation activities should be recognized in planning future parks and recreation areas.

#### TRANSPORTATION POLICIES

1. The location and design of proposed major and minor streets should be consistent with the existing and proposed patterns of land use.
2. Critical deficiencies in the existing street system should be corrected.
3. Every means to support efforts to expand transit service, frequency of service and transit usage should be pursued. Salt Lake County should support ongoing mass transit studies by W.F.R.C.
4. Proposed major streets, freeways and substantial improvements to existing major streets, should be designed to reduce noise levels, mitigate other hazards and improve visual quality.
5. The official Salt Lake County major and secondary highway plan should be regularly updated and utilized for Federal, state, local and private sector highway improvements.
6. Curb, gutter and sidewalks should be provided on all new and improved thoroughfares and streets, and wherever possible, exclusive bicycle lanes should also be included.
7. Access to the canyons should be improved. Passing lanes, bike lanes, mass transit expansion and provision of park and ride lots within a reasonable distance from the canyon mouths should be considered.
8. Proponents of developments which may have significant traffic impact should provide a traffic impact analysis prepared by a qualified and experienced traffic engineer.

#### AGRICULTURAL POLICIES

1. Productive land should be retained in agriculture as long as possible rather than be converted to urban uses.
2. Appropriate areas should be zoned for rural residential to help preserve agriculture.
3. Truck garden type farms should be encouraged to remain and be protected from incompatible uses.

#### PUBLIC FACILITIES POLICIES

1. Salt Lake County should encourage school officials to designate school sites in advance where possible and sites should be of the proper size to accommodate future school needs.
2. Schools should be designed and located to provide multiple purpose use of the facilities by school age children, older members of the population, and community-wide groups without conflicting with the primary function of the school.

3. Schools serving elementary and junior high age children should not be located on busy thoroughfares. Junior high schools, high schools, vocational schools, and colleges should be located so as to provide convenient access to public and private transportation.
4. School buildings and grounds should be designed to provide flexibility including alternative uses of buildings, changing enrollment size, etc.
5. Libraries should be located in areas best suited to serve the residents of the County. Consideration could be given to locating public libraries in the schools where location, access, available parking and functional building design make cooperative use feasible.

#### WAYS AND MEANS

1. Community Council area master plans should be completed and updated every 5 years unless rapid or changing development requires update more often in particular areas. These plans should be adopted by the County Planning and County Commission.
2. The Zoning ordinance should be revised, modernized and simplified by standardizing and consolidating residential zone requirements, adding performance standards to commercial and industrial zones, revising parking requirements and sign control, revising environmental controls, etc.
3. There should be strict, impartial enforcement and coordination of licensing, zoning laws and ordinances, building codes, etc.
4. Community Councils, representative of the people, should continue to serve as the public sounding board for development and master plan decisions.
5. The cities in Salt Lake County should recognize Salt Lake County's right to provide municipal services to the unincorporated area.
6. Salt Lake County and the cities should reach agreements on stabilized boundaries.
7. The county should develop and adopt an urban design element of the master plan to define the character of the communities in the county to insure harmonious transition from new to existing development as the county continues to evolve within the Wasatch Front metropolitan area.
8. The County Planning Commission should review and comment on all redevelopment projects in the unincorporated area to insure that they are in harmony with overall development plan.
9. Salt Lake County should institute an orientation program for new Planning Commission, Board of Adjustment and community council members.
10. To the extent possible, new development should contribute to the various intra-structure funds of the county in proportion to the impact of the project on the respective funds.

11. Salt Lake County should determine to what extent some unincorporated areas (such as canyons) serve the county-wide population and provide needed facilities and services for the users through county-wide funds.
12. Salt Lake County should study the service and taxation issues concerning unincorporated areas rendered non contiguous by city boundaries.
13. The Salt Lake County Planning Commission should enact development standards and guidelines to effectuate goals and policies.

APPROVALS:

Planning Commission	September 9, 1986
County Commission	October 29, 1986

## Appendix 2

### Soil Characteristics and Constraints

A. Knutsen-Wasatch Association

The Knutsen-Wasatch association is made up of gently sloping to steep soils on lake terraces and fans. These soils formed in mixed lake sediments and alluvium. The dominant native vegetation is bunchgrasses, mainly sand dropseed and Indian ricegrass, and such shrubs as oakbrush and big sagebrush. Elevations range from 4,300 to 5,200 feet. This association is used mainly for range. Some areas are used for urban development, some for orchards, or for irrigated crops of alfalfa and small grains. The soils are well suited to orchards with sprinkler irrigation. They also are well suited to urban development.

B. Preston Series

The Preston series consists of excessively drained soils on lake terraces in the southeastern part of the survey area. These soils formed in coarse-textured lake sediments or alluvium from quartz monzonite and quartzite that has been reworked by the wind. Slopes range from 1 to 30 per cent. The vegetation is bunchgrasses and shrubs, such as sand dropseed and scattered oakbrush. Elevations range from 4,300 to 5,200 feet. The organic-matter content is low. The intake of water is very rapid, and permeability is rapid. The hazard of soil blowing is high. Preston soils are used mainly for range. Some areas are used for irrigated crops.

C. Sandy Terrace Escarpments

Sandy terrace escarpments is a miscellaneous land type that consists of deep, well-drained, stratified but mainly sandy lake sediments. It occurs on terrace escarpments. Texture ranges from loam to sand. Slopes range from 6 to 50 per cent. Elevations range from 4,200 to 5,200. Runoff is medium. Organic-matter content is low. The hazards of water erosion and soil blowing both are high.

D. Stony Land

Stony land consists of deep, well-drained, stony or bouldery material that is intermixed with gravelly and very gravelly sandy loam material derived from granitic rock. This land type is on glacial moraines and in drainage ways, mainly in the community of Granite. The stones and boulders make the use of machinery for seeding impractical. Elevations range from 5,200 to 7,500 feet.

E. Stony Terrace Escarpments

Stony terrace escarpments is a miscellaneous land type that consists of deep, well-drained, stony terrace escarpments. The soil material is stratified and ranges from sandy loam to clay loam. Stones and cobblestones make up 40 to 70 per cent of the volume in most places. Elevations range from 4,200 to 5,200 feet. Runoff is medium to rapid, and the hazard of erosion is high.

The soil survey information used to prepare these maps was taken from the U. S. Department of Agriculture, Soil Conservation Service, Soil Survey of Salt Lake area, Utah. This was published in April 1974. The field work for the survey was done in the early 1960's and determined the kinds of soil, where they are located and what their uses may be in Salt Lake County.

The survey was made by soil scientists traversing the fields and mountains. Steepness, length and shape of slopes was observed and hundreds of holes were dug to expose the soil profiles whose characteristics were recorded. The items recorded were type, arrangement and thickness of the soil horizons or layers, the depth to seasonal high watertable and depth to bedrock or hardpan (if encountered within 60 inches of the soil surface). Other items observed and recorded were soil color, texture, amount of rock fragmentation, pH, type of parent rock material and the kinds of native plants or crops.

Comparisons were made among the soil profiles and the similar soils were grouped together. Soils were classified and named according to nationwide, uniform procedures. Those soils that have like or similar profiles comprise a soil series. Except for different texture in the surface layer, all the soils of one series have major horizons that are similar in thickness, arrangement, and other important characteristics. Each soil series is named for a town or other geographic feature near the place where the soil was first observed and mapped. Taylorsville and Bluffdale, for example, are the names of two soil series of Salt Lake County. All of the soils in the United States that have the same name are essentially similar and behave alike under similar land use conditions.

Soil series are often divided into types. For example, Bluffdale sandy loam, one to three percent slopes, and Bluffdale silty clay loam, zero to one percent slopes are two of several types within the Bluffdale series. Therefore, soils of one series can differ in texture on the surface and in slope, stoniness, salinity, or other characteristics that affect the use of the soils. As the different soils were recognized and identified, the individual boundaries were located on aerial photographs. These photographs were used to prepare the soil maps contained in the soil survey reports. The maps in turn were used to prepare this soil map. Soils are identified on the map by map symbols, or mapping units.

Some mapping units are made up of two or more soils of different series, or of different phases within one series. These are known as soil complexes or soil association. A soil complex consists of areas of two or more soils, so intermingled or so small in size that they cannot be shown separately on the soil map. An association is made up of adjacent soils that occur as areas large enough to be shown individually on the soil map, but are shown as one unit because the time and effort required to delineate them separately cannot be justified.

In Salt Lake County, there are places where the soil is so rocky, so shallow, or so severely eroded that it cannot be classified as a soil series. These places are delineated on the soils map, but they are called land types and are given descriptive names. "Clayey terrace escarpment" is a land type in Salt Lake County.

While a soil survey is in progress, samples of soils are taken for laboratory measurements and for engineering tests. On the basis of laboratory data, engineering tests, crop yield, range yield and other data, test groups of soils are set up. These are reviewed and tested by farmers, agronomists, engineers and others. The interpretations that finally evolve reflect up-to-date knowledge of the soils and their behavior under present methods of use and management. The soil survey report contains engineering soil interpretation tables that rate the soil for community development. These reports are available from your local Soil Conservation Service Office. These soil conditions are:

1. Watertable, at depth of 0 to 30 inches
2. Rock Outcrop
3. Bedrock at depths of 0 to 20 inches
4. Soils with high shrink-swell potential
5. Very high or high erosion hazard
6. Strong salt or alkali effect
7. Very rapid or rapid permeability
8. Impermeable, very slow or slow permeability
9. High water runoff potential
10. Susceptibility to hillside slippage.

The following information discusses each of these soil conditions, why it is considered to have a negative impact on development and what the possible mitigations might be.

**Watertable 0-30"**--The soils in which the seasonal high watertable ranged from 0 to 30 inches, were grouped and identified. The operation and maintenance of septic tank absorption fields, sanitary landfills, excavation operations or the construction and maintenance of homes with basements would be constrained by the watertable. Drainage may or may not be feasible, and location of outlets may be difficult to locate due to the relatively flat terrain. Also, drainage systems may fail and the watertable may return to its natural level.

**Rock Outcrop**--Areas that are 90 percent barren are considered as rock outcrop, but the landscapes may have inclusions of small pockets of soils that support good vegetative cover. Rock outcrop areas generally have value only for wildlife or aesthetic purposes. Some soil delineations include areas of rock outcrop interspersed throughout the soils. Rock outcrop has a somewhat negative impact on development. It becomes more costly and difficult to place underground utilities, prepare roadbeds, and perform excavations in areas where rock outcrop is exposed. In areas where rock outcrop is interspersed throughout the soil delineation, realignment of underground utilities and roads is usually necessary.

**Bedrock 0-20"**--Bedrock at depths of 0-20 inches was considered to be a serious constraint for development. Although the shallow depth is not a constraint in regard to foundation materials for dwellings, etc., it does present problems and increase costs of excavation and placement of underground utility lines. It is a severe constraint if septic tank absorption fields are placed in the area. Also, plant growth is generally sparse in these areas. Care should be taken to maintain plant vigor and density to prevent soil erosion.

**High Shrink-Swell Potential**--This soil condition was considered to be a serious constraint for development. These soils swell upon wetting and shrink upon drying. Sufficient volume change occurs upon wetting and drying to exert pressure on foundation walls and bottoms. The pressure thus exerted can cause cracking of the foundation because of uneven stress on different parts of the structure.

**Very High or High Erosion Hazard**--This soil condition identifies the erodibility of the soils in the presence of running water or wind action. Soil erosion and resultant sedimentation can present serious problems. Although erosion takes place upon and affects a specific location, the sediment produced is mobile and may cause damage at locations far removed from the original source. Soil slope is probably the most important factor of soil erosion hazard. Generally, the steeper the slope, the faster the erosion. Vegetative cover or other artificial ground cover alters the amount of erosion but will not alter the erosion hazard rating.

**Strong Salt or Alkali Effect**--This soil condition should be considered because it influences the kind and density of native plants or field crops. When developed, it influences the selection of plants used in landscaping, and extra cost is incurred in preparing the soil for successful plant growth. Metal pipes and concrete deteriorate rapidly when placed in soils that are strong in salt or alkali.

**Very Rapid or Rapid Permeability**--Permeability is the ability of a soil to transmit air or water. It is an interaction of texture, structure, porosity, organic matter, pH, etc. Rapid or very rapid permeability occurs in loamy sand or sandy soils. The rapid or very rapid permeability groups may allow pollutants or effluents to travel great distances through the soil.

**Impermeable, Very Slow or Slow Permeability**--The soils in this group are mainly clay, silty clay, silty clay loam or silty loam soils that have weak structure and lack appreciable amounts of pores. These soils generally are susceptible to surface water floods during periods of high rainfall or rapid snowmelt. These soils are also areas of rapid water runoff potential.

**High Water Runoff Potential**--Identifies the Hydrologic Soil Groups that influence the minimum rate of infiltration obtained from a bare soil after prolonged wetting. The soils with high water runoff potential were identified because most of the water that falls on them moves to other soils as runoff. The water must seek a lower level on another soil or in a drainage way or stream.

**Susceptibility to Hillside Slippage**--This soil condition is identified as posing a real hazard to public safety and welfare through loss of life or property. Mitigation of this constraint is most difficult, and because of the major hazard involved, these areas should not be developed. These soils generally have low values of internal friction and cohesion and occur on steep or very steep slopes. Cutting of the slopes and additional loading by structures could possibly trigger massive slides.

Mitigation techniques for these constraints, particularly for areas of high erosion hazard and runoff potential, can be reviewed in the Salt Lake County 208 Water Quality Project report on Best Management Practices for the control of surface runoff. Larger maps at a scale of 1" = 2000' are available from the Planning Department in your area.

SOIL SYMBOL	Permeability							SOIL SYMBOL	Permeability									
	0 to 30" Waterable Depth	Rock Outcrop	0 to 20" Bedrock Depth	High Shrink Swell Potential	Very High or High Erosion Hazard	Strong Salt or Alkali	Very Rapid or Rapid		0 to 30" Waterable Depth	Rock Outcrop	0 to 20" Bedrock Depth	High Shrink Swell Potential	Very High or High Erosion Hazard	Strong Salt or Alkali	Very Rapid or Rapid			
AGG*			X				X	3	KdB								0	
AVH*	X	X	X				X	4	KdC								0	
BAG			X				X	1	KFA								0	
BbG			X				X	1	KTB								0	
BCG	X	X	X		X		X	5	KtA				X				1	
BCH*	X	X	X		X		X	5	KoB				X				1	
BDG			X				X	1	KoC				X				1	
BEG*		X	X				X	1	KrA				X				1	
BFF			X				X	1	KsF2*				X				1	
BGA								0	LAA								0	
BbA								0	LAC								0	
BbB								0	LbC								0	
BbC								0	LcA								0	
BjG			X					1	LdA			X		X	X		3	
BjE								0	LdB			X		X	X		3	
BkC								0	LeE			X		X	X		3	
BlB			X				X	2	LeF			X					1	
BmB			X		X		X	3	LeG			X					1	
BnA			X				X	2	LEH*	X		X					2	
BnB			X				X	2	LYD								0	
BrB	X				X		X	3	Lk			X		X	X		3	
BsA	X				X		X	2	Lo								0	
BsB	X			X	X		X	3	LSG			X					1	
Bt			X		X		X	2	Ma			X					1	
BuE								0	Mc	X		X					4	
BVF*		X					X	2	Mg	X		X		X	X		4	
BWH*	X						X	2	Mh		X		X		X		2	
CA			X				X	4	Mu	X		X					2	
CaC	X					X	X	3	NbE			X					1	
CaE	X					X	X	3	NbG			X					1	
Ch	X						X	2	NcD								0	
Ck	X				X		X	3	NjH			X					1	
Cl	X				X	X	X	4	NvG*			X					1	
DAG				X				1	NzC	X							1	
DBC				X			X	2	NzD	X							2	
DCG			X		X		X	Ex	OJD								0	
De			X		X		X	3	OJE			X					1	
Df			X				X	2	OJG			X					1	
DGG*			X		X		X	Ex	OLG			X					1	
DhG			X		X		X	Ex	ORG			X		X			2	
Dk			X		X		X	3	PaA								0	
DPD*			X				X	Ex	PBE			X					1	
DPE*			X		X		X	Ex	PBG			X					1	
Dr								0	PCG*			X		X			4	
DRD*			X					Ex	PeA			X		X			0	
Du*								0	PeB								0	
EMG		X		X			X	3	PIC				X				1	
FCG				X				1	PjB								0	
FHD								0	PbB								0	
FHG				X				1	PLG			X					1	
FjG				X		X		2	PrD			X		X			2	
FGG*		X	X		X		X	4	PrF			X		X			2	
FZE*	X			X		X		3	PsB			X		X			2	
FZG*	X			X		X		3	PTG*		X	X		X		X	2	
GEG				X				1	PUE*		X	X		X			1	
GGG*				X			X	2	PUH*		X	X		X			3	
Gp				X				1	PWG*		X	X	X	X		X	5	
GU				X				1	Re		X	X	X	X		X	0	
HaB								0	RO		X						3	
HaC								0	RVH*		X			X	X		2	
HbA				X			X	2	Sa	X		X		X			4	
HcB				X			X	2	Sc	X		X		X			1	
HdF*			X				X	Ex	Sd			X		X			1	
HeB			X				X	Ex	Se	X		X		X			4	
HfC								0	SMG*			X		X			1	
HGG*			X		X		X	Ex	SO		X			X			3	
HNF*			X				X	Ex	SP			X		X			1	
HbD			X				X	Ex	St	X							1	
HjD			X				X	Ex	TaA					X			1	
HkF*			X				X	Ex	TaB					X			1	
HlA								0	TaC					X			1	
HlB								0	TbB					X			1	
HlC								0	Te			X		X	X		4	
HmE			X		X		X	Ex	TlA			X		X			0	
HNF*			X				X	Ex	TtC								0	
HoG				X				1	TuB								0	
HtF2*				X			X	2	Tv			X		X			4	
HVF								0	VcG			X		X	X		3	
HXF*		X		X			X	1	VrG		X	X		X			4	
HYG				X				1	WAG		X	X		X			1	
Ir	X			X				4	WdD					X			1	
Jo			X		X		X	4	WgE					X			1	
KaB								0	WmA								0	
KaC								0	WmB								0	
KbG*				X			X	2	ZWH*		X	X		X			4	
KdA								0										

**SOILS: CONSTRAINTS TO DEVELOPMENT**

This map and soil information must be used in conjunction with slope map.

- No soil constraints
- 1 1 soil constraint
- 2 2 overlapping soil constraints
- 3 3 overlapping soil constraints
- 4 4 overlapping soil constraints
- 5 5 overlapping soil constraints
- EX Ex Exclusion area. Constraints generally cannot be mitigated.

\* Asterisk indicates soil mapping unit is a complex or association. If the most restrictive soil make up 50 percent or more of the soil mapping unit, the entire soil delineation is mapped as to the restrictive value.

- 1 A soil mapping unit that 30 percent or more of the mapping unit consisting of rock outcrop is mapped as high runoff potential.
- 2 Du may be a severe constraint area due to subsidence, insects, and methane generation.