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07/17/96 3:45 PM**NO FEE**
NANCY WORKMAN
RECORDER, SALT LAKE COUNTY, UTAH
SL CITY - RECORDER
REC BY:B GRAY ,DEPUTY - WI

STATE OF UTAH,
City and County of Salt Lake, } ss.

I, Scott C. Crandall, City Recorder of Salt Lake City, Utah, do hereby
Scott C. Crandall Deputy
certify that the attached document is a full, true and correct copy of.....

1). Ordinance 19 of 1996 (Adopting the City-Wide Transportation Master Plan of 1996)

2). three Master Plan maps

3) Transportation Master Plan

passed by City Council/Executive Action of Salt Lake City, Utah, April 16, 19 96

appears of record in my office.

6408191

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of said City,

this 17th day of July 19 96

SALT LAKE CITY UTAH CORPORATE SEAL

Scott C. Crandall Deputy City Recorder

Published July 19, 1996 19

BK7415PG1854

SALT LAKE CITY ORDINANCE
No. 19 of 1996
(Adopting the City-Wide Transportation
Master Plan of 1996)

AN ORDINANCE ADOPTING THE CITY-WIDE TRANSPORTATION MASTER PLAN OF 1996, PURSUANT TO SECTION 10-9-303, UTAH CODE ANNOTATED.

WHEREAS, the City Council of Salt Lake City, Utah, has held public hearings before its own body and before the Planning Commission as required by Section 10-9-303, Utah Code Annotated; and

WHEREAS, the City Council finds that it is appropriate under Section 10-9-301, et seq., Utah Code Annotated, and in the best interest of the City to adopt the City-Wide Transportation Master Plan of 1996, setting forth transportation and circulation elements and City policy for land-use plans, as they relate to existing or proposed public streets, rights-of-way and other alternative means of transportation;

NOW, THEREFORE, be it ordained by the City Council of Salt Lake City, Utah:

SECTION 1. That the City-Wide Transportation Master Plan recommended for adoption by the Salt Lake City Planning Commission on March 7, 1996 is hereby adopted, pursuant to Section 10-9-303, Utah Code Annotated. The City Recorder is

hereby directed to retain three certified copies of the City-Wide Transportation Master Plan which is hereby incorporated by reference, for the public record.

SECTION 2. EFFECTIVE DATE. This ordinance shall take effect immediately upon its first publication and the City Recorder is instructed to record this ordinance and a copy of the three Master Plan maps, contained within the City-Wide Transportation Master Plan, with the Salt Lake County Recorder.

Passed by the City Council of Salt Lake City, Utah, this 16th day of April, 1996.

CHAIRPERSON

ATTEST AND COUNTERSIGN:

CHIEF DEPUTY CITY RECORDER

Submitted to the Mayor on April 18, 1996.

Mayor's action: XXX Approved _____ Vetoed.

MAYOR

APPROVED AS TO FORM
Salt Lake City Attorney's Office
Date 3-14-96
By

BK7464P1856

ATTEST AND COUNTERSIGN:

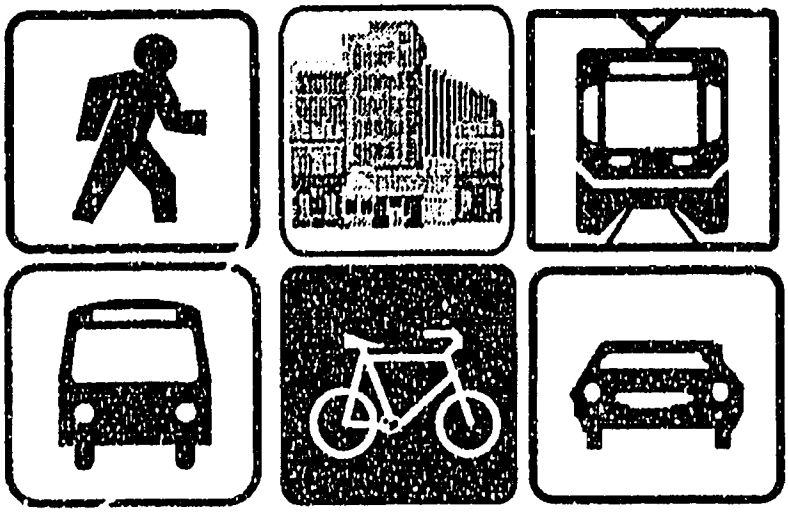
Christine Meeker
CHIEF DEPUTY CITY RECORDER

Bill No. 19 of 1996.
Published July 19, 1996.

DLW:etc
3/12/96

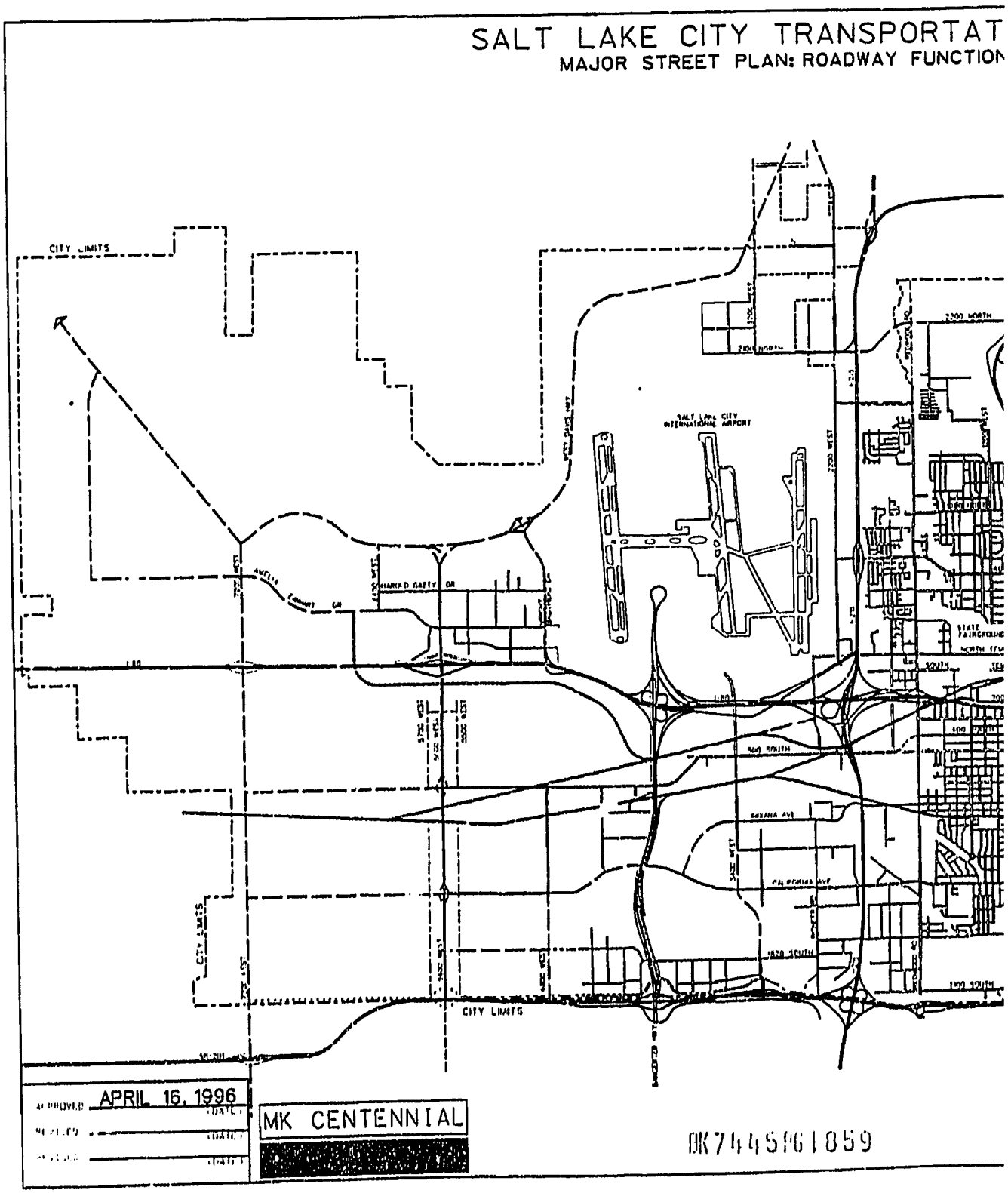
SALT LAKE CITY

Transportation Master Plan

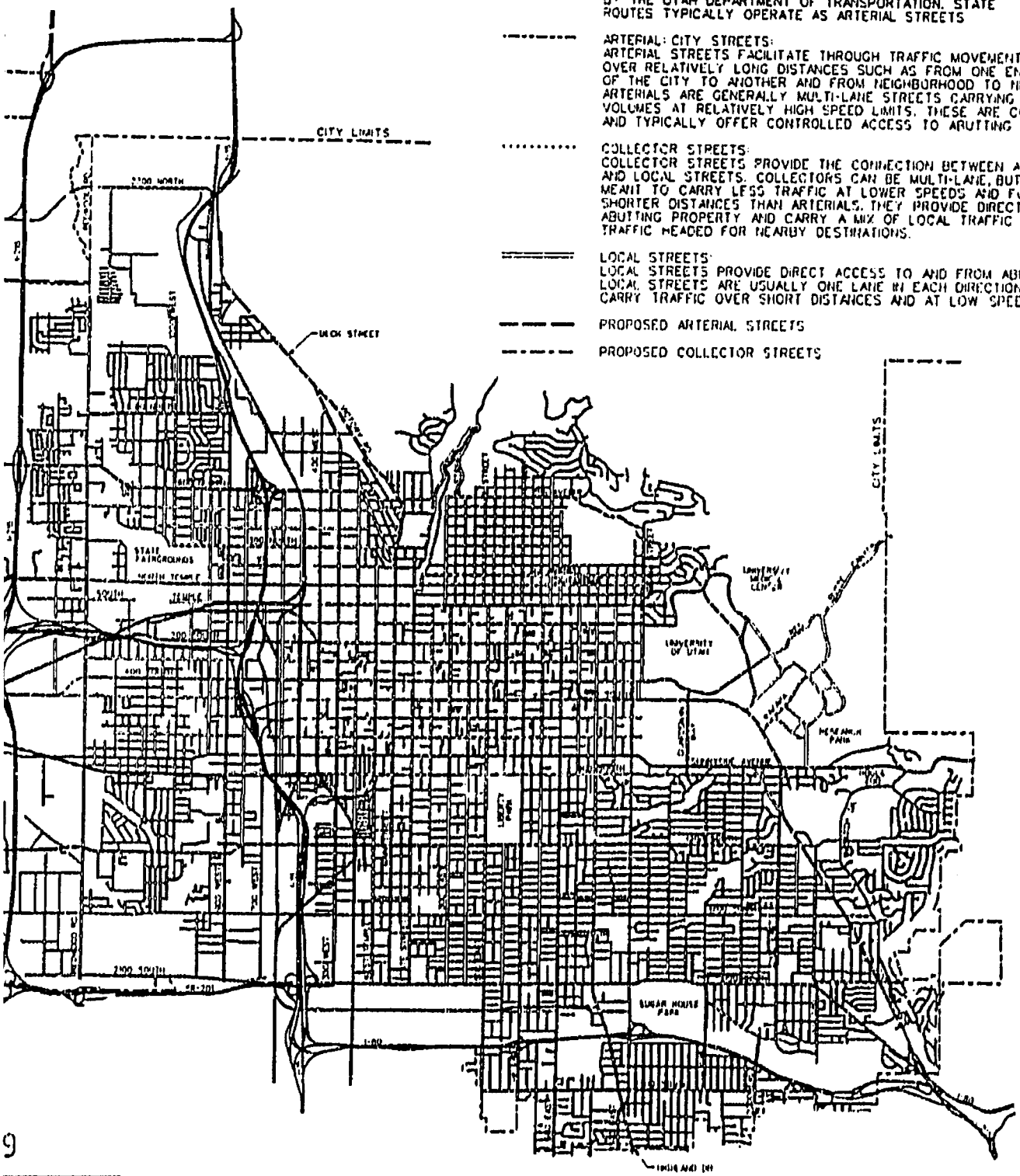


Maps

April 16, 1996



NSPORTATION MASTER PLAN
ADWAY FUNCTIONAL CLASSIFICATION



LEGEND

FREEWAYS / EXPRESSWAYS - STATE ROUTES:
A ROADWAY WHICH TYPICALLY HAS HIGHER SPEEDS, MEDIANS, GRADE SEPARATIONS AT ALL RAILROADS, AND GRADE SEPARATIONS OR INTERCHANGES AT SELECTED CROSSROADS. FREEWAYS ARE INTENDED TO PROVIDE HIGH LEVELS OF SAFETY AND EFFICIENCY IN MOVING HIGH VOLUMES OF TRAFFIC AT HIGH SPEEDS.

ARTERIALS: STATE ROUTES:
THESE ARE STATE HIGHWAYS OPERATED AND MAINTAINED BY THE UTAH DEPARTMENT OF TRANSPORTATION. STATE ROUTES TYPICALLY OPERATE AS ARTERIAL STREETS

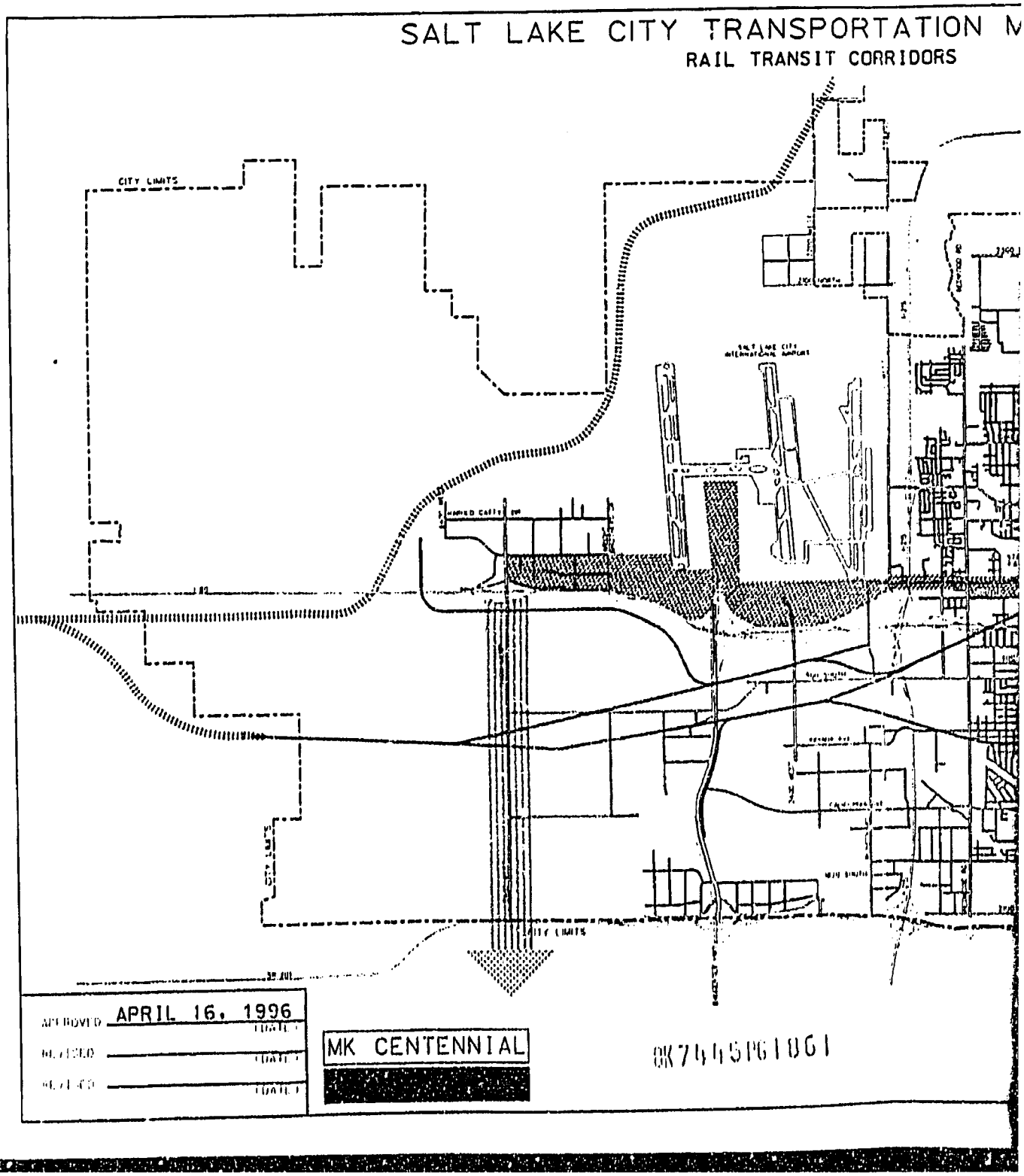
ARTERIAL: CITY STREETS:
ARTERIAL STREETS FACILITATE THROUGH TRAFFIC MOVEMENT OVER RELATIVELY LONG DISTANCES SUCH AS FROM ONE END OF THE CITY TO ANOTHER AND FROM NEIGHBORHOOD TO NEIGHBORHOOD ARTERIALS ARE GENERALLY MULTI-LANE STREETS CARRYING HIGH TRAFFIC VOLUMES AT RELATIVELY HIGH SPEED LIMITS. THESE ARE COMMUTER STREETS AND TYPICALLY OFFER CONTROLLED ACCESS TO ABUTTING PROPERTY.

COLLECTOR STREETS:
COLLECTOR STREETS PROVIDE THE CONNECTION BETWEEN ARTERIAL AND LOCAL STREETS. COLLECTORS CAN BE MULTI-LANE, BUT ARE MEANT TO CARRY LESS TRAFFIC AT LOWER SPEEDS AND FOR SHORTER DISTANCES THAN ARTERIALS. THEY PROVIDE DIRECT ACCESS TO ABUTTING PROPERTY AND CARRY A MIX OF LOCAL TRAFFIC AND COMMUTER TRAFFIC HEADED FOR NEARBY DESTINATIONS.

LOCAL STREETS:
LOCAL STREETS PROVIDE DIRECT ACCESS TO AND FROM ABUTTING PROPERTY. LOCAL STREETS ARE USUALLY ONE LANE IN EACH DIRECTION MEANT TO CARRY TRAFFIC OVER SHORT DISTANCES AND AT LOW SPEEDS.

PROPOSED ARTERIAL STREETS

PROPOSED COLLECTOR STREETS


SALT LAKE CITY TRANSPORTATION M
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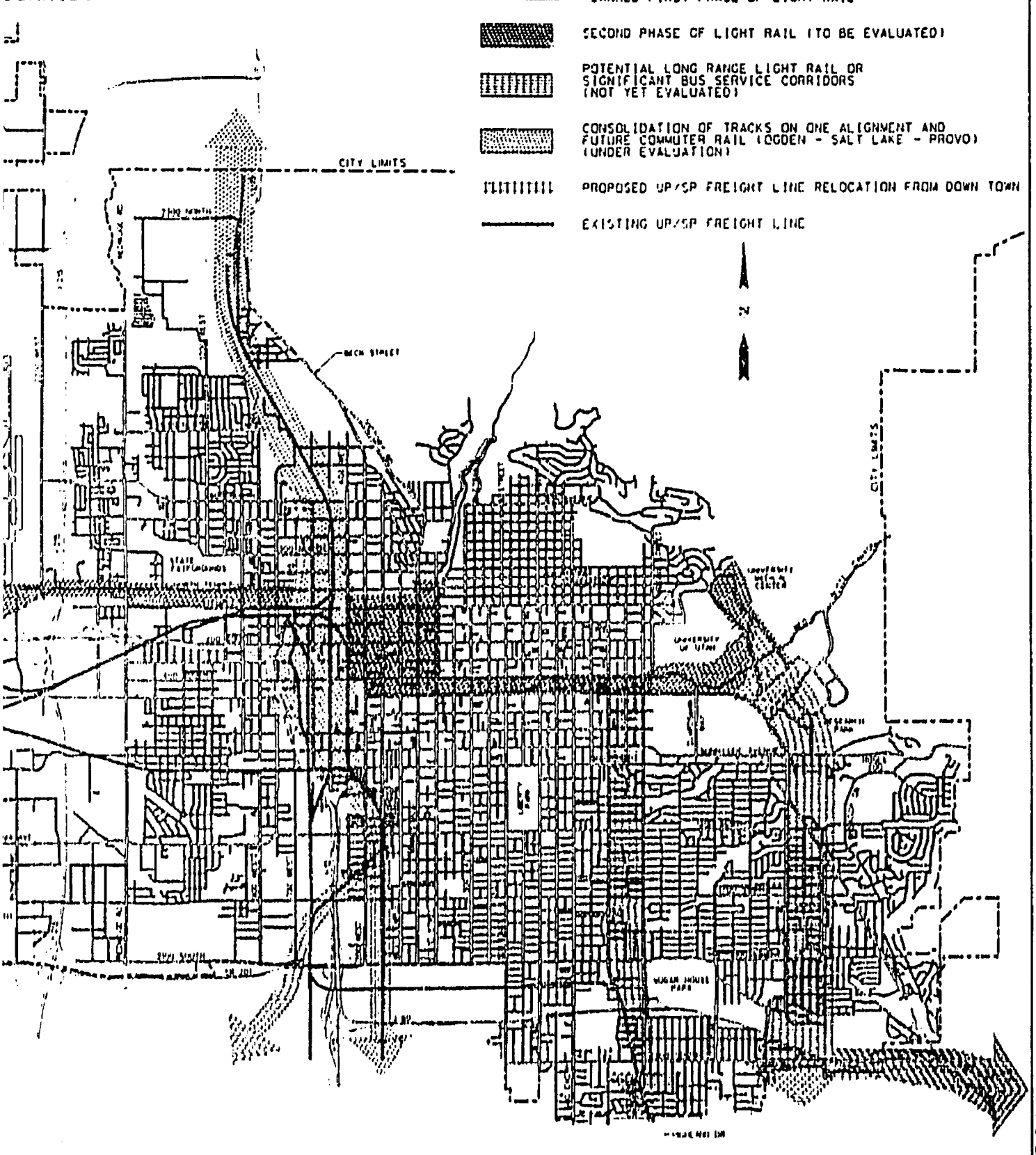
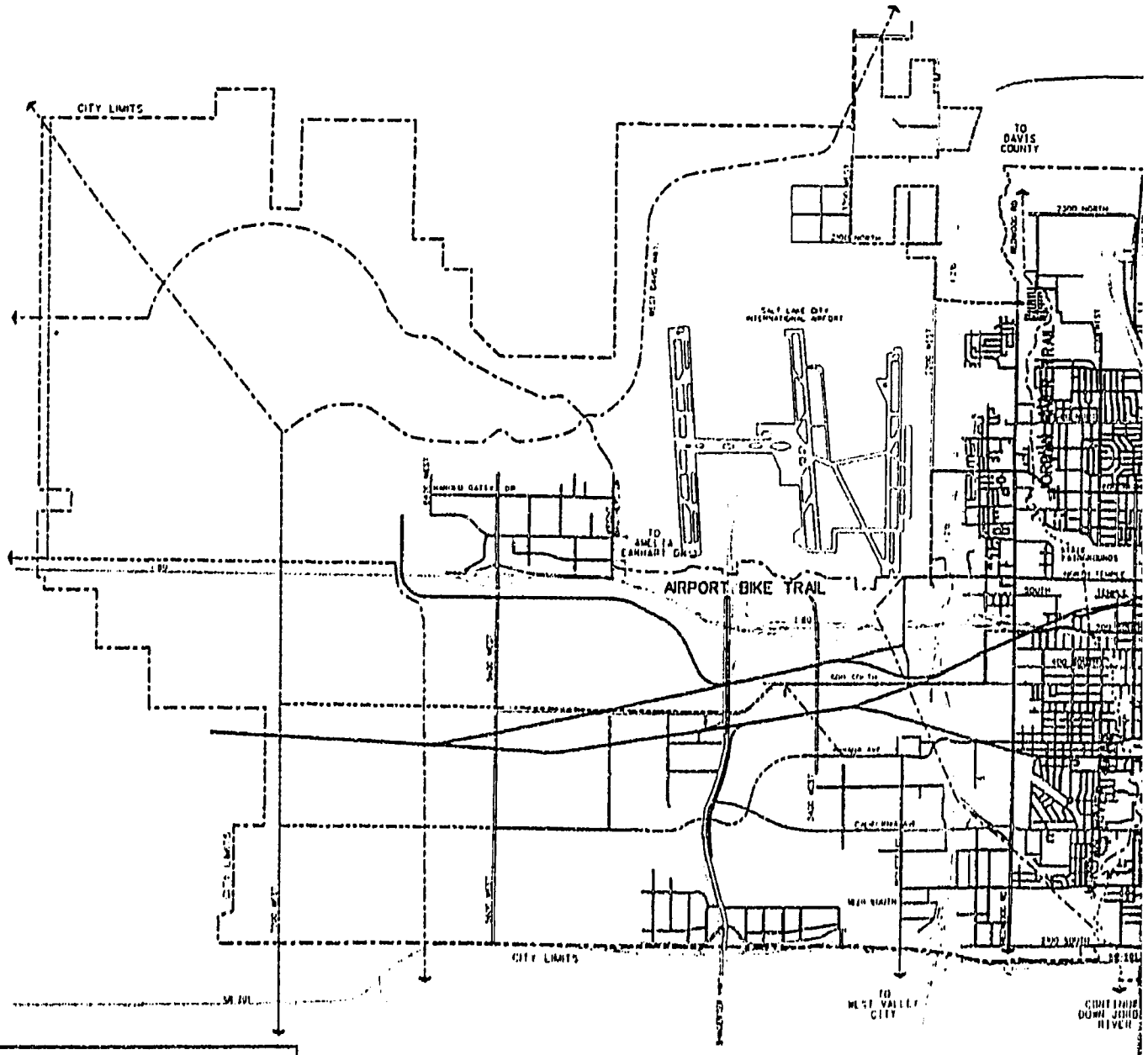
CORRIDORS



SALT LAKE CITY TRANSPORTATION
BIKEWAYS MASTER PLA



APPROVED APRIL 16, 1996
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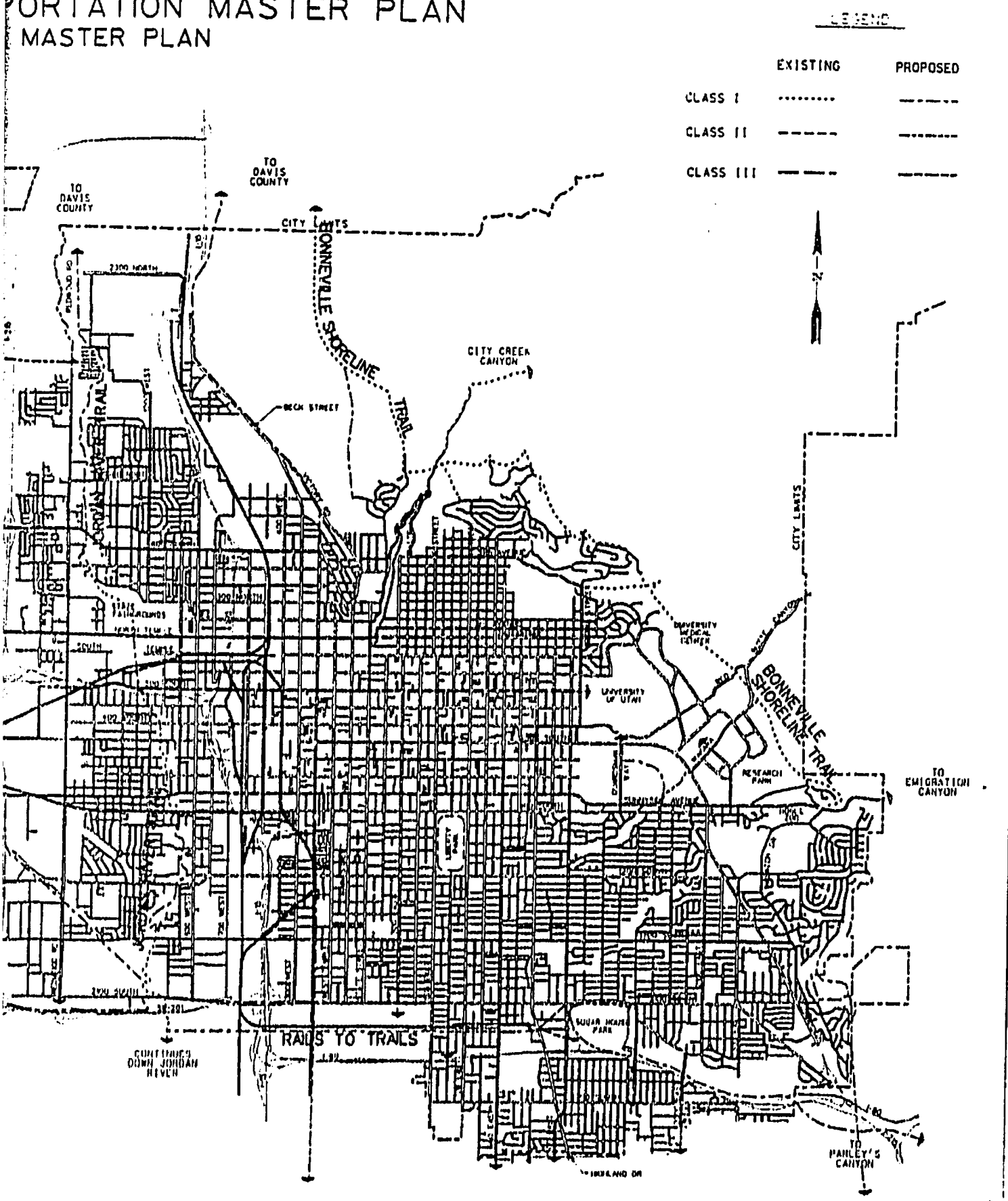
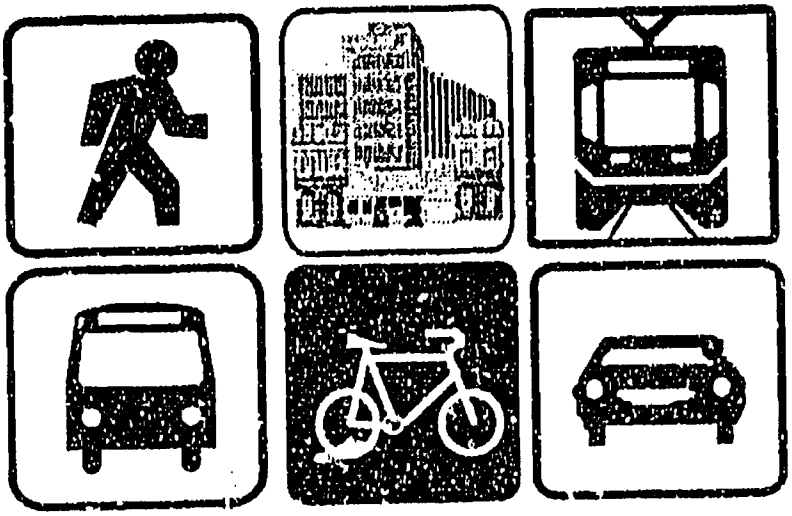
PORTATION MASTER PLAN
MASTER PLAN



SALT LAKE CITY

Transportation Master Plan



April 16, 1996

ROGER BLACK
PUBLIC SERVICES DIRECTOR

SALT LAKE CITY CORPORATION

DEEDEE CORRADINI
MAYOR

DEPARTMENT OF PUBLIC SERVICES
DIVISION OF TRANSPORTATION

Dear Transportation User:

This document is the first city-wide transportation master plan for Salt Lake City. Based on the many comments from our citizens, elected officials and other users of our transportation system, we have created this transportation master plan which outlines a common vision and direction to address the current and future transportation issues facing Salt Lake City.

We heard that you want to preserve and enhance the residential neighborhoods of our city. You also recognize the need to maintain the viability of businesses. You want less emphasis placed on the automobile and more on other modes of transportation. This transportation master plan outlines these desires in a philosophy we will use in providing and continuously improving our total transportation system in order to achieve our common vision.

The success of this plan depends on all of us. We need to rethink the way we use our transportation system, how and when we travel. We should look at the way our land use decisions impact and often dictate our transportation system and how we can make developments more friendly to modes other than the automobile. We need to evaluate and prioritize how future transportation improvements will be funded.

What is in this master plan? This master plan discusses how you can expect the transportation system in Salt Lake City to function. It addresses the types of traffic you can expect on your street and the transportation options which will be encouraged in Salt Lake City. This master plan does not tell you what street improvements are going to be made on your corner, nor will it eliminate traffic on your street. Although non-auto transportation modes will be stressed, traffic congestion during peak hours will continue to exist.

As your Transportation Division, we will be reporting to you annually, in a Transportation Action Plan, on our collective progress in addressing the transportation needs of Salt Lake City. Our first annual Transportation Action Plan accompanies this master plan document. The areas on which we will focus are detailed in our action plan. This action plan relates directly to the guiding principles and direction outlined in this master plan.

This is a living document. Your comments and suggestions are always welcome. Your input will be helpful in the development of future annual action plans. Thanks to all of the citizens who took the time to give us input. I hope that this document reflects an approach to transportation in Salt Lake City which you can strongly support.

Sincerely,

Timothy P. Harpst

Timothy P. Harpst, P.E.
City Transportation Engineer

349 SOUTH 200 EAST, SUITE 201, SALT LAKE CITY, UTAH 84111
TELEPHONE: 801-535-6630 PARKING ENFORCEMENT: 801-535-6633 FAX: 801-535-6019

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Introduction

Your Transportation Master Plan

Master Plan Development Process

Your Transportation Master Plan was developed with many opportunities for public input. The goal of City staff and the consultant team was to give everyone, with interest in the transportation future of Salt Lake City ample opportunities to present their concerns, ideas, and comments.

At the inception of the Transportation Master Plan process, a master plan advisory committee was created. Members included residents from each of the city council districts as well as representatives of business groups and other organizations. During the development of this document, the advisory committee met at least monthly to review issues and give valuable feedback regarding the master plan development. A technical advisory committee made up of City, Utah Transit Authority, Utah Department of Transportation, Wasatch Front Regional Council, Salt Lake City School District and Downtown Alliance representatives assisted in the preparation of technical information.

A three step approach was used to gather input used in the development of this master plan:

I. Compatibility Review of the Salt Lake City Vision and Strategic Plan

II. Establishment of Salt Lake City Council Transportation Policies.

III. Extensive Public Input Process on Transportation Issues and Focus on Priorities.

A summary of each of these three steps follows.

I. Salt Lake City Vision and Strategic Plan

The vision for the transportation future of Salt Lake City is influenced by the Salt Lake City Vision and Strategic Plan, published in December of 1993.

SALT LAKE CITY VISION STATEMENT

We envision Salt Lake City as a prominent sustainable city: the international crossroads of western America, blending family life styles, vibrant artistic and cultural resources, and a strong sense of environmental stewardship with robust economic activity to create a superb place for people to live, work, grow, invest and visit.

The strategic plan is the culmination of an effort to proactively define a vision for Salt Lake City's future and show how it can be achieved. This Transportation Master Plan is consistent with the vision included in the Strategic Plan. The strategic plan includes descriptions of Salt Lake City which will exist when the vision is achieved. The following statements relate to transportation:

- The land use practices, transportation patterns, and consumption habits of Salt Lake citizens reflect a strong commitment to preserve and enhance the natural setting of the City. ***You, the public, take environmental preservation seriously.***

- Salt Lake City neighborhoods provide a safe environment for

families and promote responsible citizenship among neighbors. ***Citizens care about their neighborhood communities.***

- Salt Lake City sustains a vibrant local economy that takes full advantage of its competitive geographic advantages for tourism, distribution, communications, and transportation; as well as its competitive labor force advantages for multi-lingual services, high technology, and health care. ***The City has a clear sense of its niche in the global economy.***

- Salt Lake City government excels in the delivery of economical, world class public services and also participates with other valley jurisdictions in cooperative arrangements to contain costs and resolve regional problems. ***Local government works.***

II. City Council Transportation Policies

This master plan is also influenced by the transportation policies of the Salt Lake City Council which held a retreat on October 29, 1994 to determine how it should approach a variety of transportation issues facing the City in the next 25 years. The Council arrived at nine policy statements that make up the standard of balancing access to the City and preserving neighborhoods:

1. The Council considers neighborhoods, residential and commercial, as the building blocks of the community.

2. The Council encourages the preservation and enhancement of living environments, particularly the Downtown.

3. The Council discourages through traffic on streets other than arterial streets in residential neighborhoods.

4. The Council will focus on ways to transport people to their desired destinations, not on moving motorized vehicles at the expense of neighborhoods.

5. The Council will make and support transportation decisions that increase the quality of life in the City, not necessarily the quantity of development.

6. The Council supports the creation of a series of linkages (provisions and incentives) to foster appropriate growth in currently defined growth centers.

7. The Council supports more public-private partnerships in which all who benefit from capital improvements participate in funding those improvements.

8. The Council supports considering the impacts on neighborhoods on at least an equal basis with the impacts on transportation systems in the transportation master plan and related planning.

9. The Council supports giving all neighborhoods equal consideration in transportation decisions.

III. Public Input Process and Focus on Priorities

During the month of November 1994, eight public open houses were held to encourage the public to express their concerns and suggestions regarding transportation issues in Salt Lake City.

On March 11, 1995, a Transportation Master Plan working paper was introduced to the public. The working paper presented a summary of the input of the November meetings in the form of three approaches to the transportation future of Salt Lake City. These approaches were Focus on Personal Auto, Focus on Mixed Modes, and Focus on Public Transit.

Focus on Personal Auto

The Focus on Personal Auto assumed that the emphasis of the transportation system will be primarily focused on continuing to meet the needs of the single-occupant automobile. Little effort would be expended to improve public transit and other transportation alternatives. This alternative would require Salt Lake City to increase the carrying capacity of the major streets within the City while implementing restrictive traffic controls elsewhere to minimize through traffic in residential neighborhoods.

Arterial streets would be expected to carry higher volumes of traffic. The vehicle carrying capacity on these streets would need to be increased through construction of additional lanes and intersection improvements. Residential street traffic controls would have to be constructed to restrict commuter traffic.

Improvements to transit in this alternative would be limited to those already in the process, such as the planned north-south light rail corridor. Efforts to reduce travel would be limited to current programs.

Because of the emphasis on meeting the needs and mitigating the impacts of the automobile, the relative cost of this alternative is high. The associated air quality of this alternative is the worst of the three.

Focus on Mixed Modes

The second alternative was the 'Focus on Mixed Modes'. Less emphasis was placed on increasing capacity for the single-occupant automobile and more incentives are placed on alternative modes.

With less emphasis on meeting the capacity needs of the single-occupant vehicle, there is less need for major roadway construction. Greater effort is

expended in improving the efficiency of the existing street system. By providing alternative modes of transportation, less impact will be felt on the adjacent residential streets. More effort is applied to improving the transit system and travel demand management methods to encourage alternative modes of travel. This alternative is the least costly of the three approaches and has an intermediate impact on air quality.

Focus on Public Transit

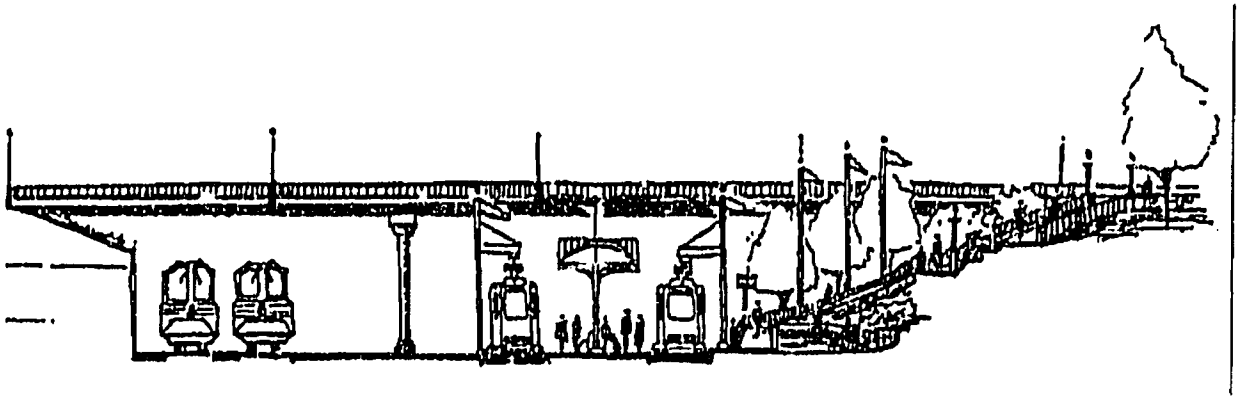
The third alternative is the 'Focus on Public Transit'. In this alternative the greatest emphasis was placed on the improvement of transit service and incentives to use modes of travel other than the automobile.

Transportation demand management programs designed to reduce the amount of automobile use would be emphasized. Examples of these programs might include strong restrictions placed on parking through higher fees, limited development of new parking spaces in congested areas and employer subsidized transit passes for employees.

Transportation system management programs designed to facilitate transit and non-auto travel modes at the expense of automobiles would be emphasized. Traffic lanes on major streets could be designated as 'bus only' lanes. On-street parking could be eliminated to provide bicycle lanes. Street improvements would be limited to minor changes such as adding turn lanes at intersections and providing traffic signal pre-emption to help transit movement. This alternative had the best air quality improvement and the medium cost impact of the three alternatives.

Public Preference

A questionnaire was included with the working paper. One of the questions asked was, which of the three alternatives the preferred. **The majority of responses favored the Focus on Public Transit, and the remaining responses favored Focus on Mixed Modes.**



Your Transportation Master Plan

This transportation master plan reflects the desire of the public to shift the emphasis of Salt Lake City's resources from meeting the needs of the single-occupant automobile to mass transit and multiple forms of transportation.

The heart of the Transportation Master Plan is the set of guiding principles, listed on the opposite page. These principles provide the basis upon which present and future transportation issues will be evaluated by Salt Lake City.

The remainder of this document looks at the following topics and issues that influenced the master plan development. Each discussion culminates in direction statements that are adopted as part of this Master Plan.

1. Regional Planning
2. Land Use Planning
3. Street System
4. Transportation Demand Management (TDM)
5. Parking
6. Public Transportation
7. Bicycles
8. Pedestrians
9. Freight Rail
10. Funding
11. Air Quality
12. Education

In addition to the guiding principles and direction statements that follow, there are two Companion documents associated with the Salt Lake City Transportation Master Plan.

The first is the Salt Lake City Transportation Master Plan Maps containing the:

- Major Street Plan
- Bikeways Master Plan
- Rail Transit Corridors

Each of these maps has been updated as part of the master plan development process. The Major Street Plan classifies streets by their intended use. The Bikeways Master Plan has been updated to show bicycle routes implemented since the first Bikeways Master Plan was adopted in 1992. Recently proposed future bike routes are also shown. Our first map of freight and commuter rail plans are also included. These maps will be updated on a regular basis.

The second companion document is the Salt Lake City Transportation Annual Action Plan. This report is intended to document the progress made during the previous year in attaining the goals of this Master Plan and to set forth the goals and direction for the coming year.

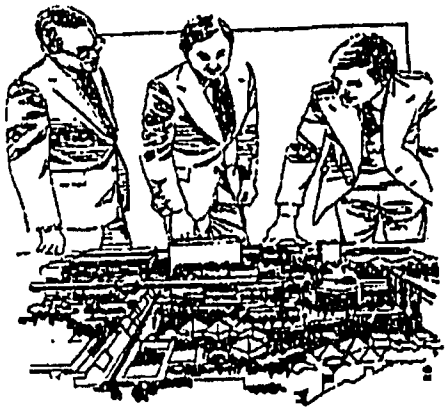
SALT LAKE CITY TRANSPORTATION MASTER PLAN

GUIDING PRINCIPLES

These guiding principles provide the basis upon which present and future transportation issues will be evaluated and decisions made:

- Salt Lake City's transportation system will support and encourage the viability and quality of life of its residential and business neighborhoods.
- Salt Lake City will create a multi-modal transportation system. Dependence on the automobile as our primary mode of transportation will be reduced by emphasizing other modes. The transportation system will be designed to move people, not just automobiles.
- Salt Lake City will take a leading role in addressing regional land use issues affecting Salt Lake City and their link to transportation impacts along the Wasatch Front.
- Salt Lake City will consider the impact of various transportation modes on the environment and the community.
- Salt Lake City will develop funding mechanisms which are equitable and adequate to meet the capital and operational needs of the transportation system.
- Salt Lake City will educate citizens about transportation issues and impacts, and encourage public involvement in the decision-making processes.

1. Regional Planning



Much of the transportation demand in Salt Lake City is created by workers, students, business customers and others living outside of the city. These people play an important part in maintaining the economic viability of the City. They also create some of the greatest challenges to the transportation system. Further, the land use and transportation decisions made by other jurisdictions along the Wasatch Front have a significant impact on Salt Lake City.

In addition to Salt Lake City, there are 13 other cities, Salt Lake County, the Utah Department of Transportation, and the Utah Transit Authority that influence transportation within Salt Lake County. Also, the Wasatch Front Regional Council has a responsibility to insure that each of these entities considers metropolitan area wide needs in their transportation planning. As the metropolitan area continues to grow, there are increased transportation impacts from Davis, Summit, Tooele, Weber and Utah counties. If Salt Lake City is going to be successful in controlling its transportation future, cooperation and coordination with these other jurisdictions and agencies is very important.

Economic issues are a major impediment to regional land use planning. Every city and county needs to develop its own commercial and industrial developments to maintain a stable economic base. There is competition among these jurisdictions to lure tax revenue generating businesses. Without cooperation in the planning of land uses, regional transportation plans fail to adequately address the impacts of these land use decisions across jurisdictional boundaries.

The desire for economic development can impact decisions relating to the control of transportation. Many of the incentives and disincentives that can be used to influence the transportation choices of the traveler are ineffective or economically unacceptable if implemented inconsistently or by only one jurisdiction.

The vision and directions outlined in this Master Plan must be shared with and accepted by other jurisdictions and transportation agencies. These agencies and jurisdictions can be partners in helping Salt Lake City achieve the objectives contained in the City's vision and direction statements.

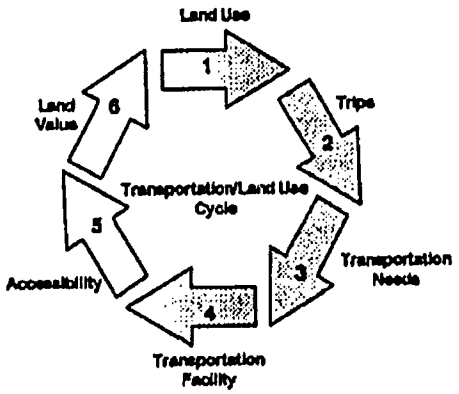
Direction

1.1. Salt Lake City will take the lead in addressing regional transportation issues.

1.2 Salt Lake City will encourage other political jurisdictions and transportation service providers to adopt transportation and land use policies compatible with this Master Plan.

2. Land Use

There can be no doubt of the link between land use and transportation. The type of land uses and their locations influence the travel patterns of an area. In the past, the primary solution for congestion was to build newer and bigger roads. This approach, as illustrated below in a transportation/land use cycle, encouraged more growth, which again resulted in increased levels of congestion.



As the transportation system in Salt Lake City is modified to be more transit oriented and allow greater options for other modes of travel, we need to recognize the benefits of matching our land use patterns with the total transportation system. Transit systems benefit from higher densities along the major transit corridors. Encouraging higher density housing and concentrating business and commercial uses at transit stations, allows transit to provide better service and provides greater opportunities for ridesharing. Major transit corridors in our community include: State Street, Redwood Road, and 700 East where significant bus service is provided. Salt Lake City will preserve and enhance residential communities within the City which allow residents to live, work and play in the same area. In the future, light rail and commuter rail could serve our community in the corridors shown on the Transportation Master Plan Rail Transit Corridors map.

Allowing neighborhood commercial uses in higher density residential neighborhoods provides economically viable services within walking distance of the users. New commercial developments can be designed to better interact with non-automobile modes of transportation. For example, bicycle racks can be provided and shower/locker room facilities can be installed to encourage bicycling, walking and jogging.

Direction

2.1 Salt Lake City will preserve and enhance residential communities within the City which allow residents to live, work and play in the same area.

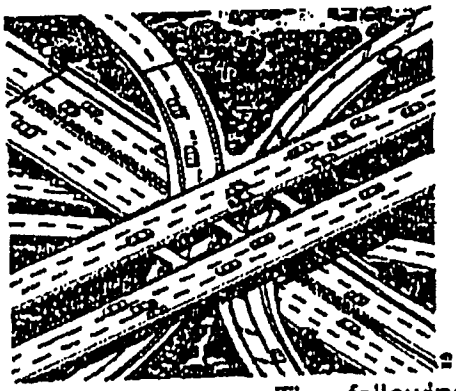
2.2 Salt Lake City will explore opportunities to increase residential and destination densities at major bus and rail transit nodes along transit corridors.

2.3. Salt Lake City will promote development that is transit, pedestrian and bicycle friendly.

2.4 Salt Lake City will encourage growth in the Northwest Quadrant along existing and planned transportation corridors.

2.5 Salt Lake City will explore the feasibility of establishing an intermodal transportation center.

3. Street System



The street system is the circulatory system of the city; providing routes for the movement of goods, services, and people. The street system provides both access and mobility. For the majority of Salt Lake City, the street system is laid out in a grid pattern. This grid network allows for the greatest accessibility and spreads local traffic over a number of streets. This street pattern generally minimizes travel lengths to get from one point to another. Within the City, streets serve different purposes. Accordingly, streets are classified by their function and purpose. The following definitions describe the classifications of streets adopted by Salt Lake City and most other communities in the United States.

Freeways:
These routes provide for rapid movement of large volumes of vehicles between urban areas. No local access to individual sites is provided. Freeways are designed for the highest travel speeds. I-15, I-80, and I-215 are freeways within Salt Lake City. All of the freeways are under the jurisdiction of the Utah Department of Transportation.

Arterial Streets:
These streets provide for through traffic movement over long distances such as across the city with some direct access to abutting property. Arterials typically have restrictions on the number and location of driveways. Curbside parking may be restricted or prohibited. These streets are typically the widest and have the highest speed limits of all of the streets within the city. Many of the arterials within Salt Lake City are state highways under the jurisdiction of the Utah Department of Transportation. Foothill Drive, Redwood Road, 400 South, State Street, and 700 East are examples of arterials which are also state highways.

Collector Streets:
Collectors provide the connection between arterials and local streets. There is direct access to abutting properties. These streets provide for medium distance trips such as between neighborhoods. They also collect traffic from the local streets and channel it to the arterial system. Collectors typically have narrower widths and lower speed limits than arterials. In Salt Lake City some collector streets are unique because of their narrower right-of-ways or higher traffic volumes. Some of these unique collectors are located in and around the downtown area.

Local Streets:
Local streets provide for direct access to the residences and businesses which they serve and for short distances or local traffic movements. There are few, if any, restriction on the number of driveways allowed on local streets. Within Salt Lake City, most local streets have a speed limit of 25 mph.

The classifications of all streets in Salt Lake City are identified on the Salt Lake City Major Street Plan. This map is formally adopted by the City and is included in the Maps document portion of this Master Plan. Existing and prospective residents and business owners are encouraged to be aware of the street classifications in their neighborhoods so they understand the type of traffic they can expect on their streets.

Challenges

Although land use relates directly to travel demand, street classifications, particularly major streets, do not necessarily relate directly to the land use adjoining a street. For example, many arterial streets pass through both residential and commercial neighborhoods. These streets need to function as designated in order to meet the legitimate travel needs for which they were planned and designed, while being sensitive to the safety and quality of life needs of the adjacent land use.

The street system doesn't always function the way we would like. Increased growth outside of Salt Lake City has put additional pressure on our street system to accommodate travel demand. Currently, travel demand is primarily made up of automobile trips, and the number of automobiles on our streets has steadily increased. As traffic volume and congestion increase along the major arterials, drivers look for less congested alternatives and traffic spills over onto adjacent streets. This is the primary cause of many of the speeding and traffic volume concerns expressed by residents living along collector and local streets.

Traffic Calming

Physical traffic management techniques that the city could use as "traffic-calming" device range from mildly restrictive to very restrictive. Some of these include:

- A *woonerf* involves reducing the width of the travel lanes by extending the curbs into the street. This typically slows traffic, but some on-street parking is eliminated.
- A *roundabout*, or traffic circle, is constructed in the middle of an intersection. All traffic entering the intersection circles the roundabout in counterclockwise direction until the desired street is reached. A roundabout slows traffic as it enters the intersection, discouraging high speed through traffic.
- A *diverter* is a barrier constructed diagonally through the middle of an intersection and prohibits through traffic. all vehicles enter the intersection must turn right or left.

These physical traffic management techniques exist in some areas of the city or are recommended for consideration in neighborhood master plans. In general, their use should be carefully evaluated on a case-by-case basis with adjacent property owners and neighborhood community councils, to determine if they would be appropriated.

Enforcement

Enforcement of traffic controls is a key component of a traffic calming program. In particular, police enforcement of speed limits and other traffic regulations is important to ensure compliance with these regulations. Two programs that serve as non-physical traffic calming techniques are Neighborhood Speed Watch and Photo Radar. Salt Lake City presently offers a Neighborhood Speed Watch Program for residents and

property owners along local streets who want to be actively involved in monitoring traffic speed on their streets. The residents use radar equipment loaned to them by the City Transportation Division to record the speed of vehicles driving on local streets. Drivers found to be driving well over the speed limit are mailed an educational pamphlet explaining the safety concerns associated with speeding. This is an educational program and no citations or fines are levied.

Implementation of a photo radar program, not presently in use in Salt Lake City, was encouraged by many attendees of the master plan open houses. Speeding on residential streets is the number one traffic concern of residents of Salt Lake City. A photo radar program involves the use of a radar gun connected to a camera which records the speed and license plate of vehicles speeding on a street. This information is processed and the violator receives a citation in the mail. This passive speed control technique has proven to be successful in reducing speeds and accidents on "troubled" streets. West Valley City, for example, reports that in addition to reducing speeding, more than a 50% reduction in accidents has been experienced since beginning their photo radar program. Photo radar can also be perceived as controversial because it does not provide a personal interaction between a police officer and the speeder.

Traffic Signal Coordination

Traffic signal coordination is also effective in meeting some street system challenges. In general, traffic signal coordination will result in fewer stops for traffic traveling at the speed limit along a major corridor . Decreased traffic delays by reducing stops, decreases vehicle emissions - thus resulting in better air quality.

Direction

3.1 Arterials are the major traffic carrying streets in the City. The carrying capacity of arterials must be maintained to encourage commuter traffic to use arterial streets rather than local and collector streets. The grid system of arterial streets will be maintained as much as possible, while recognizing adjacent land use needs.

3.2 Collectors are designed to collect traffic to and from local streets and carry it to and from the arterials. Collectors should not be used for carrying nonlocally generated commuter traffic through a neighborhood.

3.3. Traffic calming strategies will be used to slow traffic and discourage commuter through traffic on collector and local streets. Strategies such as street closures and diverters will be used as a last resort and not without a thorough study of the impacts on the surrounding street system.

3.4 Barriers such as railroads and freeways restrict access within and across neighborhoods. These barriers will be minimized by providing as many crossings as possible.

3.5 Additional traffic signal coordination will be implemented where practical.

3.6 A transportation safety program will be maintained to identify and eliminate high accident sites.

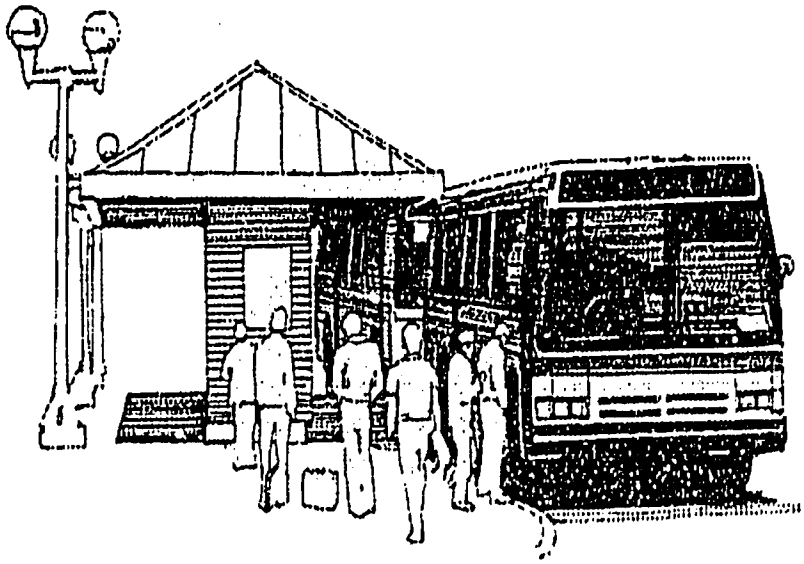
4. Transportation Demand Management

Transportation Demand Management (TDM) is a system of actions designed to alleviate traffic problems through improved management of vehicle trip demand. The purpose of TDM is to maximize the movement of people, not vehicles, within the transportation system. Salt Lake City recognizes TDM as a powerful tool in reducing congestion, improving air quality and community livability. TDM must play an increasingly important role in transportation decisions and addressing transportation-related problems.

Three examples of current TDM actions are:

- Mandatory trip reduction for government employers
- Voluntary trip reduction for private employers
- Public education for individual trip reduction

Initial use of TDM strategies by the population, especially major employment centers, should be voluntary with incentives that are attractive enough to actually achieve significant use. These include, but are not limited to providing subsidies to transit users, preferred or free parking for rideshare vehicles, and creating on-site services such as cafeterias, bank or ATM access, day care, etc., that decrease the need for someone to drive alone to work.

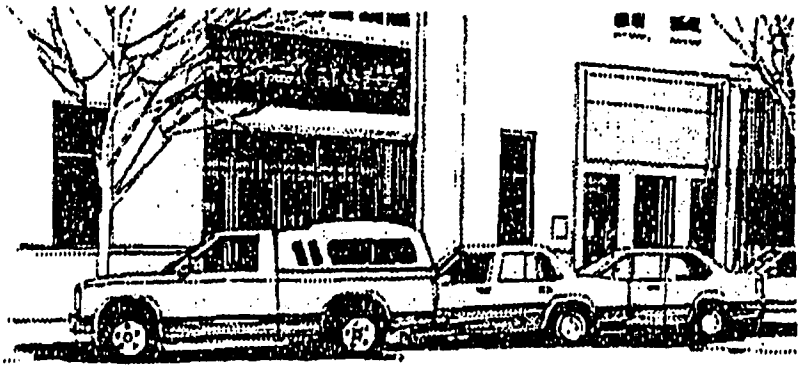


The possibility exists that voluntary use of all available TDM strategies will not achieve the desired shift to alternative transportation modes. In this case, serious consideration should be given to gradually implementing mandatory TDM strategies. Large employers may need to develop a TDM program and/or create disincentive-based options such as; eliminating employee parking allowances and requiring payment for single occupant vehicle parking. TDM strategies are discussed in various sections throughout the Master Plan.

Direction

4.1 Salt Lake City will encourage citizens and employers to utilize TDM activities.

5. Parking



The price and supply of parking is an important consideration when someone is deciding which mode of transportation to use.

The thinking in the past has been to always provide an adequate supply of parking for each individual land use. This encourages automobile use and consumes valuable land for parking that could be used for better purposes. As we look for methods to encourage the use of alternatives to the single occupancy automobile, controlling the supply and cost of parking is an effective method for encouraging change. Because the great majority of off street parking in Salt Lake City is privately owned, a cooperative effort between Salt Lake City government and off street parking facility owners will be necessary to successfully influence commuter behavior.

Employee Parking

Currently, many employers provide free parking for their employees. This free parking is essentially an employer-provided tax-free benefit, which serves as an inducement to drive to work.

There are several Transportation Demand Management techniques which are available to control commuter parking. They include:

- Peak-hour pricing for long term parking - Increased rates for parking during morning peak commuter arrival periods. This impacts commuters while missing most shoppers and deliveries. In areas with available transit capacity, transit use increases. In areas without adequate transit service, ridesharing and alternative work hours see the greatest increase.

- Parking tax on private parking

- Requirement to charge employees for parking

- Employee transportation allowance - The employer provides a cash allowance equivalent to the value of employer provided parking. The employee has the option to use the allowance for on-site parking, purchasing a transit pass, car pooling, bicycling, or walking and pocketing the unused balance.

Studies in other cities have reported that parking management measures by employers resulted in vehicle trip reductions of from 4% to 48%. Employees shifted their travel to ridesharing and increased transit use. Parking spaces not utilized by employees are then available for retail use.

Customer Parking

The convenient availability of short term customer parking is vital for the success of businesses. Salt Lake City provides parking meters, time restrictions and parking enforcement to encourage the turnover of on-street parking for customer use and discourage long-term parking. Increased long term parking restrictions, higher parking fees, and continued enforcement of restrictions may be necessary to further encourage alternatives to single occupant automobile commuting.

Convenient off-street customer parking is often available in downtown Salt Lake City; but just as often, it is not easy to locate. A program among all short term parking providers to create a common signing and payment program would add significant convenience for the users.

Residential Parking

As we look to preserve and enhance our residential neighborhoods, parking is an important area to consider. The controls we place on the availability and cost of business and institutional parking may force commuters to park in the adjacent residential neighborhoods. Salt Lake City does have a residential parking permit program to discourage non-residents from parking in residential neighborhoods. These areas may need to be expanded to mitigate the impact created by tighter controls on the availability of parking.

Direction

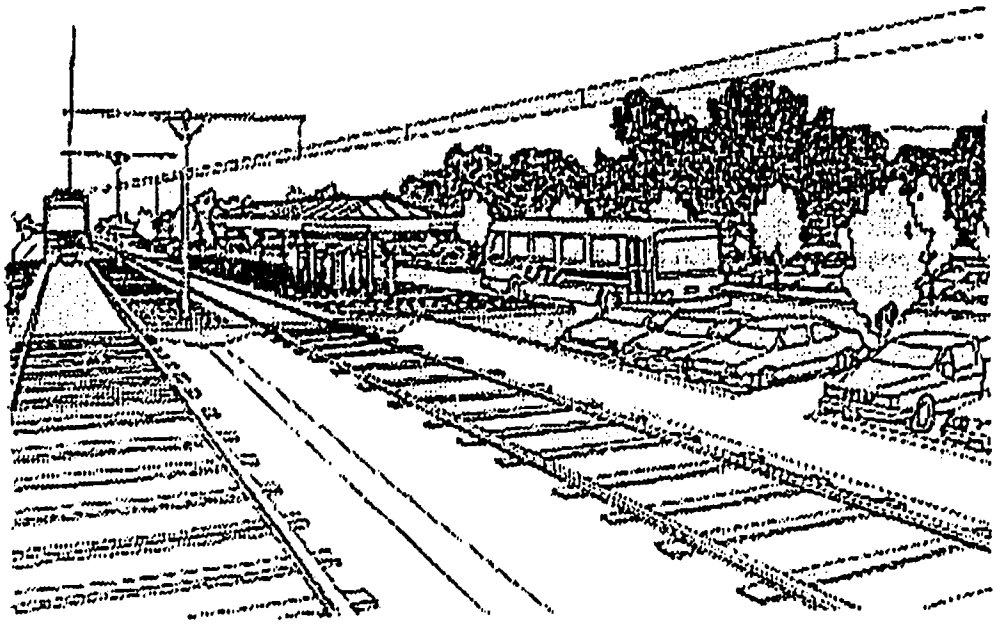
5.1. Salt Lake City will lower the maximum allowable parking requirements in the downtown area, in conjunction with implementation of trip reduction strategies, to reduce employee parking demand.

5.2. Salt Lake City will evaluate ways to make the available parking in the central business district more consumer friendly.

5.3. Residential neighborhoods will be protected from the negative impact of overflow parking from adjacent land uses.

6. Public Transportation

Use of public transportation reduces the number of vehicles on the road and reduces the demand for parking. Transit increases the people-carrying capacity of our transportation system by increasing the number of people per vehicle.

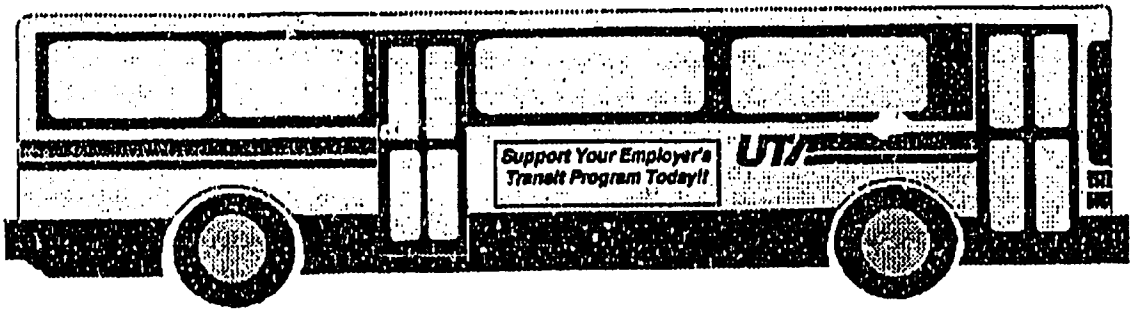


Transit service can be improved by:

- providing increased service frequency (ten minutes or less between buses make it easier to match your schedule with the bus).
- reducing riding time by creating express routes, using HOV lanes, developing routes with more direct service.
- construction of a light rail system.
- providing transit terminals at major activity centers, and park and ride lots in suburban areas.
- promoting employer subsidies for employee transit passes. This encourages more employees to use transit and can reduce the amount of costly parking employers are required to provide.

- placing transit on an equal footing with the automobile by promoting the elimination or reduction in employer subsidized parking.

- employers encouraging transit use by providing a guaranteed ride home for employees who need to leave early for emergencies or have to work late.



Transit use is impacted by land use. Higher densities of residential and commercial developments encourage more efficient bus/light rail transit service. Proposed light rail corridors are illustrated in the Transportation Master Plan Maps document.

Higher density developments can be encouraged at major transit hubs. Large employers should be encouraged to locate in areas already served by transit or easily served by extension of the transit system. Transit stops should be conveniently located and comfortable. Information needs to be provided to inform people how the system works and how to get where they want to go.

There is competition throughout the valley for the service that the Utah Transit Authority provides. Service is limited by the revenue generated through fares, sales taxes and federal subsidy.

Direction

6.1 Salt Lake City strongly supports measures that increase the convenience of transit usage.

6.2 Salt Lake City strongly supports the construction and operation of a light rail transit system.

6.3 Salt Lake City strongly supports employer programs to encourage transit use.

6.4 Salt Lake City will evaluate opportunities to improve transit service through improvements to the street system.

7. Bicycles

Salt Lake City adopted a Bikeways Master Plan in October of 1992. The purpose of the plan was three-fold: 1) to identify opportunities for bike route development in a logical network throughout the City, 2) to attempt to set a uniform standard of high quality route design and maintenance, and 3) to address the issue of implementation -- how to make a quality bike route network a reality. The adoption of the plan was a sign of commitment by the City to support cyclists and the many benefits bicycles and cycling bring to the community. These benefits include better health, cost savings, improved air quality, and reduced congestion.

Salt Lake City's Bikeways Master Plan has been updated and is presented in the Transportation Master Plan Maps document. This plan identifies three types of bike route facilities. Class I facilities are those that provide bicycle travel on a route that is completely separate from any street or highway. Class II facilities are those that provide a striped and signed lane for one way bike travel on a street. Class III facilities share the street with automobiles and are designated only by signing.

During the development of the plan, the cycling community's needs were separated into two distinct groups, commuting and recreational travel. Commuting cyclists expressed a preference to travel on arterial and collector streets with wide shoulders, infrequent stop signs, and intersections with protective traffic signals. Recreational cyclists and children preferred bike paths on quiet residential streets, sidewalks, or a separated right-of-way that is not shared with cars. Employers can promote greater use of bicycles for commuting by providing showers, lockers and secure bicycle parking.

Direction

7.1. Salt Lake City will review and enhance the City's master planned network of bikeways.

7.2. Salt Lake City will upgrade as many existing Class III routes to Class II or Class I routes as possible. New Class III routes will not be implemented unless necessary to connect other Class II or Class I routes.

7.3. Salt Lake City will encourage use of bicycles as an alternate form of transportation for commuting and recreational purposes.

7.4. Salt Lake City will strive to enhance bicycle safety and maintain bike routes with regular sweeping, removal of obstacles, resurfacing, and enforcement of parking regulations adjacent to bike lanes.

8. Pedestrians

Walking has changed in popularity from the first and often only choice of transportation for nearly all people just a century ago, to an activity now enjoyed by only a small percentage of our population. As urban growth spreads farther out into the suburbs, walking is increasing for recreational purposes, but declining for all other trip purposes.

While the growing travel distances between work and home can account for some of the decline, many who could walk for commuting, school or shopping purposes simply choose not to. Reasons include the convenience of the automobile, fears of crime on the street, weather conditions, and pedestrian barriers to access. Salt Lake City, with its long blocks and wide streets can be especially frustrating for pedestrians who walk significant distances to cross at an intersection.

Much of the attractiveness for walking as an alternative mode of transportation depends on the feeling of open space in the pedestrian environment. Salt Lake City's Open Space Plan (1991) identified the need for development of more pedestrian corridors and mid-block crossings. Proposed mid-block crossings must be carefully reviewed by City staff for adherence to currently accepted safety and traffic engineering practices.

Direction

8.1. Salt Lake City will make walking more attractive as an alternative transportation mode for short trips, by creating a friendly walking environment, increasing pedestrian access in residential and commercial areas, and improving safety.

8.2. Salt Lake City will develop and implement strategies to facilitate and enforce safe pedestrian crossings of major streets.

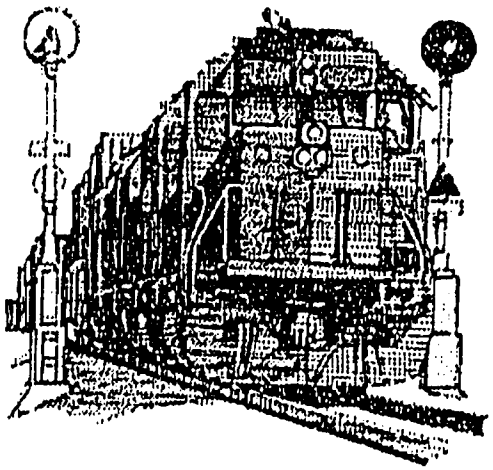
8.3 Salt Lake City will assist the school district in developing and maintaining safe school walking routes.

9. Freight Rail

Freight rail service in Salt Lake City is provided by the Union Pacific and Southern Pacific railroads. Shortline railroads provide direct rail service to industrial uses. Amtrak provides limited passenger service.

The mainline tracks pass through the western edge of downtown. Nearly 80 trains per day use these tracks. The majority of these trains are interstate trains that do not stop in Salt Lake City. These trains cause delays and inconvenience to drivers and pedestrians in the area. The trains are also delayed because of the low speeds required to travel through the tight curves in the area. Further, the tracks act as a barrier between downtown and the neighborhoods to the west. The rail lines also create the need for long viaducts between I-15 and downtown. This severely restricts access into the area.

In 1994, Salt Lake City commissioned the development of the Visionary Gateway Plan for the area bounded by 900 South, 300 West, North Temple and I-15. The Visionary Gateway Plan developed several concepts for long range transportation and land use in the area. These concepts addressed the location and use of freight rail. Several of the concepts in the plan recommend consolidation of existing freight service in the area to eliminate unneeded tracks and create the ability to shorten viaducts over the area. Relocation of the rail opens opportunities for redevelopment of the area and development of a corridor for commuter rail. Proposed realignment and consolidation of freight lines are illustrated in the Transportation Master Plan Maps document.



The implementation of these concepts depends on the demand for freight rail service in the area and the ability of the railroads to find alternative alignments for the mainline. Jurisdictions outside of Salt Lake City will be involved in the relocation of a mainline.

Direction

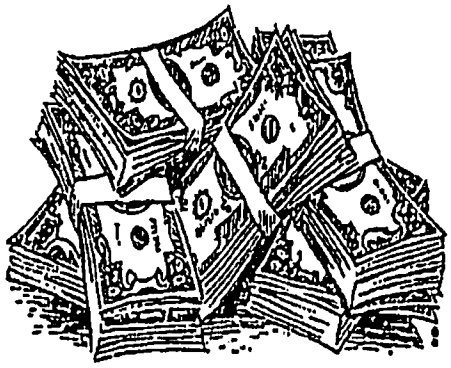
9.1 Salt Lake City supports and encourages the consolidation of freight railroad lines in the west downtown area.

9.2 Salt Lake City supports the western relocation of the railroad mainlines out of the existing residential and commercial areas.

10. Funding

Funding for transportation is divided into two categories; capital budget for the construction of new facilities and an operating budget to fund the day to day staff and maintenance work of the City Transportation Division. A capital improvement program is developed as part of the City's budget each year. This program includes all major city-funded capital purchases; such as fire stations, water and sewer projects as well as transportation related projects such as construction of new streets and traffic signals. City staff have identified $145 million in unfunded capital improvement needs. Over $83 million of this is for improvements to the street, pedestrian and bikeway systems. Current funding sources for capital improvements in the city include:

a. General Fund
b. Community development block grants
c. Class 'C' (state gas tax)
d. Federal Highway Administration (federal gas tax)
e. Special improvement districts
f. Private donations
g. Redevelopment agency (property tax increment)
h. Other state and federal
i. Enterprise fund



The Salt Lake City Development Technical Team prepared a document in October, 1987 titled "Identifying Infrastructure needs and Financing Alternatives for the Northwest Quadrant - An Idea Document". This document focused on the infrastructure needs and financing alternatives for development of the Northwest Quadrant. Many of these alternatives warrant consideration for funding City transportation improvements.

User fees can be an important source of funding. The cost associated with transportation modes can be a motivator to encourage people to evaluate their transportation decisions. Funding issues and requirements are key factors in many of the other sections in this Master Plan.

Direction

10.1. Salt Lake City will evaluate and implement funding strategies which assist in influencing the transportation decisions of the users.

10.2. The costs of improvements for mitigating the negative impacts of traffic will be shared by those creating the impact and those receiving the benefit.

10.3. The effects of our transportation policies and programs will be evaluated to minimize the negative impact on the economic viability of the business community.

11. Air Quality

In 1970, Congress passed the Clean Air Act, which established ambient air quality standards for several types of air pollution. The Clean Air Act Amendments of 1990 were passed in an effort to re-emphasize the air quality standards. They laid down a set of tight deadlines for progress to be achieved in non-attainment areas with accompanying federal funding penalties for non-compliance. The Amendments require that all federally funded highway and transit projects come from a Transportation Plan and Transportation Improvement Program that conform with the latest air quality implementation plan.

In the Wasatch Front Region, Salt Lake City is a non-attainment area for carbon monoxide, while Salt Lake and Davis Counties are non-attainment areas for ozone. Salt Lake County is also non-attainment for PM10 (fine particulates that get trapped in the lungs). Non-attainment means that the air quality standards established by the federal government are not met. Automobiles are a significant component of the air pollution problem. It is estimated that up to 30% of the PM10 is directly attributable to automobiles. In addition, 40%-50% of the ozone and 80% of the carbon monoxide in air pollution is directly attributable to automobiles.

Not meeting the air quality standards developed by the federal government can result in the loss of federal funding for transportation projects. Unless the region's Long Range Transportation Plans and the Transportation Improvement Program can be shown to conform with an EPA approved air quality plan, no new capacity increasing highway or transit projects may be implemented. The policies that must be implemented to ensure cleaner air may be strict, but achieving clean air has become critical not only to our health, but also to moving forward with any new transportation projects. Salt Lake City will investigate and implement transportation related measures to reduce air pollution. Potential air quality measures may include:

- Closing drive-up windows during no burn periods and prohibiting drive-up windows on new construction.
- Creating tolls on freeways and certain streets.
- Compressed work week.
- Volunteer no-drive days and/or odd-even license plate travel days.
- Limiting the sale or construction of any new wood-burning fireplaces.
- Endorsing enhanced inspection and maintenance program of motor vehicles.
- Marketing strategies to encourage alternatives to the single occupant vehicle

Direction

11.1. Salt Lake City will implement transportation related policies that are aimed at improving air quality.

11.2. Salt Lake City will cooperate and work with other government agencies in the urbanized area to eliminate the non-attainment status for all pollutants in a reasonable time frame and maintain attainment status.

12. Education

During the development of this Master Plan, many comments were received from the public about the need for more and better education of the public regarding transportation and traffic issues. The public also stressed the need for information to be made available on transportation issues so that they could better understand why decisions are made by city officials. In addition, public education has been demonstrated to have a measurable impact on commute choices and travel behavior.

There are several methods that could be utilized to inform and educate the public on transportation issues. These include:

- a weekly "Just Ask the City Traffic Engineer" newspaper question and answer column authored by the City Transportation Engineer.
- a transportation speaker's bureau that could speak on specific subjects within the transportation engineering field.
- a series of pamphlets that would address specific transportation related engineering subjects such as: warrants for traffic signal and stop sign installations, traffic calming techniques, Transportation Demand Management strategies.

Direction

12.1. Salt Lake City will develop and implement programs to inform the public about transportation issues.

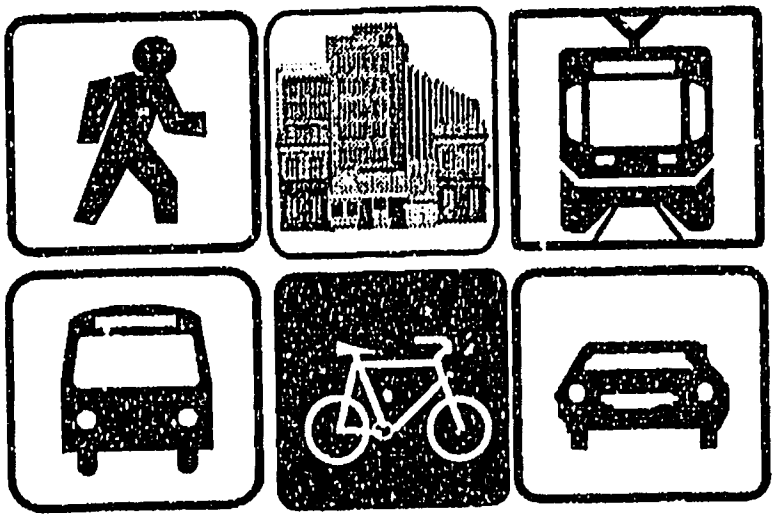
Transportation Master Plan Implementation

The master plan document sets the guiding principles and direction against which future land use and transportation decisions should be evaluated. To implement this Master Plan, a companion Action Plan document has been developed to monitor and record the City's progress towards its transportation objectives. The Action Plan is based on the **guiding principles** and **direction statements** in the Transportation Master Plan. The Action Plan document will be updated by the Salt Lake City Transportation Division on an annual basis using a public input process. You too can help the City reach its objectives by utilizing alternative transportation modes and by remaining active in the City's transportation planning activities.

It is anticipated that this master plan will remain relevant for many years to come. However, as progress is made and new transportation challenges face our community; it can be expected that changes to this Transportation Master Plan or associated map documents, will be proposed. It is intended, as with other Salt Lake City master plans, that future modifications to this Transportation Master Plan be approved only after successfully completing a formal public input and hearing process before the Planning Commission and City Council.

Background material and information regarding the Transportation Master Plan public involvement process is included in a technical appendix that is on file at the Salt Lake City Transportation Division offices.

We appreciate your support in the development and implementation of this Transportation Master Plan. Your continued participation is always welcome. Suggestions and/or comments may be submitted to the Salt Lake City Transportation Division. Our phone number and address are located on the back cover of this Transportation Master Plan.



Appendix

Glossary of Terms
Bibliography and Suggested Reading
Key Participants in the Development of the Transportation Master Plan

Glossary of Terms

ADT -- Average Daily Traffic

Commuter Rail (Heavy Rail) -- Large passenger trains that carry commuters between the work place and residential neighborhoods over relatively long distances, usually between metropolitan areas. These trains typically travel at high speeds and make few stops.

Congestion Pricing -- Setting the price of using the private automobile high enough that other alternative modes of transportation become viable, thus reducing congestion caused by the private automobile.

EPA -- Environmental Protection Agency

HOV -- High Occupancy Vehicle. This is a bus, automobile or van that carries at least two people.

Light Rail -- Small passenger trains that carry people to various points of origin and destination within a metropolitan area. These trains typically travel at higher speeds and make fewer stops than buses.

MPH -- Miles Per Hour

Multi-modal -- More than one mode, or method, of travel. For example, driving a private automobile to a park and ride lot and riding on a bus to work is multi-modal.

PM10 -- Particulate matter in the air that is 10 microns in diameter or greater.

ROW -- Right-of-Way

TDM -- Transportation Demand Management. Actions designed to reduce/manage vehicle trip demand, e.g., starting an employee bus pass program.

TSM -- Transportation System Management. Strategies to maintain and make more efficient use of existing transportation systems, e.g., adding left turn lanes at a busy intersection.

UDOT -- Utah Department of Transportation

UTA -- Utah Transit Authority

VMT -- Vehicle Miles of Travel

WFRC -- Wasatch Front Regional Council. This council is the regional planning organization for Salt Lake, Tooele, Weber, Davis, and Morgan Counties.

Bibliography and Suggested Reading

City of Burbank, *Transportation Element - Preliminary Draft*, City of Burbank, Burbank California, 1994.

Deseret Architects/DLR Group, Rich and Associates, Eckhoff Watson, and Preator, *Salt Lake City Downtown Parking and Transit Strategy Analysis - Final Report*, Salt Lake City, August 1990.

Salt Lake City, *Salt Lake City Vision and Strategic Plan*, Salt Lake City, December 1993.

Salt Lake City, *Salt Lake City Open Space Plan*, Salt Lake City, January 15, 1991.

Salt Lake City, *Bikeways Master Plan*, Salt Lake City, October 1992.

Anthony Downs, *Stuck In Traffic*, Brookings Institution and The Lincoln Institute of Land Policy, Washington D.C., 1992.

Robert Cervero, *Suburban gridlock*, Rutgers, The State University of New Jersey, New Brunswick N.J., 1988.

COMSIS Corporation, *Evaluation of Travel Demand Management Measures to Relieve Congestion*, Final Report, Los Angeles, 1990.

COMSIS, Institute of Transportation Engineers, Georgia Institute of Technology, K.T. Analytics Inc., and R.H. Pratt, Consultant Inc., *Implementing Effective Travel Demand Management Measures*, Institute of Transportation Engineers, Washington D.C., June 1993.

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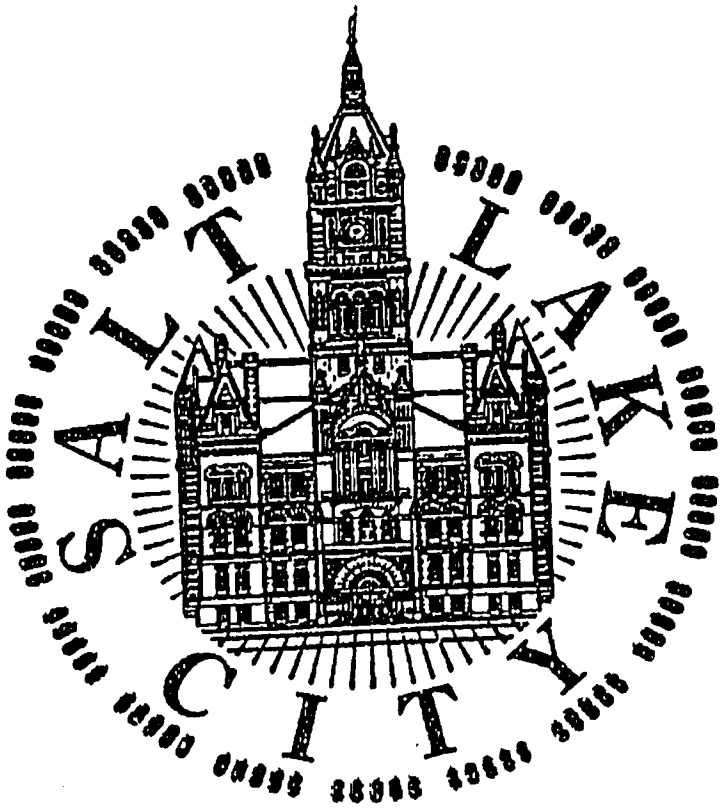

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