

CRITICAL ANALYSIS OF THE TRANSPORTATION
STUDY AND CONCEPT PLANS, CITY OF
WHEAT RIDGE, COLORADO

by

THOMAS P. LAM

B.A., UNIVERSITY OF ALBERTA, 1969

A NON-THESIS PROJECT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF REGIONAL AND COMMUNITY PLANNING

Department of Regional and Community Planning

KANSAS STATE UNIVERSITY

Manhattan, Kansas

1976

Approved by:


Major Professor

LD

2068

P7

1976

L34

c.2

TABLE OF CONTENTS

	<u>Page</u>
Introduction	1
Chapter I. General Transportation Research	4
Chapter II. General Information of Wheat Ridge	9
A. City History	9
B. City Government	9
C. Planning Commission	10
D. Planning Staff	10
E. Wheat Ridge in SMSA	10
F. Transportation Plan and the Comprehensive Plan	13
G. Growth and No Growth	16
H. Land Use and Transportation	17
I. Selected physical and Socio-economic Data	18
1. Physical Features	18
2. Population	18
3. Employment	23
4. Income	23
5. Education	23
J. Neighborhood Planning Program	26
Chapter III. Evaluation of the Transportation Study	29
Chapter I. Goals, Objectives and Recommendations	29
Chapter II. General Discussion	30
Chapter III. Existing Situation	30
Chapter IV. Street Classification and Standards	30

8-85

	<u>Page</u>
Chapter V. Existing Functional Classification	31
Chapter VI. Transportation Facilities	31
The Bikeway Plan	36
Chapter VII. Concept Transportation Plans	39
A. Concept 1	39
B. Concept 2	42
C. Concept 3	44
Appendix	45
Chapter IV. Conclusion	48
Epilog	50
Appendix A. Transportation Study and Concept Plans of Wheat Ridge, Colorado	
Appendix B. Wheat Ridge Neighborhood Meetings in Formulation of Goals and Objectives for the Comprehensive Plan	
 Bibliography	
 Figures	
1. Wheat Ridge Organization Chart	11
2. Population Projection, Wheat Ridge	24
3. Proposed Street Design Standards, Landscaped	32
Maps	
1. Wheat Ridge in Metropolitan Denver	14
2. Proposed Regional Highway Map	15
3. Generalized Existing Land Use	19
4. Generalized Existing Zoning	20
5. Population by Neighborhood Planning Areas	25

	<u>Page</u>
6. Wheat Ridge Bus, ART Routes	34
7. Recreational Bikeways	38
8. City of Wheat Ridge, Traffic Origin-Destination, Work Trips	47

Tables

1. Difference in Transportation Elements Between a Small City in SMSA and an Isolated Small City	8
2. City of Wheat Ridge, 1974 Land Use	21
3. Population and Housing Densities	22

INTRODUCTION

Wheat Ridge is a suburban city situated in the northwest portion of the Denver Metropolitan area. A group of vocal citizens like the way it is - a bedroom community. They do not want too much commercial development and industrial development to disturb the peaceful environment which they are enjoying.

The Wheat Ridge Chamber of Commerce is the opposing group that wants a "fair" share of commercial and industrial development. However, with the present situation, the city cannot attract too much new business. The major streets of the city just cannot handle the existing traffic adequately. The businessmen, therefore, would like to widen these streets. Their intention, of course, faces the strong objection of the vocal group. This group foresees that in widening the streets, it will attract more business development and therefore, more traffic into the city.

The political decision-makers of the city have not openly expressed their ideas towards the "Transportation Study and Concept Plans" of the city since it has not been formally presented to them. Unofficially, some of them tend to incline towards the vocal group. The reasons are (1) they also do not want too much traffic and (2) they are concerned about their position and popularity in the next election. It is this vocal group that votes and not too many of the silent majority. However, the politicians

have to consider the reality of the existing economic situation. The city needs more tax base to support all the city provided services. More business will bring more taxes to the city without raising the existing tax structure. The property tax definitely cannot support these services since it is the second lowest in the entire metropolitan area - 4.8 mill levy.

The normal trend of the elected officials in this city seems to remain silent until they have to vote on an issue. If they face an opposing group, larger than the supporting group of the issue, very often they will defer it to the next council meeting. During this period, they will try to iron out the difference with the departments concerned. If nothing works out, they will vote, in most cases, in favor with the "majority". At times, a consulting firm would be hired so as to get a third idea.

During the same period, individuals of the vocal group will send a few letters to the council members or to the local newspaper voicing their opinions.

This report is a detailed analysis of the "Transportation Study and Concept Plans". A copy of this transportation study is attached as Appendix A of this report.

The study was written by the Long Range Planning Division of the city's Department of Community Development in 1975. It is not an official document since it has not been approved by the Planning Commission and City Council.

Selected "background" information will be presented in order for the reader to get a basic understanding of the city and to make the analysis clearer. Chapter one is a general research analysing the different transportation characteristics between small cities within Standard Metropolitan Statistical Areas and those isolated small cities outside metropolitan areas. Chapter two is some general information of the city. Chapter three is a chapter by chapter evaluation of the transportation study. Chapter four is the conclusion of this report. There will be also an epilog describing a work program for carrying out a small metropolitan town transportation plan.

CHAPTER I. GENERAL TRANSPORTATION RESEARCH

In order to carry out an adequate critique of the Transportation Study of Wheat Ridge, the broader context of small town transportation plans must be understood. In this regard, a number of other transportation plans have been examined. These plans can be divided into two categories: one of small cities within Standard Metropolitan Statistical Areas (SMSAs), herein called "SMSA Category" and the other of isolated small cities outside metropolitan areas, herein called "isolated category".

Most cities in both categories have their transportation studies as part of their comprehensive plans. Under the transportation plan sections in most cases, they stated the transportation goals and objectives, design standards for different types of streets, traffic volumes, and a map showing the future street developments with brief statements as supporting documents. In a few cases they also presented proposed bikeways and bus routes as well as other forms of transportation (such as railroads, airways and waterways).

Other basic elements, such as population and its projection, employment, income, existing and future land use, are described under other sections of each comprehensive plan.

None of the studies presented the transportation proposals of adjacent jurisdictions. It can only be assumed

that the planners must have had them "in mind" in their background research.

The "isolated Category" with populations under 10,000 usually is not funded for the establishment of formal planning departments. They hire consultant firms to do their comprehensive plans, and transportation plans are part of the package. The sophistication or adequateness of these plans depend mainly on one, the money which the cities could afford to spend on these plans and two, the willingness and capabilities of the firms to do a good job.

Also, there are normally no explicit citizen participation in these small cities. The reasons may be that the citizens in small towns (1) are not as vocal as those in metropolitan areas; or (2) there is a lack of special interest groups; or (3) the planning process in small towns does not allow for citizen participation.

The "SMSA category" normally has their planning departments, although such departments might consist of only one staff member. The residents in these suburban cities mostly live in single family housings away from the densely populated core cities. They tend to have a provincial opinion, for example, regarding the widening of any streets. They could be very vocal in the transportation proposals.

By comparing all the transportation studies examined, there are some marked difference in transportation characteristics between these two categories. Because of these

characteristics, the problems generated will be different accordingly. These differences will be discussed item by item as follows:

Traffic Generator

Central business districts (CBD) are usually the single traffic generator in "isolated category" while there are usually no single generators in "SMSA category". The generators are often small and scattered. (A traffic generator is an intensive development area which generate substantial amount of vehicular trips, for example, a major shopping center, employment center, educational or institutional facilities).

Traffic Volume

In "isolated category", high traffic volumes are found mainly in and around CBDs with low traffic volumes at the peripheral. In "SMSA category", there is usually no formalized CBDs because of the influence of CBDs in core cities. Therefore, high traffic volumes are found in activity centers and along major arterials across SMSAs. (Activity centers are designed as aggregations of urban activity large enough to be primary generator of large internal activity. Centers would create visual node of higher level of activity and services throughout the region. It is experiment that a large portion of individuals living within the center would be able to work and shop there).

Peak Hour Traffic

"SMSA category" has larger peak hour traffic than "isolated category". This is directly equated to the difference in regional population.

Parking

There are usually no parking problems in "SMSA category" since there are no single traffic generators. However, traffic problems are mostly presented in CBDs in "isolated category".

Public Transit

Buses are most likely provided throughout SMSAs in "SMSA category". Sometimes they might have other forms of public transit. In "isolated category", if there are any public transits, buses and sometimes taxis are the only mode.

Trip Length

"SMSA category" has longer trip lengths than "isolated category" to the difference in sizes of region.

Impact

"SMSA category" is influenced both physically and economically by decisions of other jurisdictions (such as development of freeways, rapid transits and shopping centers).

"Isolated category" usually has no "nearby" jurisdictions influencing its development. However, the transportation development of county, state and federal government does have a considerable impact on this category.

Table 1 lists the differences in transportation elements between these two categories.

Table 1
 DIFFERENCE IN TRANSPORTATION ELEMENTS
 BETWEEN A SMALL CITY IN SMSA AND
 AN ISOLATED SMALL CITY

ELEMENTS	ISOLATED SMALL CITY	SMALL CITY IN SMSA
Traffic Volume	High volume in & around CBD, low volume at the edge.	Usually no formalized CBD, high volume in the activity centers and along major arterials across SMSA.
Traffic Generator	CBD is the single generator	No single generator; small scattered generators.
Peak Hour Traffic	Shorter duration	Longer duration
Parking	Problem in CBD	Usually no problem
Public Transit	Bus, where transit exist	Provided through SMSA, may have rapid transit.
Trip Length	Shorter	Longer
Impact	None from other jurisdictions. Development on its own.	Influenced physically & economically by decisions of other jurisdictions (such as development of freeways, rapid transits, shopping centers); have to cooperate with other surrounding cities.

CHAPTER II. GENERAL INFORMATION OF WHEAT RIDGE

A. City History

The Wheat Ridge city government was formed in August 20, 1969 shortly after the city incorporation election on June 17, 1969.

The city obtains its name from the 1860's when people described this land as "wheat as far as you can see along the ridge..". Then, it changed from wheat farming in favor of orchards, truck gardens and flowers. Commercial greenhouses, especially carnations, have long been a major tax source of the city. This leads to the generally accepted title of the city, "Carnation Capital" of the world.

B. City Government

Wheat Ridge is a statutory city. It is responsible for police protection, community development (planning, zoning, subdivision, building and code enforcement), parks and recreation, and public works (maintenance and engineering). School, fire protection, water, garbage collection, sanitary and sewer services are not provided by the city government.

The city council consists of six alderman (two elected from each of three wards) and a mayor elected at large. All of them serve for two-year terms. Elections are held the first Tuesday in November in odd-numbered years. The

Council is the policy-making body of the city.

The city administrator, selected by the Council, is responsible to the Council for administration of all the city departments.

Figure 1 shows the Wheat Ridge organization chart.

C. Planning Commission

The Planning Commission consists of seven members, five regular and two alternates. They are citizens in the city appointed by the Mayor and serve at the pleasure of the Council. Each member serves for a term of five years.

The Commission's duty includes the making and adoption of a comprehensive plan, reviewing and making recommendations for approval and disapproval of all zoning, rezoning, subdivision and planned unit development cases to the Council. The Council then makes final decisions on these matters.

D. Planning Staff

The planning division is under the Department of Community Development. There are four planners in this division: one in charge of Long Range Planning, two in zoning and one in Grants Coordination. In addition to the professional planners, there are two subprofessionals, a planning technician and a draftsman, under the supervision of the long-range planner.

E. Wheat Ridge in the SMSA

Wheat Ridge is situated in the north-west portion of Metropolitan Denver. The entire metropolitan area had a population of about 1.2 million in 1970. In 1976, it is

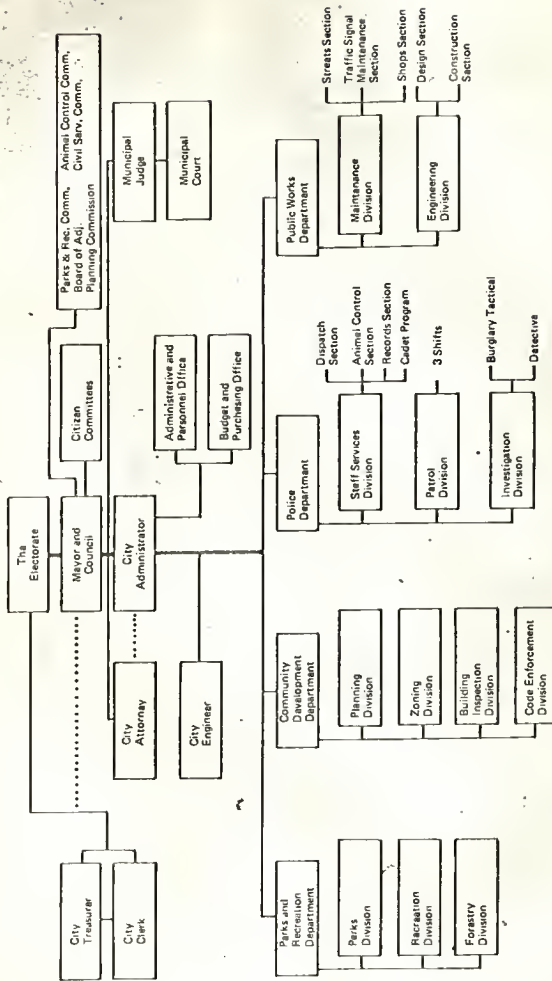


Figure 1

WHEAT RIDGE ORGANIZATION CHART

SOURCE: THE LEAGUE OF WOMEN VOTERS OF JEFFERSON COUNTY, APRIL, 1974

estimated to be close to 1.5 million.

Most of the macro-planning work is initiated by the Denver Regional Council of Governments (DRCOG), in which Wheat Ridge has one formal representative. Transportation planning sometimes is the joint effort of DRCOG, the Colorado Division of Highways, and the Regional Transportation District (RTD). Whatever decisions are made by them, they have a great impact on the cities within the metropolitan area.

The Regional Highway Facilities Plan is one of the best examples. It was the joint effort of the three agencies mentioned and was formally approved in December, 1973 by DRCOG.

The plan calls for a massive reversal of the growth trend of the past decades, that is, spreading the development along the eastern foothills of the Rockies instead of concentrating in one or two areas. In doing so, the area would maintain a population below 2.3 million by the year 2000.

The Highway plan only identifies general corridors. Interchange locations and detailed alignments are not shown.

The plan proposed an additional 80 miles of limited access facilities. The arterial streets are spaced one to two miles apart and the limited access facilities four to five miles apart.

Proposed amendments by cities and interested groups

can be submitted for consideration and may be accepted in January and July each year.

Map one shows Wheat Ridge in Metropolitan Denver and Map two shows the portion of Proposed Regional Highway in Wheat Ridge.

It should be noted that the proposed Kipling Freeway is opposed by the City of Wheat Ridge, because most of the citizens do not want any more highways in the city. Negotiation is underway with DRCOG.

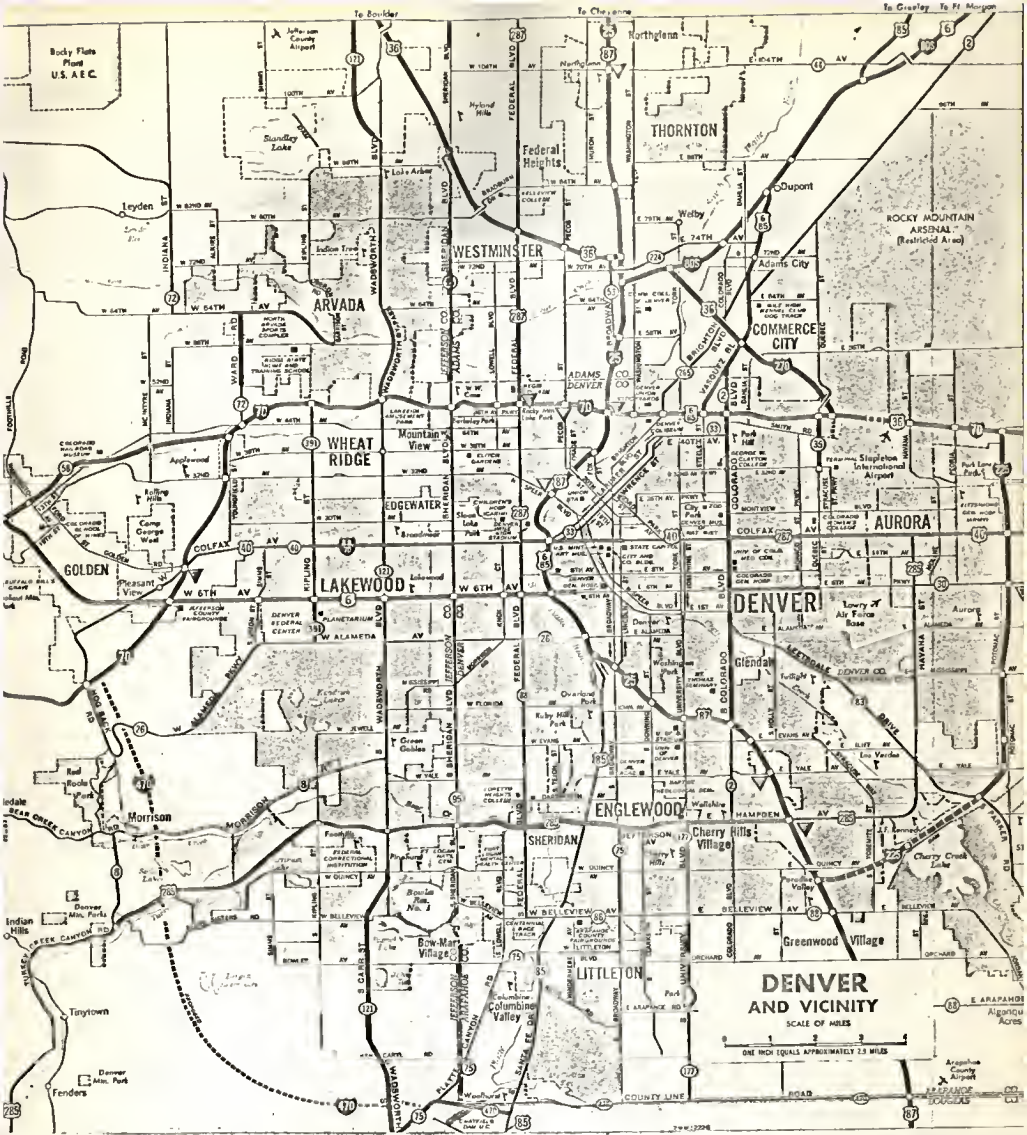
F. Transportation Plan and the Comprehensive Plan

The Long Range Planning Section of the Department of Community Development was instructed by the Council to do a comprehensive plan for the city. This comprehensive plan includes the following elements which encompass a wider scope than the state statutes' requirements.

1. Land Use Plan
2. Transportation
3. Community Facilities Plan
4. Neighborhood Conservation Plan
 - a. Rehabilitation
 - b. Urban Renewal
5. Capital Improvement Program

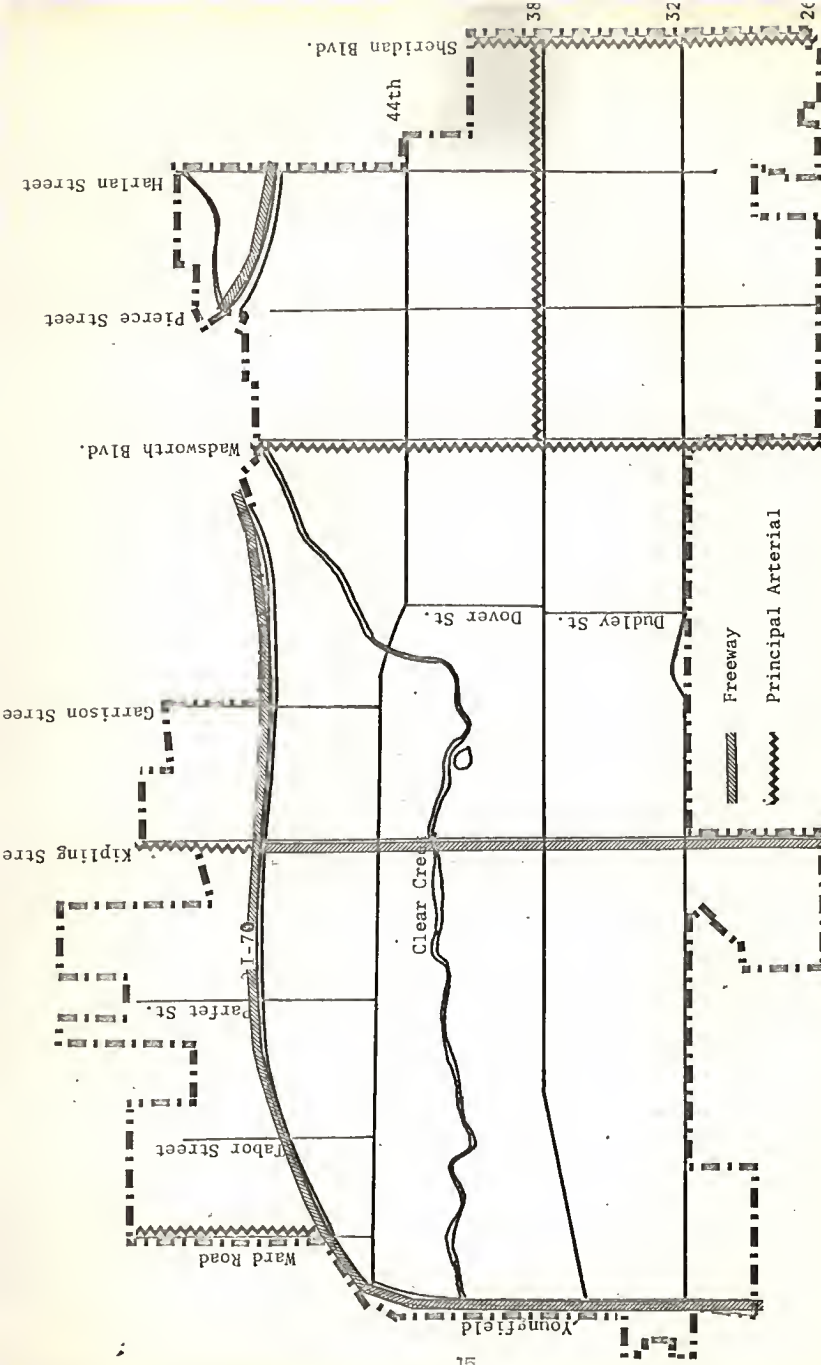
The Transportation Study and Concept Plans in Appendix A of this report is the preliminary draft of the Transportation Plan for the Comprehensive Plan.

It is this draft that is going to be reviewed and analysed in the following chapters.



Map 1

WHEAT RIDGE IN METROPOLITAN DENVER



G. Growth and No Growth

There were six meetings held in September and October, 1974 in the city regarding all the elements in the comprehensive plan. They will be further discussed in Section J of this chapter. Inputs from the citizens are summarised in Appendix B.

Throughout the meetings there were two main opposing groups - the residents vs. the businessman. The majority of the residents in the meetings prefer a slowgrowth, both in residential and commercial development. In fact, some provincial residents even prefer "no-growth". They just want it to remain as it is. Under this circumstance, according to them, the city can do without planning and most of the public works' function.

The counter viewpoints were raised by all the businessmen in the meetings. They mentioned all the problems in the city such as traffic congestions, traffic accidents, the uncontrolled ingress and egress of cars along major arterials and the drainage problems. All these problems are directly and indirectly affecting their business.

As the chairman of the Chamber of Commerce pointed out, if these problems are not corrected in the near future, some of the businessmen might move their business out of the city. This will affect the tax base in the city. He also pointed out that most of the city's revenue comes from the taxes of business and not from the residential property.

(The total city revenue in 1975 was \$2,767,837, 33.5% of this came from sales tax and 13.0% from property tax. About one-fifth of the property tax came from commercial land.

To sum up, the businessmen want to widen the existing arterials, improve the street pavements and drainage, and to zone more land for all kinds of commercial development.

H. Land Use and Transportation

Land use and transportation are directly related. One can influence the development of the other.

For example, intensive land-use will generate more traffic and a new arterial will influence the land-use adjacent to it.

The transportation plan for the city has to come up with a workable solution to satisfy as much as possible the wishes of the residents and the businessmen. Hopefully, this will minimize much of the opposition from both groups.

However, after carefully examining the regional highway plan, one sees that there are potential conflicts between the regional transportation plan and the wishes of the community. For example, according to the regional transportation plan, the portion of W. 38th Avenue east of Wadsworth Boulevard is designated as a principal arterial with a right-of-way of 120 feet. In the event the city proposes a narrower right-of-way in this portion of West 38th Avenue, the city has to get a general consensus from the

members of the DRCOG. The city must prove to the members that its proposal is a workable alternative.

Maps 3 & 4, and Tables 2 & 3 show some land use and land use related information.

I. Selected Physical and Socio-economic Data

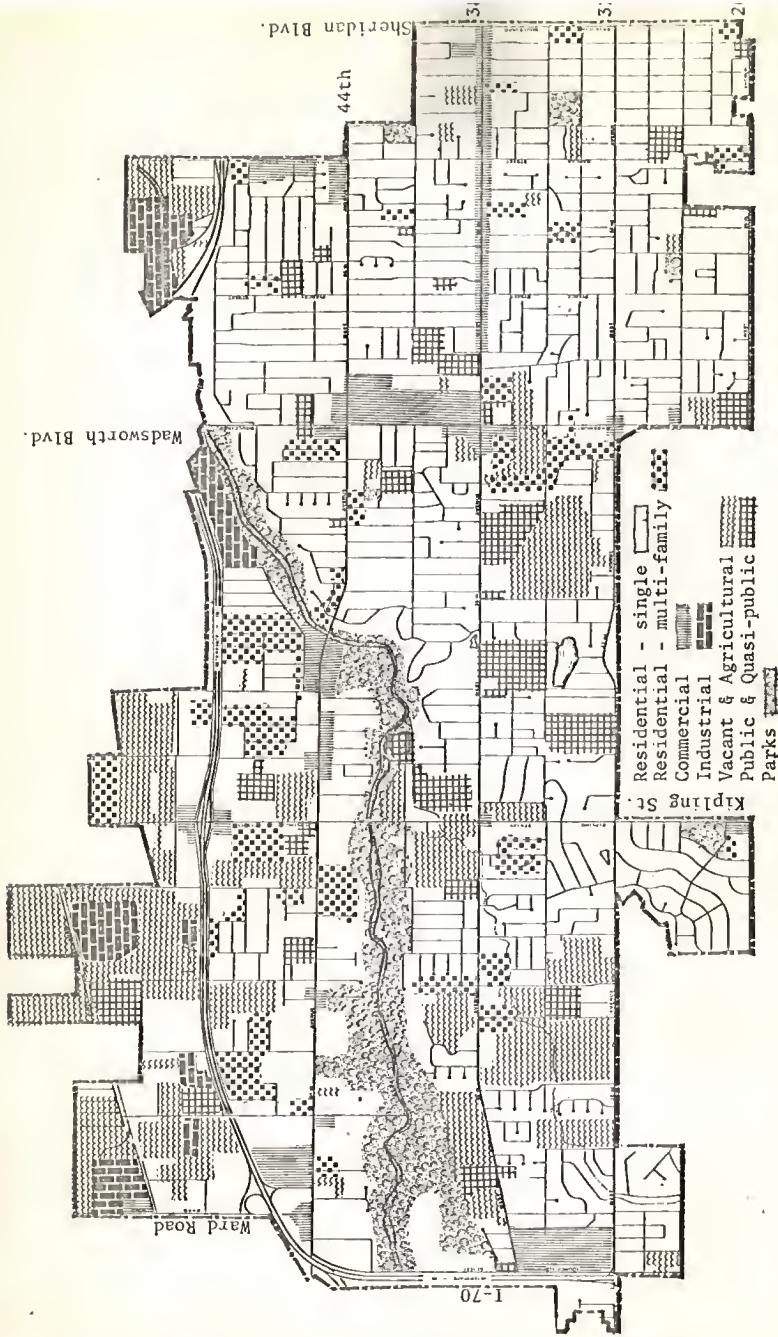
Some of the selected physical and socio-economic data will be mentioned here. They have the function in influencing the traffic generation and mode of transportation.

1. Physical Features. Wheat Ridge is situated at the eastern foothills of the Rocky Mountains. The Clear Creek and Lena Gulch running diagonally north-eastward across the city.

The topography is generally rolling towards the Creek. There are no serious grade problems affecting the design and construction of streets. Sand, gravel and clay are the main soil composition in the city.

2. Population. According to the 1960 Census, Wheat Ridge (unincorporated) had a population of 21,619 and in the 1970 Census the incorporated city had 29,795, an increase of 37.4%. In June, 1975, it was estimated (from the building certificates of occupancy) to have 36,000 people, an increase of about 20 percent.

The biggest increase was in the category of "senior citizens" (age 65 and over). They increased from 1405 in 1960 to 2665 in 1970. Most of them are located in the eastern portion of the city.

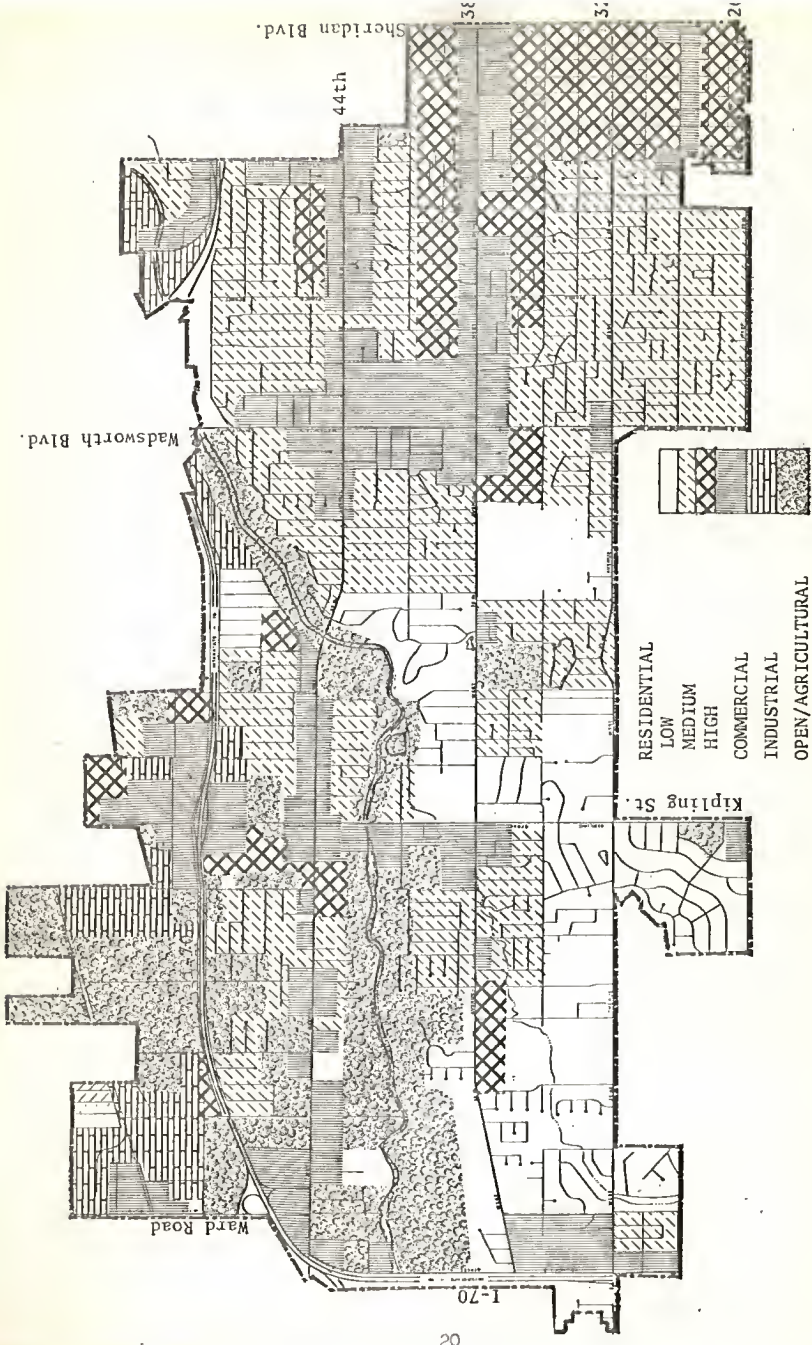


- Residential - single
- Residential - multi-family
- Commercial
- Industrial
- Vacant & Agricultural
- Public & Quasi-public
- Parks

Map 3

GENERALIZED EXISTING LAND USE

Source: Dept. of Community Dev., Wheat Ridge, 1975



Map 4

GENERALIZED EXISTING ZONING

Source: Dept. of Community
Dev., Wheat Ridge, 1975

Table 2
CITY OF WHEAT RIDGE
1974 LAND USE

PLANNING DISTRICT	AGRI/VACANT	PARK	SINGLE FAMILY	MULTI-FAMILY	COMMERCIAL	INDUSTRIAL	PUBLIC/SEMI-PUBLIC & ROADS	TOTAL ACRES
1	329.9 Ac. 53.7%	2.5 Ac. 0.4%	48.7 Ac. 7.9%	20.9 Ac. 3.4%	11.5 Ac. 1.9%	80.0 Ac. 13.1%	120.5 Ac. 19.6%	614 Ac.
2	350.4 Ac. 34.5%	35.7 Ac. 3.5%	233.4 Ac. 23.0%	110.8 Ac. 10.9%	58.7 Ac. 5.8%	33.4 Ac. 3.3%	192.6 Ac. 18.0%	1015.0 Ac.
3	86.0 Ac. 10.1%	34.3 Ac. 4.0%	411.9 Ac. 48.3%	52.1 Ac. 6.1%	80.2 Ac. 9.4%	30.7 Ac. 3.6%	189.3 Ac. 22.2%	853.6 Ac.
4	57.0 Ac. 6.2%	10.1 Ac. 1.1%	512.2 Ac. 55.4%	101.4 Ac. 11.0%	20.3 Ac. 2.2%	1.3 Ac. 0.1%	221.8 Ac. 24.0%	924.1 Ac.
5	187.4 Ac. 17.6%	16.7 Ac. 1.6%	491.6 Ac. 46.2%	58.8 Ac. 5.5%	33.4 Ac. 3.1%	1.9 Ac. 0.2%	273.6 Ac. 25.7%	1063.3 Ac.
6	419.1 Ac. 34.4%	9.9 Ac. 0.8%	435.4 Ac. 35.7%	42.8 Ac. 3.5%	53.0 Ac. 4.3%	0.5 Ac. 0.1%	258.3 Ac. 21.2%	1219.0 Ac.
CITY TOTAL	1429.8 Ac.	78.3 Ac.	2133.2 Ac.	386.8 Ac.	257.1 Ac.	148.7 Ac.	1256.1 Ac.	5689 Ac.
ARVADA	35%	6.5%	49%	2.5%	2.5%	0.5%	4%	
LAKEWOOD	2.4%	19.3%	48%	9.7%	9.1%	3.7%	7.5%	
DENVER	11.0%	5.0%	27%	4.0%	5.3%	4.5%	42.7%	

Source: Dept. of Community Dev., Wheat Ridge, 1975

PLNG. AREA	POPULATION EST. 6/75	ACRES	RESID. ACRES	% OF TOTAL ACRES	HOUSING UNITS	POP./ACRE	POP./RES. ACRE	PERSONS/UNIT	UNITS/ACRE	UNITS/ACRE UNITS/RES. ACRE
1	1,479	665.5	69.6	10.5	479	2.2	21.3	3.1	0.7	6.9
2	6,451	1015.0	344.2	33.9	2087	6.4	18.7	3.1	2.1	6.1
3	7,000	853.6	464.0	54.4	2595	8.2	15.1	2.7	3.0	5.6
4	7,718	924.1	613.6	66.4	2715	8.4	12.6	2.8	2.9	4.4
5	6,455	1063.4	550.4	51.8	2142	6.1	11.7	3.0	2.0	3.9
6	6,571	1141.6	478.2	41.9	2013	5.8	13.7	3.3	1.8	4.2
CITY TOTAL	35,674	5663.2	2520.0	44.5	12,031	6.3	14.2	3.0	2.1	4.8

Table 3

POPULATION AND HOUSING DENSITIES

Source: Dept. of Community Dev., Wheat Ridge, 1975

According to the city planning division, the optimal population in the city is projected to 44,000 for a low estimation and 50,000 for a high. At the present, the city council does not have an incentive to annex any land to the West of the city. The other sides are already surrounded by other incorporated cities. Figure two and map five show the population information in the city.

3. Employment. There were 13,175 employed people of sixteen years old and over in the 1970 census. It amounted to 44% of the total population. The breakdowns were: 4,192 people reported in professional and managerial classifications, 4,446 people reported in "white collar" classification (other than the first category) and 4,537 people reported in "blue collar" classifications. The percentages of the three categories were quite evenly distributed and compared with 29.6%, 29.6%, 40.8% for Denver SMSA (total employed was 492,961) and 27.5%, 26.4%, 46.1% for the State (total employed was 825,776).

4. Income. According to the Census, the median income of families and unrelated individuals in 1969 in the city was \$10,508. The median income of the Denver SMSA was \$8,390 and Jefferson County was \$10,998.

On the average, the median income in Wheat Ridge was above the average in the SMSA. The economic situation has been very stable.

5. Education. In the 1970 Census, there were 11,444

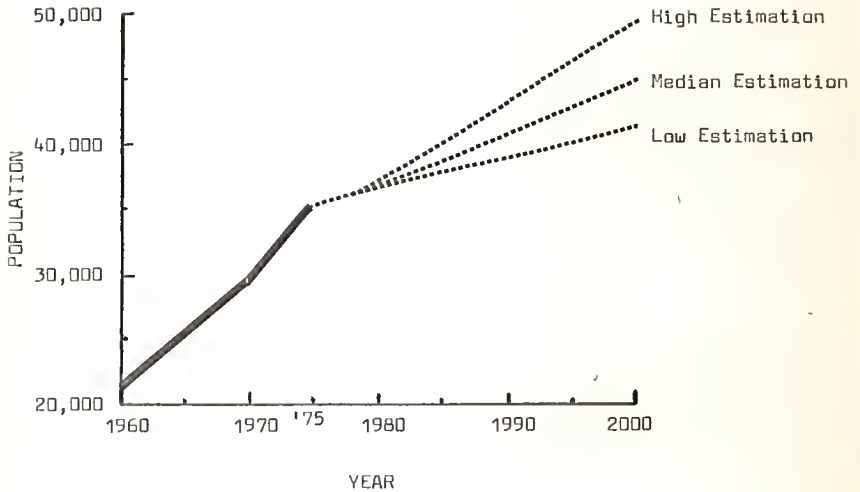
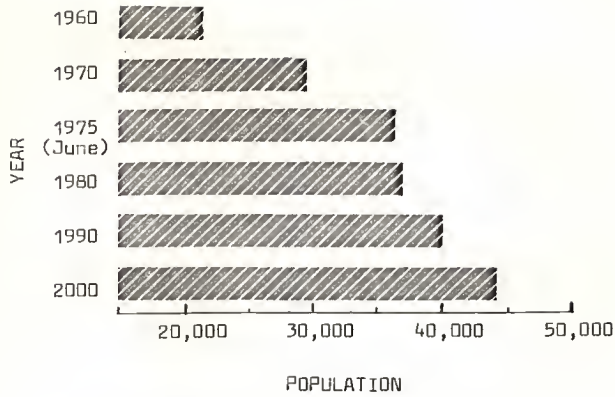
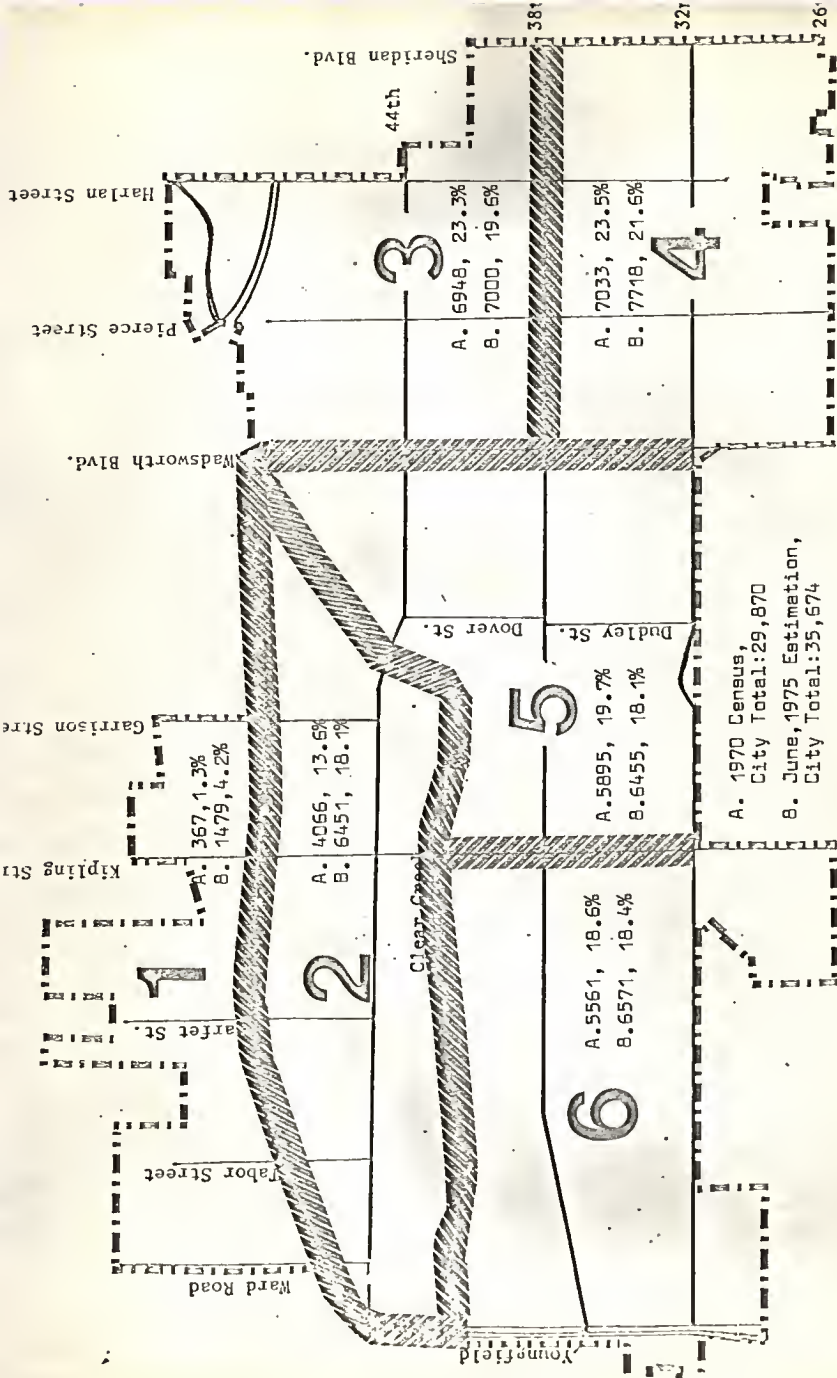


Figure 2
WHEAT RIDGE POPULATION PROJECTION

Source: Dept. of Community
Dev., Wheat Ridge, 1975



Map 5

POPULATION BY NEIGHBORHOOD
 PLANNING AREAS

Source: Population estimates provided by
 Wheat Ridge, 1975

people who had 12 years and under education, and 5,802 people who had 12 years and over education. The median school years completed was 12.6 for those 25 years old and over.

As a whole, the city is not homogeneous socially and economically. The Southwest portion is prosperous in every respect. The blighted areas are found north of the Highway I-70 east of Wadsworth Blvd. Both areas have a higher concentration of senior citizens and people under 16 years old, then the rest of the city.

J. Neighborhood Planning Program

Citizen participation has come to play an important role in the planning process in recent years. Without citizen approval, it is impossible to get any project subject to a referendum adopted, and difficult to continue for very long non-referendum projects that are not supported.

With this knowledge in mind, the Wheat Ridge long-range planner decided to get the citizens' input in the development of a comprehensive plan right from the onset. He divided the city into six neighborhoods following the boundaries of census tracts as much as possible. In September and October 1974, he had six meetings with the citizens, one in each neighborhood. He explained to them the general information of the city and the importance of a comprehensive plan. (Most of the information was taken from the 1970 Census tracts. If the tracts go across the

political boundary, split tract information was used). Then, he asked the citizens to mention the problems and to give their ideas about the future development of the City. (Appendix B)

All the councilmen and planning commissioners were invited to attend each meeting in order to show the importance of the issue and to answer some of the technical questions from the citizens. They did attend the meetings but not all of them at one time.

After collecting all the inputs from the six meetings, the planner drafted the goals and objectives of the comprehensive plan. These goals and objectives were presented to the planning commission about two months after the neighborhood meetings. With some modifications, they had been generally endorsed by the commission.

In order to have the citizens participate on a permanent basis, a neighborhood planning program was set up in February, 1975. Now, the city has six neighborhood groups. Each of which has their chairman, vice-chairman and secretary. Each neighborhood meets once a month. They discuss all the things that happened in the city and propose changes, if necessary. Goals and objectives were discussed and generally accepted. They send their minutes to the planning commission as well as to the planning division so that the city officials know what their ideas are. From time to time, they also invite some planning commissioners

and planners to attend their meetings to answer some inquiries.

So far, the Transportation Concept plans have been explained to four neighborhoods. The reactions from these citizens will be discussed in Chapter III.

CHAPTER III. EVALUATION OF THE TRANSPORTATION STUDY

The Transportation Study and Concept Plans of the City of Wheat Ridge (see Appendix A) is analysed here in a chapter by chapter manner. Changes, modifications or additions are included if deemed necessary. Each of the three concept plans will analysed in terms of:

Land Use Impact

Environment

Attitudes of the Citizens

Political Conditions

Economic Feasibility

An overall evaluation of this study will form the conclusion to this report.

Chapter I. Goals, Objectives and Recommendations

Goal B (see Appendix A, page one) calls for "an alternate transportation system so as to reverse the existing emphasis on the private automobile as the chief means of transportation". The contents of this study do not describe any alternate systems to support this goal. For examples, there are no transit plan, pedestrian and bikeway plans included. Under the circumstances, it is more appropriate to call this study a street plan rather than a Transportation Study, for it does have a detailed study of streets in the city.

Objective Number 2 stated that "The city should provide

major streets that accommodate existing and projected traffic volumes". An alternate of this statement will be to use congestion to force the citizens to use public transit.

Chapter II. General Discussion

This chapter has done an adequate job in describing the general conditions of the city. There are a couple of items that could also be included: items such as employment and income of the residents. Economy has a direct bearing on traffic generation as well as mode of transportation.

In the population paragraph, a population projection should also be mentioned. However, it should be aware that some of the supporting elements might be more appropriate in other sections of the Comprehensive Plan. For example, a detailed population element will be discussed under the section of Land Use Plan.

Chapter III. Existing Situation

Under "Automobile Registration" (see Appendix A, Page 22) it would be more meaningful if the author also states the auto registration of the County and the SMSA as a comparison.

Chapter IV. Street Classification and Standards

The street classification and standards are primarily based on those of the DRCOG. However, the right-of-way widths, traffic lanes and traffic capacity have been revised to meet the local needs as well as the opinions of

the citizens.

The proposed design standards (Appendix, Pages 38 and 40) are wider than the existing standards. The existing standards require 40 feet for local streets, 50 feet for collectors and 60 feet for arterials. The proposed standards (50' for locals, 60' for collectors and 80' for arterials) initiate a turn lane for the arterials and collectors. Such a provision has the function to eliminate some of the existing traffic accidents caused by the stop and go traffic.

The author in the study stated that "The space between the curb and the right-of-way boundary can be used for sidewalk, landscaping, utility and bikeway or a combination of the above". It is a flexible suggestion tailored to the local needs.

Figure 16 (Appendix, Page 43) shows only the cross-section of a collector parkway. There are no local and arterial parkways shown.

Figure 3 in this report suggests the design standards for these parkways.

Chapter V. Existing Functional Classifications

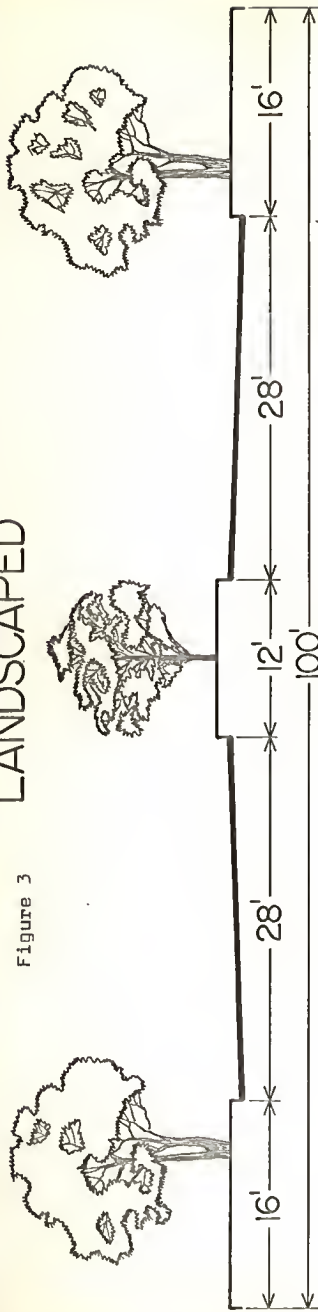
This is a short chapter classifying the existing streets into collectors and arterial streets. The streets not shown on the map must be assumed to be local streets.

Chapter VI. Transportation Facilities

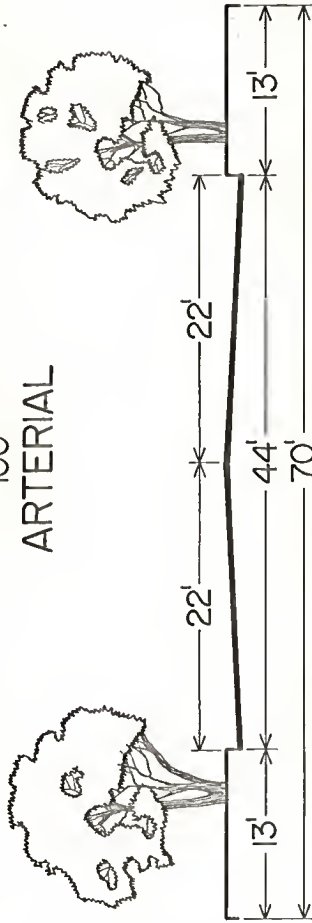
The public transit in this chapter deserves a more

LANDSCAPED

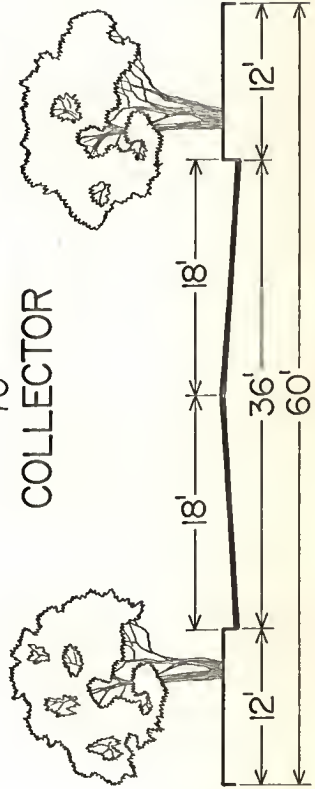
Figure 3



ARTERIAL



COLLECTOR



LOCAL

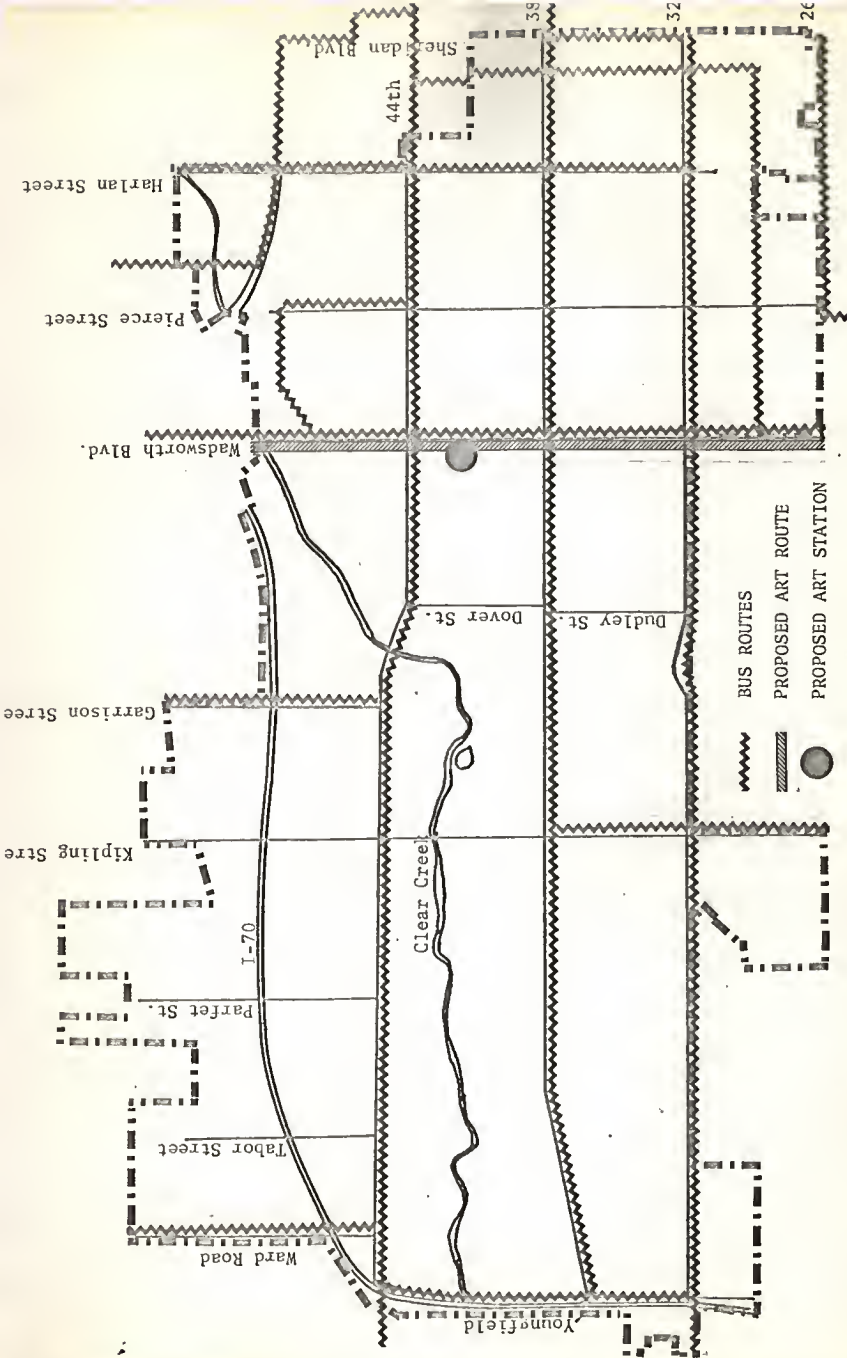
Source: Dept. of Community
Dev., Wheat Ridge
1975

detailed description. The reader should know exactly what the bus service is in the city. The following is a more detailed description of public transit.

Wheat Ridge, same as other municipalities and counties in the region, is served by the Regional Transportation District (RTD). It was created by the voters in 1971. See map 6.

Before September, 1975, RTD only provided two "regular" buses and three express buses linking the city to the Denver Metropolitan Area. One "regular" bus which ran along West 38th Avenue only served in the morning, 6 AM - 9AM, and in the afternoon, 2 PM - 6 PM with about one hour headway. There was no bus service between 9 AM - 2 PM. The other "regular" bus which still runs through the north-east corner of the city is of little use to the city. The three express buses only serve once in the morning and once in the afternoon. There was no bus service on Sundays and Holidays.

After September, 1975, the Number 13 regular bus which runs through the city along W. 38th Avenue expanded both its route and frequency. It extends from Kipling Street all the way to the Western city limit. The headway is now about one hour from 9 AM to 4 PM, with about half an hour from 7 AM to 9 AM and from 4 PM to 6 PM, Monday through Friday. On Saturdays, Sundays and Holidays, it runs about one hour headway from 7 AM to 5 PM. This is



Source: Regional Transportation Dist.
 & Dept. of Community Dev.
 Wheat Ridge, 1975
 * Automatic Rapid Transit

Map 6

WHEAT RIDGE BUS, ART ROUTES

the bus used most by the passengers to go to work and shop in downtown Denver.

The regular bus fare is 35¢ from 4 AM to 9 AM and 4 PM to 7 PM weekdays and 25¢ at all other times.

Also, since September 8, 1975, there are two new mid-size buses running exclusively in the city and to Arvada in the north. These two buses generate eight different routes at different times of the day with different headways. The schedules, frequency and routes were carefully selected by a special citizens' Metro-Transit Committee appointed by the City Council. The bus fare is 25¢ at all times.

These two buses will run six months as a trial period. If there are still not enough passengers, the service will be terminated. So far, the ridership has not been ideal. One of the problems is that people may endorse a certain route but it does not necessarily mean that they will use the bus. People have been used to the private automobile for a long time. It takes a special kind of education to train them to use the public transportation.

Automated Rapid Transit (ART) is proposed by RTD for the region. The portion of Wadsworth Blvd. in Arvada, Wheat Ridge and Lakewood is proposed for the ART route. A station is also proposed at W. 41st Avenue in the City. See Map six.

The Bikeway Plan

Since "bikeway" is part of a transportation system not included in the plan being analysed, it is presented here in order to understand the whole transportation setting.

Out of the many purposes of bikeway (such as neighborhood, community, recreational, sport riding and touring) recreational and school community bikeways seem to be the most needed in the City. Due to the small size of the city (9 sq. miles) and "adequate" bus service, work-commuting type bikeways should not be in great demand.

A State Trail System along Clear Creek is in the implementation state. The Trail includes hiking, equestrian, cross-country skiing, snowshoe and biking. At the present, the section east of Kipling Street is 90% completed. The section between Kipling Street and Youngfield Street should be finished in 1976 if land acquisition poses no problems.

This Trail has the function to fulfill the most needed parks and open space of the city. As it stands, the city has only 84 acres of parks while the Metropolitan standard calls for 10.5 acres for every 1,000 persons. The city has approximately 36,000 population and should have about 380 acres for park and recreation by this standard.

Other than the Clear Creek, the Lena Gulch and Rocky Mountain Ditch seem to be ideal for recreational bikeway development.

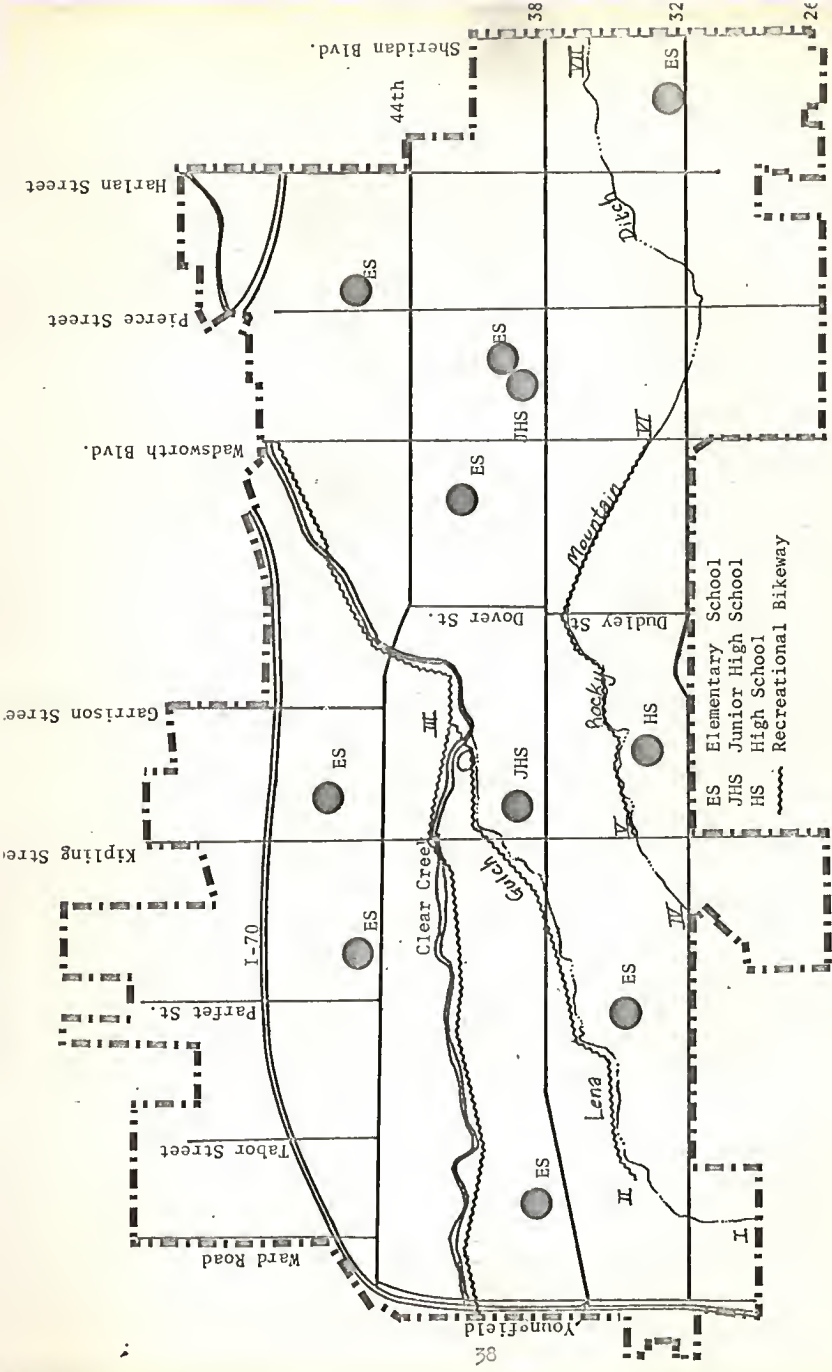
Map 7 shows a proposed bikeway on the north bank of the Lena Gulch. From point I to point II, the area is not suitable for bikeway for it is too steep (30 degrees to 60 degrees) and too close to the back yards of most of the houses. From points II to III, the area poses no problems. It also has access to the Clear Creek Trail System.

Rocky Mountain Ditch from Points IV to V and VI to VII are fully developed and are not possible for such a development. Only from points V to VI still has the potential for a bikeway.

Other than the recreational bikeway, school-commuting bikeways should also be developed. Map 7 also shows the location of all the schools in the city. A survey must be done in order to find out the best route for this type of bikeway. Since it is used by school children, it is advisable to limit use on major arterials (See map 2 for major arterials).

In order to have a workable bikeway plan, the following information is needed:

1. The exact ROW width of the existing streets
2. Survey/Questionnaires
 - a. Assessment of bikeway demand
 - b. Type of bikeways
 - Bike Lane - An on-street bikeway. Bike paths-
 - An off street bikeway
 - c. Potential bikeway locations
 - d. Length of trip
3. Intersections and crossings
4. Bikeway signing
5. Bikeway lighting
6. Bicycle parking facilities
7. Bikeway policy - registration, licensing and enforcement



Map 7

RECREATIONAL BIKEWAY

Source: Dept. of Community Dev., Wheat Ridge, 1975

8. Bikeway costs and funding
9. Bikeway maintenance
10. Safety rules
11. Land acquisition methods - especially for bike paths and bike trails
12. Timing for development

Chapter VII, Concept Transportation Plans

A. Concept 1 (Appendix, page 49)

Land Use Impact:

With some minor exceptions, the collector and arterial streets proposed in Concept 1 are practically the same as the existing street functional classification, shown in Figure 17 (Appendix, page 45). In other words, the proposed collector and arterial streets are used as such at the present time. The difference is the proposed design standards which are wider than the existing ones. In most cases, the existing ROWs are wide enough to accommodate the new standards.

Under the circumstances, this street plan should not have a great change on land use.

The only change will be the new collector street system proposed north of I-70 for the future industrial development. This street system will be beneficial to the potential developers.

Environment:

This plan suggests that the major corridors, such as W. 44th, W. 38th and W. 32nd Avenue should be turned into parkways. It also suggests that "local streets, especially those in the new subdivisions should also be well landscaped". This will definitely enhance the existing

unsightly environment with all the overhanging utility wires. The wires will be either covered up by the trees or have to be removed and placed underground for the landscaping.

The only reservation on environment will be the section of Simms Street by-pass which cuts across the natural landscaped Clear Creek. It should be designed in such a way so that it will minimize the harmful effect to the natural habitat.

Attitude of the Citizens:

As of January 1976 this transportation study has been explained to three out of the total six neighborhoods. They prefer Concept 1 to the other two concept since there are no drastic changes to the existing street system.

It should be mentioned here that there is a small group of vocal citizens who object to any new development in the city. They go to all the public meetings to express their opinions. The majority of the citizens just do not bother to attend any meetings. Under this circumstance, the inputs from the public meetings are mostly from the vocal group. They become the "majority" in the meeting.

They did not make any negative comments on the proposed collector on Dudley and Dover Streets. They accepted well the new collector street network north of I-70 as well as the Simms Street by-pass.

As a whole, those in attendance at neighborhood public

meetings did not object to the widening of a collector or arterial street by just putting on additional turn lanes.

Political Condition:

This study has been presented to the Planning Commission once and they generally endorsed Concept 1. However, they do not want to make any firm commitments until they gather all the inputs from the six neighborhoods.

As of January 1976, most of the Council members are not fully aware of the detail of the study. It is premature for them to comment on the study until the Planning Commission refers it to them on a later day.

Economic Feasibility:

There are about 13 miles of arterial and 25 miles of collector streets proposed in Concept 1. Except for about 4.5 miles of collectors which need totally new construction, the others will be mainly overlay on the existing streets.

One of the most costly constructions seems to be the Simms Street by-pass which requires the construction of a new bridge across the Clear Creek.

Out of the 13 miles arterial system, there are about 6.7 miles that belong to the jurisdiction of the State Highway Department. Any widening of these arterials should be the responsibility of the Highway Department.

The total cost to construct these arterials and collectors, therefore, should not be too costly to the city and furthermore, these proposed streets are intended

to be accomplished within a span of 25 years (up to the year 2000).

The exact cost and priority have not been set since the street plan has not been adopted by the Planning Commission and City Council. It is very difficult to make a cost estimation without knowing the priority, time interval and construction/land costs.

B. Concept 2 (Appendix page 50)

Land Use Impact:

The major impact on land use will be the realignment of the section of W. 44th Avenue west of Kipling Street and the new pair of collector streets on both sides of Lena Gulch. The realignment will prevent the through traffic, especially the truck traffic, going through this portion of W. 44th Avenue. It will, therefore, preserve this neighborhood from the nuisance generated by the traffic. Accordingly, it will stabilize and increase the property value of the residential development.

The pair of collector streets along Lena Gulch seems to be superfluous. The traffic counts there do not call for additional streets. West 38th Avenue will be good enough to handle the future traffic in this section of the city.

Environment:

Although the pair of collectors along Lena Gulch proposed to be well landscaped, it will still disturb some

of the natural open space along the gulch.

Furthermore, since the gulch is located in the Clear Creek Valley, any additional street system has the potential to increase the air pollution which will not be easily dispersed by wind.

Attitude of the Citizens:

The residents in the area bounded by Highway I-70 Frontage Road, Carr Street, 46th Avenue and Garrison Street strongly oppose the alternative collector streets looped around their area. They said that this loop will definitely increase traffic volume in their area.

They also wonder if the realignment of W. 44th Avenue west of Kipling Street would really have the effect to preserve the neighborhood there.

In addition, the citizens in the meeting also question the validity of the collector streets along Lena Gulch.

Political Condition:

A planning commissioner and a councilman attended one of the neighborhood meetings. They are fully aware of the contention of the collector street loop. In the decision-making stage, most probably they would vote against such a proposal.

Economic Feasibility:

There are about 12 miles of arterial and 24 miles of collector streets proposed in Concept 2. They are about the same total length as Concept 1. Out of the 24 miles

of collector streets, there are about 13 miles that need new construction. This may require more construction dollars than Concept 1. However, this concept does not require the construction cost of a new bridge. In this case, the cost may be just about the same in both concepts.

C. Concept 3 (Appendix page 51)

Land Use Impact:

The significant impact on land use in this concept will be practically the same as Concept 2: the realignment of W. 44th Avenue is identical; only the collectors along Lena Gulch is somewhat different.

There are no collector street systems proposed north of I-70. The land use impact therefore is nil. This will hinder the future industrial development there since industrial development relies heavily on highway accessibility.

Environment:

Except for the collectors along Lena Gulch, this concept does not seem to have any noticeable adverse impact on the environment.

Attitudes of the Citizens:

Most of the citizens at the 3 neighborhood meetings do not want any street development along Lena Gulch. However, between Concepts 2 and 3, they prefer the proposal in Concept 3.

They generally accept the arterial proposal on West

38th and West 44th Avenues between Sheridan and Wadsworth Boulevards and the collector proposal on these two avenues west of Wadsworth Boulevard.

Other than the arterial proposal mentioned above, the rest of the arterial proposal falls on the existing highways. The residents would like these highways to remain as they are and object to any widening.

Political Conditions:

Since the proposals in Concepts 2 and 3 are similar, city officials' reactions to Concept 3 should also be similar to Concept 2.

Economic Feasibility

There are about 8 miles of arterial and 24 miles of collector streets proposed in this concept. Out of these 24 miles there are about 6 miles of new collector streets proposed.

Among the three concepts, this one seems to be least costly since there are fewer arterial streets proposed.

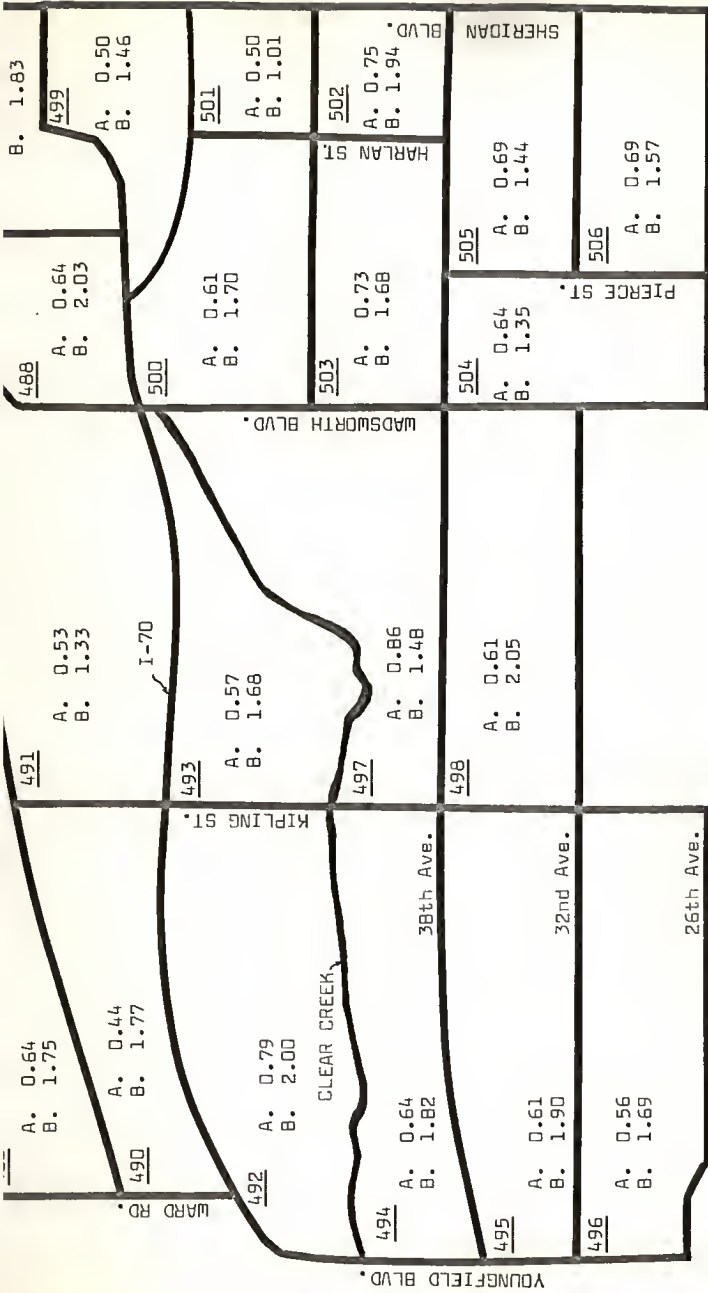
Appendix (Appendix 1 to v)

In Appendix iii, City of Wheat Ridge, Traffic Origin-Destination Map, it shows all the trips which include home base work, home base shopping, home base additional (trips other than work and shopping), non-home base, truck and external (in and out of the Denver Metropolitan area). However, there is no such map which shows only the origin and destination for work trips. The work trip map is important

in that it shows the general traffic in the morning and evening rush hours. Map 8 serves this purpose.

The total number of trips for all purposes for the City of Wheat Ridge was 109,412 according to the Denver Regional Council of Governments' research in 1971. In the same period, the work trips were 10,653 or 17.01% of all trips.

From 1971 to 1975, there is only a slight increase in traffic counts in the city. It is assumed that there is a general increase for the work trips, as well as all other trips.



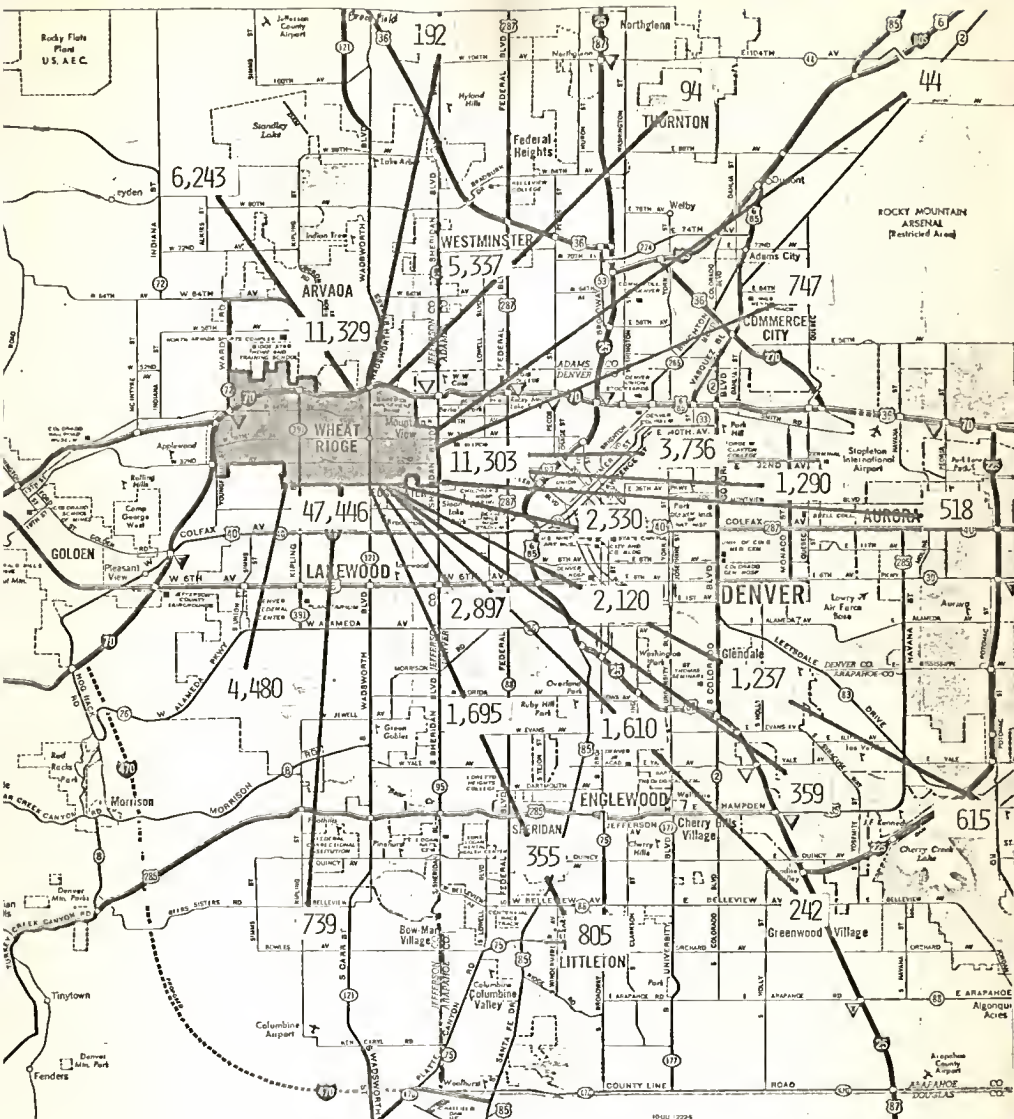
PERSONAL USE VEHICLE (A) AND VEHICLE DRIVER TRIPS (B)
PER CAPITA BY TRAFFIC ZONES

Source: DRCOG, 1971

TRAFFIC ZONES	POPULATION TOTAL	PERSONAL USE VEHICLE	P.U.V. PER CAPITA	DWELLING UNIT	VEHICLE DRIVER TRIP	V.D.T. PER CAPITA
486	1,089	693	0.64	396	1,908	1.75
488	2,496	1,599	0.64	663	5,072	2.03
489	1,092	741	0.68	429	1,993	1.83
490	378	168	0.44	126	669	1.77
491	3,750	1,974	0.53	1,134	4,744	1.33
492	1,054	837	0.79	341	2,109	2.00
493	3,193	1,829	0.57	1,054	5,369	1.68
494	1,584	1,020	0.64	408	2,842	1.82
495	2,890	1,768	0.61	816	5,482	1.90
496	4,216	2,380	0.56	1,054	7,104	1.69
497	2,978	2,550	0.86	1,190	5,892	1.48
498	2,126	1,304	0.61	686	4,348	2.05
499	1,152	576	0.50	352	1,682	1.46
500	3,386	2,066	0.61	1,238	5,772	1.70
501	76	38	0.50	38	77	1.01
502	1,064	798	0.75	418	2,060	1.94
503	2,242	1,634	0.73	950	3,766	1.68
504	2,332	1,500	0.64	894	3,155	1.35
505	2,304	1,600	0.69	896	3,324	1.44
506	3,264	2,240	0.69	1,184	5,138	1.57
TOTAL	42,666	27,315	0.64	14,267	72,506	1.70

DATA BY TRAFFIC ZONES

Source: DRCOG, 1971



CITY OF WHEAT RIDGE
 TRAFFIC ORIGIN - DESTINATION



PICTORIAL VIEW OF LENA GULCH DRIVE



DOWNING STREET



SEVENTH AVENUE

EXAMPLES OF PARKWAYS IN DENVER

APPENDIX B

WHEAT RIDGE NEIGHBORHOOD MEETINGS IN
FORMULATION OF GOALS AND OBJECTIVES
FOR THE COMPREHENSIVE PLAN

WHEAT RIDGE NEIGHBORHOOD MEETINGS IN FORMULATION OF GOALS AND OBJECTIVES
FOR THE COMPREHENSIVE PLAN

NEIGHBORHOOD PLANNING AREA #1

October 1, 1974 7:30 P.M. - 10:00 P.M.
Attendance 23

Areas of importance by priorities:

1. Carefully selected Industrial developments
2. Maintaining labs and order
Recreation Center
3. Traffic Control
Low density residential developments
4. Storm drainage
5. Improvement of East-West Arterials
6. Bikeways

NEIGHBORHOOD PLANNING AREA #2

September 25, 1974 7:30 P.M. - 10:30 P.M.
Attendance 76

Areas of importance by priorities:

1. Prevent change of 44th Avenue to Arterial
2. Public transit
Street improvement and services
3. Cood overall zoning plan
4. Less gravel pits
5. More Commerical Development in the City
6. More City aesthetics and landscaping
Elimination of utility poles and more street lights
7. Intergovernment cooperation
8. City Hall Complex
Effect of 44th Arterial on Fruitdale
School facilities provision
9. More Parks and Recreation facilities
10. Consolidate public services (water, fire, etc.)

NEIGHBORHOOD PLANNING AREA #3

September 17, 1974 7:30 P.M. - 10:30 P.M.
Attendance 80

Areas of importance by priorities:

1. Drainage
2. Quality and cleanliness
3. Sidewalks
4. Police protection
5. Parks
6. Better Streets
7. Public transit
8. Services

9. More light Commercial and Industrial development
10. No Commercial and Industrial
11. Utilize the lands in the existing zoned areas. No new changes or proposals.

NEIGHBORHOOD PLANNING AREA #4

September 18, 1974 7:30 P.M. - 10:30 P.M.

Attendance 106

Areas of importance by priorities:

1. Street improvement
2. Improvement of City government efficiency
3. Widening of major streets
4. Drainage improvements
5. More walkways and sidewalks
Low density residential
6. Bike routes
Transit system
7. More parking facilities
8. No economic growth
No widening of major streets
9. Public pool
More parks
10. Street landscaping
11. No increase in taxes

NEIGHBORHOOD PLANNING AREA #5

September 24, 1974 7:30 P.M. - 10:30 P.M.

Attendance 110

Areas of importance by priorities:

1. Consolidation of Public Service (especially water and sanitation)
2. Improvement of existing City services
3. No more widening of streets
(no four lane street developments)
4. Maintain harmony in neighborhood development with compatible density
5. Bikeways and walkways
6. Public transit (inter and intra-City)
7. Noise (decible) control
Senior citizens nursing homes
8. Community aesthetic improvement
(landscaping, underground public utility lines)
9. Public safety (proper traffic signaling, pedestrian, etc.)
10. Municipal pool
11. Air pollution control
12. Low and moderate income housing
13. No economic growth

NEIGHBORHOOD PLANNING AREA #6

September 11, 1974 7:30 P.M. - 11:00 P.M.

Attendance 75

Areas of importance by priorities:

1. To remain as residential City
2. Against the Kipling and Ward Road Corridors

3. No more Arterials
4. Street improvements
5. Noise (decibel) control
6. Aesthetic enforcement
7. Police and fire protection
8. Small neighborhood stores

NUMBER OF ATTENDANCE IN THE SIX NEIGHBORHOODS

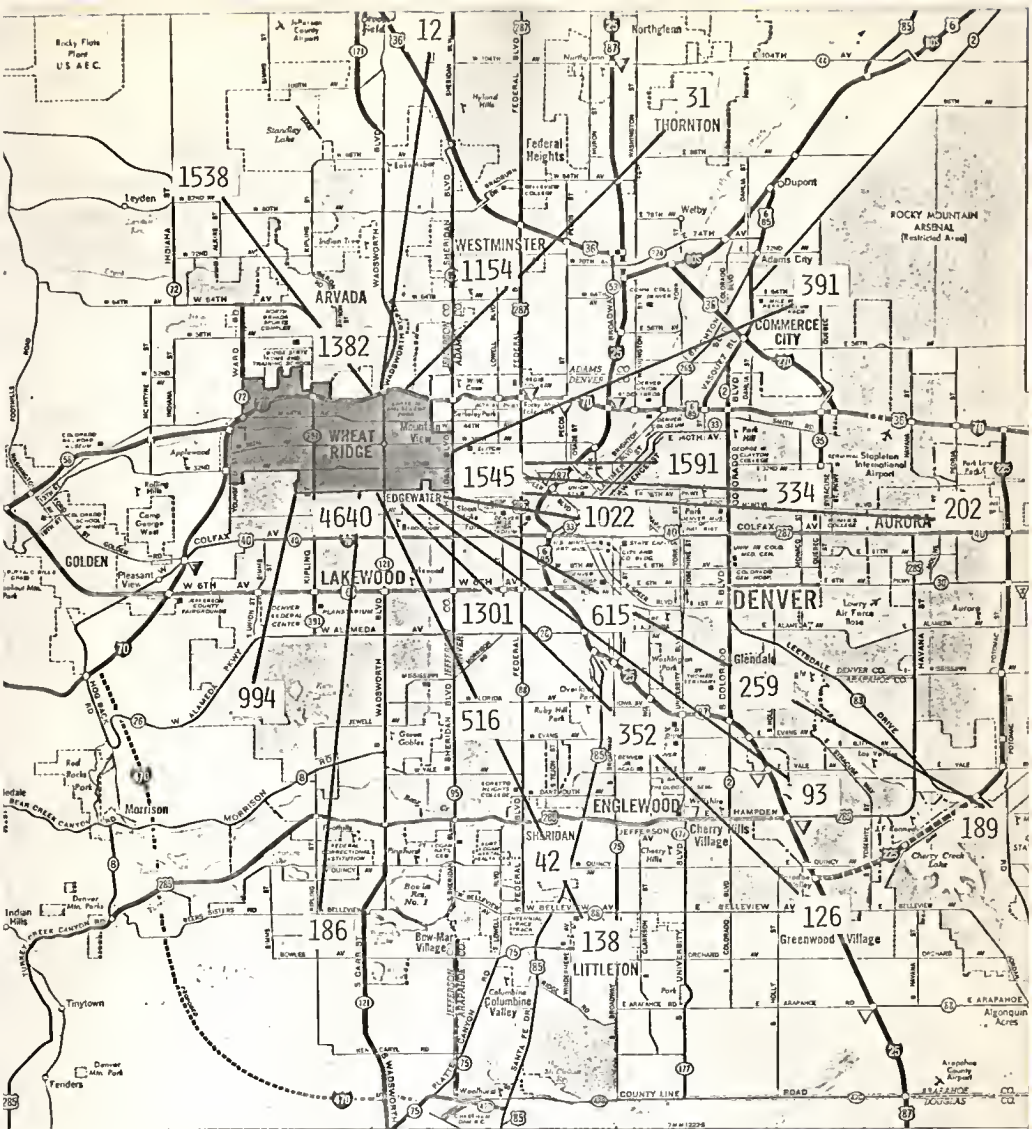
<u>Planning</u>	<u>Attendance</u>	<u>Population in Area</u>	<u>% Attendance</u>
<u>Area</u>			
1	23	1300	1.8%
2	76	6300	1.2%
3	85	6800	1.3%
4	95	7600	1.3%
5	106	6300	1.7%
6	70	6400	1.1%
Total	455	34,700	1.3%

BIBLIOGRAPHY

- Arvada, City of, Colorado, Planning Commission. The Comprehensive Plan for the City of Arvada. Arvada, Colo.: The Commission, 1973.
- Dechiana, Joseph, and Lee Koppelman. Urban Planning and Design Criteria. New York: Van Nostrand Reinhold Co., 1970.
- Earle V. Miller Engineers. Yuma Area Transportation Study - A Report and a Plan. Phoenix, Arizona: The Engineers, 1966.
- Havekost/Waldman & Associates. Golden Opportunity Comprehensive Plan - Phase III. Golden, Colo.: The Association, 1971.
- Ken R. White Co. Graig - Moffat County Comprehensive Plan. Denver: The Co., 1970.
- _____. The Comprehensive Plan for Lamar, Colo. Denver: The Co., 1969.
- Lakewood, City of, Colo., Dept. of Community Development. Concept: Lakewood - A Comprehensive Plan for the City of Lakewood. Lakewood, Colo.: The Dept., 1974.
- Murphy, Raymond E. The American City: An Urban Geography. New York: McCraw Hill Book Co., 1966.
- National Academy of Sciences, National Research Council, Highway Research Board. Highway Research Record No. 422: Land Use and Transportation Planning. Washington, D.C.: The Academy, 1973.
- National Committee on Urban Transportation. Better Transportation for Your City - A Guide to the Factual Development of Urban Transportation Plans. Brattleboro, Vermont: Vermont Printing Co., 1958.
- Oblinger - Smith Corporation. Comprehensive Development Plan, Louisville, Colo. Denver: The Corporation, 1973.
- Powers - Willis - Wozniak & Associates. Comprehensive Plan for the Physical Development of North Platte, Nebraska. North Platte, Nebraska: The Associates, 1969.

San Jose, City of, Calif., Planning Commission. The Master Plan of San Jose, California - A Physical Development Policy Statement. San Jose: The Commission, Jan., 1965.

U.S. Department of Transportation, Federal Highway Administration. Urban Transportation Planning: General Information. Washington, D.C.: U.S.G.P.O., March, 1972.



Map 8 CITY OF WHEAT RIDGE
 TRAFFIC ORIGIN - DESTINATION
 WORK TRIP

CHAPTER IV. CONCLUSION

This Transportation Study has done an adequate job in street planning. However, a pedestrian and bikeway plan should be included in this study. A new transit plan to expand the existing service is not necessary at this stage.

In the three neighborhood meetings, the only concern of most of the residents is for that section of street plan in their neighborhood and pay little attention to the plan as a whole. Sometimes, systematic planning just does not work this way. One should look at the plan as a total system and not sporadically, yet their position is understandable !

A small group of vocal citizens have the attitude to oppose any forms of growth. The word "Arterial" means to them widening of streets and increasing traffic. Therefore, it would disrupt the existing situation. They do not understand that the street plan has the function to minimize the existing as well as the future traffic problems in the city. This kind of attitude is shared by a couple of Councilmen.

Under this circumstance, an alternative plan to the existing street plan would be to narrow down all the streets deliberately. This would cause further congestion up to such a point that most of the people would have to use

public transportation.

Economically, the street plans proposed in the three concepts are all feasible in a span of 25 years.

Concept 1 seems to be most reasonable and has the least adverse environmental impact. If the staff in the Department of Community Development also agrees, they have to do a hard selling job to convince the public and the City Council.

EPILOG

After reviewing this Transportation Study and about a dozen other transportation documents, a check list leading to the development of a transportation plan has been designed. It is mainly for suburban cities in a metropolitan area.

Before conducting any survey as suggested in the list, it is advisable to contact outside agencies for they might have the data already, or to ask for advice or help, if necessary. Outside agencies may include state highway department, regional council of governments, regional transportation agencies, the core city, colleges and universities in the region, and the Bureau of Census.

By comparing this transportation study to the check list, one will notice that the study has done an adequate job for it contains all the essential steps as listed.

Some of the following steps require further explanations. They are marked with asterisks and the explanations will be found after the check list.

1. INVENTORY AND ANALYSIS OF EXISTING CONDITIONS

- *A. A schedule for various stages of planning
- *B. Development of goals and objectives
- *C. Population estimation
- *D. Economic
 - 1. Employment
 - 2. Income
- E. Functional relationship between land use and transportation

- F. Street standards for highways, arterials, collectors and local streets
 1. Right-of-way width
 2. Pavement width
 3. Sidewalk
 4. Curb and gutter
- *G. Terminal and transfer facilities
 1. On and off-street parking and loading of people and goods
- H. Pedestrian and bicycle circulation system
- *I. Travel pattern - origin - destination survey
 1. Household interview
 2. External interview
 3. Truck interview
 4. Hotel and motel interview
- *J. Trip Generation
- *K. Trip Attraction
- *L. Trip Distribution
- *M. Traffic Assignment
- *N. Travel Time
- *O. Traffic counts or volume
- *P. Vehicle registration
- *Q. Traffic accident
- R. Traffic control devices
- *S. Transit service
 1. Routes and coverage
 2. Passenger loading data
 3. Service frequency
 4. Frequency of stops
 5. Travel time
 6. Adherence to schedule
 7. Speeds and delays
 8. Passenger riding habits
 9. General operating data
- *T. Functional classification of streets
- U. Laws and ordinances pertinent to transportation
- *V. Financial resources
- W. Inputs from citizens
- X. Analysis and tabulation of existing data
- Y. Determination of nature and extent of present deficiencies

*II. FORECASTING AND PROJECTING

- A. Population
- B. Economic
 1. Employment
 2. Income
- C. Land Use
- D. Travel patterns
- E. Traffic Volumes

- F. Annexation
- G. Determination of nature and extent of future deficiencies

III. PLAN FORMULATION AND EVALUATION

- A. Transportation planning objectives
- *B. Plan elements and scope of the plan
- C. Define planning areas
- D. Forecasting years
- *E. Planning restraints
- F. New street design standards for highways, arterials, collectors, local streets and parkways
- G. Rapid transit consideration
- H. Environmental and sociological impact
- I. Citizens participation
- J. Feasibility study
- K. Transit Plan
- L. Pedestrian/Bikeway Plan
- *M. Street Plan

IV. PLAN IMPLEMENTATION

- A. Priorities and staging
- B. Financing and funding
- C. Capital improvement program

V. CONTINUING TRANSPORTATION PLANNING PROCESS

- A. Updating
- B. Reevaluation of forecast
- C. Reevaluation of objectives, restrictions, resources and concepts
- D. Plan modification
- E. A current plan

EXPLANATION OF THE CHECK LIST

I. INVENTORY AND ANALYSIS OF EXISTING CONDITIONS

- A. Could be as simple as a bar diagram
- B. Tie in with the goals and objectives in the Comprehensive Plan
- C. Make use of the building permits or better still, the certificates of occupancy to update the population from the last census
- D. From census or other agencies in the region
- G. Also, railway, air and water transportation facilities

The O-D Survey is to find out the purpose and number of

trips into, out of, within and through the city, the mode of travel used, and the time of day the trips are made. Most of the transportation deficiencies could be determined from the results of the survey. The sophistication of the survey depends on the size and transportation problems in the city. In due course, it is not necessary to go through all the four interviews as mentioned.

- I. 1. For internal trip movements
- 2. A roadside interview for trans trip and external/internal movements
- 3-4 For trans movements
- J - M. Develop from O-D survey
- I - N. Could be omitted for a small size city and concentrate on traffic volume
- O. From State Highway Department
- P. From County
- Q. From police department
- S. Usually transit service is on a regional basis. Contact regional transit agency for basic data.
- T. Assign existing streets as local, collector, arterial and highways
- V. Include federal, state and county funding

II. FORECASTING AND PROJECTING

Some of the data could be obtained from regional agencies and institutions

- C. Include anticipated rapid transit systems and stations

III. PLAN FORMULATION AND EVALUATION

- B. Listing a detailed table of contents
- E. Such as limited resources, proposals of adjacent cities and regional highways
- M. With alternatives

1971-72
1972-73
1973-74

APPENDIX A

Transportation Study and Concept Plans
of Wheat Ridge, Colorado

TRANSPORTATION STUDY AND CONCEPT PLANS

CITY OF WHEAT RIDGE, COLORADO

CITY OF WHEAT RIDGE, COLORADO

TRANSPORTATION STUDY AND CONCEPT PLANS

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
I. Goals, Objectives and Recommendations.....	1
II. General Discussion.....	2
III. The Existing Situation.....	4
A. Street Right-Of-Way and Pavement Widths.....	4
B. Sidewalks, Curbs and Gutters.....	4
C. Unpaved Streets.....	7
D. Automobile Registration.....	22
E. Traffic Signalization.....	22
F. Existing Traffic Volumes.....	24
G. Projected Traffic Volumes.....	27
H. Traffic Accidents.....	29
IV. Street Classification and Standards.....	34
A. Street Functional Classifications.....	34
B. Street Design Standards.....	35
V. Existing Functional Classifications.....	44
VI. Transportation Facilities.....	46
VII. Concept Transportation Plans.....	48
A. Concept 1.....	49
B. Concept 2.....	50
C. Concept 3.....	51

LIST OF FIGURES

Figure 1.....	5
Figure 2.....	6
Figure 3A.....	8
Figure 3B.....	9
Figure 3C.....	13
Figure 3D.....	14
Figure 4.....	19
Figure 5.....	23
Figure 6.....	25
Figure 7.....	26
Figure 8.....	28
Figure 9.....	30

LIST OF FIGURES (Cont.)

PAGE

Figure 10.....	31
Figure 11.....	32
Figure 12.....	33
Figure 13.....	36
Figure 14.....	38
Figure 15.....	40
Figure 16.....	43
Figure 17.....	45

APPENDIX

Personal Use Vehicle and Vehicle Driver Trips Per Capita by Traffic Zones.....	i
Traffic Data by Traffic Zones.....	ii
City of Wheat Ridge Traffic Origin-Destination.....	iii
Graphical Sketch of Lena Gulch Drive Concept.....	iv
Example of Parkways in Denver.....	v

GOALS, OBJECTIVES AND RECOMMENDATIONS

The following goals are recommended to help ensure a well-balanced transportation network for the City of Wheat Ridge:

GOALS:

- A. The City should participate in the development of a well-balanced, regional transportation system to move people and goods in a safe, expeditious and economic manner.
- B. The City should strive for an alternate transportation system so as to reverse the existing emphasis on the private automobile as the chief means of transportation.
- C. The City should ensure public safety for pedestrians and for motor vehicle drivers.
- D. The City should ensure proper future development and traffic movements by curtailing disorganized street development.

OBJECTIVES AND RECOMMENDATIONS

1. The City should encourage more buses for both inter and intra City movements so as to discourage private auto usage.
2. The City should provide major streets that accommodate existing and projected traffic volumes. Accordingly, the City should minimize existing congested traffic conditions and therefore traffic accidents.
3. The City should provide facilities that are convenient and safe for the pedestrian, as well as the bike rider, such as sidewalks, pedestrian crossings and bikeways.
4. The City should provide proper traffic signals and traffic controls as needed for safe and efficient traffic flow.
5. The City should provide suitable street lights to ensure general safety as well as a unified City appearance.

GENERAL DISCUSSION

Besides providing movement of people and goods, a transportation network can also affect land use and therefore urban form.

The major streets of the City are basically in a "grid-iron" pattern. Within these major grids, there are local streets, curved streets and cul-de-sacs. These local streets serve the traffic generated from the neighborhoods and feed the local traffic into the major streets.

The major streets that run east and west across the City are 26th Avenue, 32nd Avenue, 38th Avenue, 44th Avenue, and Highway I-70. They are roughly one-half mile apart. Twenty-sixth and 38th Avenues terminate at the west side of the City limits while 32nd and 44th Avenues have access to Denver on the east and Golden and the foothills on the west.

The streets that run north and south across the City are Sheridan Boulevard, Wadsworth Boulevard, Kipling Street and Youngfield Street. They are about one and a half miles apart. Both Sheridan and Wadsworth Boulevards give access to the entire metropolitan area, in a north south direction.

Parking in the residential districts is usually along both sides of the local streets in the older sections of the City, while off-street or in garages in the newer sections. Under the provisions of the Zoning Ordinance, the City requires all new developments to provide off-street parking.

Mercury-vapor street lighting is provided at most of the block corners and in some mid-blocks. It is the general opinion of the citizens that adequate street lighting is needed to ensure general safety, security and convenience, especially in the residential districts. Street lighting should be located or mounted in such a way to prevent light shining onto residential windows and the eyes of drivers, bicyclists and pedestrians.

According to the 1970 Census, there were 12,335 workers who used some sort of transportation to go to work. The break down is as follows: 11,673 workers (95%) used private automobiles, 370 workers (3%) used public transit and 292 workers (2%) walked. (This data did not include those who worked at home).

Also, according to the 1970 Census, there were 6,420 workers (49%) working in Denver, 4,860 workers (37%) working within Jefferson County, 1,037 workers (8%) working in other counties within the Denver SMSA, and 742 (6%) working outside the Denver SMSA or not reported.

Between 1970 and January, 1975, there was roughly an increase of 5,700 people in the City, (estimated from newly constructed units). Assuming that one-third of these people are in the work force, this amounts to an increase of about 1,900 workers.

THE EXISTING SITUATION

STREET RIGHT-OF-WAY AND PAVEMENT WIDTHS

There are no detailed records of the precise street right-of-way (ROW) width and pavement width in the City. In some sections of the City, the right-of-ways have not been dedicated to the City by the property owners. A thorough study is needed to survey and record the actual right-of-way width of every street in the City.

The Street Right-Of-Way Widths Map, as seen in figure 1, was prepared by making use of the Quarter-Section Maps; while the Street Pavement Width Map was prepared from information from aerial photos supplemented by field survey (figure 2). Both of the maps give only a general indication since there are errors in the Quarter-Section Maps and aerial photos are not accurate enough to give the exact measurement.

Generally speaking, the right-of-way widths for local streets in the City are less than 50-feet, with collector streets ranging from 50 to 70 feet and arterial streets from 60 to 80 feet. The pavement widths for local streets roughly range from 24 feet to 30 feet, collectors from 34 feet to 38 feet and arterials from 35 feet to 50 feet.

SIDEWALKS, CURBS AND GUTTERS

It is the general desire of the citizens to have adequate sidewalks in the City, especially in the residential districts and along the busy streets. In doing so, it will increase the general safety of the school children and other pedestrians. Moreover,

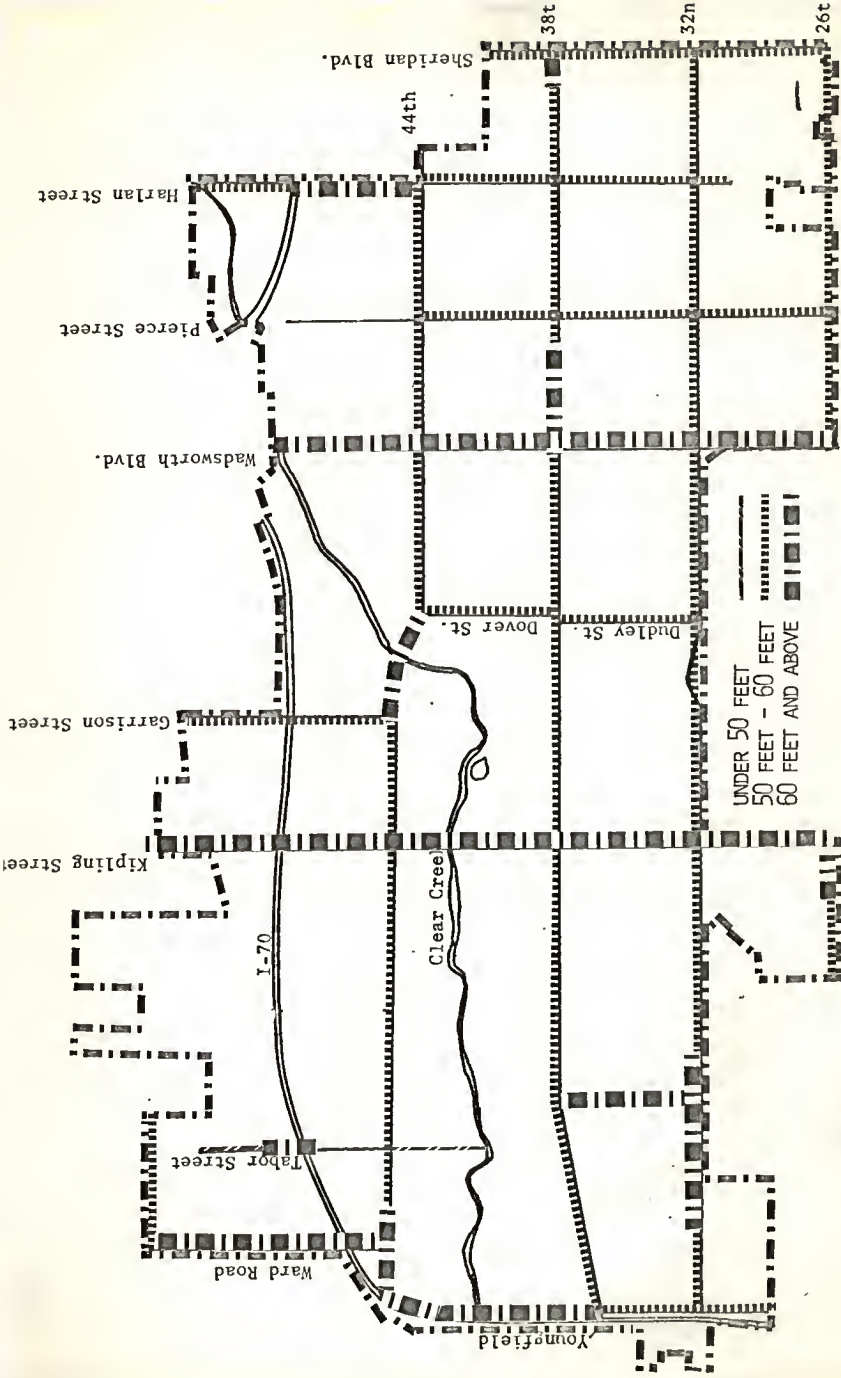


Figure 1

EXISTING RIGHT-OF-WAYS

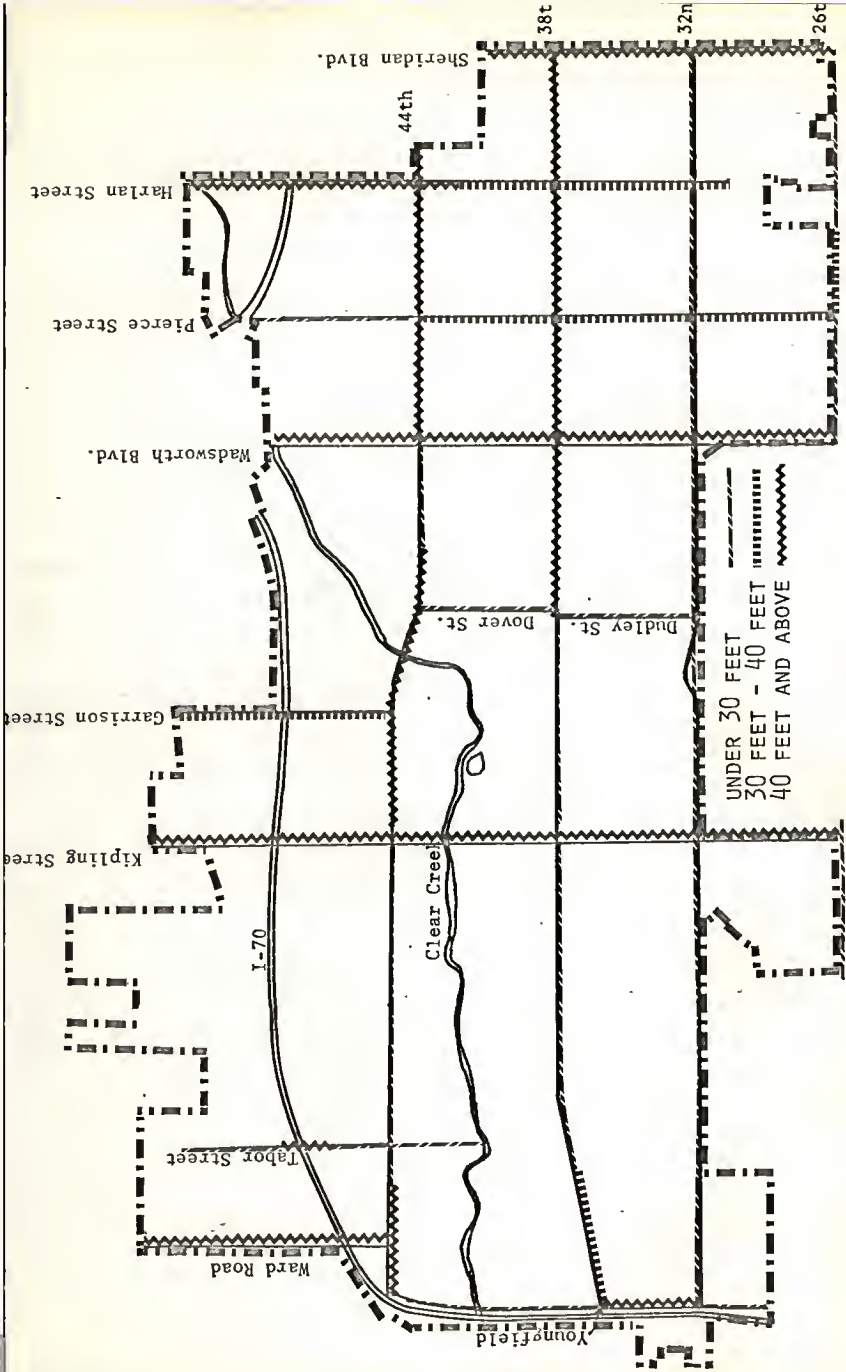


Figure 2

EXISTING PAVEMENT WIDTHS

sidewalks tend to generate a closer social interaction within a neighborhood. Currently, there are not many sidewalks except in the new subdivisions. In many cases, the existing sidewalks are only about three feet wide next to the busy traffic lanes. For example, those along Kipling between 38th and 44th, and 38th Avenue between Wadsworth and Kipling.

Curb and gutter, like sidewalks, are inadequate in the City. In due course, this usually creates drainage problems even with a small amount of precipitation. Also, pavements wear out at a much faster rate because of the poor surface run-off.

Figure 3 showing the inventory of sidewalks, and curbs and gutters in the City was prepared by making use of the aerial photographs. They were supplemented by occasional field checks if deemed necessary.

UNPAVED STREETS

As of January, 1975, there were about 11 miles of unpaved streets out of a total of 131 street miles in the City. The break down of the street mileage is: 120.35 miles of asphalt (91.8%), 7.08 miles of gravel (5.4%) and 3.63 miles undeveloped (2.8%).

The unpaved streets are covered with gravel in the developed areas and dirt in the undeveloped areas.

Again, the Unpaved Streets Map, as seen in figure 4, was prepared from aerial photographs aided by field study.

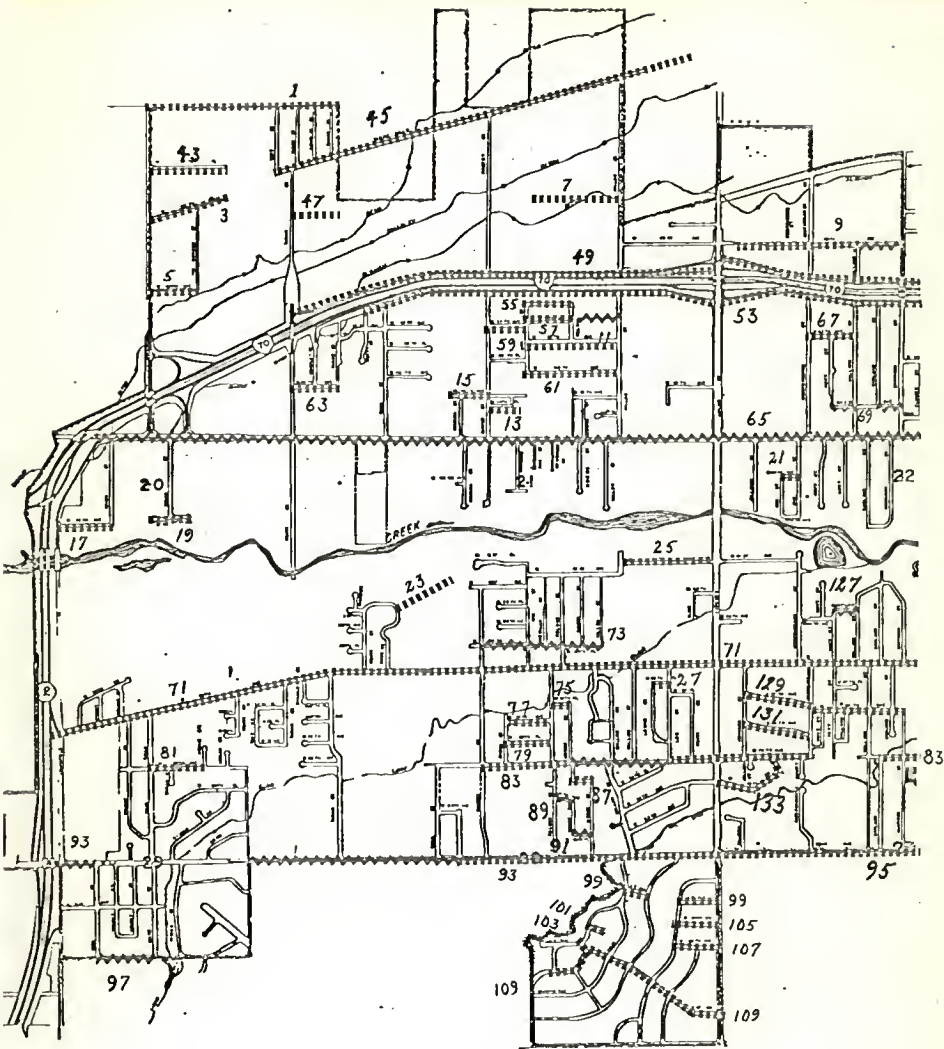
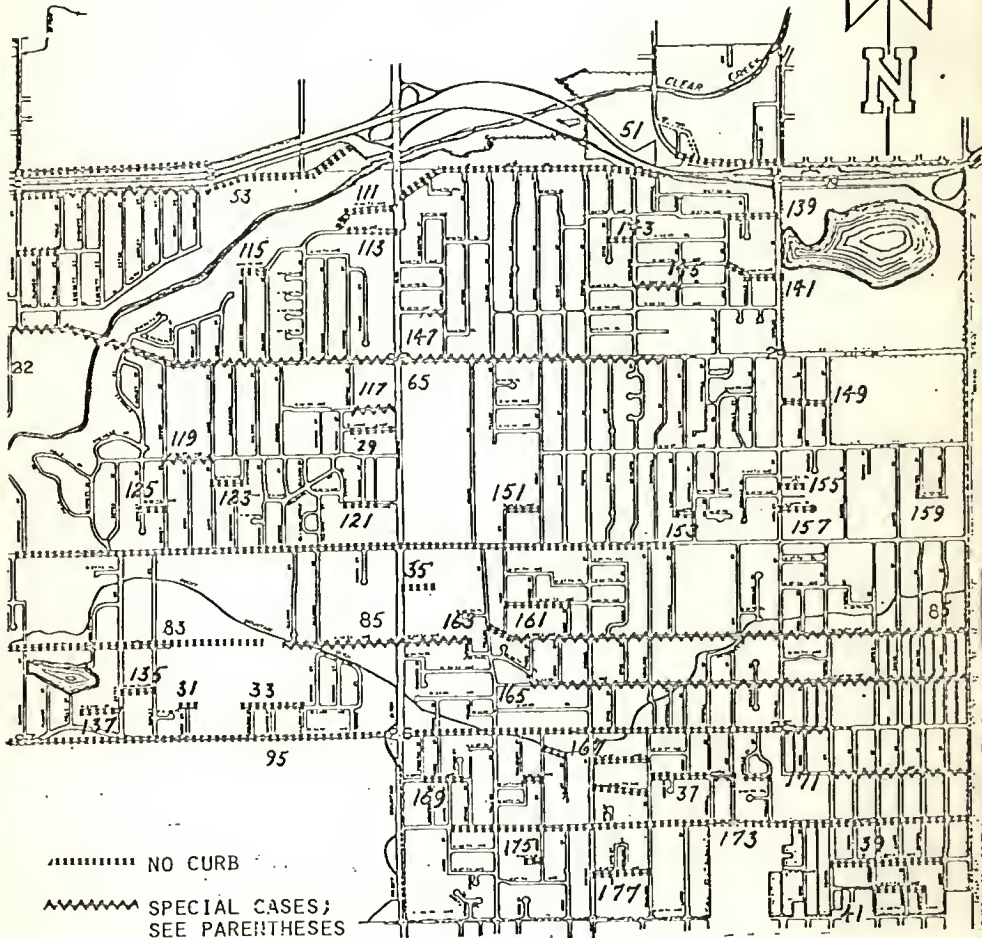


Figure 3A
 EAST-WEST STREETS LACKING CURB, GUTTER & SIDEWALK
 (AS OF JANUARY 1, 1975)
 WEST HALF OF CITY
 ODD NUMBERS USED FOR EAST-WEST STREETS



----- NO CURB
~~~~~ SPECIAL CASES;  
SEE PARENTHESES  
ON ATTACHED LIST

EAST-WEST STREETS LACKING CURB, GUTTER & SIDEWALK  
(AS OF JANUARY 1, 1975)  
EAST HALF OF CITY  
ODD NUMBERS USED FOR EAST-WEST STREETS

EAST WEST STREETS LACKING CURB, GUTTER & SIDEWALK

(as of January, 1975)

Unusual cases such as those with curbs on one side only, are numbered in parentheses.

1. W. 52nd Avenue - From Ward Road east to Simms
3. W. 49th Place - Ward Road east to end
5. W. 48th Avenue - Ward Road east to Van Gordon
7. W. 50th Avenue - from Miller Street west to Oak Street
- (9) W. 49th Avenue - east of Kipling Street to Garrison; curbing south side, Garrison to Holland.
- (11) W. 47th Place - Miller Street west to cul-de-sac (curb, north)
13. W. 44th Place - Pierson Street east to Owens Street
15. W. 45th Avenue - Parfet west to beyond Pierson Street
17. W. 42nd Avenue - Youngfield Street east to Xenon Street
19. W. 42nd Avenue - Vivian Street east and west
21. W. 43rd Avenue - Iris Street west to Iris Court
23. W. 40th Avenue - Robb Street east to end
25. W. 41st Avenue - Miller Street east to Kipling Street
27. W. 37th Place - Lewis Street east to Lee Street
29. 3 Acre Lane - Wadsworth west to end
31. W. 33rd Avenue - at end of Cody Court
33. W. 33rd Avenue - West from Allison Street to west of Balsam Street (intermittent)
35. W. 37th Avenue - Vance Street west to Wadsworth
- (37) W. 30th Avenue - Jay Street west to Pierce, and Reed to Saulsbury - curb south side, Jay to Kendall
39. W. 28th Avenue - Ames Street west to Fenton Street
41. W. 27th Avenue - Benton Street west to Depew Street
43. W. 50th Place - Ward Road east to end
45. Ridge Road - Taft Street east to Miller Street
47. W. 49th Place - Tabor Street east to Simms extended
49. North Frontage Road - Tabor east to Carr
51. W. 48th Avenue - Harlan west to Lamar Street north of Freeway, and Marshall Street west to Wadsworth Blvd, south of Freeway
- (53) South Frontage Road - Swadley Street east to end east of Carr Street; (curb walk, south Carr Street west to Field Street)

55. W. 48th Avenue - Nelson Street west to Oak Street
57. W. 47th Place - Nelson Street west to Oak Street
59. W. 47th Avenue - Parfet Street east to Miller Street
61. W. 46th Avenue - Oak Street east to Miller Street
63. W. 46th Place - Tabor Street east to Simms Street
- (65) W. 44th Avenue - Youngfield Street east to Newland Street  
(occasional spot curbing)
67. W. 46th Place - Field Street west to Garrison Street
- (69) W. 45th Avenue - Garrison Street west to Garland Street and Holland  
Street west to Hoyt Street (no curb south)
71. W. 38th Avenue - Youngfield Street east to Marshall Street
- (73) W. 38th Place - Miller Street west to Parfet Street (intermittent curb  
walk south side)
75. W. 36th Place - Moore Street west to Nelson Street
77. W. 36th Avenue - Nelson Street west to Owens Street
79. W. 35th Place - Nelson Street west to Owens Street
81. W. 35th Avenue - Ward Road east to Upham Court
- (83) W. 35th Avenue - Parfet Street east to Independence Street  
(curb walks on south, Moore Street east to Lee Street) and from  
Garland Street east to Balsam Street extended
- (85) W. 35th Avenue - Allison Street east to Upham Street (occasional curb walks)  
and from High Court east to Sheridan Blvd. (occasional curb walk)
87. W. 34th Place - Moore Court east to Moore Street
- (89) W. 34th Avenue - Nelson Street east to Moore Street  
(sidewalk on north side)
- (91) W. 32nd Place - Moore Court to Moore Street (sidewalk on north)
- (93) W. 32nd Avenue - Union Street east to Quail Street (curb walk on north)  
and from Quail Street to Kipling Street (curbwalk on north, Quail to  
Perison)
- (95) W. 32nd Avenue - Kipling Street east to Fenton Street (intermittent  
curb, Harlan Street to Fenton Street)
- (97) W. 29th Avenue - Xenon Street east to Ward Road (curb walk on north)
99. W. 31st Avenue - Morningside Drive east to Hillside Drive, and Skyline  
Drive east to Kipling
101. Rangeview Circle - Rangeview Drive to cul-de-sac
103. Dawn Court - Rangeview Drive east to Twilight Drive
105. W. 30th Avenue - Skyline Drive east to Kipling
107. W. 29th Avenue - Skyline Drive east to Kipling
- (109) Twilight Drive - (Named W. 27th Avenue at Kipling Street) west to Oak  
Street (curb walk on south, Dawn Court to Oak Street)

- 111. W. 48th Avenue (Johnson Court)- from Wadsworth Blvd. west to W. 47th Avenue
- 113. W. 47th Avenue - Wadsworth Blvd. west of Johnson Court
- 115. W. 46th Avenue - Brentwood Street east to Balsam Street
- (117) W. 42nd Avenue - Yarrow Court east to Yarrow Street (curb walk on northeast)
- (119) W. 41st Avenue - Everett Street east to Zephyr Street (curb walk intermittent, Balsam Street to Zephyr Street) and Reed Street east to Pierce Street and Harlan Street east to Sheridan Blvd. (sidewalks north, from Eaton Street to Sheridan Blvd.)
- 121. W. 39th Avenue - Kipling Street west to Zephyr Street
- 123. W. 40th Avenue - Brentwood Street west to Carr Street
- 125. W. 39th Avenue - Dover Street west to Dudley
- (127) W. 39th Avenue - Holland Street west to Hoyt Street (curb walk on north)
- 129. W. 37th Avenue - Garrison Street west to Johnson Street
- 131. W. 36th Avenue - Independence Street west to Johnson Street
- 133. W. 34th Drive - Kipling Street east to W. 35th Avenue
- 135. W. 34th Avenue - Dudley Street west to Estes Street
- 137. W. 32nd Place - Estes Street west to cul-de-sac
- 139. W. 47th Avenue - Harlan Street west to Jay Street
- 141. W. 46th Avenue - Harlan Street west to Jay Street
- 143. W. 46th Place - Newland Street west to Otis Street
- (145) W. 45th Place - Lamar Street west to Newland Street
- (147) W. 45th Avenue - Vance Street west to Kipling Street (curb walk on south)
- 149. W. 43rd Avenue - Harlan Street east to Fenton Street
- 151. W. 39th Avenue - Reed Street west to Teller Street
- 153. W. 39th Avenue - Kendall Street west to Lamar Street
- 155. W. 40th Place - Harlan Street east to end
- 157. W. 38th Place - Harlan Street east to cul-de-sac
- 159. W. 39th Avenue - Ames Street west to Benton Street
- 161. W. 36th Avenue - Pierce Street west to High Court
- 163. W. 35th Place - Teller Street east to High Court
- (165) W. 33rd Avenue - Sheridan Blvd. west to Teller Street (occasional curb walk)
- 167. W. 31st Avenue - Newland Street west to Pierce Street and Quay St. west to Reed
- 169. W. 30th Avenue - Webster Street east to Upham Street
- (171) W. 30th Avenue - Sheridan Blvd. west to Fenton Street (curb with no sidewalk) and Ingalls Street west to Ingalls Court
- 173. W. 29th Avenue - Sheridan Blvd. west to Vance Street
- 175. W. 28th Place - Reed Street west to cul-de-sac
- 177. W. 28th Avenue - Pierce Street east to Newland Street

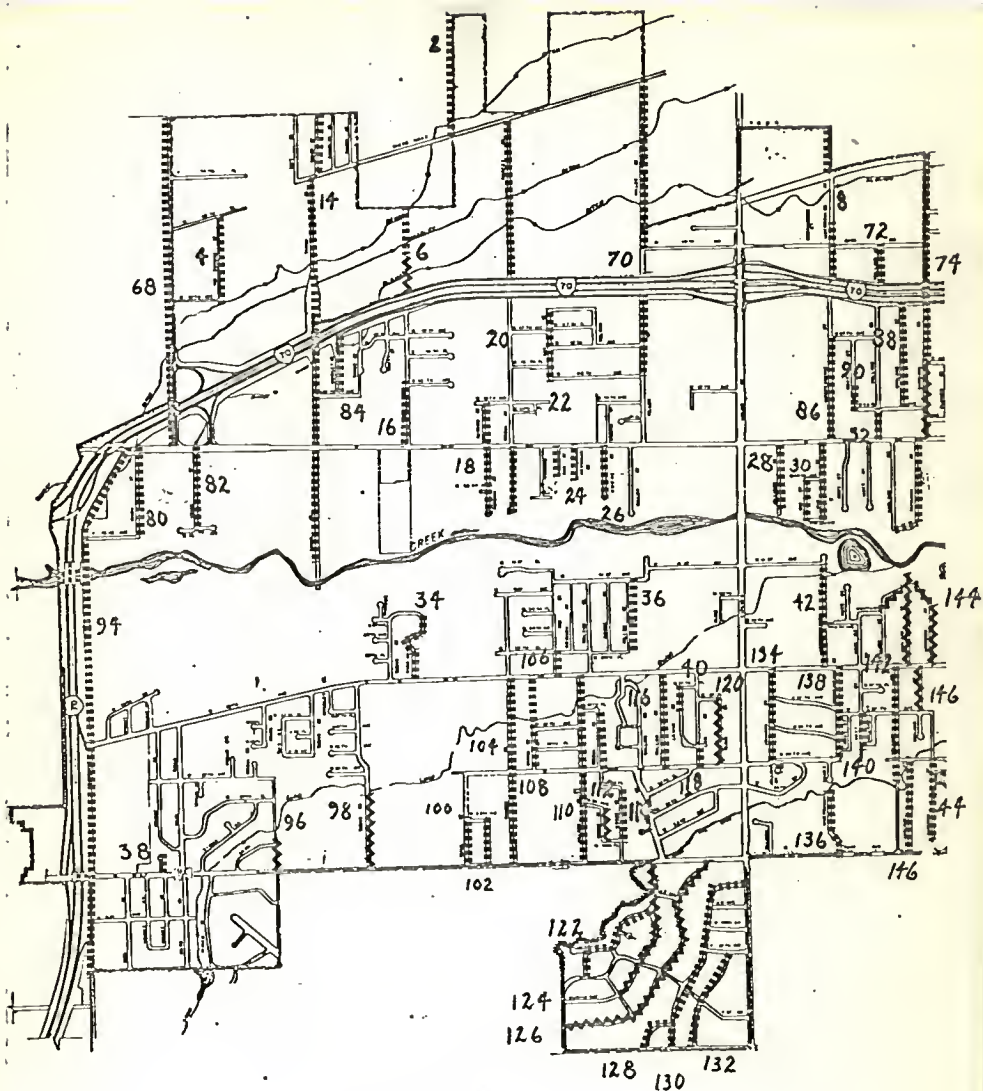


Figure 3C

NORTH-SOUTH STREETS LACKING CURB, GUTTER & SIDEWALK

(AS OF JANUARY 1, 1975)

WEST HALF OF CITY

EVEN NUMBERS USED FOR NORTH-SOUTH STREETS

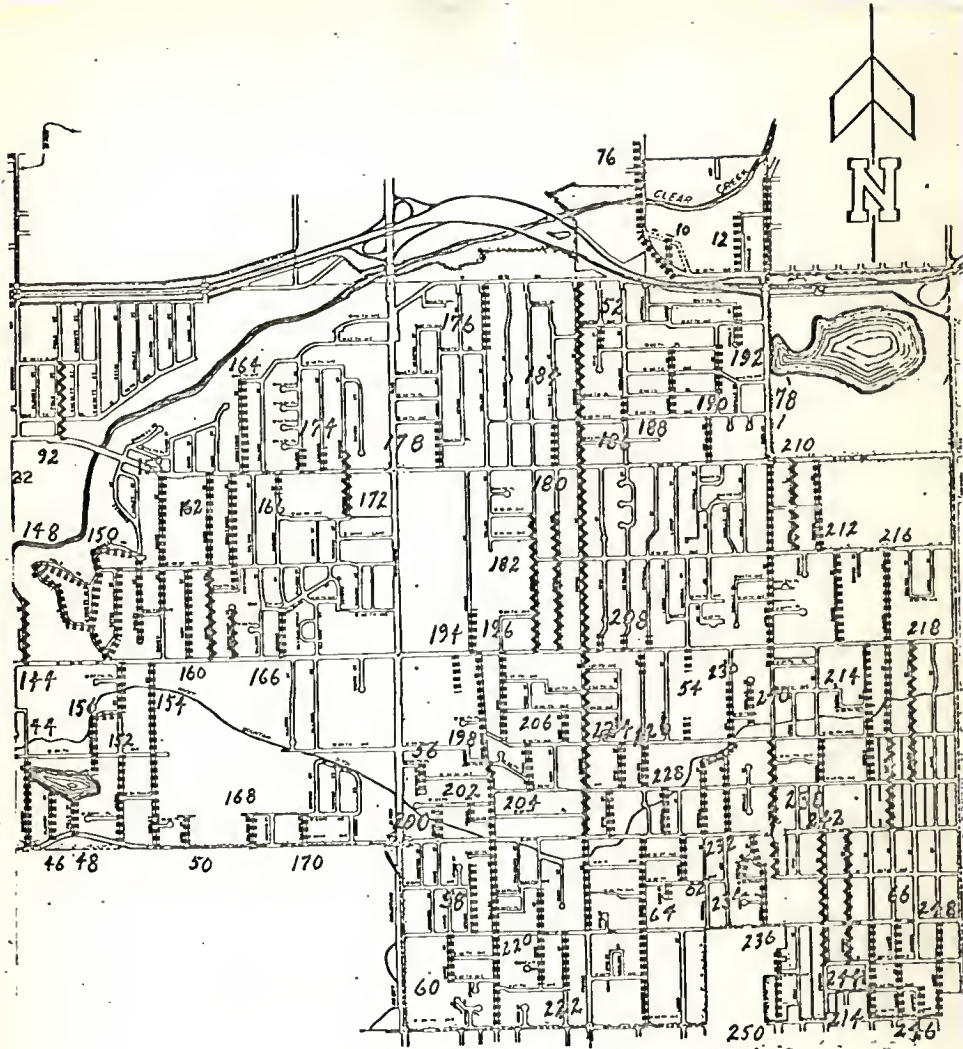


Figure 3D

NORTH-SOUTH STREETS LACKING CURB, GLITTER & SIDEWALK

(AS OF JANUARY 1, 1975)

EAST HALF OF CITY

EVEN NUMBERS USED FOR NORTH-SOUTH STREETS

NORTH-SOUTH STREETS LACKING CURB, GUTTER & SIDEWALK

(as of January, 1975)

Unusual cases such as those with curbs on one side only, are number in parentheses.

2. Quail Street - Ridge Road, north to the end.
4. Van Gordon - W. 48th Avenue, north to W. 49th Place
- (6) Robb Street - North Frontage Road, north, W. 50th Avenue extended (curb on west side)
8. Independence - North Frontage Road, north to the end, and W. 51st Avenue, south to the end.
10. Lamar Street - Marshall Street north to Old Arvada Road
12. Ingalls - W. 48th Avenue, north to W. 49th Place
14. Tabor Street - W. 52nd Avenue, south to end
16. Robb Street - W. 44th Avenue, north to W. 46th Avenue
18. Pierson Street - W. 45th Avenue, south to end
20. Parfet Street - Ridge Road, south to North Frontage Road and from W. 44th Avenue, south to end
22. Oak Street - W. 44th Avenue, south to the end and from W. 46th Avenue north to W. 48th Avenue
24. Newcombe Street - W. 44th Avenue south to the end
26. Moore Street - W. 44th Avenue south to the end
28. Jellison Street - W. 44th Avenue south to the end
30. Iris Court - W. 42nd Avenue north to W. 43rd Avenue
32. Holland Street - W. 44th Avenue north to W. 45th Avenue
34. Robb Street - W. 38th Avenue north to W. 40th Avenue
- (36) Miller Court - W. 38th Place north to W. 41st Avenue (curb walk, west side)
38. Wright Court - W. 32nd Avenue north to cul-de-sac
40. Lewis Street - W. 37th Place, south 200 feet more or less
42. Independence Court - W. 38th Avenue north to W. 41st Avenue
44. Garrison Street - W. 32nd Avenue north to W. 35th Avenue and from W. 38th Avenue north to Garland Street
46. Flower Street - W. 32nd Avenue north to the end
48. Field Court - from W. 32nd Avenue north to the end
50. Cody Court - W. 32nd Avenue north to W. 33rd Avenue
52. Otis Street - W. 47th Avenue south to W. 46th Place
54. Kendall Street - south from W. 38th Avenue and north from W. 35th Avenue each 200 feet more or less
56. Webster Street - from W. 34th Place, south to the cul-de-sac

58. Upham Street - W. 29th Avenue north to the end
60. Vance Street - W. 29th Avenue south to W. 27th Avenue
62. Lamar Street - W. 32nd Avenue south to W. 30th Avenue
64. Marshall Court - from W. 30th Avenue south to cul-de-sac
66. Chase Street - W. 26th Avenue north to W. 29th Avenue
68. Ward Road - W. 44th Avenue north to W. 52nd Avenue
70. Miller Street - W. 46th Avenue north to South Frontage Road and W. 49th Avenue north to Ridge Road.
72. Holland - W. 49th Avenue south to North Frontage Road
- (74) Garrison Street - W. 51st Avenue to south of W. 44th Avenue at Garland Street (curb walk on east) W. 44th Avenue north to W. 46th Place
76. Marshall Street - Lamar Street north to W. 50th Avenue
78. Harlan Street - W. 48th Avenue north to W. 50th Avenue and W. 44th Avenue south to W. 37th Place
80. Xenon Street - W. 44th Avenue south to W. 42nd Avenue
82. Vivian Street - W. 44th Avenue south to W. 42nd Avenue
84. Swadley Street - W. 46th Avenue north to North Frontage Road
86. Independence Street - North Frontage Road, south to W. 42nd Avenue
88. Garland Street - North Frontage Road, south to W. 45th Avenue
90. Hoyt Street - W. 45th Avenue north 200 feet more or less
- (92) Field Street - W. 46th Place south to W. 44th Avenue (curb walk on east)
94. Youngfield Street - W. 44th Avenue south to W. 29th Avenue
- (96) Union Street - W. 32nd Avenue to W. 32nd Drive (curbwalk on west)
- (98) Simms Street - W. 32nd Avenue north to end at W. 34th Avenue (curb walk on west)
100. Quail Street - W. 32nd Avenue north to W. 33rd Avenue
102. Pierson Street - W. 32nd Avenue, north to W. 33rd Avenue
104. Parfet Street - W. 32nd Avenue, north to W. 38th Avenue
106. Oak Street - W. 38th Avenue north to W. 38th Place
108. Owens Street - W. 38th Avenue south to W. 35th Avenue
110. Nelson Street - W. 38th Avenue south to W. 32nd Avenue
- (112) Moore Court - W. 35th Avenue north to W. 38th Place and W. 32nd Place north to W. 34th Avenue (curb walk on east)
114. Moore Street - W. 32nd Place north to W. 34th Place
116. Miller Street - W. 38th Avenue south to W. 35th Avenue
118. Lee Street - W. 35th Avenue, north to Lewis Street
- (120) Kline Street - W. 35th Avenue, north to W. 37th Place (curb walk on west)
122. Rangeview Drive - Twilight Drive north to Morningside Drive
- (124) Morningside Drive - W. 32nd Avenue south to Dawn Court (curb and gutter on south)
- (126) Hillside Drive - W. 32nd Avenue south to Oak Street (curb and gutter on south)



128. Circle Drive - W. 26th Avenue north to Skyline Drive
130. Skyline Drive - W. 26th Avenue north to Kipling Street
132. Paramount Parkway - W. 26th Avenue north to W. 29th Avenue
134. Johnson Street - W. 38th Avenue south to W. 35th Avenue
136. Independence Court - W. 32nd Avenue north to cul-de-sac
138. Independence Street - W. 38th Avenue south to W. 35th Avenue
140. Hoyt Street - W. 35th Avenue north to W. 37th Avenue
- (142) Holland Street - W. 38th Avenue south to Lena Gulch and W. 39th Avenue north to Garland Street (curb walk on east)
- (144) Garrison Street - W. 38th Avenue north to Garland Street (curb walk on west)
- (146) Garland Street - W. 37th Avenue north to end (asphalt gutter on east) and W. 35th Avenue south to W. 32nd Avenue
148. Field Drive - northerly from Everett Street back to Everett Street
150. Everett Street - from W. 38th Avenue northerly continuing as Everett Drive, to Dudley Street
152. Estes Street - W. 32nd Avenue north to W. 35th Avenue, and from Everett Street (W. 37th Avenue) north to W. 41st Avenue
154. Dudley Street - from Everett Drive, south to W. 32nd Avenue
156. Everett Street - from Estes Street (W. 37th Avenue) south to cul-de-sac
158. Dover Street - W. 44th Avenue south to W. 39th Avenue
160. Cody Street - from W. 38th Avenue north to W. 41st Avenue
- (162) Carr Street - W. 38th Avenue north to W. 44th Avenue (curb walk on west, W. 38th Avenue to W. 41st Avenue)
- (164) Brentwood Street - W. 46th Avenue south to W. 40th Avenue, and W. 38th Avenue north to cul-de-sac (curb walk on east to cul-de-sac)
166. Ammons Street - W. 38th Avenue north to W. 39th Avenue and from W. 44th Avenue south 200 feet more or less
168. Balsam Street - W. 32nd Avenue north to W. 33rd Avenue
170. Allison Street - W. 32nd Avenue north to W. 33rd Avenue
- (172) Yarrow Street - W. 42nd Avenue to north of W. 44th Avenue 200 feet more or less (curb walk on east)
174. From W. 44th Avenue north on Allison Street and on Zephyr Street 200 feet more or less
176. Teller Street - From W. 43th Avenue south to W. 46th Place
178. Vance Street - From W. 45th Avenue south to W. 44th Avenue
- (180) Quay Street - W. 45th Avenue south to W. 44th Avenue, and from W. 43rd Avenue south to W. 38th Avenue (curb walk on west)
- (182) Reed Street - W. 43rd Avenue south to W. 38th Avenue (curb walk on west)
- (184) Pierce Street - W. 48th Avenue south to W. 32nd Avenue (intermittent curb walks) and from W. 32nd Avenue to W. 29th Avenue
186. Newland Street - W. 45th Place to W. 45th Avenue
188. Lamar Street - W. 45th Avenue to W. 46th Place

190. Jay Street - W. 44th Avenue to W. 45th Avenue and W. 45th Place to W. 46th Place
192. Ingalls Street - W. 47th Avenue to W. 46th Place
194. Upham Street - W. 37th Avenue extended north to W. 39th Avenue extended
196. High Street - W. 35th Avenue, north to W. 39th Avenue
198. Teller Street - W. 38th Avenue south to W. 26th Avenue (curb walk on east, W. 34th Place to W. 34th Avenue)
200. Vance Street - W. 32nd Avenue north to W. 33rd Avenue
202. Upham Street - W. 33rd Avenue south to W. 32nd Place
204. Reed Street - W. 35th Avenue south to W. 34th Place
206. Quay Street - W. 35th Avenue north to W. 36th Avenue
208. From W. 38th Avenue, 200 feet more or less north and south on Newland Street north on Marshall Street, and north on Otis Street
- (210) Gray Street - From W. 44th Avenue south to W. 41st Avenue (curb walk on west)
212. Fenton Street - W. 44th Avenue south to W. 41st Avenue and Eaton Street, W. 41st Avenue to W. 38th Avenue
214. Depew Street - W. 38th Avenue south to W. 33rd Avenue, and W. 29th Avenue south to W. 26th Avenue.
- (216) Chase Street - W. 41st Avenue south to W. 36th Place, and W. 35th Avenue south to W. 32nd Avenue (curb walk on west)
- (218) Benton Street - W. 38th Avenue south to W. 33rd Avenue (curb walk on east)
220. Reed Street - W. 30th Avenue south to W. 28th Place
222. Quay Street - W. 27th Avenue north to W. 29th Avenue
224. Otis Street - W. 32nd Avenue north to W. 35th Avenue
226. Newland - W. 35th Avenue south to W. 33rd Avenue, and W. 32nd Avenue south to W. 26th Avenue
228. Marshall Street - W. 32nd Avenue north to W. 33rd Avenue
230. Kendall Street - W. 32nd Avenue north to W. 35th Avenue, and Jay Street, W. 35th Avenue north to W. 37th Avenue, extended.
232. Jay Street - W. 32nd Avenue north to Kendall Street, and W. 28th Avenue north to W. 30th Avenue
234. Ingalls Court - W. 30th Avenue north to Ingalls Street
236. Ingalls Street - W. 29th Avenue north to W. 32nd Avenue
- (238) Harlan Street - W. 35th Avenue south to W. 30th Avenue (curb walk on east)
240. Ingalls Street - W. 35th Place north to cul-de-sac
- (242) Fenton Street - W. 35th Avenue south to W. 33rd Avenue, and from W. 32nd Avenue south to W. 28th Avenue (curb walk on west)
- (244) Eaton Street - W. 32nd Avenue south to W. 28th Avenue (sidewalk on east)
246. Benton Street - W. 26th Avenue north to W. 27th Avenue
248. Ames Street - W. 26th Avenue north to W. 29th Avenue
250. Harlan Street - W. 26th Avenue north to W. 28th Avenue extended

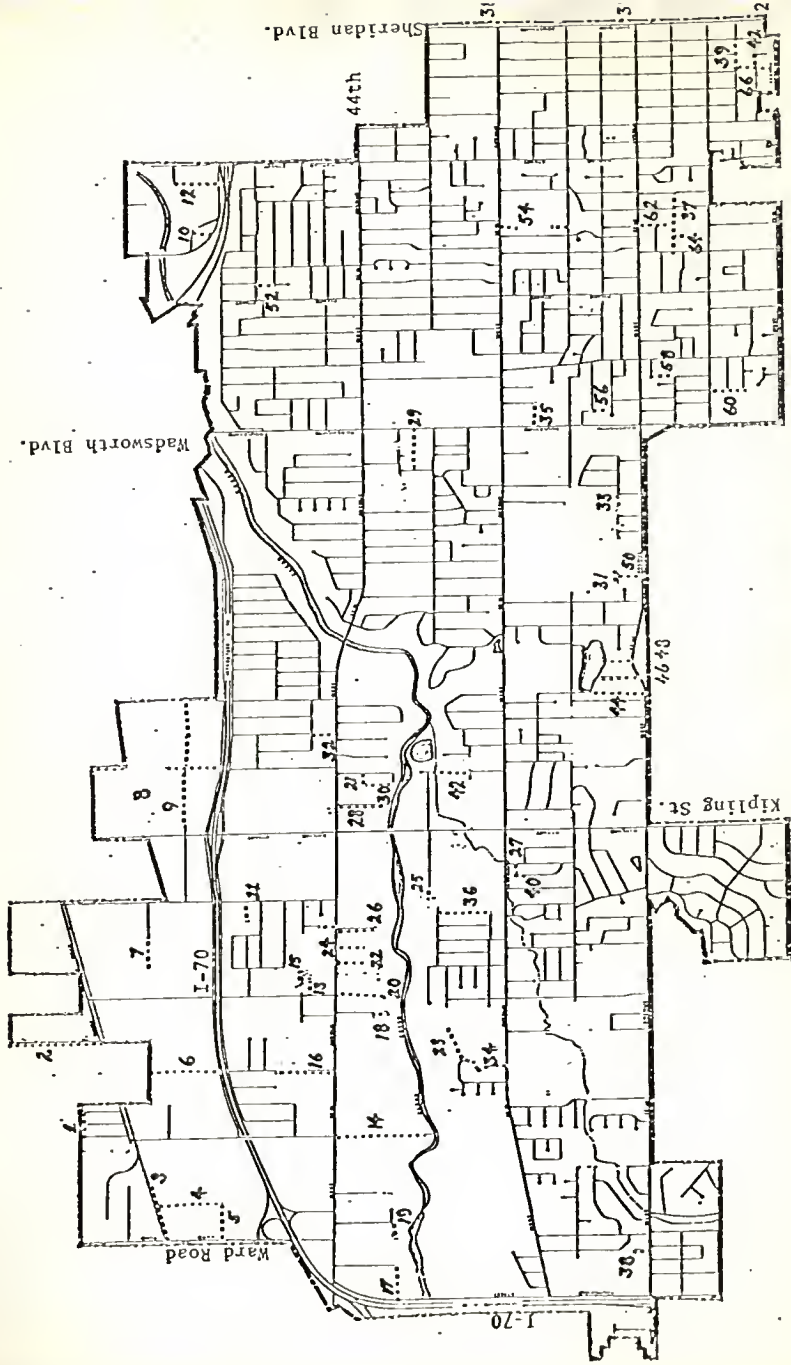


Figure 4

**UNPAVED STREETS**  
(AS OF JANUARY, 1975)

EAST WEST STREETS ARE IDENTIFIED BY ODD NUMBERS;  
NORTH SOUTH STREETS BY EVEN NUMBERS

UNPAVED STREETS  
(as of January, 1975)

East west streets are identified by odd numbers; north south streets by even numbers.

1. W. 52nd Avenue from Taft Street east to Simms Street.
  3. W. 49th Place - Ward Road east to end
  5. W. 48th Avenue - Ward Road east to Van Gordon
  7. W. 50th Avenue - West of Miller Street from Nelson Street projected, to Oak St.
  9. W. 49th Avenue - East of Kipling Street to Holland Street
  11. W. 47th Place - Miller Street west to cul-de-sac
  13. W. 44th Place - Parfet Street east to Owens Street
  15. W. 45th Avenue - Oak Street west to Owens Street (paper street)
  17. W. 42nd Avenue - Youngfield Street east to Xenon Street
  19. W. 42nd Avenue - Vivian Street west to end
  21. W. 43rd Avenue - Iris Street west to Iris Court
  23. W. 40th Avenue - Robb Street west to end
  25. W. 41st Avenue - Miller Street east 200 feet more or less
  27. W. 37th Place - Lewis Street east to Lee Street
  29. 3 Acre Lane - Wadsworth west to end (Yarrow Street extended)
  31. W. 33rd Avenue - At end of Cody Court
  33. W. 33rd Avenue - West from Allison Street 200 feet more or less
  35. W. 37th Avenue - Vance Street west to Wadsworth Boulevard
  37. W. 30th Avenue - Jay Street west to Holland Street
  39. W. 28th Avenue - Ames Street west to Chase Street
  41. W. 27th Avenue - Benton Street west to Chase Street
- 
2. Quail Street - Ridge Road north to end
  4. Van Gordon Street - W. 48th Avenue north to W. 49th Place
  6. Robb Street - North Frontage Road north to W. 50th Avenue extended
  8. Independence Street - North Frontage Road north to end; and W. 51st Avenue south to end
  10. Lamar Street - Marshall Street north to Old Arvada Road
  12. Ingalls Street - W. 45th Avenue north to W. 49th Place
  14. Tabor Street - W. 44th Avenue south to end
  16. Robb Street - W. 44th Avenue north to W. 46th Avenue

18. Pierson Street - W. 43rd Avenue south to end
20. Parfet Street - W. 44th Avenue south to end
22. Oak Street - W. 44th Avenue south to end
24. Newcombe Street - W. 44th Avenue south to end
26. Moore Street - W. 44th Avenue south to end
28. Jellison Street - W. 44th Avenue south to end
30. Iris Court - W. 42nd Avenue north to W. 43rd Avenue
32. Holland Street - W. 44th Avenue north to W. 45th Avenue
34. Robb Street - W. 38th Avenue north to W. 40th Avenue
36. Miller Court - W. 38th Place north to W. 41st Avenue
38. Wright Court - W. 32nd Avenue north to cul-de-sac
40. Lewis Street - W. 37th Place south 200 feet more or less
42. Independence Court - W. 39th Avenue north to Lena Gulch
44. Garrison Street - W. 32nd Avenue north to end
46. Flower Street - W. 32nd Avenue north to end
48. Field Court - W. 32nd Avenue north to end
50. Cody Court - W. 32nd Avenue north to W. 33rd Avenue
52. Otis Street - W. 47th Avenue south to W. 46th Place
54. Kendall Street - W. 38th Avenue south to end; and W. 35th Avenue north to end
56. Webster Street - W. 34th Place, south to cul-de-sac
58. Upham Street - W. 30th Avenue north to end
60. Vance Street - W. 29th Avenue south to W. 27th Avenue
62. Lamar Street - W. 32nd Avenue south to W. 30th Avenue
64. Marshall Court - W. 30th Avenue south to cul-de-sac
66. Chase Street - W. 26th Avenue north to W. 28th Avenue

## AUTOMOBILE REGISTRATION

There is a continuing increase of auto ownership in the City. According to the Jefferson County Motor Vehicle Registration, the City's auto registration records are as follows:

|      | <u>Auto<br/>Registration</u> | <u>Percent<br/>Increase</u> | <u>Estimated<br/>Population</u> | <u>Car Per Capita</u> |
|------|------------------------------|-----------------------------|---------------------------------|-----------------------|
| 1970 | 22,998                       |                             | 30,084 (Census)                 | 0.76                  |
| 1971 | 24,319                       | + 5.7%                      | 31,714                          | 0.77                  |
| 1972 | 26,189                       | + 7.7%                      | 35,052                          | 0.75                  |
| 1973 | 27,016                       | + 3.2%                      | 35,589                          | 0.76                  |
| 1974 | 27,311                       | + 1.1%                      | 35,759                          | 0.76                  |

According to the 1970 Census, 20,609 people in the City were 18 years old and over. The auto registration in 1970 was 22,998. In this case, the car per capita of those people 18 years old and over was 1.12.

## TRAFFIC SIGNALIZATION

Signals, such as for intersection controls, mid-block pedestrian and fire control are found mainly along West 32nd Avenue, 38th Avenue, 44th Avenue, Harlan Street, Pierce Street, Wadsworth Boulevard, and Kipling Street. The location of all traffic signals in the City can be seen in figure 5.

In the residential areas, stop signs are used to regulate the flow of traffic at the intersections. There are very few pedestrian and automatically controlled intersection signals. Such signals should be provided adequately especially at the intersections between local streets and major arterial streets. For example, those automobiles from the local streets between Kipling and Youngfield have a difficult time trying to cut into the busy 44th Avenue during the rush hour.

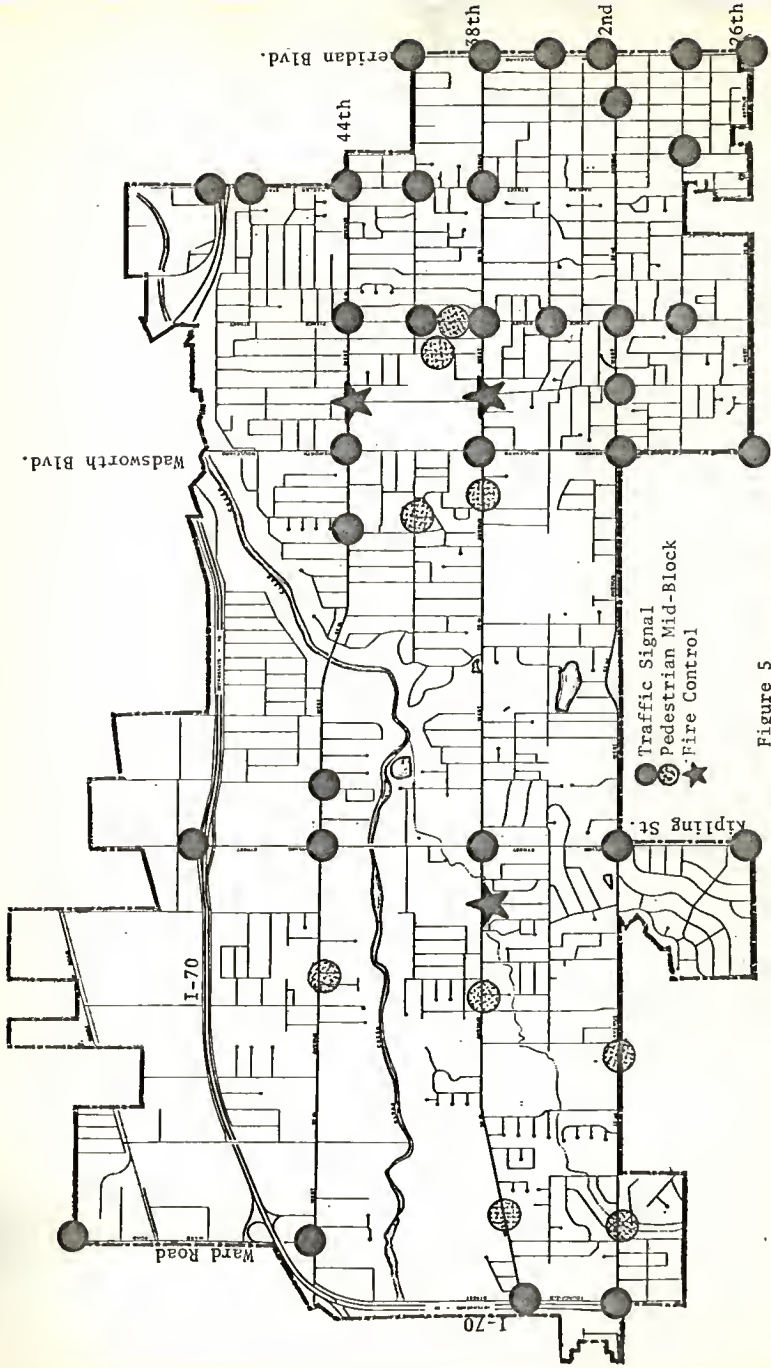


Figure 5

TRAFFIC SIGNALIZATION

Traffic signals located at proper intersections will provide general safety both for automobiles and pedestrians. They also have the effect of checking the speed limits of careless drivers within the City.

#### EXISTING TRAFFIC VOLUMES

Traffic counts have the function of delineating volumes of daily traffic on the streets. By assigning these traffic counts or volumes to the traffic lanes, plus other traffic factors, a traffic engineer can calculate the traffic capacity of the streets. Also, traffic volumes can be projected into the future. Such a projection will definitely help the decision-makers decide whether to improve or construct more streets so as to handle the future traffic well in advance of actual needs.

The State Highway Department did a thorough traffic count in the City in 1971. Figure 6 is a copy of the 1971 average weekday traffic. In the spring of 1975, the Highway Department did another thorough traffic count inventory in the City. The final result of this inventory will be published in November, 1975. The 1975 Unadjusted Weekday Traffic Map, as seen in figure 7, only gives a very generalized picture. The figures shown have not been adjusted to the "average weekday traffic". However, by comparing these two maps, some major difference in traffic volumes within a period of four years, is noticeable.

Generally speaking, there was a decrease in traffic volumes in the eastern half of the City from 1971 to 1975. Conversely, there was an increase in traffic volumes in the western half of the City within the same period.



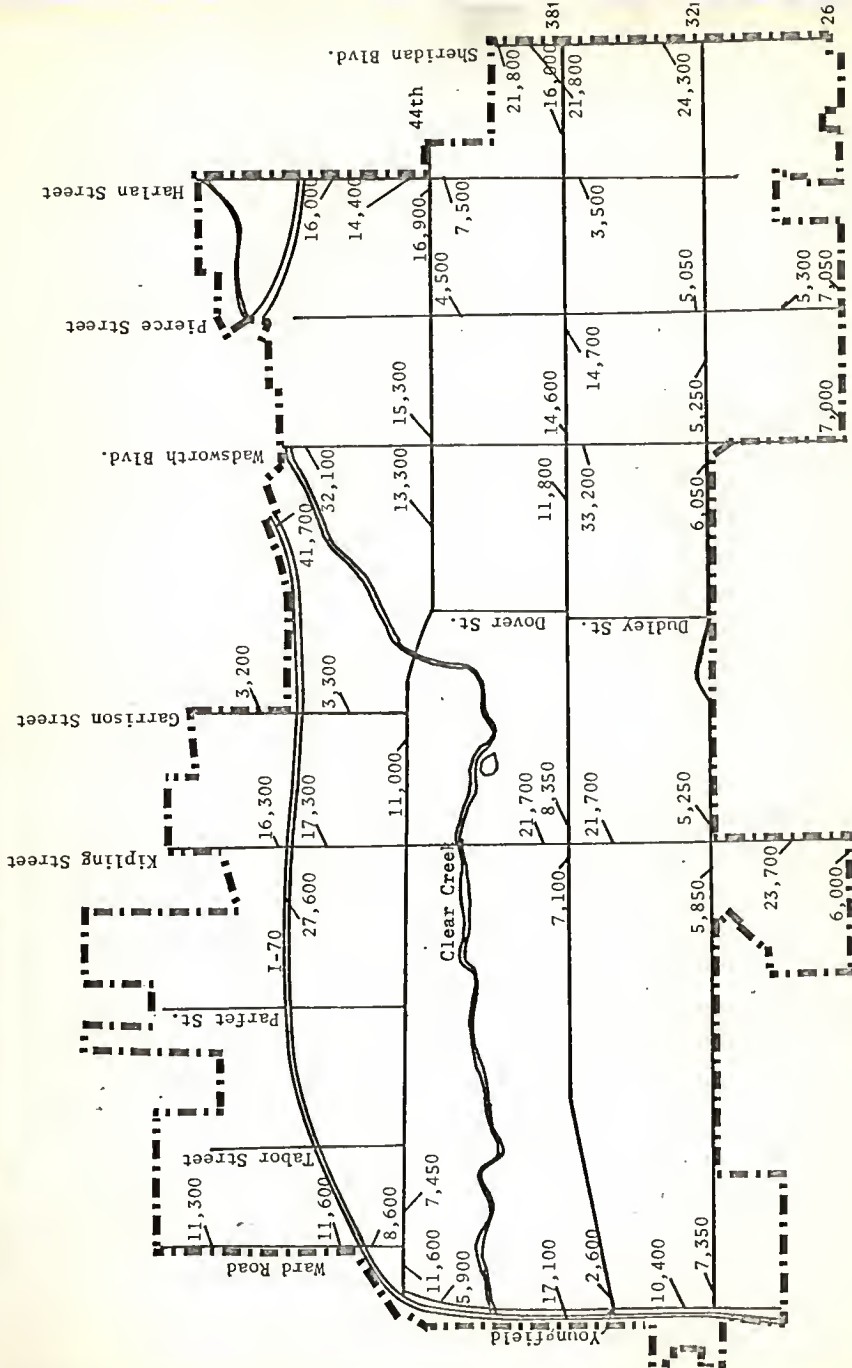


Figure 6

# 1971 ANNUAL AVERAGE WEEKDAY TRAFFIC

Source: State Department of Highways

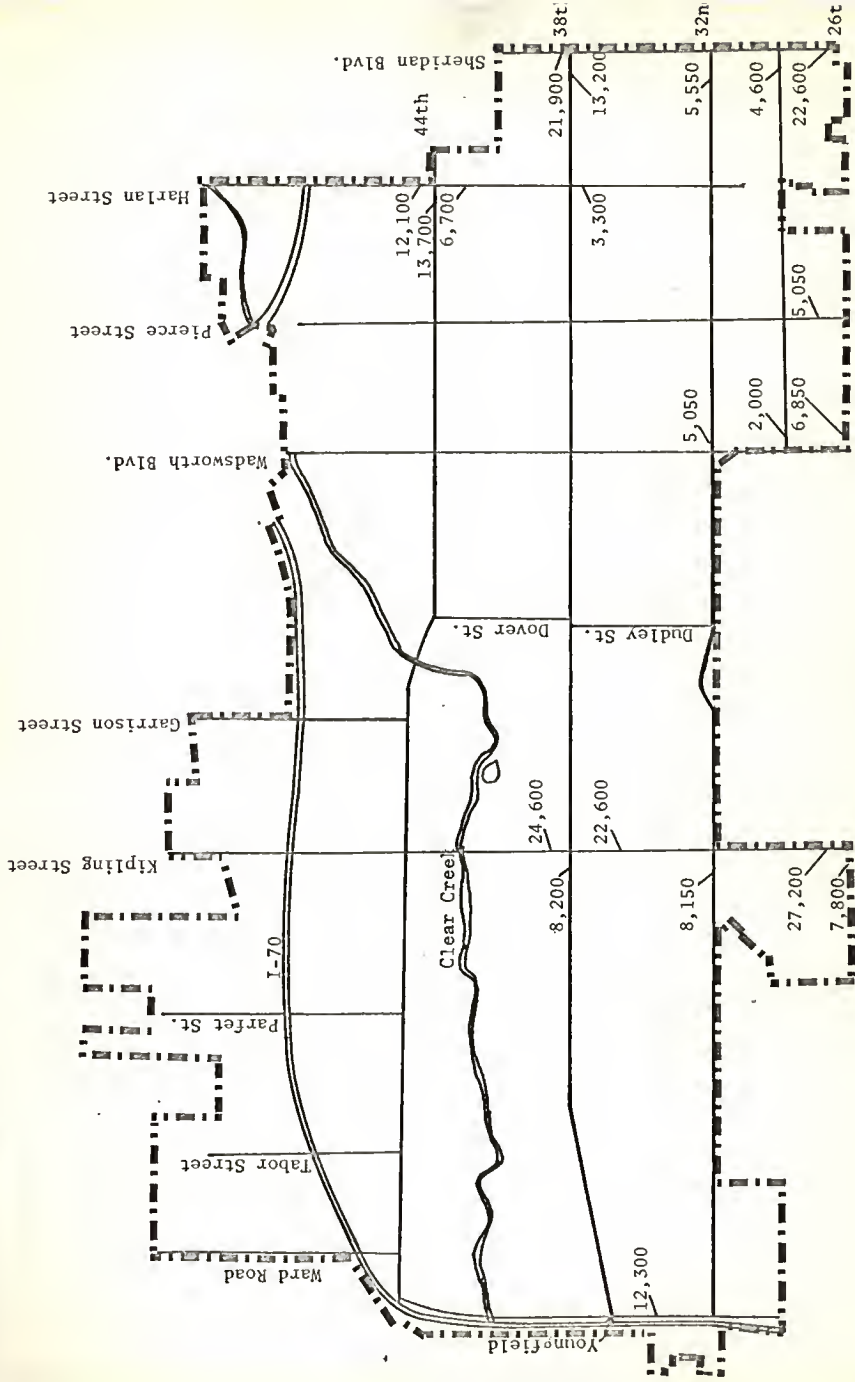


Figure 7

1975 "UNADJUSTED" WEEKDAY TRAFFIC

Source: State Department of Highways

In both 1971 and 1975, Wadsworth carried the heaviest traffic, then Kipling Street, Sheridan Boulevard, 44th Avenue, 38th Avenue, 26th Avenue, and 32nd Avenue in a decending order. The traffic along Wadsworth Boulevard is mostly cross-town in nature, while Kipling Street is heavily used by the local citizens.

#### PROJECTED TRAFFIC VOLUMES

The Projected Traffic Volume - Year 2000 Map (figure 8) was prepared by the joint effort of State Highway Department, Denver Regional Council of Governments and Regional Transportation District, (called JRPP). The projection was based on the existing traffic and land use pattern, income level, trip generation and other socio- economic factors. It is also based on proposed streets and highways. Such a proposal will affect the future traffic volumes on the existing routes. A change in any of the factors and proposals will change the traffic projection.

Two new corridors have been proposed by JRPP. One is the Kipling By-pass which has the effect of decreasing the existing Kipling Street traffic to about 30-40%. The other is the Simms Street By-pass which also has the effect of decreasing the general traffic on the streets west of Kipling.

Both of these proposals have not been accepted by the City.

By comparing the traffic volumes of 1971, 1975 and 2000, one will notice that there are few marked increases or decreases in traffic

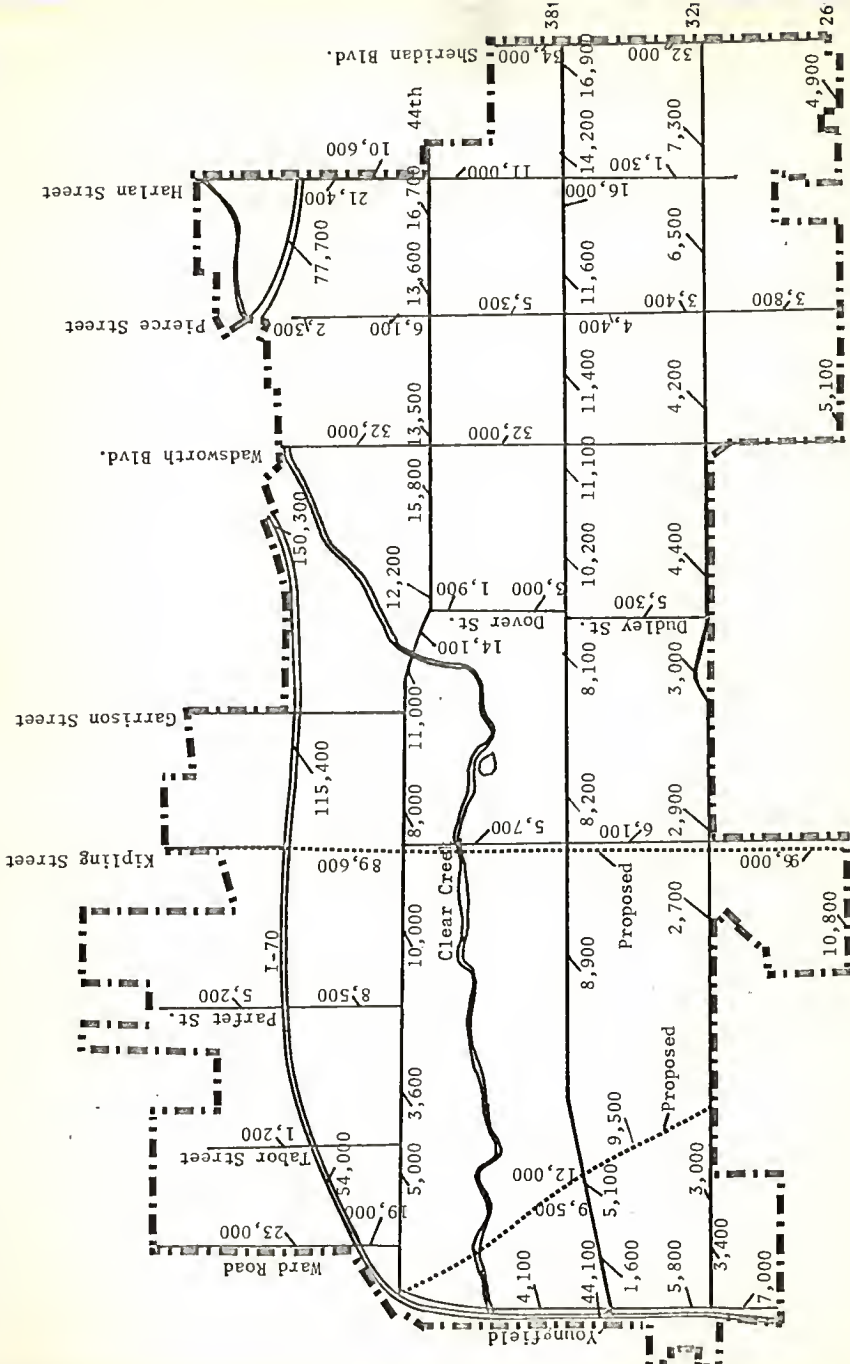


Figure 8

PROJECTED TRAFFIC VOLUME - YEAR 2000\*

\*Based on the existing traffic and land use patterns, and the proposed streets and highways. Subject to change. Source: JRPP

volumes in the City streets. Generally speaking, there is a noticeable decrease in traffic in the vicinity of Kipling and Simms Street By-passes. On the other hand, there is a significant increase in traffic on the State and United States Highways.

The traffic projection of year 2000 is a very general guideline and should not be taken as exact. Any figure should not be singled out or taken out of context.

#### TRAFFIC ACCIDENTS

Traffic volumes, capacity, width of streets, signalization, street intersections, parking situation, lighting and pedestrians are the main factors affecting traffic accidents.

Figures 9, 10, 11 and 12 show the traffic accidents that occurred in the City during 1972, 1973 and 1974.





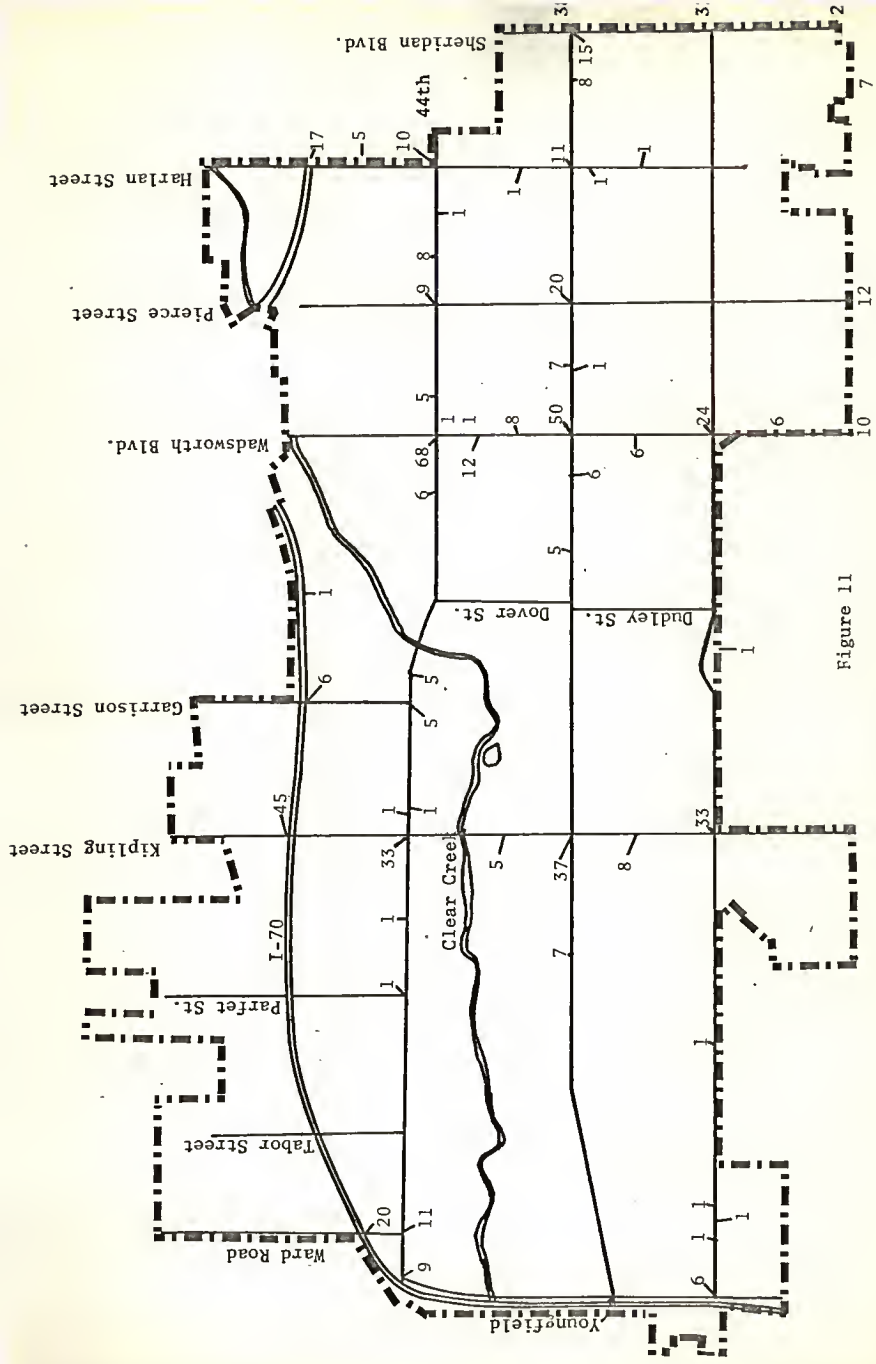


Figure 11  
TRAFFIC ACCIDENTS 1974\*

\* INCLUDES PEDESTRIAN & BICYCLE



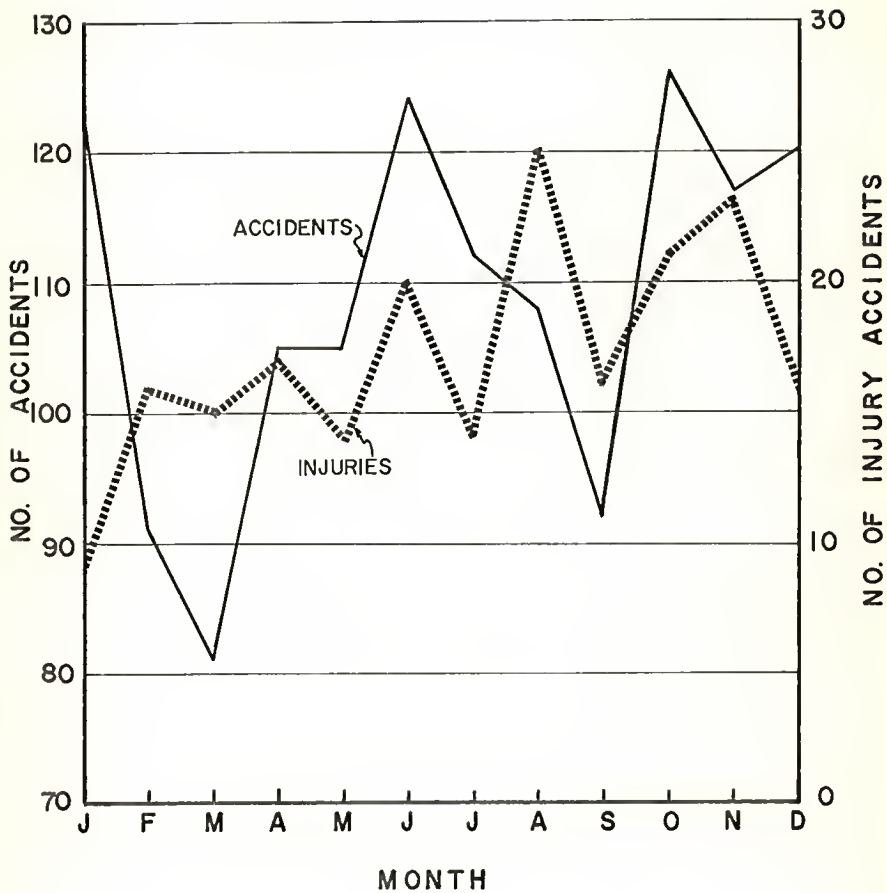


Figure 12  
MONTHLY ACCIDENTS 1974

## STREET CLASSIFICATION AND STANDARDS

### STREET FUNCTIONAL CLASSIFICATIONS

Street classification decisions should be based on the amount and kind of traffic, and the surrounding land use which a street serves. In addition to the existing conditions, one should also consider the traffic projections in the future 10-25 years. Transportation planning is mainly prospective and not primarily for the present.

The amount of traffic is usually measured in terms of Average Daily Traffic (ADT). ADT is the average total number of vehicles passing a street or route on a typical day.

There are three kinds of street classifications in the City. They are local, collector and arterial streets. Their functions are as follows (based mainly on Denver Regional Council of Governments' Standards):

Local Streets: The local street system serves primarily to provide direct access to adjacent property and access to higher order of streets. Local streets may serve residential (both low and high density), minor commercial and industrial land use. It offers the lowest level of mobility and normally should not contain bus routes. All traffic carried by local streets should have an origin or a destination within the neighborhood.

Traffic capacity should not be a deciding factor for local street design standards in residential neighborhoods. The reasons are the desired low traffic speeds and short travel distance from residences to collector streets.

Collector Streets: The Collector Street System, unlike the arterial system, penetrates neighborhoods. It is the principal traffic artery within residential areas. The system collects and distributes traffic between major arterial and local streets. It also serves as a main connector within communities, linking one neighborhood with another, or one industrial district with another. It has the potential for supporting minor commercial establishments along its routes. Some bus routes should be provided to serve the surrounding land use.

All traffic carried by collector streets should have an origin or a destination within the community.

Arterial Streets: The Arterial Street System interconnects highways and communities. It provides high potential for the location of industrial land uses. It also permits rapid and relatively unimpeded traffic movement through the City. Bus routes should be provided to serve the surrounding intensive land uses and to furnish intra-community continuity. Arterial streets should not penetrate identifiable neighborhoods.

Besides the above three street classifications, there are of course, interstate and state highways in the City as shown in figure 13. However, such highways are not within the jurisdiction of the City and will not be discussed here.

#### STREET DESIGN STANDARDS

Both the existing right-of-way and pavement widths for local, collector and arterial streets in the City are generally narrower than those of the surrounding cities. The following proposed

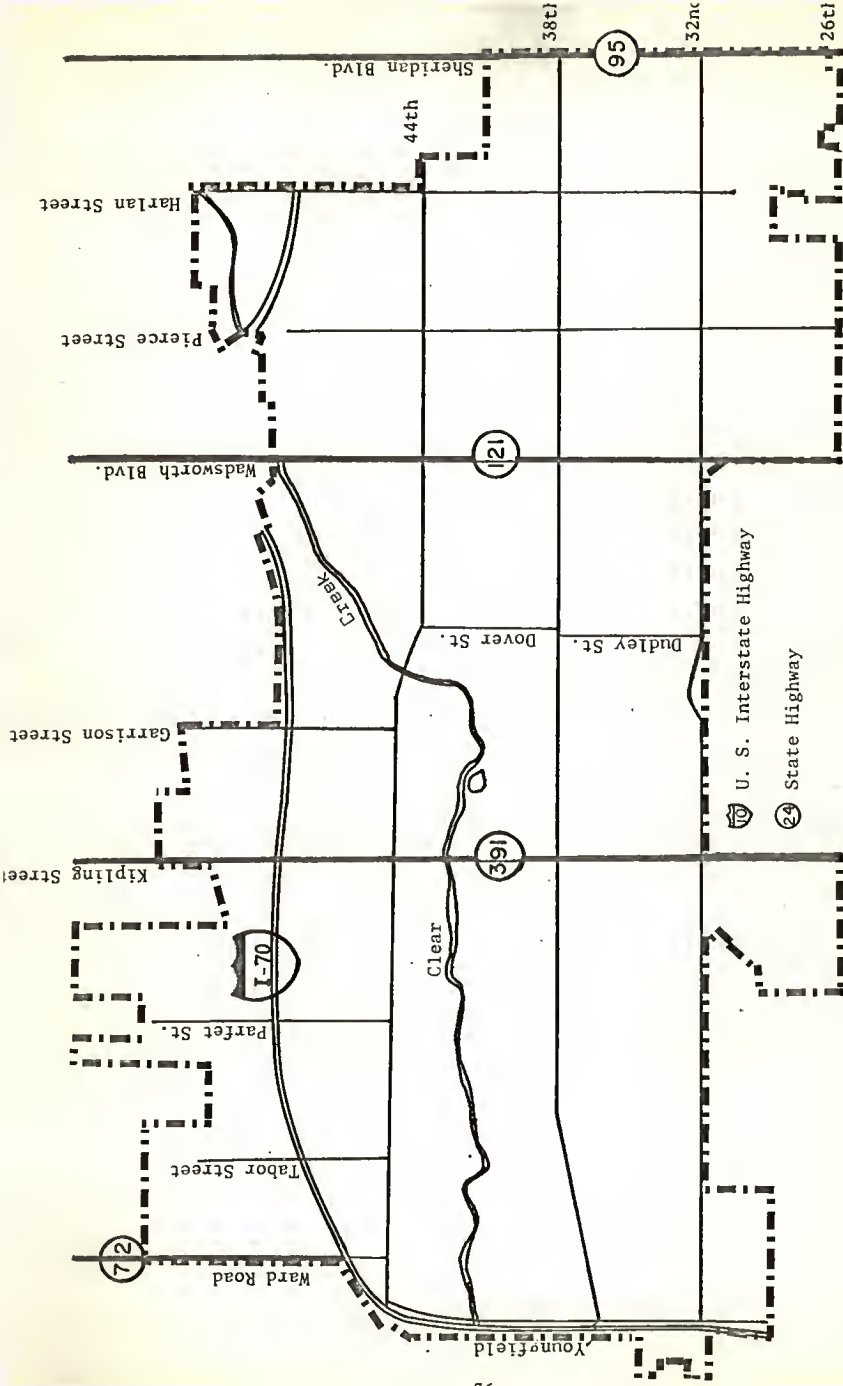


Figure 13

EXISTING HIGHWAYS

street standards are so designed that they will be comparable with the standards of other cities. However, the overall standards are still under those in other cities. With the majority of the land use utilized for residential development, the proposal should serve the traffic adequately in the City.

The following street design standards are adopted partially from the Physical Development Coordinating Committee of Denver Regional Council of Governments.

Local Streets: (See figure 14 for Typical Cross-Section)

Right-of-Way Width - 50 feet

Traffic Lanes - 2

Traffic Capacity - 2000 vehicles per day (V.P.D.)

Speed Limit - 25 miles per hour (M.P.H.)

Access Conditions - Intersections are at grade with direct access to abutting property.

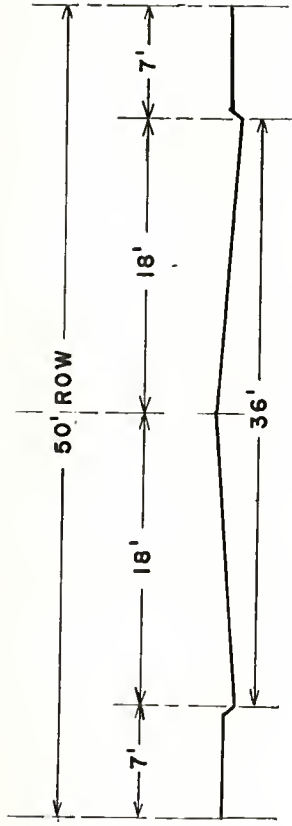
Traffic Characteristics - (a) Direct access to residential properties is by way of curb cuts or drive over curbs.

(b) Occasional parking is normally allowed on both sides of the street.

Planning Characteristics - (a) Local streets should be designed to prevent through traffic from passing through the neighborhood.

(b) Local streets should not intersect major arterial streets.

# LOCAL STREET



# COLLECTOR STREET

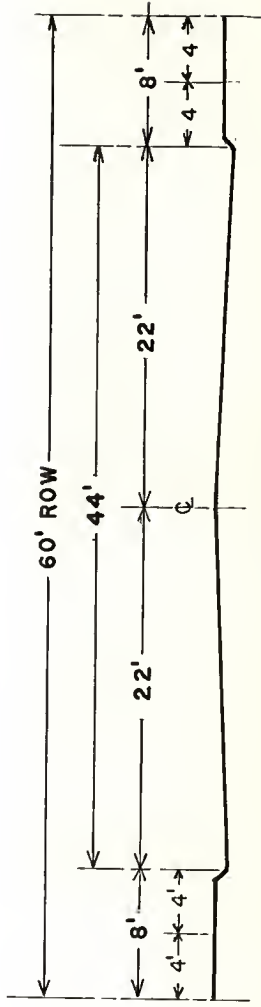


Figure 14

TYPICAL CROSS-SECTION FOR LOCAL AND COLLECTOR STREETS

Collector Streets: (See figure 14 for Typical Cross-Section)

Right-of-Way Width - 60 feet

Traffic Lanes - 2 to 4

Traffic Capacity - 5,000 - 11,000 V.P.D.

Speed Limit - 25 - 30 M.P.H.

Access Conditions - Intersections are at grade with direct  
access to abutting property permitted.

Traffic Characteristics - Regulation of traffic between  
collector streets and other types  
of streets is accomplished by traffic  
control devices.

Planning Characteristics - (a) Collector streets should have  
continuity throughout a neighborhood  
or industrial district but need  
not extend beyond these districts.  
(b) Intersections with major streets  
should be one-quarter mile apart.  
(c) Sidewalks should be set back  
from the street.

Arterial Streets: (See figure 15 for Typical Cross-Section)

Right-of-Way Width - 80 feet

Traffic Lanes - 4

Traffic Capacity - 20,000 - 30,000 V.P.D.

Speed Limit - 25 - 45 M.P.H.

Access Conditions - (a) Intersections are generally at  
grade and should not be permitted at  
intervals less than one-quarter mile.

# ARTERIAL STREET

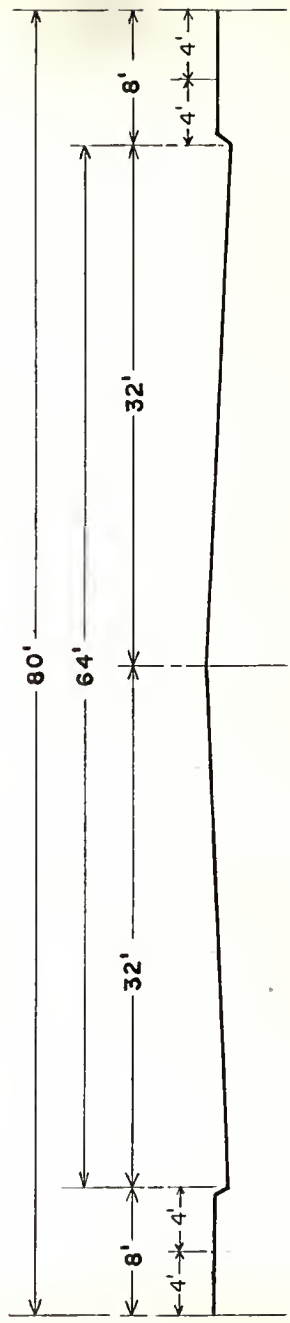


Figure 15

# TYPICAL CROSS-SECTION FOR ARTERIAL STREET



(b) Abutting properties and local streets not normally allowed indiscriminate direct access to the street.

Traffic Characteristics - (a) Regulation of traffic are accomplished by traffic control devices and channelization.

(b) Parking is prohibited.

(c) Roadways should have a median strip between them.

Planning Characteristics - (a) Major arterial streets should be spaced approximately one mile apart.

(b) Major arterial streets should not bisect neighborhoods but should act as boundaries between them.

(c) Sidewalks should be set back from the street.

(d) Abutting properties should not face on the roadway unless separated from it by a frontage road.

The provisions of a turn lane on an arterial street has several advantages. It offers a smooth flow of traffic to the traveled lanes. It will eliminate the traffic accident potential of stop and go traffic because of turning vehicles. Without erratic movements, there will be less air and noise pollution.

The space between the curb and the right-of-way boundary can be used for sidewalk, landscaping, utility and bikeway or a combination of the above.

Other than the design standards for local, collector and arterial streets, there is also a standard for parkways. A parkway's function is practically the same as an ordinary street. The difference is that it is well landscaped on the median and side strips. The purpose is to stabilize and enhance the surrounding areas both environmentally and socially. The trees have the effect of minimizing the traffic noise and dust to the adjacent developments. People can live along a busy arterial parkway and yet not be adversely affected. (See figure 16 for Typical Cross-Section for a parkway).

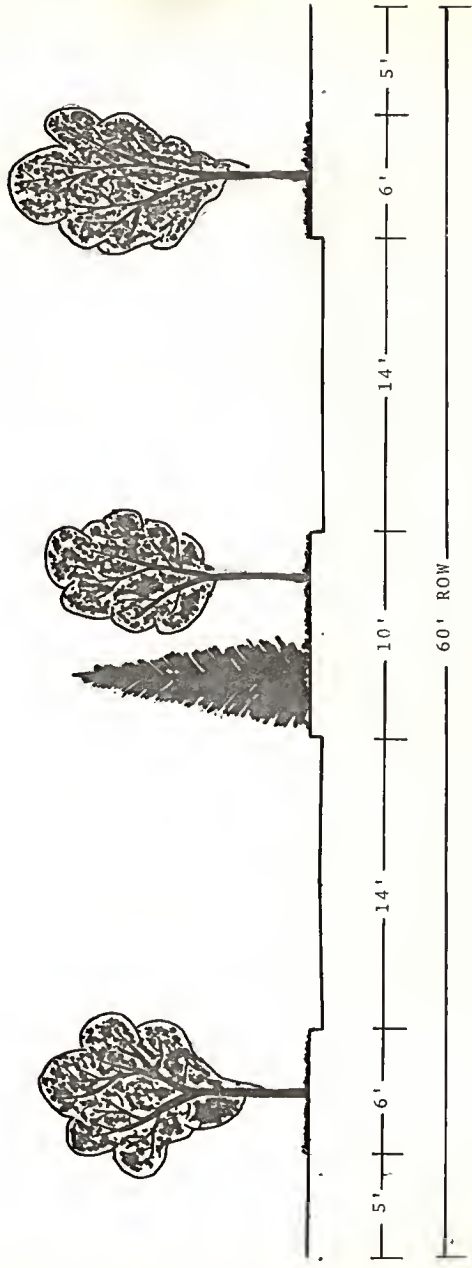


Figure 16  
TYPICAL CROSS-SECTION - COLLECTOR PARKWAY

#### EXISTING FUNCTIONAL CLASSIFICATIONS

Figure 17 shows the existing collector and arterial streets by applying the classifications and standards as previously discussed. The streets are so designated by their functions or the purposes they served rather than by the traffic counts. For example, although the traffic counts on W. 38th Avenue, between Kipling and Youngfield Streets are low, the street does function as a collector. It collects the traffic from the local streets in that neighborhood. In the event of changing land use or alignment of streets, the existing functional classification of streets may be changed accordingly.

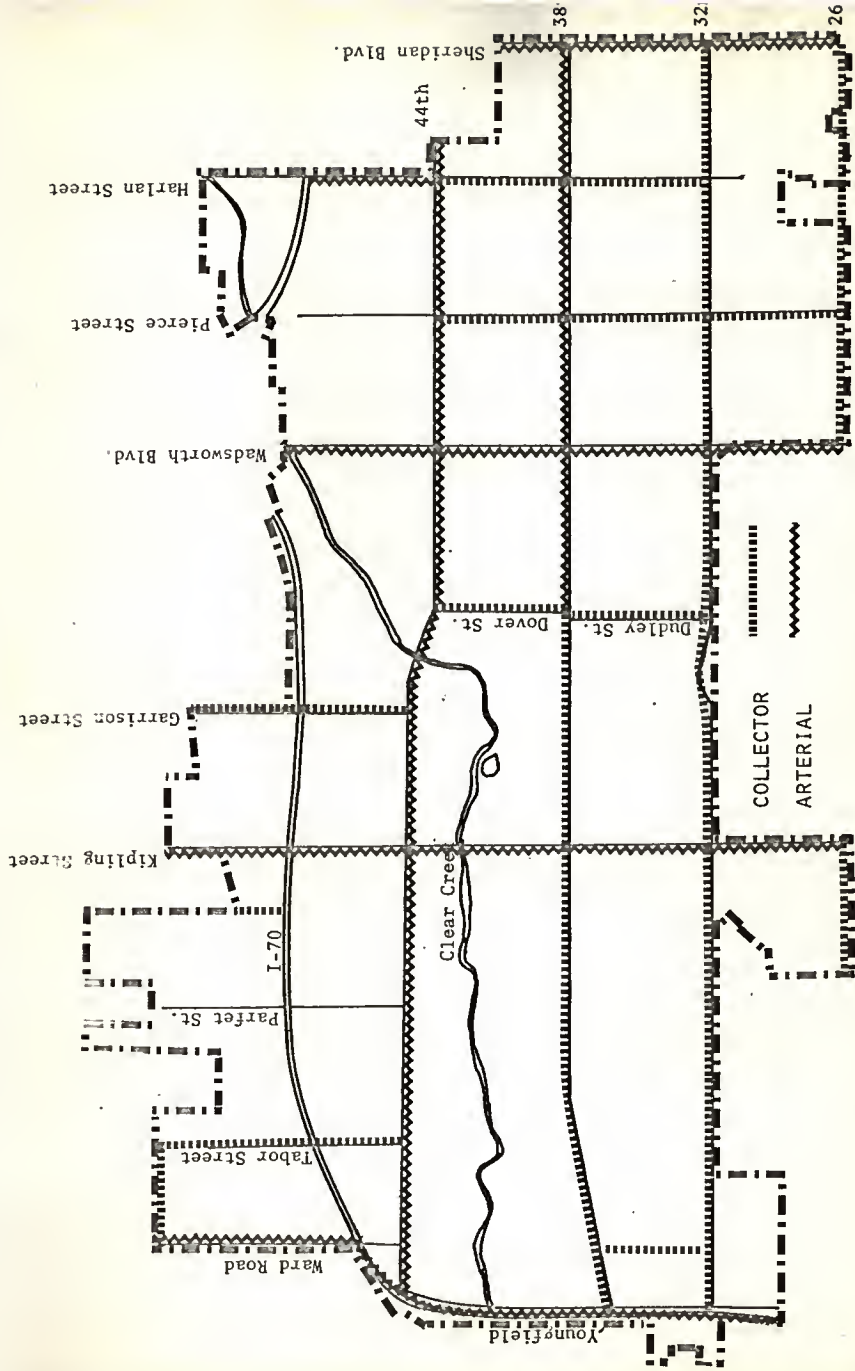


Figure 17

EXISTING STREET FUNCTIONAL CLASSIFICATIONS

## TRANSPORTATION FACILITIES

Wheat Ridge is situated in a very good location resulting in convenient access to air, railway, as well as highway transportation.

### Air:

There is no airport in the City, however, both Jeffco Airport and Stapleton International Airport are about 8.5 miles from the City. Jeffco Airport can be reached by Wadsworth Boulevard and Stapleton by I-70 easily. This means that either airport facility can be reached from the City in less than 10 minutes.

### Public Transit:

Currently, bus is the only public transit facility in the City. It is not well used by the citizens since there are only a few bus schedules daily. Hopefully, the Regional Transportation District (RTD) will provide more bus schedules and more buses that will run on the major streets in the City. A guided rail transit system passing through the City is also being discussed. Bus transit, as well as guided rail definitely will help minimize the usage of private automobiles. People could park their cars in the parking lots provided, and use public transit to go to work, recreation or shopping.

Emphasizing on the usage of public transit has several advantages:

1. Minimizes usage of private vehicles and therefore minimizes traffic in the rush hours.
2. Conserves gasoline.
3. Minimizes air and noise pollution generated by automobiles.

Railway:

Colorado and Southern Railways run through the northwestern portion of the City where the major industrial sites are located. The railway originates with the City of Golden and runs eastward to join the main railway tracks of Burlington Northern and Union Pacific where they have access to the entire nation.

This railway could provide a very efficient mode of transportation to and from the industrial district, north of Highway I-70 within the City.

#### CONCEPT TRANSPORTATION PLANS

The following transportation plans are three alternative concepts for future street development. Each plan has its own methods of solving the future traffic problems in the City. They are proposed by the Department of Community Development of the City. The City Officials may adopt one of the plans or a combination of the plans. If deemed necessary, an entire new proposal may also be developed.



## CONCEPT TRANSPORTATION PLANS

### CONCEPT 1

This proposed Transportation Plan is based on the Transportation Plan adopted by the City Council in 1971. It has some modifications and additions:

#### Modifications:

1. West 38th Avenue between Sheridan and Wadsworth Boulevards, and West 44th Avenue between Sheridan Boulevard and Kipling Street are proposed as arterial streets instead of collector streets.

The reasons are: (a) to minimize traffic congestion and accidents where heavy commercial developments are located; and (b) to provide direct access to Wadsworth Boulevard and Kipling Street where most of the cross-town traffic is located.

#### Additions:

1. A collector street system is proposed north of 1-70 to handle future industrial development

At the present, there is no sophisticated street system and most of the land is vacant or used for agriculture. If deemed necessary, Robb and Parfet Streets could be also designated as collectors.

2. Dudley and Dover Streets are proposed as collectors to link up West 38th and West 44th Avenues in a stretch of about 1.5 miles between Wadsworth Boulevard and Kipling Street. This has the effect of providing a short cut to the motorists and a faster access to the Lutheran Hospital in case of an emergency.

3. The Simms Street By-pass to link up West 32nd and West 52nd Avenues in a stretch of about 1.7 miles between Kipling Street and Youngfield Street. This will lessen traffic on the local streets in its vicinity.
4. Garrison Street is proposed as a collector street for easy access to Arvada.

Most of the existing ROWs are wide enough to accommodate the proposals.

To enhance the City environment, the major corridors should be turned into parkways. The first priorities could be West 44th, West 38th, and West 32nd Avenues; then Wadsworth Boulevard, Kipling, Pierce, and Harlan Streets. Whenever possible, local streets, especially those in the new subdivision, should also be well landscaped. The ROW for parkways might have to be wider than the regular streets to accommodate landscaping.

#### CONCEPT 2

The basic premise of this plan is to exclude arterials from defined neighborhoods and lessen the burden from existing streets by adding collectors.

West 44th Avenue has been realigned to avoid dissection of the Fruitdale neighborhood. Its position next to I-70 would decrease noise, danger and disruption. A loop has been added to offer access. If the South Frontage Road could be extended to Wadsworth, West 44th Avenue could also be moved between Wadsworth and Kipling. The realignment would also remove the barriers between the neighborhood and the Clear Creek greenbelt. The existing West 44th Avenue would become a local street.

Dover and Dudley have been classified as collectors because of the need for a north-south collector between Wadsworth and Kipling. For the same reason, Garrison, north of West 44th Avenue has been added as a collector. There is also increasing development on Garrison north of I-70. The North Frontage Road, Ridge, Miller, Ward and Tabor have been reclassified because of the difficult access to the Industrial area.

A collector parkway along Lena Gulch is included in this plan. Lena Drive was planned to reduce the burden on West 38th and West 32nd Avenues. It takes advantage of the sparse development in the corridor and at the same time, will preserve the open space along Lena Gulch. This alignment emphasizes minimum disturbance of natural areas and the use of existing streets whenever possible. Lena Drive will consist of two widely separated lanes each one way. A connection could be made at Simms between the lanes. Three alternate alignments are shown.

All other streets will retain their present classifications.

### CONCEPT 3

The major features of this plan are the realignment of West 44th Avenue and Lena Drive.

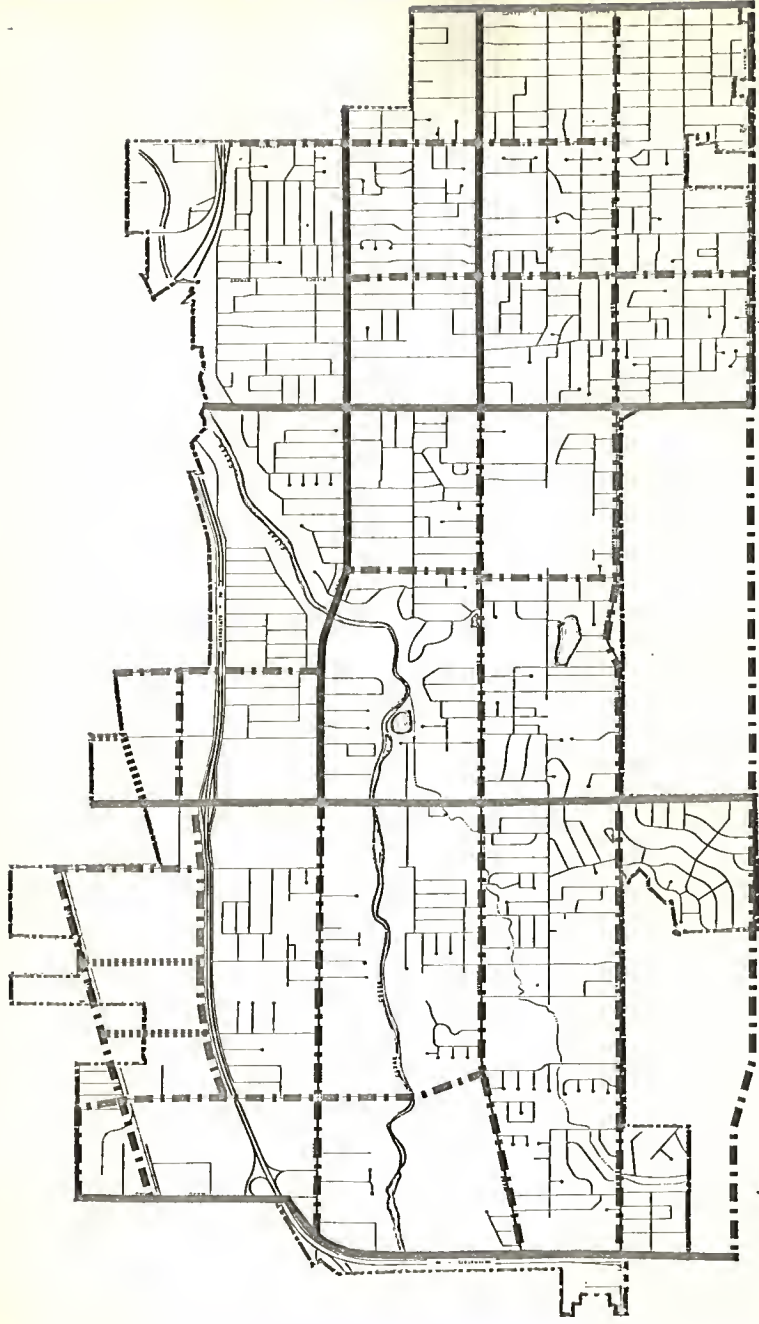
West 44th and West 38th Avenues will remain arterial east of Wadsworth, and collector west of Wadsworth. Harlan Street, Pierce Street, West 32nd Avenue, and West 26th Avenue will remain collectors.

Lena Drive affords the opportunity of fully utilizing the scenic potential of the flood plain. Properly designed, it will enhance the area. This collector parkway will lessen congestion on West

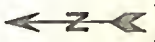
32nd and West 38th Avenues. The alignment of Lena Drive is much closer to the channel than in Plan 2, but there will still be ample open space between the lanes. Only in the vicinity of the Brookside Apartments and Red Barn, will the lanes converge. West 32nd Avenue will become a local street.

The realignment of West 44th Avenue is discussed in Plan 2, the only difference being the section between Kipling and Wadsworth. In Plan 3, this section remains in its present location.

The remainder of the streets will remain as they are.

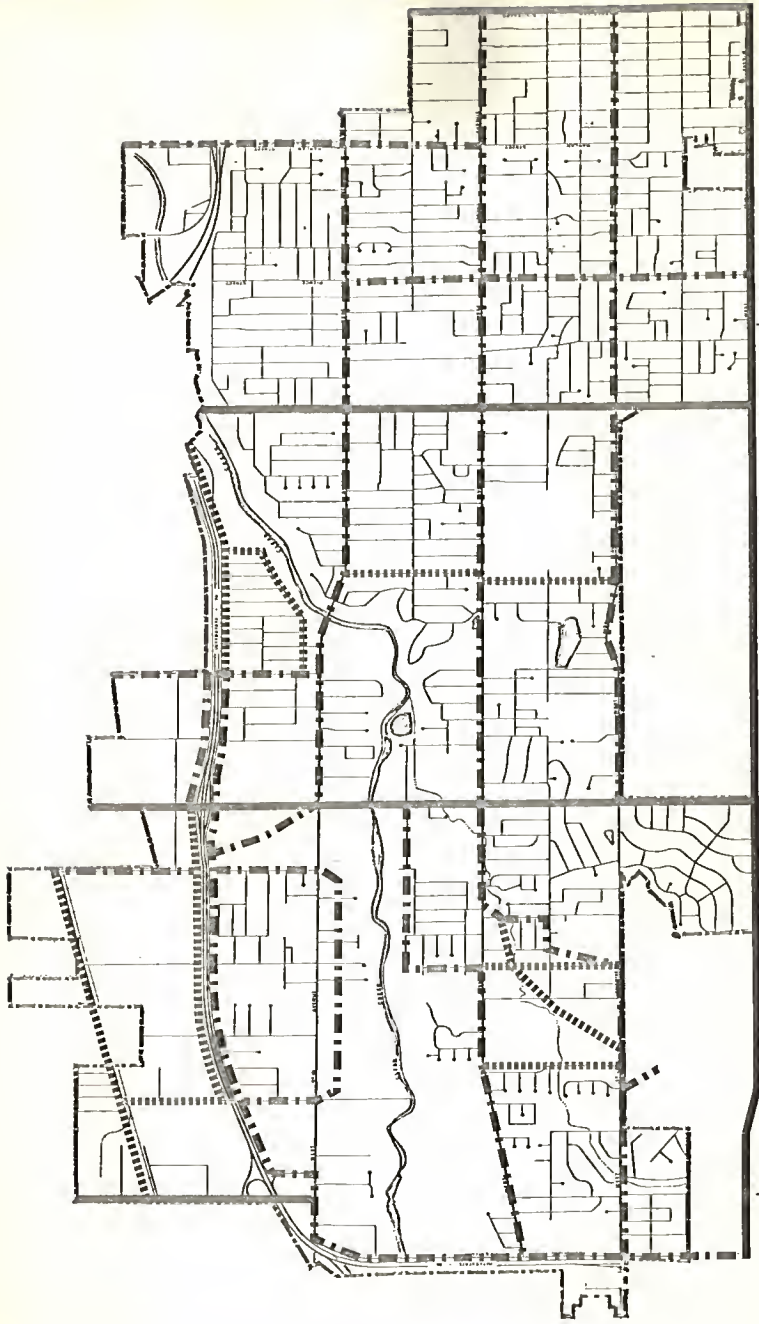


- ARTERIAL
- - - COLLECTOR
- ..... ALTERNATIVE

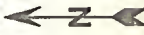


0 660' 1320' 2640'  
 1 INCH = 1/2 MILE

# TRANSPORTATION CONCEPT 1

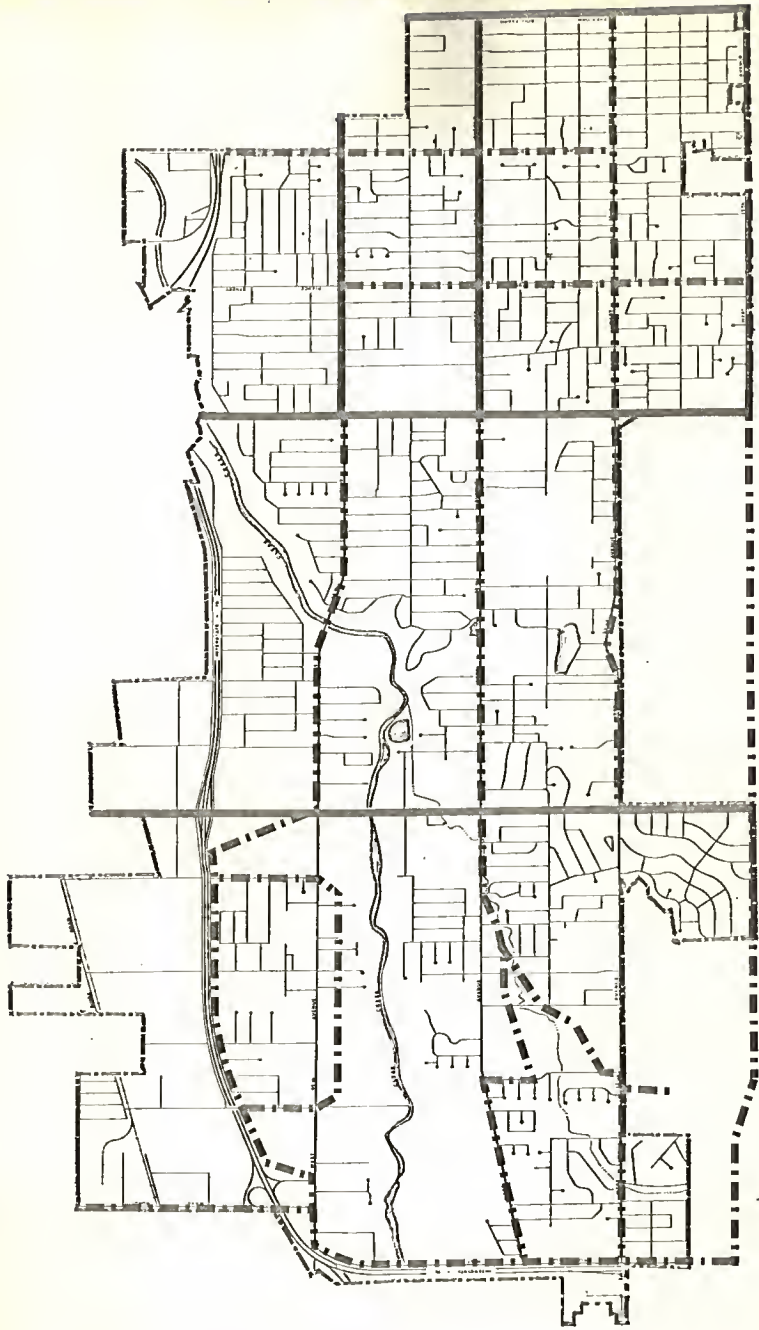


- ARTERIAL
- - - COLLECTOR
- ..... ALTERNATIVE



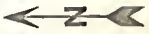
0 660' 1320' 2640'  
 1 INCH = 1/2 MILE

# TRANSPORTATION CONCEPT 2



— ARTERIAL

- - - COLLECTOR



0 660 1320 2640'

1 INCH = 1/2 MILE

# TRANSPORTATION CONCEPT 3