

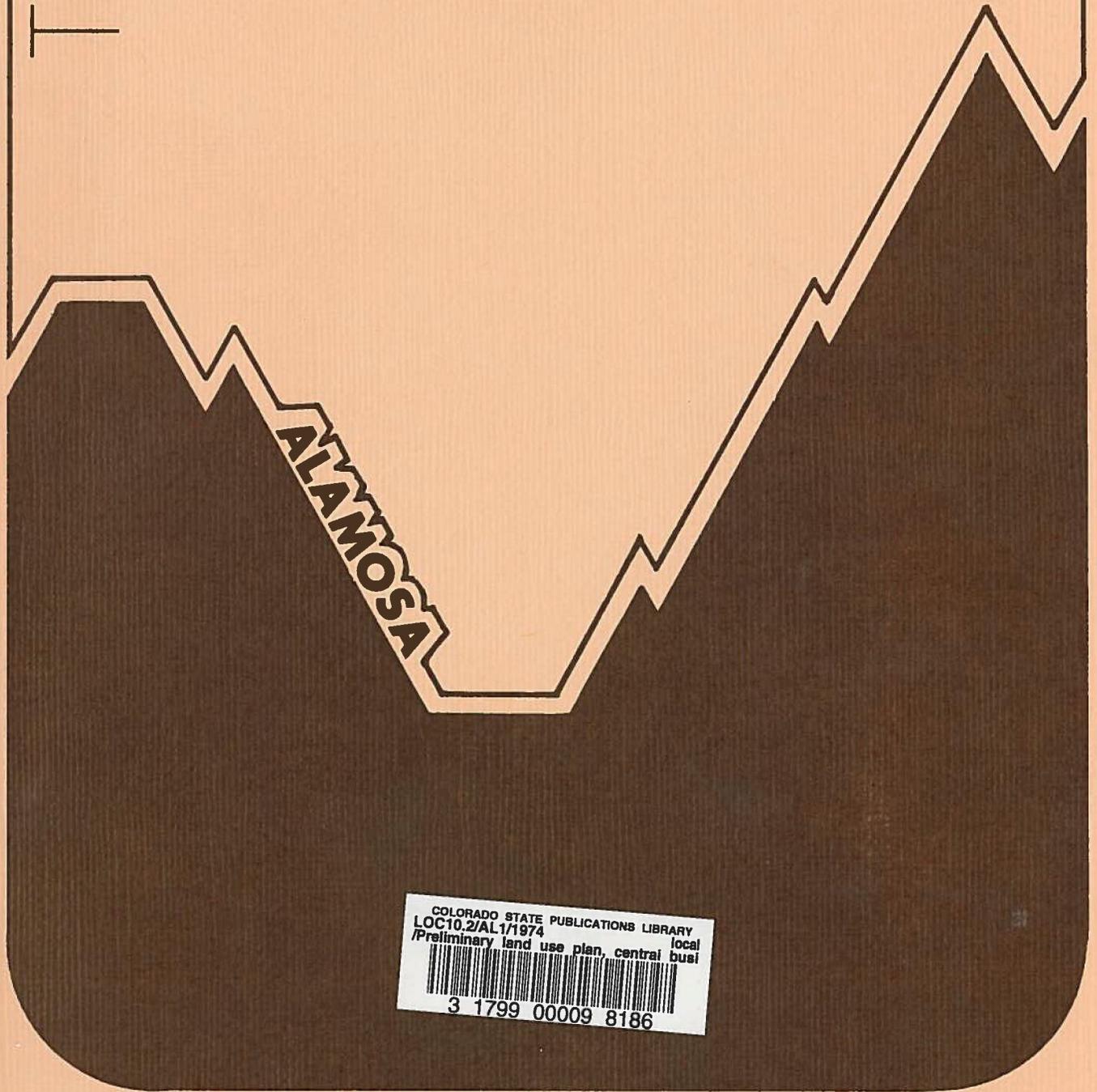
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PRELIMINARY LAND USE PLAN, CENTRAL BUSINESS DISTRICT
AND
TRANSPORTATION

CITY OF ALAMOSA, COLORADO

Prepared by
Oblinger - Smith Corporation
Consultants in Planning, Design and Development
Denver, Colorado

June, 1974

This report was prepared for the Colorado State Division of Planning and was financed, in part, through an urban planning grant from the Department of Housing and Urban Development under the provisions of Section 701 of the Housing Act of 1954, as amended.

FOREWORD

This is the second preliminary report of the Alamosa comprehensive planning program. Major plan elements included in this document are: Preliminary Land Use Plan element, and the Central Business District and Transportation elements. Additionally, the Physical Features Map, which was discussed but not included in the first preliminary report, is included in the Appendix.

As noted in the text of the report, three alternative preliminary land use plans are provided in this document. These three plans are based on three U.S. Route 160 alternate alignments presently being considered by the City for relocation of that facility. One land use plan will be included in the final Comprehensive Plan document, which will be completed during Phase 2 of the planning program.

This document is being submitted for review by the Planning Commission, City Council, city staff and interested citizens and the San Luis Valley Council of Governments. The purpose of this review is to obtain input from these officials and agencies as to the accuracy of the plan and to assure that it is fulfilling the planning needs of the City of Alamosa.

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PRELIMINARY LAND USE PLAN

The City of Alamosa is currently engaged in a study to determine the most desirable means of correcting numerous problems related to U.S. Route 160. From the outset of the study, it was apparent that the only means of correcting these problems was to relocate the highway from the central business district to one of many possible alternate alignments. At this time the number of alternative highway alignments has been reduced to three, as graphically illustrated on the following page.

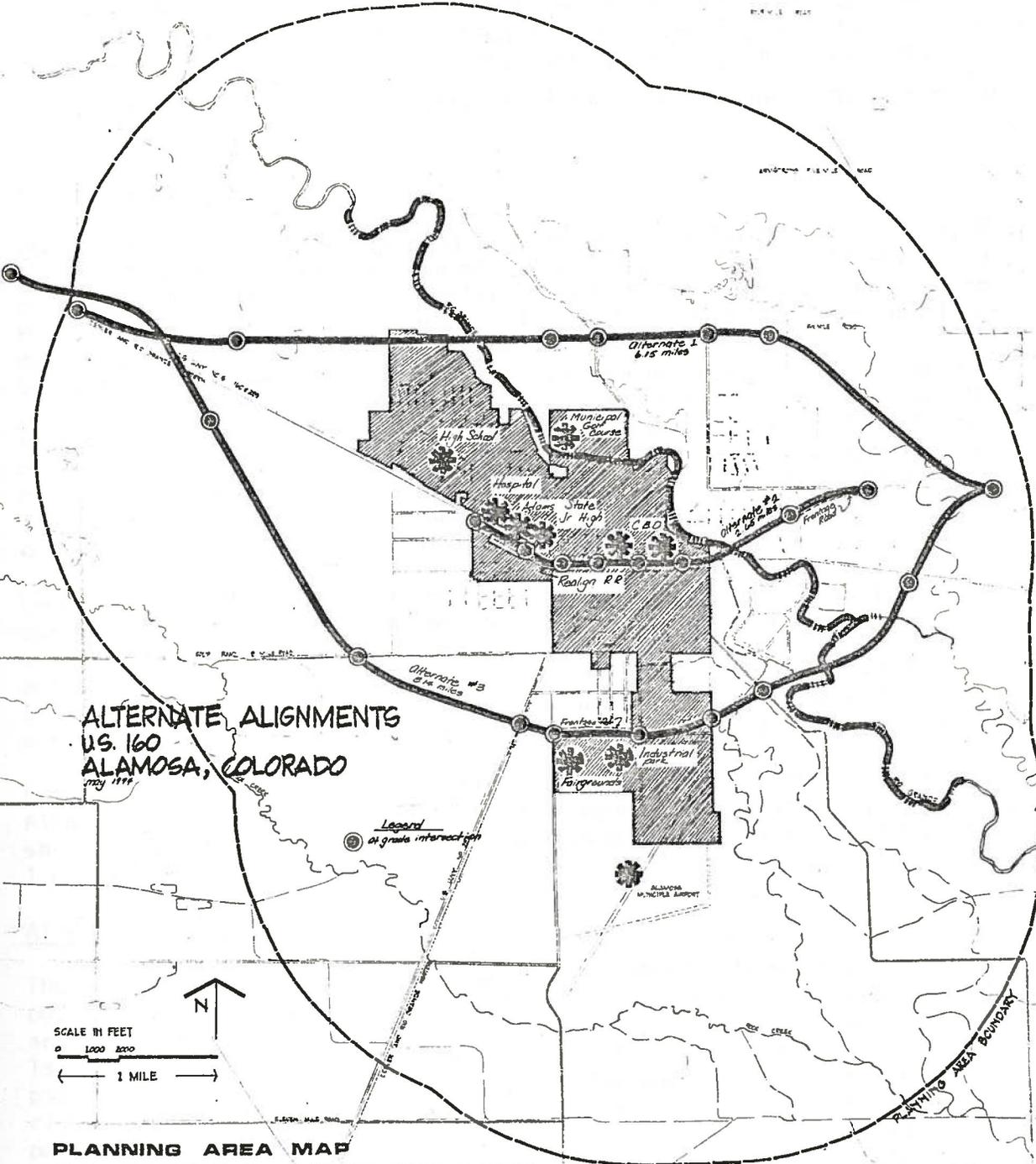
- Alternate 1. A bypass to the north of the City along Six Mile Road.
- Alternate 2. An interior route generally utilizing part of the railroad right-of-way adjacent to Sixth Street.
- Alternate 3. A partial bypass in the south portion of the City along 20th Street.

Due to the access and exposure requirements of both commercial and industrial development, and to some extent the access requirements of residential development, each alternate alignment will have a substantial effect on future land use patterns which will occur in Alamosa. Because these patterns will differ, alternate preliminary land use plans are required to properly illustrate potential future land use within the planning area for each alternative.

Alternate Land Use Plans

The following presumptions were utilized in preparation of the alternate land use plans:

- Residential development will desire convenient access to the relocated highway, resulting in a large portion of new residential development occurring adjacent to the highway.
- The northwest portion of the planning area is the most desirable location for residential development and regardless of highway location, will remain the primary residential growth area.
- If expanded industrial development occurs, particularly south of the community, some residential development will occur in that general area.
- Commercial development will locate adjacent to the highway, particularly at major access points from the bypass to the City.
- Bypass routes would cause a decentralization of commercial development, and would provide additional incentive to locate major retail efforts away from the central business district to capitalize on the exposure and access provided by the relocated highway.
- Due to the extensive railroad system in the planning area, industrial development can obtain rail service in numerous locations.
- In order to achieve convenient access and exposure, future industrial development will locate adjacent to the new highway where possible.



**ALTERNATE ALIGNMENTS
U.S. 160
ALAMOSA, COLORADO**

SCALE IN FEET
 0 1600 3200
 ← 1 MILE →



**PLANNING AREA MAP
ALAMOSA, COLORADO**

Legend
 ● at grade intersection

Alternate 1
 6.15 miles

Alternate #3

Alternate #4

PLANNING AREA BOUNDARY

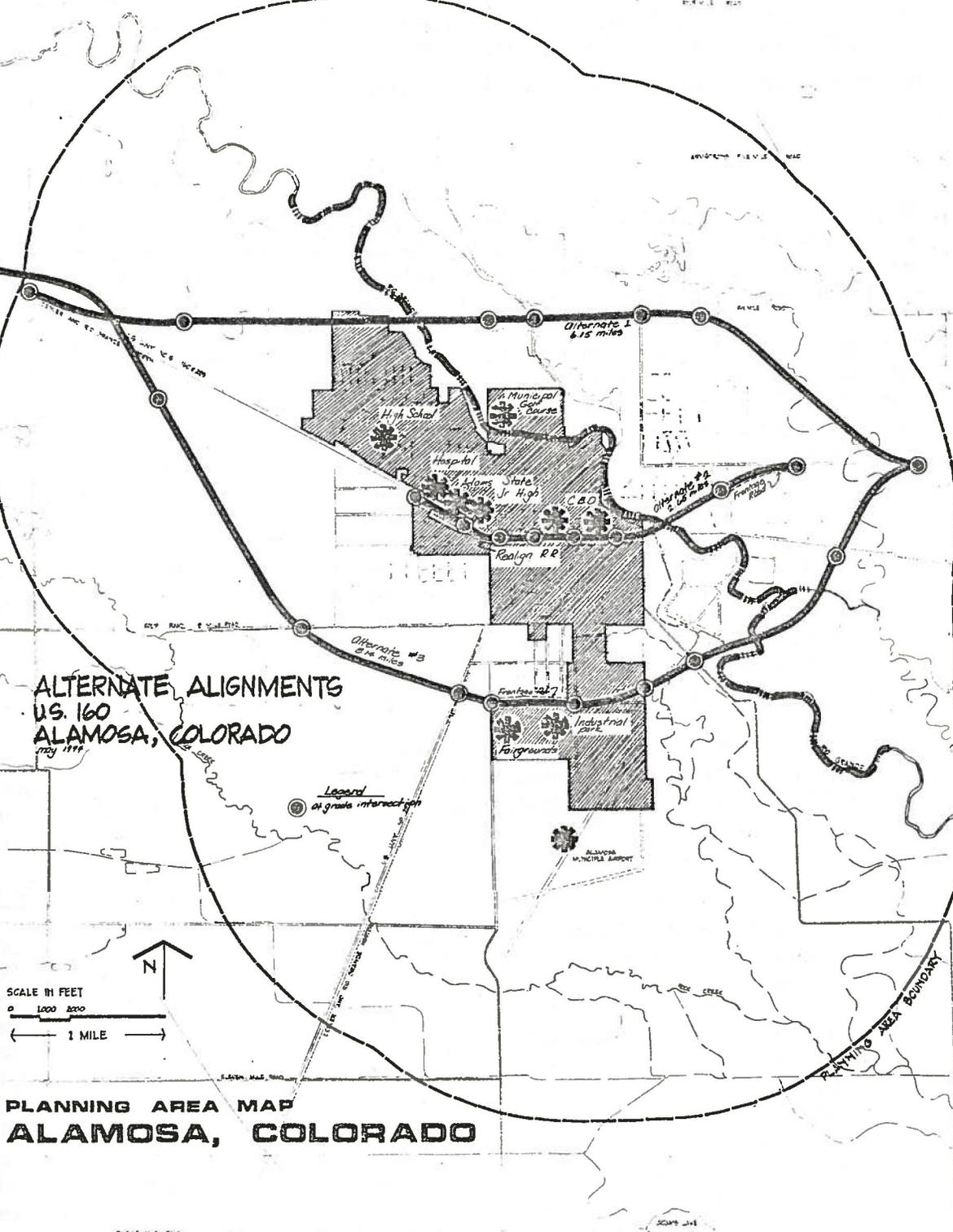
High School
 Hospital
 State Jr High
 Municipal Golf Course
 C.B.O.

Industrial Park
 Municipal Airport

Realign RR

Franklin St

Franklin Road



- The reliance on air freight and air passenger service for industrial purposes will result in the expansion of the industrial park located at 20th Street and State Avenue.
- Public development will not be altered substantially regardless of which alternate highway alignment is selected. Major public development for all alternate land use plans is related to the cemetery and airport in the south portion of the community, and the golf course and Rio Grande recreation in the north portion of the community.
- Other public development will occur as needed to serve the expanding City.

Alternate Plan 1

The first alternate land use plan provides for the realignment of U.S. Route 160 from the east portion of the planning area, north along Six-Mile Road, proceeding directly west and realigning with the existing highway in the west portion of the planning area. It is anticipated that such an alignment would further encourage residential development in the northwest portion of the community and would result in substantially more development in the northeast portion of the planning area than would occur if another alternate alignment is selected. Due to the fact that expansion of the existing industrial park on 20th Street and State Avenue is expected to occur regardless of the location of the highway, it is anticipated that limited residential expansion would occur in the south portion of the community, generally from 14th Street to 20th Street.

Commercial development would occur in a decentralized pattern, primarily surrounding the intersections of the Alternate 1 highway alignment with arterial streets serving the remainder of the community. Since it is anticipated that most major retailing functions and highway-oriented activities would occur along the realigned highway, it is expected that minimal redevelopment would occur in the central business district vicinity.

Future industrial growth is depicted in the vicinity of the Municipal Airport and on the extreme east and west boundaries of the planning area, where industries can achieve direct access and exposure to the Alternate 1 highway alignment.

Alternate Plan 2

The second alternate highway alignment is centrally located within the existing community. Generally, residential land use would be developed around the existing and expanded commercial core area. If the highway is aligned south of Sixth Street using railroad right-of-way, it is possible that this may provide the incentive for redevelopment of railroad right-of-way for commercial purposes. It is anticipated that this expanded commercial area would be utilized for activities requiring large sites, which would be relocated out of the central business district, such as automobile dealerships, farm implement sales and lumber yards. This land use plan also provides for industrial expansion in the east and west portions of the planning area with excellent highway exposure and rail service.

LEGEND:

LAND USE

-  RESIDENTIAL
-  COMMERCIAL
-  PUBLIC
-  INDUSTRIAL

TRANSPORTATION

-  REALIGNED U.S. 160
-  ARTERIAL STREETS
-  HIKE & BIKE TRAILS

SCALE IN FEET



**PRELIMINARY LAND USE MAP - ALTERNATE 1
ALAMOSA, COLORADO**



LEGEND:

LAND USE

-  **RESIDENTIAL**
-  **COMMERCIAL**
-  **PUBLIC**
-  **INDUSTRIAL**

TRANSPORTATION

-  **REALIGNED U.S. 160**
-  **ARTERIAL STREETS**
-  **HIKE & BIKE TRAILS**

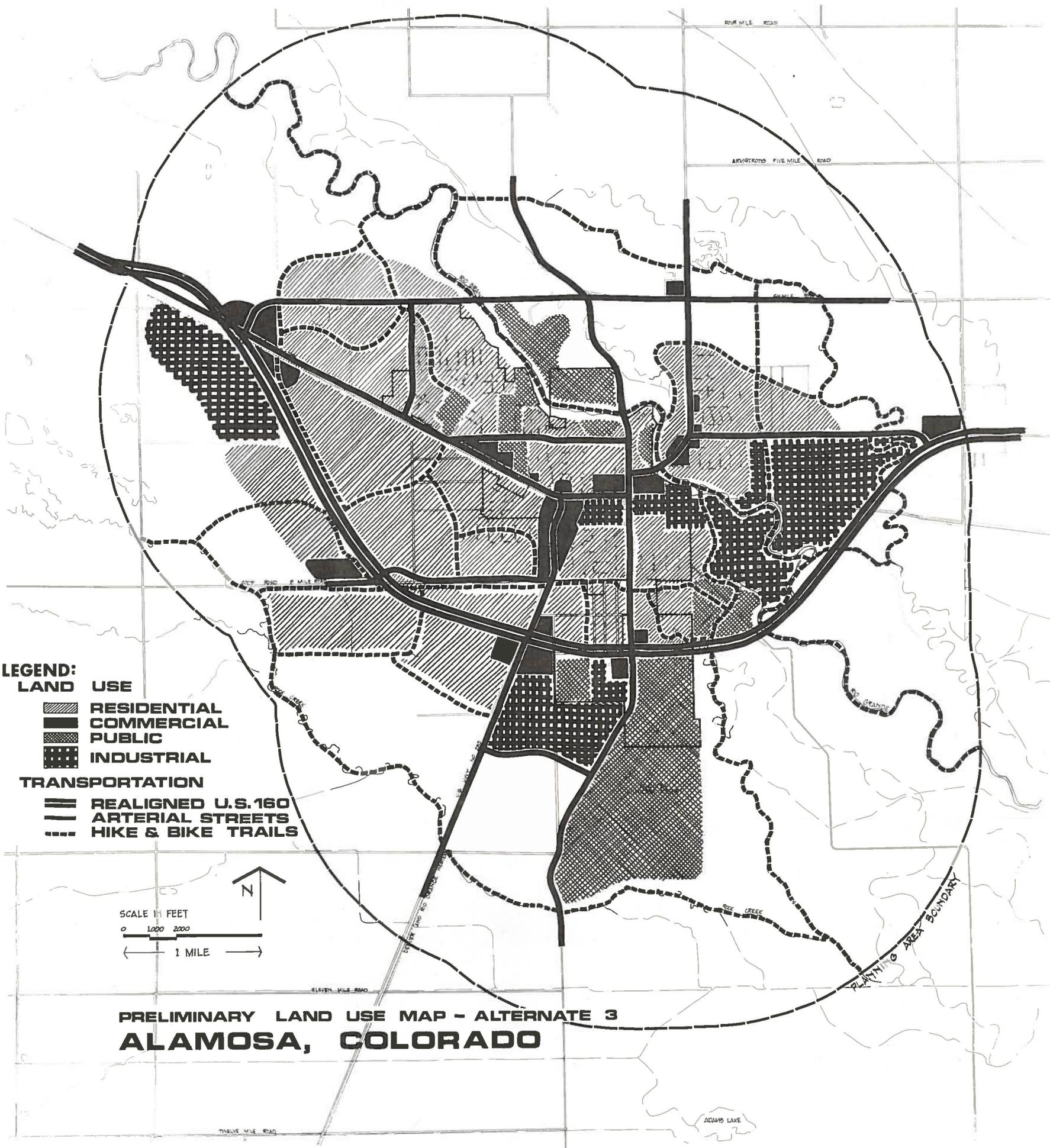
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0 1000 2000

1 MILE



**PRELIMINARY LAND USE MAP - ALTERNATE 3
ALAMOSA, COLORADO**



Alternate Plan 3

Alternate highway alignment 3 provides for partial City bypass along 20th Street. This alignment would result in relatively compact growth in the central and south portions of the City, although the desirability of the northwest portion of the planning area for residential development will continue to exert strong pressure on that area for development. As with Alternate 1, major commercial activity is expected to occur at major interchange points along the realigned highway, resulting in decreased emphasis on the central business district. Industrial development would occur in much the same locations as indicated in the other alternative land use plans, with special emphasis on the existing industrial park due to that area's location adjacent to the new alignment.

Summary

Comparison of the land use patterns which would result from the various highway alignment alternatives indicates that Plan 2 represents the most desirable land use growth pattern for the City to achieve. Alternate Plan 1 results in a less compact, "mushroom shaped" land use pattern and decentralized commercial development. Additionally a large portion of future development would occur north of the Rio Grande.

Plan 2 provides for the most compact growth of the three plans, would strengthen the central business district as a centralized retailing center, and would provide a stimulus for redevelopment of the railroad yards.

Plan 3 would result in a decentralized commercial development pattern, relatively compact overall growth pattern, and would strengthen the viability of the existing industrial park.

Since land use is only one of many considerations in highway alignment selection, it must be recognized that Plan 2 may or may not be the adopted plan. This question will be resolved during Phase 2 of the planning program.

CENTRAL BUSINESS DISTRICT

The impetus for the CBD improvement and redevelopment plans resulted from the City's desire to achieve its goals and objectives related to commercial development.

- To create and maintain an attractive central business district (CBD) and make it the cultural, financial, commercial, and entertainment center of the San Luis Valley.
- To achieve attractive, efficient and safe shopping environments.
- To assure that all persons have convenient pedestrian, bicycle and vehicular access to shopping facilities.
- To minimize adverse effects of commercial development on adjacent land uses and the major street system.

Presently Alamosa is capturing a substantial amount of all retail sales in the Valley, and it is important that this retail position be at least maintained and, if possible, enhanced. Additionally, it is noted that as other communities grow, they will be able to provide larger inventories of goods and could capture some sales that are currently going to Alamosa. For these reasons, it is believed that steps must be taken to upgrade the Alamosa central business district.

Any improvement or redevelopment plans for the Alamosa central business district must be considered in conjunction with the highway improvements previously discussed in this report. Present traffic volumes, noise levels, and safety factors substantially subtract from the desirability of the Alamosa CBD as a shopping environment. Regardless of what level of improvement or redevelopment is to take place, it is imperative that the traffic congestion be reduced if improvements are to be successful. Reducing traffic volumes will require that Sixth Street be utilized as the primary traffic carrier or as a supplement to Main Street in the future. This is true regardless of which alternate highway alignment is selected.

Background Data

The first preliminary report included substantial data relative to the central business district. In that report, existing and future retail square footage requirements and off-street parking requirements were calculated. Applicable tables in that document are included here for reference.

TABLE 1
Retail Floor Space Projections

	Floor Space in Square Feet		
	1970	1980	2000
City-Wide	328,800	385,600	588,600
Central Business District	263,000	308,500	470,900
Sales Per Square Foot	\$45	\$50	\$75

Source: Oblinger-Smith Corporation, Consultants in Planning, Design and Development, 1974.

TABLE 2
Parking Space Projections

	Number of Parking Spaces ¹		
	1970	1980	2000
City-Wide	1,808	2,120	3,237
Central Business District ²	1,446	1,696	2,589

¹ Based on standard parking requirements of 5.5 spaces per 1,000 square feet of floor space.

² Existing central business district parking: 1,003 on street parking spaces; 333 off-street parking spaces.

Source: Oblinger-Smith Corporation, Consultants in Planning, Design and Development, 1974.

Assuming that retail floor space will occupy approximately 70 percent of total business space, the figures stated in Table 1 can be transformed into the number of blocks for generalized area needs. The standards indicate that if unrelated uses such as lumber yards and service stations were not included, that approximately 7.25 blocks would have been required for adequate sales and parking space in 1970. Based on 1980 floor space and parking requirements, approximately 8.5 blocks will be required and 13 blocks will be required by 2000. Although the standard utilized in determining parking needs was 5.5 spaces for 1,000 square feet of retail floor space, when including stairways, office space, walls, etc., it is believed that ratio drops to approximately 1.6 square feet per one square foot of building area. In terms of total general shopping area to parking, the ratio could vary substantially depending upon the amenities provided such as playgrounds, pedestrian malls, fountains, and other facilities.

Redevelopment Concept

The CBD redevelopment concept illustrates the shopping center concept of CBD redevelopment, including a perimeter street system providing major access to parking lots. Provision is made for the vacation and closing of streets to provide mall treatments which can include both pedestrian improvements, parking and new structures. Moreover, the concept provides for the removal of automobile traffic from the main shopping environment, creating a pedestrian orientation for that space. The black symbols on the concept plan identify recommended activity nodes within the pedestrian areas which can be fountains, playgrounds, or something of major importance to identify the area as a key location.

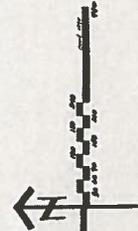
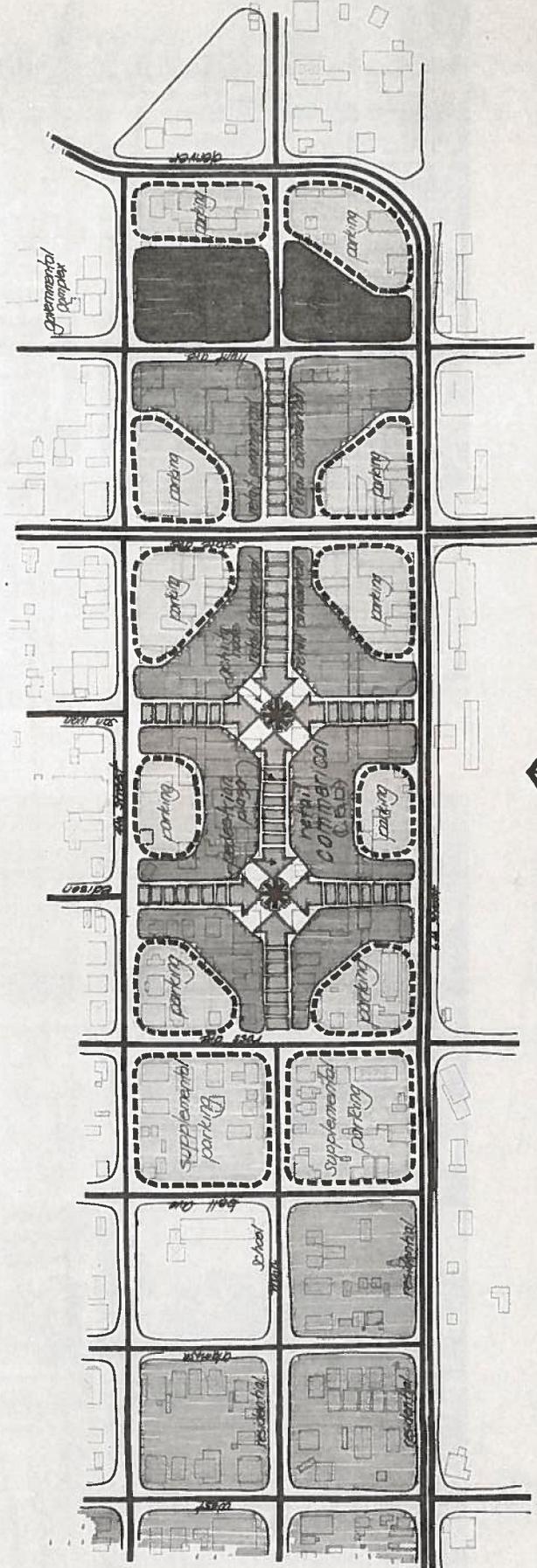
This approach to CBD redevelopment provides the vehicle to solve many of the problems inherent in the Alamosa CBD. The conflict between automobiles and pedestrians is reduced by restricting automobile traffic to a perimeter street system which provides access to major off-street parking areas in close proximity to retail commercial space. This concept also reduces conflicts between automobiles by removing on-street parking on heavily traveled streets. The concept is very efficient in terms of land usage by providing for both compact parking areas and compact retailing areas, as well as the higher use of land through redevelopment of rights-of-way.

Central Business District Improvement Plan

The CBD improvement plan is based on the premise that the land resources should be preserved for future options. The intent is to provide immediate improvement programs and facilities which will not conflict with the long-range goal of eventually closing streets to provide mall treatment as described later. This particular plan proposes the connection of Denver and Sixth Streets to facilitate traffic movement around the core area and to provide direct access to major parking resources. In so doing, the opportunity for minor land use changes exists in the construction of new facilities where obsolete structures have been removed.

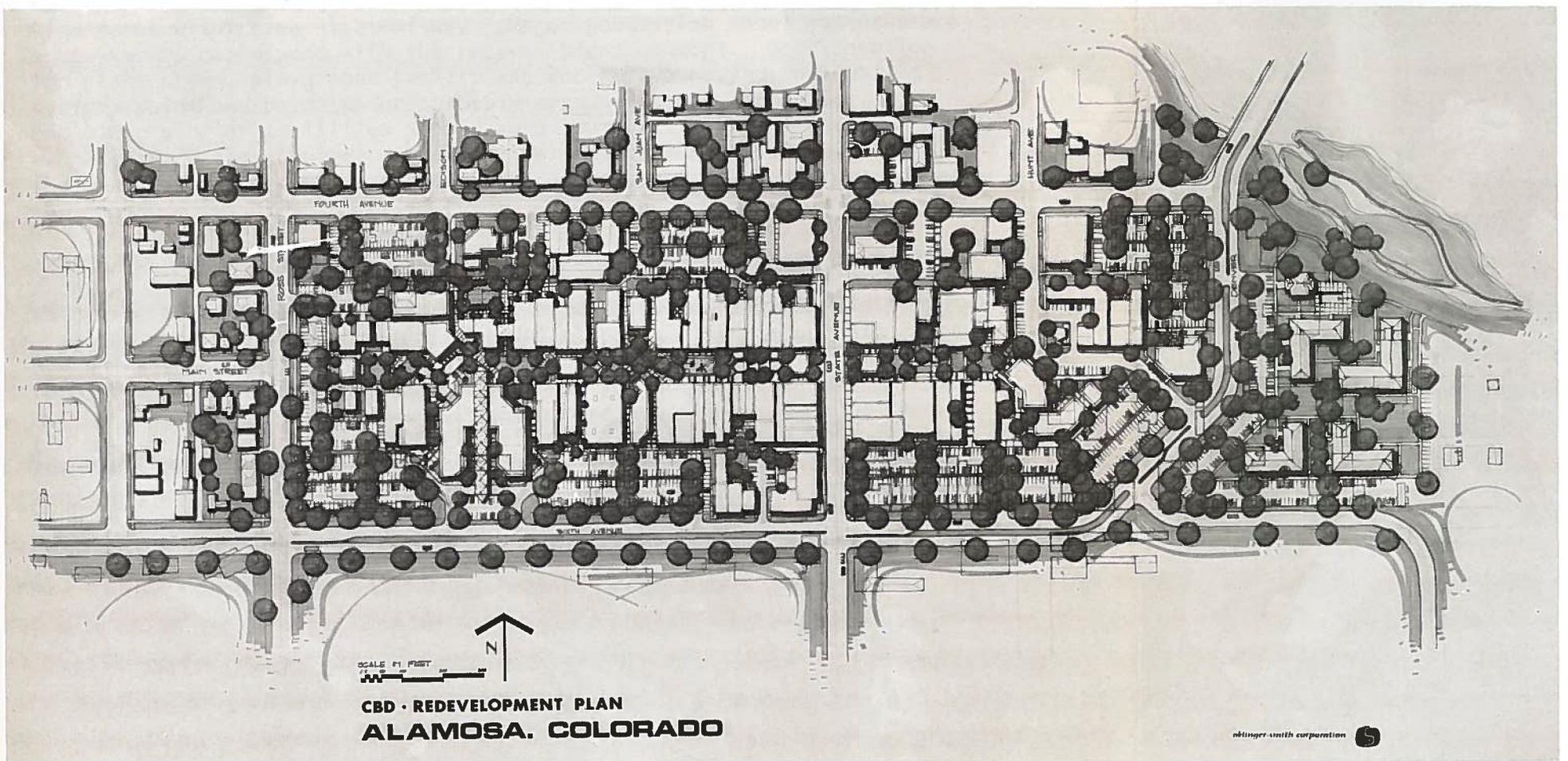
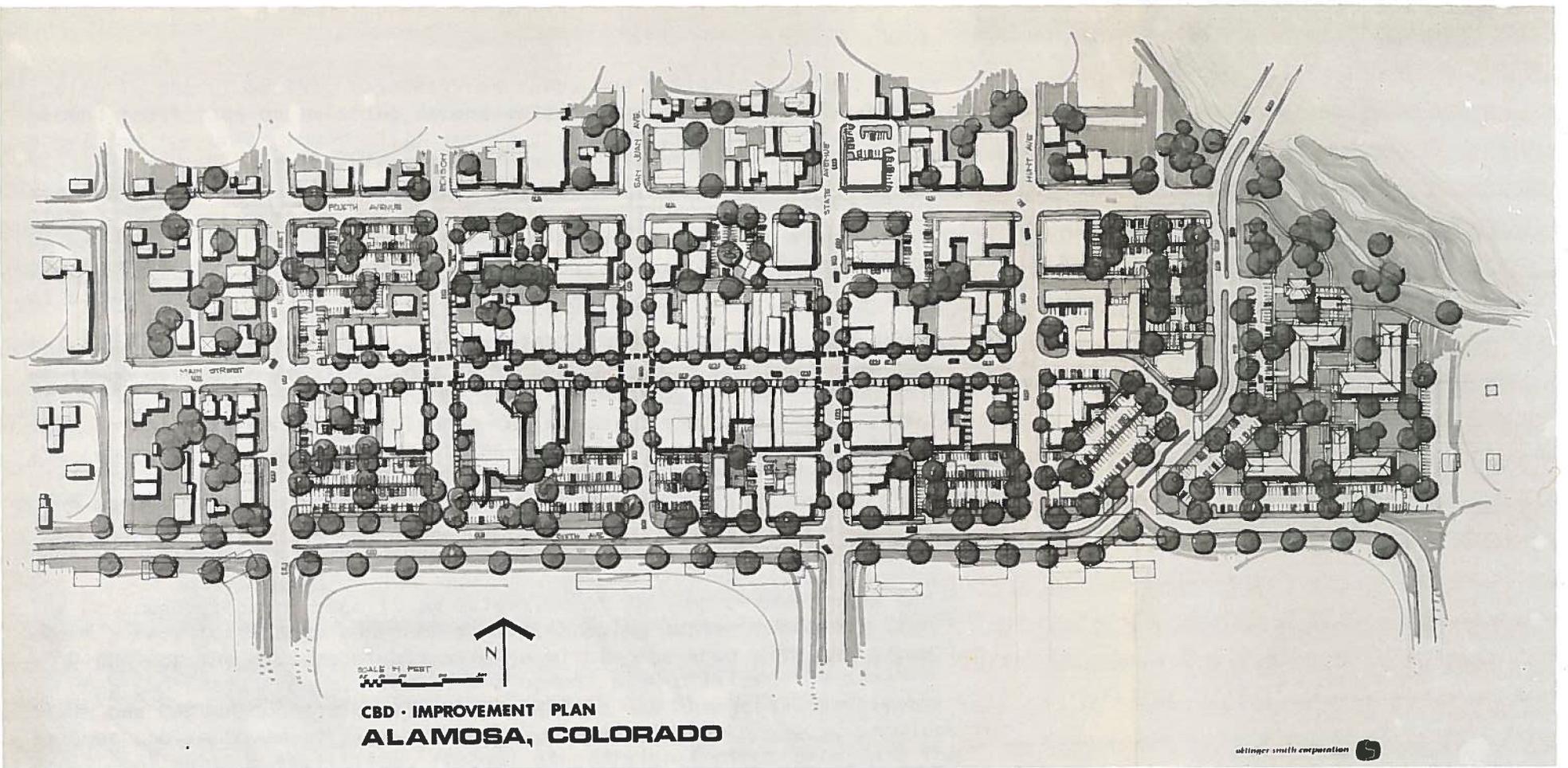
East of Denver, it is suggested that a major land use change be adopted which would permit low to moderate income housing primarily for senior citizens. This facility is well located for putting senior citizens in close proximity to the post office, shopping facilities, churches and major recreational resources. It allows the senior citizen to walk rather than wait on automobile transportation to satisfy many of his needs. A recreation resource is provided in the extension of the park from the north across Denver, and the inclusion of bicycle paths, walking paths and other similar facilities.

The removal of obsolete structures or inappropriate land uses is suggested to provide off-street parking as indicated. Parking lots are set up so that in the future when the minor streets are closed, additional parking can be provided by extension of these parking lots. In addition to parking facilities, a paint and patch-up program is desirable where structures are painted and repaired according to an overall coordinated scheme. Other desirable improvements include limited plant material, decorative



CBD RE-DEVELOPMENT CONCEPT

ALBUQUERQUE, COLORADO
 OBLINGER-SMITH CORPORATION
 DENVER, COLORADO



paving in the sidewalks, possibly new curbs and gutters, benches, playground facilities on existing vacant lots, new lighting systems, the provision for underground utilities in the alleys, and the opening of two-door systems for those commercial establishments having major parking resources behind their present facility.

Major pedestrian movements across Main Street and other local streets should be identified by directive paving patterns. The encouragement of slower-moving traffic would also be required.

This plan does provide for a continuation of on-street parking; however, it would be desirable to limit this as much as possible and encourage construction of off-street parking facilities. The major goal behind this plan is to preserve future options. As structures become obsolete or are removed, the redevelopment of the area should not jeopardize the ultimate street enclosure and mall treatment as suggested in the redevelopment plan.

Central Business District Redevelopment Plan

The CBD redevelopment plan is an extension of the improvement plan and shows a very long-range approach to the shopping center concept. It provides for the closure of all streets within the area with the exception of Ross and State Avenue. The redevelopment plan utilizes the same Sixth and Denver connection and the same land use change on the river as does the improvement plan. The redevelopment plan, however, provides for additional parking facilities, removal of additional structures, and the utilization of closed street rights-of-way for parking, pedestrian movements and new structures. The intent is to reduce the canyon effect of the Main Street corridor into three sub-elements through the introduction of structures within the right-of-way. Major pedestrian focal features are suggested to correspond with the redevelopment concept. Consideration for plaza areas, playground facilities, decorative paving, a lighting system, paint and patch-up or possibly even new canopy construction, and other similar facilities should be encouraged. The introduction of a coordinated sign control system or the design of a uniform signing theme would be appropriate for both the improvement plan and the redevelopment plan.

The major concerns are to create a total pedestrian environment in the shopping area and to reduce all pedestrian-automobile conflicts. A compact retailing area should be retained. If necessary, additional retailing area could be provided through two-level shopping with appropriate canopies and walkways connecting the upper and lower level shops. This encourages pedestrian utilization and reduces the need for automobile transportation. As the smaller narrow retail uses become obsolete, they should be removed and new facilities constructed to better utilize the land area. This new construction coupled with modern methods of merchandising will facilitate a higher, more compact core area without the need of additional retail sales area. As additional parking is required, the single family residential on the periphery could be removed for employee and overload parking.

Implementation

Implementation of the central business district improvement and redevelopment plans is dependent on numerous factors, including community support, city government support, merchant support, correcting of the traffic congestion problem, and probably non-local financial assistance. Additionally, implementation would require in-depth study of existing and desired conditions in the central business district.

It is believed that substantial improvement could be achieved by undertaking individual projects such as undergrounding of overhead utilities, installation and maintenance of plant materials, provision of additional off-street parking, minor rehabilitation of structures, removal of dilapidated structures, coordinated paint schemes and the installation of human scale lighting. Moreover, improvements can range from nothing to the ultimate redevelopment plan and, if properly planned and coordinated, can be completed over a long time period.

It is recommended that the City, through working with the Chamber of Commerce, promote the establishment of a downtown merchant's association. The City should also investigate federal assistance programs and attempt to determine the actual desires of the businessmen, community and the availability of non-local funds to determine the extent of the short-range program required. At that time, the detailed design study can be undertaken, tailored to meet the immediate as well as long-range needs for the Alamosa Central Business District.

TRANSPORTATION

Essential to a complete transportation system are many forms of transportation including air, rail, street, and, in some cases, transportation by water. In Alamosa the street system, providing for automobile and truck transportation, is of greatest immediate concern and will be considered first.

The street system in any urban area has two primary objectives. The first objective is to provide a convenient, safe and economic means of routing traffic between various points in the City and surrounding areas. Important in this objective are the words, "convenient", "safe", and "economical". A convenient street system is one in which the motorist is able to reach major thoroughfares quickly and easily. Proper street design enhances safety by including such factors as limited access to major thoroughfares, three-way local street intersections as opposed to four-way, adequate width and number of lanes, and proper signalization and signing. An economical street system is achieved by designing specific streets to carry high volumes of traffic and by utilizing new techniques in subdivision design which normally require less roadway to serve development than the older grid street plans.

The second primary objective is to protect residential, commercial, industrial, and public areas from undesirable and unnecessary traffic, while at the same time providing proper access to these activities.

As noted in the first preliminary document, there are four general functional categories of streets of importance in Alamosa including expressways, arterial streets, collector streets, and local streets. Primarily, arterial streets carry relatively high speed through-traffic, accommodate traffic moving considerable distances within a community, and accommodate traffic moving into and out of the community. As the term implies, the principle function of collector streets is to gather traffic from local and residential streets and carry it to the arterial system. Collector streets should serve neighborhood activities such as schools, churches and parks, and should be designed so that they may serve these minor traffic generating activities without carrying through-traffic. Adequate space for two lanes of moving traffic should be available at all times along collector streets. Local or residential streets are those streets with the primary function of providing access to abutting property. Through-traffic movements should be discouraged on local streets by avoiding a major grid pattern of streets with the characteristic four-way intersections.

Street Standards

The street standards recommended for Alamosa are illustrated on Table 3, Alamosa Street Standards. The Table is self-explanatory and indicates that as the functional level of streets increases from local to arterial, the standards become more stringent. The last item on Table 3, type of surface, requires some explanation. It is recommended that arterial streets be surfaced with a high type surface which includes mixed bituminous or

TABLE 3
Alamosa Street Standards

Item	Standard		
	Arterial	Collector	Local
Design speed	40-50 m.p.h.	30-40 m.p.h.	20-30 m.p.h.
Spacing	one mile	$\frac{1}{4}$ to $\frac{1}{2}$ mile	As required
Minimum Sight Distance	275 feet	200 feet	150 feet
Maximum Grade ¹	5 percent	7 percent	8 percent
Minimum Curve Radius	700 feet	400 feet	200 feet
Number of Lanes ²	-	-	2
Lane Width	12 feet	11-12 feet	11 feet
Sidewalks	4-8 feet ³	4-8 feet ³	4 feet
Parking Permitted	No	Yes	Yes
Maximum Cul-de-Sac Length	N.A.	N.A.	600 feet
Minimum Cul-de-Sac Radius	N.A.	N.A.	50 feet
Right-of-Way Width ⁴	120 feet	80 feet	60 feet
Median Width	4-16 feet ⁵	4-16 feet ⁵	N.A.
Surface (See Text)	High	Intermediate	Low

N.A. = Not Applicable

¹ Minimum grade for all streets - 0.5%

² Dependent on Traffic Volume. See Table

³ 4 foot sidewalks in residential areas and 8 foot sidewalks in commercial areas.

⁴ Minimum requirement is 15 feet beyond curb.

⁵ 16 feet if turn lane is provided at intersections.

Source: Adopted from American Association of State Highway Officials Publications and from National Highway Functional Classification and Needs Study Manual.

bituminous penetration roads on a rigid or flexible base with a combined (surface and base) thickness of seven inches or more; also any bituminous concrete, street asphalt, rock asphalt, portland cement, concrete, brick, or combination brick-type road. An intermediate type surface is adequate for collector streets. Intermediate surface consists of mixed bituminous or bituminous penetration road on a flexible base with a combined (surface and base) thickness of 7 inches. A lot type surface is satisfactory for local streets. This is a bituminous surface course (less than one inch thick) on a base suitable to carry occasional heavy axle loads.

These standards should be incorporated into the City's public improvement manual and/or subdivision regulations. This will assure that new construction meets the standards indicated in the Table. Additionally, when improvements in the existing portion of the community are undertaken, it should be done with these standards in mind. Moreover, achieving these standards with new development and redevelopment will not only provide higher quality facilities, but will achieve the functional traffic circulation system desired.

Table 4 provides a guide to the number of travel lanes and other improvements required to adequately serve various traffic volumes. As previously noted, arterial streets normally require four lanes while collector streets require two lanes. Local streets also require two travel lanes, although since local streets do not carry through traffic, the travel lanes and parking separation are not as critical as with collector streets.

The general figures illustrated in Table 4 provide a guide only. As noted on the Table, high anticipated traffic volumes should be studied prior to right-of-way acquisition and roadway design and construction.

Street Conditions

One means of achieving implementation of a functional street system is by maintaining streets in accordance with the different levels of service to be provided. Stated another way, arterial and collector streets should be maintained to the highest level to encourage maximum utilization of these streets.

Major streets in Alamosa were inventoried in 1974. Inventory items included surface width, right-of-way width, whether or not a street had curb and gutter, the pavement surface material and its condition, and whether or not parking occurred on the street. The results of this inventory are illustrated on Table 5, Major Street Inventory.

Although the information provided in Table 5 will be analyzed in detail to assist in preparation of the capital improvement program, the following general review is appropriate. For the most part, City roadway surface and right-of-way widths are adequate and, in some cases, extremely wide. It appears that existing rights-of-way will permit the City to construct wider streets where necessary without additional right-of-way acquisition. The streets inventoried in East Alamosa indicate that although the right-of-way widths are adequate in most cases, roadway widths are relatively narrow. As that area develops, these numerous streets may have to be widened.

TABLE 4

Number of Lanes Needed for Various Design Volume Ranges

Type of Area	Central Business District		Fringe Area and Outlying Business District		Suburban Residential Areas	
	4*	2	4*	2	4*	2
Number of Travel Lanes	4*	2	4*	2	4*	2
Without Separate Left Turn Lanes						
DHV ¹	800-1,250	0-800	1,050-1,600	0-1,050	1,000-1,500	0-1,000
ADT ²	10,000 to 16,000	Under 10,000	11,600 to 17,900	Under 11,600	8,900 to 13,800	Under 8,900
With Separate Left Turn Lanes						
DHV ¹	800-1,550	--	1,050-1,950	--	1,000-1,850	--
ADT ²	10,000 to 19,500	--	11,600 to 21,700	--	8,900 to 16,700	--

* Facilities needing more than four lanes should be analyzed individually.

¹DHV - Design Hourly Volume

²ADT - Average Daily Traffic

Source: Adopted from the National Highway Functional Classification & Needs Study Manual.

Drainage relates to the provision of curb and gutter. While the majority of the streets in Alamosa have curb and gutter, many do not. Although the primary function of curb and gutter is to facilitate drainage, it is also important in terms of assuring that parking occurs on the street rather than lawns and in urban situations, which generally improves the appearance of neighborhoods. For these reasons, it is suggested that curb and gutter should be provided in all but very low density development.

Although the majority of Alamosa streets maintain a bituminous surface, the surface materials are of relatively low grade material which tends to "ravel" under high volumes of traffic. As a result, the majority of streets inventoried were in fair condition and a few streets were reported to be in poor condition. The deterioration of streets is most critical as related to arterial streets such as State Avenue and Craft Drive. Additionally, most of the streets, including Main Street (U.S. 160), in the vicinity of the central business district were reported to be in only fair condition. Since these streets carry the greatest traffic volumes, they should be considered a high priority improvement in the capital improvement program.

In the future the City should use high pavement types such as portland cement or asphalt cement to overcome this problem. Streets which are of a gravel surface should be improved as again in the dense urban situation, gravel streets are unacceptable.

Parking is allowed on nearly all streets in Alamosa which have curb and gutter. In limited cases, parking occurs on gravel streets as well. This acceptability of on-street parking will be addressed in detail in the Traffic Safety Study. In some areas it is evident that parking is not desirable, particularly the diagonal parking which occurs in the central business district. As a general rule, parking along arterial streets is normally restricted or prohibited. Parking along collectors and local streets is usually permissible.

Existing Street System

As with most grid patterns, the existing street system of Alamosa only partially falls within the functional classifications of arterials, collectors, and local streets. It is very difficult to achieve a functional street system with a grid pattern as access is provided to major thoroughfares at nearly every block. To some extent an artificial functional system has been established with the use of stop signs, but even this adaptation does not adequately define the various functional level of streets.

It is readily apparent that Main Street (U.S. Route 160) is the primary arterial street in the community, recording average traffic volumes in excess of 14,000 at the intersection of Main Street and U.S. 285. Traffic congestion resulting from the inability of Main Street to accommodate this high volume causes local residents, including college students, to utilize First Street and probably other streets to drive from the west portion of the community to the central business district vicinity. Thus, it would appear that First Street is also serving a major east-west arterial function. State Avenue, Ross Avenue and U.S. Route 285 provide the major north-south arterials with several streets in the vicinity of Adams State College experiencing relatively high traffic volumes.

TABLE 5
Major Street Inventory - 1974

Street	Location	Surface Width	R-O-W Width	Drainage ¹	Surface Type ²	Condition	Parking
Weber Drive	Clark-north	30'	60'	No	GR.	Fair	None
Murphy Drive	Clark-north	34'	45'	CG	Bit.	Fair	Both Sides
Clark Street	Craft to Duke	24'	50'	No	GR.	Fair	None
Clark Street	Duke to Murphy	34'	50'	No	Bit.	Fair	None
Craft Drive	U.S. 160 to Clark	24'	50'	No	GR.	Fair	None
Oliver Avenue	Clark to Victoria	30'	60'	No	GR.	Fair	Both Sides
Murphy Drive	Sunset to Clark	34'	45'	CG	Bit.	Fair	Both Sides
Sunset Drive	Murphy to Brown	46'	55'	CG	Bit.	Fair	Both Sides
Sunset Drive	Brown to Stadium	34'	60'	CG	Bit.	Fair	Both Sides
Victoria Street	U.S. 160 to Oliver	35'	60'	CG	Bit.	Fair	Both Sides
Murphy Drive	First to Sunset	50'	60'	CG	Bit.	Fair	Both Sides
Stadium Drive	First to Sunset	45'	60'	CG	Bit.	Fair	Both Sides
U.S. 160 & 285	First-east	70'	100'	No	Bit.	Good	None
U.S. 160 & 285	Richardson to First	48'	75'	No	Bit.	Fair	None
Pike Avenue	U.S. 160 to First	43'	60'	CG	Bit.	Fair	Both Sides
Edgemont Blvd.	U.S. 160 to First	55'	70'	CG	Bit.	Good	Both Sides
Richardson Ave.	U.S. 160 to First	35'	60'	CG	Bit.	Good	Both Sides
First Street	U.S. 160 to Murphy	24'	60'	No	Bit.	Fair	None
First Street	Murphy to Crestone	45'	60'	No	Bit.	Fair	Both Sides
First Street	Crestone to LaVeta	45'	60'	CG	Bit.	Fair	Both Sides
First Street	LaVeta to State	50'	80'	CG	Bit.	Fair	Both Sides

Street	Location	Surface Width	R-O-W Width	Drainage	Surface Type	Condition	Parking
Third Street	Richardson to Hunt	50'	76'	CG	Bit.	Fair	Both Sides
Fourth Street	West to Edison	50'	76'	CG	Bit.	Fair	Both Sides
Fourth Street	Edison to Denver	56'	76'	CG	Bit.	Fair	Both Sides
Main Street	Richardson to Cochetopa	50'	80'	CG	Bit.	Fair	Both Sides
Main Street	Cochetopa to Ross	50'	76'	CG	Bit.	Fair	Both Sides
Main Street	Ross to Denver	60'	78'	CG	Bit.	Fair	Both Sides
Main Street	Denver to LaDue	56'	78'	CG	Bit.	Fair	Both Sides
Sixth Street	West to Bell	34'	50'	No	Bit.	Fair	One Side
Sixth Street	Bell to LaDue	37'	50'	CG	Bit.	Fair	Both Sides
Eighth Street	Center to LaDue	52'	80'	CG	Bit.	Good	Both Sides
West Eighth St.	Washington to Center	24'	60'	No	GR.	Fair	None
West Tenth St.	Washington to Center	18'	60'	No	GR.	Poor	None
Twelfth Street	Ross-east to Corporation Line	48'	74'	CG	Bit.	Good	Both Sides
Seventeenth St.	U.S. 285 to State	24'	60'	No	Bit.	Good	None
Twentieth Street	Fairgrounds to State Ave.	24'	50'	No	GR.	Fair	None
Twentieth Street	State-east to Corporation Line	20'	50'	No	Bit.	Fair	None
Tremont Street	Craft to Murphy	15'	50'	No	GR.	Poor	None
Tremont Street	Murphy to Center	15'	30'	No	GR.	Fair	None
8-Mile to Coop Rd.	Craft to U.S. 285	24'	60'	No	Bit.	Good	None
Craft	8-Mile Coop to First	20'	60'	No	GR.	Fair	None
Washington	Eighth to Tremont	18'	50'	No	GR.	Poor	None
Center	8-Mile Coop to Ninth	45'	110'	No	Bit.	Good	None
U.S. 285	8-Mile Coop Road-south	45'	110'	No	Bit.	Good	None
West Avenue	Ninth to Sixth	30'	100'	No	Bit.	Good	None
West Avenue	Sixth to Main	54'	80'	No	Bit.	Good	None

Street	Location	Surface Width	R-O-W Width	Drainage	Surface Type	Condition	Parking
West Avenue	Main to First	50'	78'	CG	Bit.	Good	Both Sides
Ross Avenue	Twentieth to Eleventh	20'	60'	No	GR.	Fair	None
Ross Avenue	Eleventh to Eighth	50'	80'	CG	Bit.	Good	Both Sides
Ross Avenue	Eighth to Third	50'	80'	CG	Bit.	Good	Both Sides
Edison Avenue	Sixth to Main	60'	75'	CG	Bit.	Fair	Both Sides
Edison Avenue	Main to Third	50'	78'	CG	Bit.	Fair	Both Sides
San Juan	Sixth to Main	56'	80'	CG	Bit.	Fair	Both Sides
San Juan	Main to Third	50'	75'	CG	Bit.	Fair	Both Sides
State Avenue	Airport to Fourteenth	22'	60'	No	Bit.	Fair	None
State Avenue	Fourteenth to Eighth	48'	72'	CG	Bit.	Fair	Both Sides
State Avenue	Eighth to Third	60'	75'	CG	Bit.	Fair	Both Sides
State Avenue	Third north to Bridge	50'	78'	CG	Bit.	Fair	Both Sides
Hunt Avenue	Sixth to 1/2 block north of Main	56'	80'	CG	Bit.	Fair	Both Sides
Hunt Avenue	1/2 block north of Main to Third	56'	78'	CG	Bit.	Fair	Both Sides
Denver	Sixth to Main	60'	76'	CG	Bit.	Fair	Both Sides
Denver	Main to Fourth	50'	76'	CG	Bit.	Fair	None
LaDue Avenue	Twelfth to Main	50'	80'	CG	Bit.	Good	Both Sides
East Section Line	Twentieth to Twelfth	22'	60'	No	GR.	Fair	None

EAST ALAMOSA

Six Mile Road	State to State Hwy. 17	24'	60'	No	Bit.	Good	None
State Avenue	One Lane Bridge to 6-Mile Rd.	24'	60'	No	Bit.	Good	None
St. Highway 17	Sante Ave. to 6-Mile Rd.	30'	120'	No	Bit.	Good	None
First Street	Costilla Blvd. to Sante	24'	80'	No	Bit.	Fair	Both Sides

Street	Location	Surface Width	R-O-W Width	Drainage	Surface Type	Condition	Parking
First Street	Rio Grande to Costilla	22'	70'	No	GR.	Poor	None
Curtis Lane	First to Haniver	24'	40'	No	Bit.	Fair	None
Curtis Lane	Haniver to Blanca Vista	25'	50'	No	GR.	Fair	None
Blanca Vista	Sante to Curtis	20'	30'	No	Bit.	Fair	None
Sante Avenue	First to Blanca Vista	44'	120'	No	Bit.	Good	None
Costilla Blvd.	Broadway to Fifth	24'	80'	No	Bit.	Fair	Both Sides
Broadway	Bridge to First	48'	Var.	No	Bit.	Good	None

¹ No indicates that the street segment does not have curb and gutter. CG indicates the presence of curb and gutter

² Surface types are as follows:

C - Concrete

Bit. - Bituminous

BR - Brick

GR - Gravel

Source: Oblinger-Smith Corporation, Consultants in Planning, Design and Development, 1974.

The existing street system is best defined by the streets identified on the Federal Aid Primary and Federal Aid Urban portions of the designated part of the Federal Aid System of Alamosa. These two designated systems include the following streets:

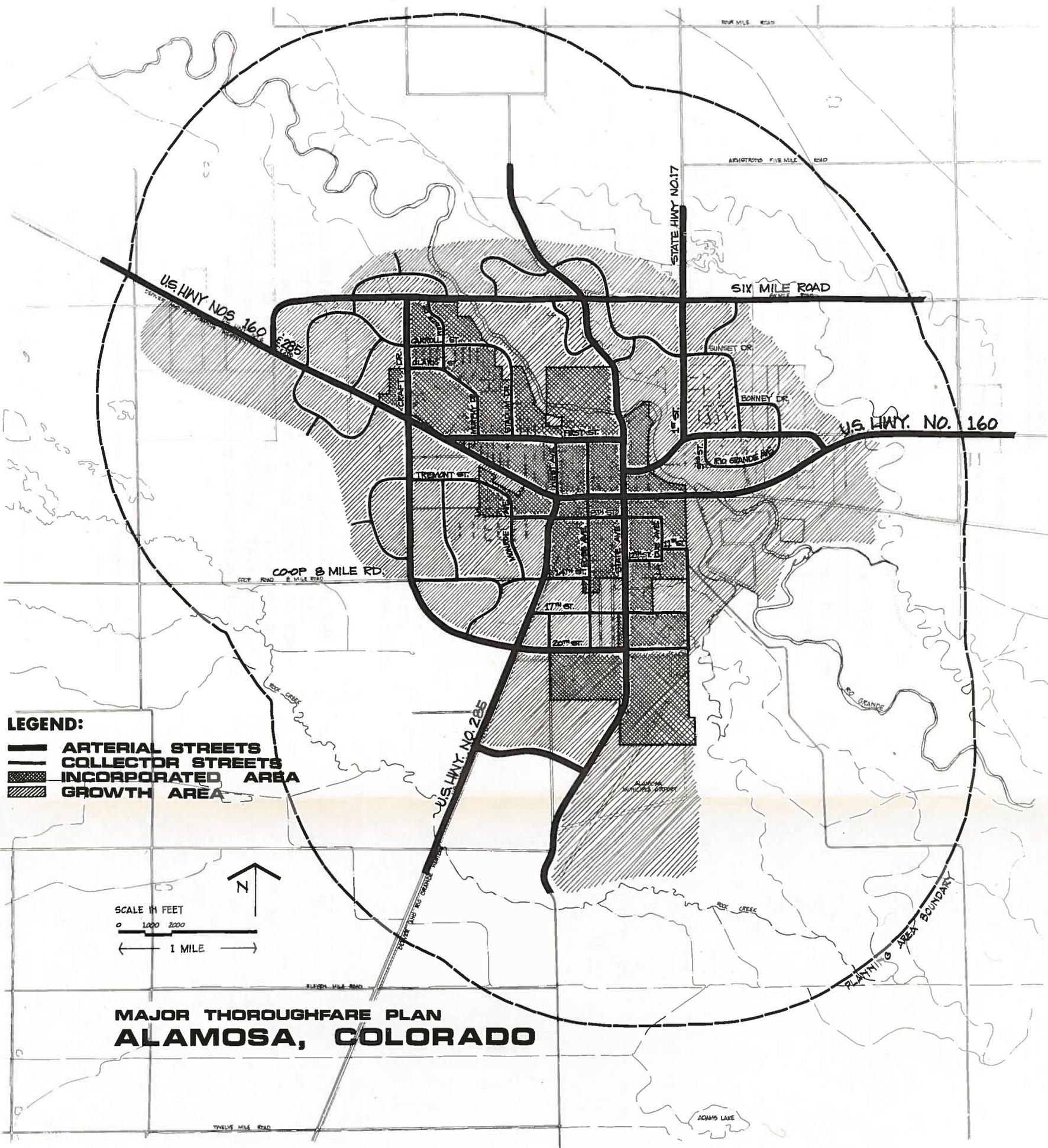
- Federal Aid Primary: U.S. Route 160, U.S. Route 285 and State Route 17.
- Federal Aid Urban: State Avenue - Airport to River; Ross Avenue - 20th to First Street; West Avenue - U.S. 160 to First Street; Richardson Avenue - U.S. 160 to First Street; Edgemont Boulevard - U.S. 160 to First Street; Stadium Drive - First Street to Carol Street; Murphy Drive - First Street to Carol Street; Coff Drive - U.S. 160-north; Washington Avenue - 8th Street to U.S. 160; Clark Street - Craft Drive to Murphy Drive; First Street - U.S. 160 to State Avenue; 8th Street - Washington Avenue to U.S. 285; 9th Street - U.S. 285 to South First Avenue; 17th Street - U.S. 285 to State Avenue; and 20th Street - U.S. 285 to South First Avenue.

Major Thoroughfare Plan

The proposed major thoroughfare plan is illustrated on the Major Thoroughfare Plan Map. The map identifies arterial and collector streets with all other existing streets being considered local streets or new local streets, which would be provided through individual subdivision design. The importance of the major thoroughfare plan is apparent not only in determining street improvement priorities and identifying proper locations for traffic signals and stop signs, but also to assure that future development provides for the continuation of both collector and arterial streets. Every plat submitted to the City should be analyzed to assure that needed collector streets and arterial streets are located to assure ultimate development of a continuous system.

The major thoroughfare plan is based on the Preliminary Land Use Plan 2, which provides for the relocation of U.S. Route 160 along the Sixth Street alignment. If another alternate highway alignment is selected, anticipated land use patterns would differ and therefore minor changes would need to be made in the major thoroughfare plan. For the most part, however, particularly within the existing portions of the City, the plan would remain intact regardless of alternate alignment selection.

The major thoroughfare plan generally provides for arterial streets located at one-mile intervals, as required by the street standards. Collector streets are provided every one-fourth to one-half mile. Although the arterial street system provides for relatively straight streets, the collector street system is indicated as being curvilinear in new areas. The plan assumes that local streets would be designed to have access only to collector streets and not to arterial streets regardless of their proximity to those arterial streets. Access to significant new commercial development should be provided by frontage or service roads. As with local streets, frontage or service roads are recommended to restrict access to the arterial streets, thereby increasing the traffic carrying capacity of those streets and reducing safety hazards associated with unlimited access to major thoroughfares.



Other Modes of Transportation

Other modes of transportation which are important in Alamosa include rail, air, and bus transportation. A complete, balanced transportation system is an asset to any community, not only from an economic standpoint, but from a convenience standpoint as well.

Rail

Rail freight service is provided by the Denver and Rio Grande Railroad. No passenger service is provided. Discussion with railroad personnel indicates that the capacity exists, or if needed can be provided, to serve additional freight requirements which may occur throughout the planning period.

Some conflict between rail and vehicular transportation occurs in the vicinity of the railroad transfer yards, particularly as related to switching which occurs in that area. Normally only three trains depart from Alamosa daily. Due to the infrequency of trains and the relatively low train speed in the Alamosa vicinity, it is believed that vehicular/rail conflict is more of an inconvenience than a safety hazard. Since the railroad right-of-way effectively divides the community in half, it appears that the only means of improving this condition is to relocate the rail yards. In addition to the infrequent trains and low speeds, rail crossing safety is further enhanced by provision of cross-buck signs at all crossings. (An additional cross-buck is required on Railroad Avenue, north of the railroad tracks.) The major crossing deficiency appears to be the lack of auxiliary signs showing the number of tracks at multi-track crossings, as required by the manual of Uniform Traffic Control Devices.

Bus

Bus service to and from Alamosa is provided by Continental Trailways. Service to and from Grand Junction, Monte Vista, Durango, Farmington, and Gallup occurs once daily. Buses to and from Denver occur three times daily.

It appears that the major bus deficiency in Alamosa is lack of any bus system running within the City of Alamosa itself, and throughout the San Luis Valley Region. It is recommended that mini-bus service be considered in Alamosa to transport the elderly and persons that cannot drive from their residences to shopping and medical facilities. This program could be expanded on a region-wide basis to provide bus service throughout the entire region.

Alamosa Municipal Airport

The Alamosa Municipal Airport plays an important role in the economy of Alamosa. Frontier Airlines provides service to and from Alamosa to Denver and Durango twice daily. Additionally, twelve private aircraft were reported to be based in Alamosa in 1973.

The airport, which is attended 24 hours a day, provides for airline, charter and training activities. In 1973 annual operations amounted to

17,800 operations. Two runways are maintained--one 7,872 foot asphalt runway and a 4,700 foot secondary cross-wind runway which is not surfaced.

Several airport deficiencies were noted during the preparation of the Colorado Airport System Plan. Prepared in 1973, the short-range (0-5 year) program provided for acquisition of land to prepare for extension of the principal runway (02-20) to the north. Additionally the plan recommended that a fire and rescue building be constructed and that fire and rescue equipment be purchased.

The intermediate range (5-10 year) improvement program included expansion of the airport terminal, which is being accomplished at the present time. Additionally, the intermediate range program recommended a 1,128 foot extension of the principal runway and widening the entire runway 50 feet. Also a new 9,400 foot taxiway was recommended, as was strengthening of the entire runway apron. The installation of airfield lighting, approach aids, and fencing was also recommended.

From an economic standpoint, it is suggested that Alamosa should continue to undertake all actions necessary to assure that the airport is as modern and convenient as possible. Air transportation is important today in economic development of the City, and it is anticipated that it will grow increasingly important in the future. As expansion of the airport occurs, it is important not only that the proper clear zones be provided, but that the noise generated by both propeller and jet aircraft be considered. The City should restrict development in approach zones to open space where possible and certainly limit development to some compatible commercial or industrial activities if development is to occur in those areas. It would appear at the present time that such restriction would not be difficult to achieve, since primary expansion of the City is expected to occur to the north, south and west, with little expansion to the east.

APPENDIX

The Physical Features Map illustrated on the following page, was not included in Preliminary Report #1 due to insufficient flood plain information. Since that report was completed, it has been determined that accurate flood plain information is not available, and flood-prone areas cannot be delineated at this time.

A flood plain study is being undertaken by the U.S. Army Corps of Engineers. The results of that study should be incorporated into the plan when completed. At the present time, it must suffice to note that large portions of the City have experienced some flooding in the past and development proposed for known flood-prone areas should be restricted until adequate flood protection is provided.



