COLORADO
LAND ECONOMIC SIUDY
INTERSTATE 25-SOUTHEAST OF DENVER


PREPARED BY
COLORADO DEPARTMENT OF HIGHWAYS
SURVEY AND PLANS DIVISION
RIGMT OF WAY SECTON
UNDER TME CFNERAL SUPERVISTON OF PL ANNING AND RESEARCH DIVISION

IN COOPERAMTON WTTHI
U. S. DEPARTMENT OF COMMERCE BUREATS OF PUBLIC ROADS

1962

## COLORADO LAND ECONOMIC STUDY

## INTERSTATE 25 -SOUTHEAST OF DENVER



PREPARED BY
COLORADO DEPARTMENT OF HIGHWAYS
SURVEY AND PLANS DIVISION
RIGHT OF WAY SECTION
UNDER THE GENERAL SUPERVISION OF
PLANNING AND RESEARCH DIVISION
IN COOPERATION WITH
U. S. BUREAU OF PUBLIC ROADS
PAGE
Introduction ..... 3
Scope of Study ..... 6
General Results and Findings of Study ..... 7
Results of Study-shown Graphical ..... 10
Tabulation of Sales ..... 20
Methodology
Procedure 1 Appendix
Personal Interviews ..... 2 Appendix
Zoning 3 Appendix
Review of Controlled Access7 Appendix
Review of Colorado Blvd. Interchange7 Appendix
Case Studies of Damage Payments13 Appendix
GRAPHICAL ILLUSTRATIONS
Comparison of Highway affected parcels with Zones A through E ..... 14
Comparison of Zone C with Zones A through E ..... 16
Comparison of Zone G with Zones F and H ..... 18
Comprehensive comparison of all zones
Trend of sales ..... 18
Moving average ..... 19
MAPS
General area of study ..... 2
Annexation corridors of Denver ..... 6
Annexations in Southeast Denver ..... 5
Control bands of Study area ..... 13
County zoning changes ..... 5 Appendix
PHOTOGRAPHS
Colorado Blvd. Interchange ..... 1
1949 Aerial 9 Appendix
1951 Aerial ..... 10 Appendix
1958 Aerial
11 Appendix
1959 Aerial
12 Appendix
East Belleview Road, Aerial
30 Appendix
Denver Area Subdivisions, Aerial 29 Appendix
Typical View of Interstate 25
Through Denver31 Appendix
Through Arapahoe County32 Appendix
Through Douglas County.33 Appendix
FORMS
Before 34 Appendix
After35 Appendix
Comparable Sales36 Appendix
Personal Interview ..... 37 Appendix
Tabulation of Ownerships38 Appendix
Opinionative Questionnaire39 Appendix
Case Study: Severance Damage ..... 40 Appendix

## PREFACE

The following report embodies the results of a study of the impact upon land traversed by a portion of ColoradoInterstate Highway Route 25 , southeast of Denver.

The study consisted of two phases: changes in land utilization and land values in the area deemed to be within the area of influence of the highway, and the analysis of "before and after" sales of remainders after partial takings, for the purpose of determining the justification of damage payments.

The report outlines the reasons for the study, and the methodology and portrays by means of graphs, charts and tabulations of sales data, the major findings of the study.


Valley Highway at Colorado Blvd. Intersection. Taken before 1959. CBD of Denver can be seen in background. Arrow at upper right hand points to State Highway Building. For history on Parcels Nos. 2, 3 and 5, See Cases 1, 2 and 3 in appendix.

GENERAL AREA OF STUDY
SCALE OF MILES


## Introduction

The study of the effects of highway relocation, improvement and construction on the economy, is a relatively new venture in Colorado. In 1957, the University of Denver, under contract with the Colorado Department of Highways and the Bureau of Public Roads, undertook a study of part of U. S. Route 85-87, the main artery north and south through the State.

This study covered two phases, first the effects of highway relocation on by-passed communities, and second, the effects on property values adjacent to or within the area of influence of a relocated highway.

While the University of Denver study was comprehensive in the light of then existing conditions - particularly with respect to the degree of access control along the highways studied-it was believed that certain portions of the same routes might well be subjected to further and more intensive analysis from more recent and specific land sale data. The primary purpose of the proposed extension of the land value phase was to develop any economic trends which might be discoverable and, by the use of case studies of individual parcels of remainders, to develop actual data respecting damages and/or benefits to these remainders.

Consequently, the Colorado Department of Highways, acting through its Staff Right of Way Section, under the general supervision of the Planning and Research Division, began a study of that part of U. S. Route 87 between the Colorado Boulevard Interchange in Southeast Denver, southerly to the junction of U. S. Route 85 near Castle Rock.

This particular section of the route was chosen for the study for the reason that it constituted a relocation of the highway on which right of way acquisition and construction had been accomplished first under Colorado's Freeway Law, which provided limited access, and subsequent conversion of the highway to Colorado-Interstate Route 25 , with full access control. These influences, together with the growth characteristics of the City of Denver, were believed to present problems of special interest, since in the interim between the first acquisition of right of way and the present time, additional right of way was necessary to be acquired, as well as existing rights of limited access, to bring the highway up to Interstate Standards.

In 1902, the City of Denver-County seat of Arapahoe County and the State Capitol-became the City and County of Denver, with a population of about 150,000 . During the next forty years, and until the beginning of the second world war, Denver's growth was normal, increasing at the rate of about 5,000 annually during the first two decades and at a slightly lower rate during the last twenty years.

The War, however, and large defense installations set up in the Denver area, caused a sharp annual increase in population--nearly 10,000 per year until 1950, when the rate of increase steepened again, so that the population in 1957, the year of the Denver University Study, Denver's population exceeded
one-half million. The 1960 census returns for Denver show a total of 556,000 and for the surrounding suburban area 266,700.

A recent study $\ddagger$ predicts that by 1970, Denver's population will have grown to 585,000 , reaching 611,000 by 1980. A leveling off of the trend is therefore indicated during the next twenty years. During the same period it is predicted that the suburban area surrounding Denver will grow from slightly more than a quarter million (1960 census) to well over 750,000 by 1980, thus surpassing Denver itself.

What these statistics and predictions have to do with the subject study is simply to point up the fact that Denver is bursting out at its seams. Population increases require living space and any city kept within static boundaries reaches a point of saturation where further growth requires the annexation of area' and the extension of city boundaries.

Until about 1942 the boundaries of the City and County of Denver were very stable. Concurrently with the growth beginning with the war years, Denver began annexing parts of its neighboring counties until, by 1957, Arapahoe County on the south had lost over 8,000 acres to Denver, ${ }^{*}$ Adams County on the north had "contributed" over 1300 acres and Jefferson County, adjoining on the west had given up less than 100 acres.

[^0]All of the subject portion of highway was outside of Denver in 1949, except for a small corner near Yale Avenue, which has been in the city since 1946. Difficulty in gathering data has occurred as a result of subsequent annexations. Records had to be searched previous to annex date in Arapahoe County and then followed up in Denver.

It is noteworthy that Denver is expanding mostly by annexations of parts of its neighbor to the south. The following sketch shows the reason for this:


Significant is the fact that there are only three corridors between adjacent highly settled su.burban areas which provide vacant land for residential development. These are indicated by the arrows on the diagram and it is apparent that the expected growth of the suburbs will pinch off these corridors at a time nearly coincident with the predicted leveling off of Denver's growth.

The general area covered by the subject study is this Southeast Corridor. As will be more fully explained hereafter, the problem involved consisted of isolating and evaluating the several economic influences operating in this area, and determining the effect, for better or for worse, of the location and construction of Interstate Route 25 along the geographic axis of the corridor.

## Scope of Study

As originally envisaged, the study undertook to determine the extent of land value changes in remainders occurring at intersections of the highway with county roads, especially since these intersections were later changed from grade to either complete separations or interchanges. This was later
expanded, however, to include remainders between intersections because the picture appeared incomplete without this information.

In the period of time between the first acquisition of right of way and the beginning date of the study, much of the area adjacent to the highway between the Colorado Boulevard Interchange and the Belleview Avenue Inter-change-about five miles-had already undergone a complete change of character. Originally ranging from largely substandard suburban residential, commercial and light industrial, at the northerly end, to vacant pasture and dry land farms at the southerly end, with considerable admixture in between. The area had become urbanized for better than half its length. Relatively large areas, from forty to one hundred twenty acres in extent, were subdivided as homesites, improved with middle to upper middle class dwellings and completely occupied.

It was therefore deemed inadvisable to include this section in the study with the exception of a few case studies, since the processes of data gathering and analysis would have been a tremendous task. Furthermore, it was doubted that highway influence, if any, could have been isolated from the many other factors known to have been operating.

This report therefore includes the results of investigation pertinent to the remainders along that portion of the route between the Belleview Avenue Interchange southerly to Castle Rock, with the conclusions therefrom. Appended, will be found various case studies illustrative of changes noted in the recent histories of particular parcels.

At the inception of the study, it was assumed that sales activity along the study portion of Interstate Route 25 should be compared with that along a conventional highway. Other things being equal, it was theorized that marked differences in value trends along the two highways, would provide a measure of any impact, or lack of it, of the new highway. After assembly of a large amount of sales data along U. S. Highway No. 85, the "control" route, it became apparent that dogs cannot be compared with cats. Different influences were at work on the two routes, and the control did not appear to be pertinent. Being an "old" route with no access control, with little vacant land remaining and ownerships composed predominantly of small commercial and light industrial acreages, typical purchasers were in entirely different categories.

The general area traversed by Interstate Route 25 was therefore adopted as a control, since the whole area-right of way, severed remainders and non-highway parcels-had a common origin in land use, of sufficiently recent vintage to provide a point of departure.

This report, we think, fairly represents the influence of the study highway on the area it serves.

## General Results and Findings of Study

Right of way acquisition along the route of the study highway was commenced during the year 1949. At that time, it can be shown that land values, in the general area traversed by the proposed highway, varied from about $\$ 100$, to something less than $\$ 400$ per acre.

It is further apparent that a gradual appreciation in values had commenced prior to 1949, which may have been at least partly attributable to a general post-war inflationary trend. But beginning in 1946 the area within a half-mile on either side of the proposed route shows a sharp rise in values, quite distinct from the general trend. There is little doubt that this sharply tilted upward trend was very probably influenced by a general knowledge of the highway relocation and its route.

After some years of relative stability, but before construction of the highway actually commenced in 1951, the value of land within a half-mile of the highway again took a sharp upward trend, reaching a peak in 1955-56. Thereafter, and until the end of the study period, values appeared to subside, nearly as rapidly as their prior increase. At the same time the volume of sales dropped off to the point where usable data became nearly non-existent.

The study highway was designed originally as a freeway under State law, with intersections at many of the County Roads left as public access points at grade, and was subsequently in 1956, revised to conform to Interstate standards with complete access control. All intersections not completely closed were thereupon separated by one type or another of interchange structure.

It would have been easy to assume that the observed subsidence of values was attributable to access restrictions and so it appeared to be. However, the suddenly decreased sales volume was a puzzling factor which indicated that further research outside the records might be helpful.

Accordingly, a number of personal interviews were arranged with the owners of property in the area, and although a very few parcels proved to be considered less valuable by reason of changes in intersection design, most of the sales after 1956 were of small parcels purchased at a relatively low price to complete an assembly.

Much of the land is now being held off the market in anticipation of future demand for homesites and other community development. Some owners have refused to sell at any price and others are holding at prices unlikely to be acceptable to typical purchasers. For example one entire section of 640 acres in the south part of the County, easily accessible to the highway through an interchange at County Line Road, was purchased in 1959 for \$1000 per acre or $\$ 640,000$. The owner, an active and well known developer is asking $\$ 3000$ per acre at this time. Although this land was, in former years, range land used as pasturage or left idle, it is exceptionally well situated for homesite development, providing slope for natural drainage and an unobstructed mountain view, which in this area at least, permits a premium price.

All the land in this general area is, as heretofore pointed out, in a corridor of expansion for Denver. It requires only a sure supply of water and adequate sanitary and utility services, all of which are being supplied as the need arises. One of the reasons for limiting the scope of the study to the area South of Belleview Avenue was the fact that much of the area north of this point was developed and fully occupied before the study was undertaken, and a considerable
portion was annexed to Denver or was being supplied by Denver in anticipation of subsequent annexation.

In compiling sales data for the study it became quite apparent that higher land values applied particularly to an area approximately two miles wide located approximately a mile and a half west of the study highway. This area includes Greenwood Village, an incorporated area composed of highly restricted residential properties, and a portion of the City of Littleton. These two communities are also expanding rapidly and offer amenities to a much larger area than that included within their present perimeters.

For the most part, land holdings in the study area ranged in size from 80 acres to some including more than a section. Clark Colony, a subdivision of several sections, straddles the study highway and extends mostly to the east. The subdivision consists of 5 to 10 acre tracts originally laid out as garden and orchard tracts supplied with water from Castlewood Dam. However, this dam was destroyed by flood waters in 1933, since which time the Colony was largely abandoned by its land owners and many of the tracts were assembled into larger holdings and used by their new owners for dry land grain farming and pasturage. This was the only subdivision considered in the study.

In the appendix are 16 cases of ownerships that received severance damage payments at the time of first taking by the state. These cases show in a significant way the activity at the intersections. In fact the records have generally indicated a "gold rush" spirit in the movement of these remainder parcels. In one case the value jumped up so sharply that the last owner paid 64 times the price paid by the State for the original right of way. And this is not an isolated case, for in the activity of several of these ownerships, there have been manifested increases over $2,000 \%$. However, it must be noted that most of the cases are found nearer Denver, North of the area of the study. Only four of the case studies subsequently became a part of the data used in this analysis.

The interchange at Belleview Avenue is the location of some of the most striking examples of highway influence. Every quadrant has experienced considerable transfer activity. The northwest quadrant is being developed as a private Country Club which will include a golf course, swimming pool, boating and other club facilities; in the northeast corner there is an established motel (the owner of which unsuccessfully sued the Department for damages due to access interference) and a fence company, which moved out of the more congested area of Denver. On the south side, which is the northern boundary of the study area, a petroleum research company has located. The plant and offices are combined in a 2 -story building. The company chose this location because of relatively low cost of land, proximity to the highway, and surprisingly enough, because of the view. Part of this land was sold for the construction of an education association building. The southeast quadrant is now supporting the plant of an outdoor advertising company.

As has been inferred the impressive feature of this intersection is the fact that it has attracted commercial development in a suburban area. There is no other comparable grouping within five miles.

In concluding these results, it might be noted that in 1959 a periodic traffic count was taken on U. S. Route 87 (Interstate Route 25) which recorded 5,800 cars daily heading towards Denver out of Castle Rock. Of these, 1,064 were out of state registrations. During the same period the traffic count on U. S. Route 85 , roughly parallel with Route 87 , was 3,700 cars daily, of which 563 were out of state registrations. It is therefore apparent that nearly double the number of tourists chose the newer route when proceeding toward Denver.

## Results of Study Shown Graphically

The graphs included herewith are intended to illustrate a comparison between the area of greatest highway influence and the surrounding areas.

Map Number 4 shows the study area divided into zones, or band control portions. It is fully realized that Zones B and D may contain some of the influence of the highway, however the important factor is that all the zones definitely show segregated trends, which in the case of Zone $A$ is greatly affected by the exclusive suburban development of Greenwood Village and the City of Littleton. (See Graphs 2 and 6.)

If Graphs 2 through 5 and 6 through 9 are viewed in consecutive order it can be readily seen that the strongest land values radiate from west to east across the path of the highway.
$\ddagger$ All of the graphs were established by a 3 year moving average, with a least squares straight line to show the trend of the sales.

All of the sales used on every graph, except the one for Douglas County, were free from improvements. Lack of sales made it necessary to appropriate everything usable in this County.

Highway related or affected parcels (shown on graphs 2 through 5) are those ownerships which were directly involved in acquisitions by the state for right of way purposes. They are all within Zone C.

Grophs 6 through 9 are set up identically to graphs 2 through 5, except all of Zone C (See Map 4) is compared with the other zones rather than just the parcels immediately affected by the highway.

In every case the highway involved parcels and the entire area of Zone $C$ begin their upward trend much more rapidly than the other zones, but then drop off around the 1955 period. By 1958 there were so few highway related sales to work with that it has undoubtedly affected the picture. Actually it cannot be factually determined what the true average value is for the years 1958 to 1960, because of this lack of sales. However, the graphs were completed on data which was available.

In connection with the methodology it was decided to select the zone, or band method of analyzing the material because it presented the most feasible way of deriving definite results from the study.

[^1]Sales cover the years from 1944 to 1960, however in using a 3 year moving average a year is dropped on each end of the graph. $\ddagger$

On Map 4, Zone C expands $1 / 2$ mile from highway centerline on each side. Zones B \& D spread out one mile each, and Zones A and E have a width of about 2 miles each. All these cover an approximate 32 square miles, involving 175 usable sales. Zones F and H cover all the available sales on both sides of the highway as far East as within $1 / 2$ mile of the Parker Road and as far West as the property line of a large estate that covers many Sections. Zone G expands out one mile on each side. In Douglas County this broader approach was necessary to acquire sufficient material, and even then there is much to be desired.

[^2]
## EXAMPLE:

The moving average is much smoother than the actual data, since the averaging process evens out marked irregularities. We have combined 3 years at a time in all the graphs.

| Year | Aver. for <br> the Year | Mov. Aver. |
| :---: | :---: | :---: |
| 1948 | 25 |  |
| 1949 | 216 | 160 |
| 1950 | 239 | 311 |
| 1951 | 478 | 461 |
| 1952 | 666 |  |

Explanation: Figures 25, 216 and 239 are added together, then divided by 3 giving 160 as the 3 -yr. mov. aver.; then figures 216, 239 and 478 are added together, divided by 3, producing a moving aver. of 311 , and so on down the column.

The least squares method gives us a straight line trend that best fits the data. A sample formula is as follows: The data is arranged in columnar form; columns 4 and 5 being made up from columns 2 and 3 . Then all of the columns are added up. Two equations are constructed from the total figures and solved simultaneously.

| 1 | 2 | 3 <br> Mov. <br> Aver.) | 4 | 5 |
| :---: | ---: | ---: | ---: | ---: |
| Year | X | XY | $\mathrm{X}^{2}$ |  |
| 1949 | 0 | 160 | 0 | 0 |
| 1950 | 1 | 311 | 311 | 1 |
| 1951 | 2 | 461 | 922 | 4 |
| 1952 | 3 | 664 | 1,992 | 9 |
| 1953 | 4 | 976 | 3,904 | 16 |
| 1954 | 5 | 1,144 | 5,720 | 25 |
| 1955 | 6 | 1,406 | 8,436 | 33 |
| 1956 | 7 | 1,402 | 9,814 | 49 |
| 1957 | 8 | 1,275 | 10,200 | 64 |
| Total | 36 | 7,799 | 41,299 | 204 |



[^3]
## TREND STUDY AREA

${ }^{\text {SCALE }}$



HIGHWAY PARCELS.
ZONES $\qquad$



COMPARISON OF ZONE C WITH ZONES
ARAPAHOE COUNTY



COMPARISON OF ZONE C WITH ZONES ARAPAHOE COUNTY



COMPARISON OF ZONE G WITH ZONES F \& H DOUGLAS COUNTY
(IMPROVED AND UNIMPROVED LAND)


ZONE G
ZONES F \& H $\qquad$

COMPREHENSIVE COMPARISON OF ALL ZONES ARAPAHOE AND DOUGLAS COUNTIES



GRAPH 118


TABULATION OF SALES DATA USED IN GRAPHICAL ANALYSIS
(Free from Improved Property, R.O.W. Acquisitions and Affiliated Sales)

| Zone | Year of Sale |  | Acres | Price Per Acre | $\begin{array}{\|c\|} \hline \text { Distance } \\ \text { from } \\ \text { Belleview } \\ \text { South } \\ \text { Milos } \end{array}$ |  | $\begin{aligned} & \text { Eor } \\ & \text { Wof } \\ & \text { Hwy. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 1951 | \$ 40,000 | 140 | \$ 286 | 0.5 | 2.6 | W |
| A | 1951 | 6,000 | 40 | 150 | 2.8 | 4.6 | W |
| A | 1951 | *1,000 | 2.567 | 390 | 0.2 | 2.3 | W |
| A | 1952 | 15,000 | 80 | 188 | 2.5 | 5 | W |
| A | 1952 | *13,000 | 40 | 163 | 2.5 | 5 | W |
| A | 1954 | 6,000 | 40 | 150 | 2.5 | 5 | W |
| A | 1955 | 33,000 | 80 | 417 | 2.5 | 5 | W |
| A | 1955 | 205,500 | 320 | 642 | 3 | 6.2 | W |
| A | 1956 | 75,000 | 240 | 313 | 3 | 2 | W |
| A | 1956 | 263,200 | 640 | 411 | 3.5 | 2.8 | W |
| A | 1956 | 44,000 | 40 | 1,100 | 1.3 | 2.4 | W |
| A | 1957 | 74,500 | 60 | 1,242 | 0.7 | 2.8 | W |
| A | 1957 | 77,000 | 60 | 1,283 | 0.7 | 2.4 | W |
| A | 1957 | 77,100 | 60 | 1,285 | 0.5 | 3 | W |
| A | 1957 | 78,200 | 60 | 1,303 | 0.5 | 2.2 | W |
| A | 1958 | 18,000 | 10 | 1,800 | 2.5 | 5 | W |
| A | 1958 | 21,000 | 10 | 2,100 | 2.6 | 5 | W |
| A | 1958 | 21,000 | 10 | 2,100 | 2.6 | 5 | W |
| A | 1958 | 18,000 | 10 | 1,800 | 2.6 | 5 | W |
| A | 1959 | 18,000 | 10 | 1,800 | 2.5 | 5 | W |
| A | 1959 | 176,500 | 80 | 2,284 | 2.5 | 5 | W |
| A | 1959 | 387,500 | 156.986 | 2,468 | 2 | 3.2 | W |
| A | 1959 | 151,300 | 64.910 | 2,331 | 2 | 6.1 | W |
| A | 1960 | 40,000 | 20 | 2,000 | 1.9 | 6 | W |
| B | 1943 | 500 | 9.184 | 54 | 0.2 |  | W |
| B | 1943 | 500 | 19.316 | 26 | 1.8 |  | W |
| B | 1944 | 500 | 9.658 | 52 | 1.8 |  | W |
| B | 1946 | 500 | 9.062 | 55 | 0.8 |  | W |
| B | 1946 | 1,000 | 4.593 | 218 | 0.5 |  | W |
| B | 1947 | 500 | 9.306 | 54 | 0.3 |  | W |
| B | 1947 | 500 | 9.306 | 54 | 0.2 |  | W |
| B | 1948 | 1,000 | 9.184 | 109 | 0.5 | 1.2 | W |
| B | 1949 | 2,500 | 60 | 42 | 2.5 | 0.8 | W |
| B | 1950 | 4,000 | 40 | 100 | 1 | 1.2 | W |
| B | 1950 | 3,000 | 19.092 | 157 | 0.5 | 0.8 | W |
| B | 1950 | 2,000 | 9.184 | 218 | 0.4 | 1. | W |
| B | 1951 | 29,000 | 640 | 45 | 3 | 0.8 | W |
| B | 1951 | 3,500 | 13.252 | 264 | 0 | 0.7 | W |

TABULATION OF SALES
ARAP. (2) DATA USED IN GRAPHICAL ANALYSIS
(Free from Improved Property, R.O.W. Acquisitions and Affiliated Sales)

| Zone | $\begin{aligned} & \text { Year } \\ & \text { of Sale } \end{aligned}$ | Total Selling Price (*Fractional Interest) | Acres | Price Per Ācre | Distance from Belleview South Miles | Drive Distance from Nrst. Interchng. Miles | E or W of Hwy. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| B | 1951 | \$ 2,500 | 48.290 | \$ 52 | 1.2 | 1.4 | W |
| B | 1953 | 7,544 | 9.184 | 821 | 0.2 | 1.1 | W |
| B | 1954 | 4,500 | 4.411 | 1,020 | 0.5 | 1.2 | W |
| B | 1955 | 32,500 | 48.290 | 673 | 1.2 | 1.4 | W |
| B | 1955 | 5,000 | 4.532 | 1,103 | 0.5 | 1.5 | W |
| B | 1955 | 5,500 | 4.411 | 1,247 | 0.3 | 0.9 | W |
| B | 1955 | 13,000 | 19.092 | 681 | 0.5 | 1.8 | W |
| B | 1955 | 10,000 | 9.184 | 1,089 | 0.6 | 1.2 | W |
| B | 1955 | 7,500 | 4.532 | 1,655 | 0.1 | 1.2 | W |
| B | 1956 | 4,500 | 5.000 | 900 | 1 | 1.1 | W |
| B | 1956 | 8,000 | 9.546 | 838 | 0.6 | 1.8 | W |
| B | 1956 | 15,500 | 18.730 | 828 | 0.8 | 1.4 | W |
| B | 1957 | 1,500 | 2.387 | 628 | 0.4 | 1.6 | W |
| B | 1957 | 1,500 | 2.387 | 628 | 0.5 | 1.7 | W |
| B | 1958 | 8,500 | 3.166 | 2,685 | 0 | 1.5 | W |
| B | 1958 | 15,000 | 9.184 | 1,633 | 0.6 | 1.2 | W |
| B | 1958 | *1,500 | 5.000 | 600 | 1.1 | 1.2 | W |
| B | 1959 | 19,200 | 9.184 | 2,091 | 0.5 | 1.2 | W |
| B | 1959 | 4,000 | 9.647 | 415 | 2.5 | 3 | W |
| B | 1959 | 6,100 | 2.387 | 2,556 | 0.5 | 1.8 | W |
| B | 1959 | 22,500 | 9.062 | 2,483 | 0.8 | 1.5 | W |
| B | 1959 | 15,000 | 4.532 | 3,310 | 0.5 | 1.5 | W |
| B | 1959 | 48,000 | 80 | 600 | 2.8 | 0.8 | W |
| B | 1959 | 6,100 | 4.773 | 1,278 | 0.5 | 1.3 | W |
| B | 1959 | 4,800 | 3.925 | 1,223 | 0 | 0.7 | W |
| B | 1959 | 50,000 | 40 | 1,250 | 1.3 | 1.4 | W |
| B | - 1959 | 37,500 | 30 | 1,250 | 1.3 | 2 | W |
| B | 1960 | 640,000 | 640 | 1,000 | 3 | 0.8 | W |
| C | 1941 | 500 | 9.658 | 52 | 1.2 | 1.9 | W |
| C | 1942 | 8,500 | 647.500 | 13 | 2 |  | H |
| C | 1944 | 2,636 | 160 | 16 | 3 |  | H |
| C | 1944 | 225 | 14.487 | 16 | 1.3 |  | H |
| C | 1945 | 500 | 4.685 | 107 | 0.9 |  | H |
| C | 1945 | 3,000 | 70.515 | 43 | 0 |  | H |
| C | 1946 | 3,000 | 8.430 | 356 | 0.8 |  | H |
| C | 1946 | 2,500 | 42.301 | 59 | 0 |  | H |
| C | 1947 | 1,000 | 20 | 50 | 1 |  | E |
| C | 1947 | 1,000 | 4.701 | 213 | 0.9 |  | H |

TABULATION OF SALES
DATA USED IN GRAPHICAL ANALYSIS
(Free from Improved Property, R.O.W. Acquisitions and Affiliated Sales)

| Zone | Year | $\underset{\substack{\text { Total } \\ \text { ("Fractiong Price Interest) }}}{ }$ | Acres | $\begin{aligned} & \text { Price } \\ & \text { Per Acre } \end{aligned}$ | $\begin{gathered} \text { Distance } \\ \text { from } \\ \text { Belleview } \\ \text { South } \\ \text { Miles } \end{gathered}$ | Drive Distance from Nrst. Interchng. | $\begin{array}{\|c\|c\|} \hline \text { Eor } \\ \text { Wof } \\ \text { Hwy. } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 1947 | \$ 2,500 | 160 | \$ 16 | 3.5 |  | H |
| C | 1948 | 7,500 | 9.342 | 803 | 0.8 | 1.2 | H |
| C | 1948 | 500 | 9.397 | 53 | 1.5 | 0.7 | E |
| C | 1948 | 500 | 4.829 | 104 | 2.6 | 1 | E |
| C | 1949 | 500 | 4.701 | 106 | 0 | 0.3 | H |
| C | 1950 | 1,000 | 4.773 | 210 | 0.2 | 0.9 | W |
| C | 1950 | 1,000 | 4.773 | 210 | 0.2 | 0.9 | W |
| C | 1950 | 3,000 | 14.319 | 210 | 0.3 | 0.5 | W |
| C | 1950 | 1,000 | 9.397 | 106 | 1.5 | 0.7 | E |
| C | 1950 | 9,500 | 23.350 | 407 | 0 | 0.2 | W |
| C | 1951 | 2,000 | 3.708 | 539 | 0 | 0 | H |
| C | 1951 | 4,500 | 16.335 | 275 | 1.8 | 0.5 | E |
| C | 1951 | 1,500 | 9.397 | 160 | 1.4 | 0.5 | E |
| C | 1951 | 1,500 | 4.556 | 329 | 0.2 | 0.4 | W |
| C | 1951 | 1,500 | 4.556 | 329 | 0.5 | 0.5 | W |
| C | 1951 | 3,000 | 9.330 | 322 | 0.3 | 0.4 | W |
| C | 1951 | 750 | 2.069 | 362 | 0.5 | 0.8 | H |
| C | 1951 | 1,000 | 2.881 | 347 | 0.2 | 0.2 | H |
| C | 1951 | 1,000 | 0.707 | 1,414 | 0.1 | 0.3 | H |
| C | 1952 | 1,500 | 2.881 | 521 | 0.2 | 0.2 | H |
| C | 1952 | 47,700 | 318.159 | 150 | 3 | 0.2 | H |
| C | 1952 | 3,000 | 9.658 | 311 | 1.2 | 1.8 | W |
| C | 1952 | 16,000 | 109.557 | 146 | 2.5 | 0.7 | H |
| C | 1952 | 8,000 | 13.986 | 572 | 0.2 | 0.2 | H |
| C | 1952 | 13,960 | 13.960 | 1,000 | 1 | 0 | H |
| C | 1953 | 3,500 | 10 | 350 | 1 | 1.4 | W |
| C | 1953 | 2,500 | 4.829 | 518 | 1.2 | 1.6 | W |
| C | 1953 | 2,000 | 4.397 | 213 | 1.4 | 0.5 | E |
| C | 1953 | 2,500 | 4.431 | 564 | 1.5 | 0.5 | H |
| C | 1953 | 4,000 | 4.929 | 812 | 2.5 | 0.7 | H |
| C | 1953 | 6,000 | 9.284 | 646 | 1.4 | 0.5 | H |
| C | 1953 | 4,000 | 4.431 | 903 | 1.5 | 0.5 | H |
| C | 1953 | 18,410 | 13.960 | 1,319 | 1 | 0 | H |
| C | 1953 | 2,000 | 19.316 | 104 | 1.5 | 1.8 | W |
| C | 1954 | 1,000 | 0.500 | 2,000 | 1.4 | 0.7 | H |
| C | 1954 | 6,500 | 8.913 | 729 | 1.6 | 1 | H |
| C | 1954 | 3,000 | 1.343 | 2,234 | 0.9 | 0 | H |
| C | 1954 | 3,247 | 1.343 | 2,418 | 0.9 | 0 | H |

TABULATION OF SALES
DATA USED IN GRAPHICAL ANALYSIS
(Free from Improved Property, R.O.W. Acquisitions and Affiliated Sales)

| Zone | $\begin{aligned} & \text { Year } \\ & \text { of Sale } \end{aligned}$ | $\underset{\text { Sotal }}{\substack{\text { Selling Price } \\ \text { ("Fractional Interest) }}}$ | Acres | $\begin{aligned} & \text { Price } \\ & \text { Per Acre } \end{aligned}$ | $\begin{gathered} \text { Distance } \\ \text { from } \\ \text { Belleview } \\ \text { South } \\ \text { Miles } \end{gathered}$ | Drive Distance from Nrst. Interchng. Miles | $\begin{aligned} & \text { E or } \\ & \text { W of } \\ & \text { Hwy. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C | 1954 | \$42,000 | 67.707 | \$ 620 | 0 | 0.1 | H |
| C | 1955 | 3,455 | 4.829 | 715 | 1.6 | 1.4 | H |
| C | 1955 | 3,500 | 4.829 | 725 | 1.2 | 1.8 | W |
| C | 1955 | 56,874 | 67.707 | 840 | 0 | 0.2 | H |
| C | 1955 | 5,000 | 4.700 | 1,064 | 0.3 | 0.5 | H |
| C | 1955 | 4,500 | 4.431 | 1,016 | 1.5 | 1.2 | H |
| C | 1955 | 5,000 | 4.685 | 1,067 | 0.9 | 1.6 | H |
| C | 1955 | 4,500 | 4.287 | 1,050 | 0.5 | 0.8 | H |
| C | 1955 | 3,000 | 4.287 | 700 | 0.5 | 0.8 | H |
| C | 1955 | 9,000 | 9.658 | 932 | 1.5 | 1.1 | H |
| C | 1955 | 6,500 | 4.706 | 1,358 | 2.8 | 0 | H |
| C | 1955 | 13,000 | 13.117 | 991 | 0.2 | 0.4 | H |
| C | 1955 | 11,500 | 10.158 | 1,132 | 1.4 | 1.2 | H |
| C | 1955 | 9,000 | 9.658 | 932 | 1.5 | 0.9 | H |
| C | 1956 | 5,000 | 4.829 | 1,035 | 1.2 | 1.8 | W |
| C | 1956 | 7,500 | 4.699 | 1,596 | 1.6 | 0.3 | E |
| C | 1956 | 11,500 | 10.158 | 1,132 | 1.4 | 1.2 | H |
| C | 1956 | 21,153 | 14.102 | 1,500 | 0 | 0.2 | H |
| C | 1956 | 21,153 | 14.102 | 1,500 | 0 | 0.2 | H |
| C | 1956 | 6,500 | 4.829 | 1,346 | 1.5 | 1.1 | H |
| C | 1956 | 10,500 | 9.658 | 1,087 | 1.2 | 1.5 | W |
| C | 1956 | 13,000 | 4.829 | 2,692 | 1.5 | 1.1 | H |
| C | 1957 | 24,000 | 16.450 | 1,459 | 0.2 | 0.3 | H |
| C | 1957 | 14,000 | 11.250 | 1,244 | 0.8 | 1.6 | H |
| C | 1957 | 12,000 | 9.658 | 1,242 | 1.2 | 1.9 | W |
| C | 1957 | 9,276 | 4.700 | 1,974 | 0.2 | 0.4 | H |
| C | 1957 | 2,000 | 1.175 | 1,702 | 0.2 | 0.2 | H |
| C | 1957 | 24,478 | 13.316 | 1,838 | 0.2 | 0.4 | H |
| C | 1957 | 14,000 | 7.516 | 1,863 | 0.2 | 0.3 | H |
| C | 1957 | 5,000 | 4.829 | 1,035 | 1.6 | 2.5 | H |
| C | 1957 | 7,500 | 4.671 | 1,606 | 0.8 | 1.2 | H |
| C | 1958 | 10,500 | 14.357 | 731 | 1.6 | 0.3 | E |
| C | 1958 | 222,500 | 370.025 | 601 | 2.0 | 0 | H |
| C | 1959 | 7,500 | 4.829 | 1,553 | 1.2 | 1.8 | W |
| C | 1960 | 372,800 | 370.025 | 1,000 | 2.0 | 0 | H |
| D | 1942 | 2,500 | 23.337 | 107 | 0 |  | E |

NOTE: The letter " H " in the column headed "East or West of highway" indicates the sales that were directly involved with the highway remainders. Insufficient sales in Douglas County hindered a separate analysis of these highway related parcels.

TABULATION OF SALES
ARAP. (5)
DATA USED IN GRAPHICAL ANALYSIS
(Free from Improved Property, R.O.W. Acquisitions and Affiliated Sales)

| Zone | $\begin{aligned} & \text { Year } \\ & \text { of Sale } \end{aligned}$ | Total Selling Price (*Fractional Interest) | Acres | Price Per Acre | Distance from <br> Belleview South Miles | Drive Distance from Nrst. Interchng. Miles | Miles <br> E or W of Hwy. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| D | 1944 | \$ 500 | 9.658 | \$ 52 | 2.2 |  | E |
| D | 1946 | 1,000 | 80 | 13 | 2.5 |  | E |
| D | 1946 | 7,500 | 572.500 | 13 | 3 |  | E |
| D | 1948 | 500 | 37.579 | 13 | 2.5 | 2.9 | E |
| D | 1949 | 4,000 | 77.264 | 52 | 2 | 0.5 | E |
| D | 1949 | 1,500 | 4.706 | 319 | 0 | 1.5 | E |
| D | 1949 | 3,000 | 86.922 | 35 | 2 | 0.5 | E |
| D | 1950 | 3,000 | 10 | 300 | 0.1 | 1.5 | E |
| D | 1951 | 500 | 4.645 | 188 | 0.1 | , | E |
| D | 1951 | 1,000 | 4.645 | 215 | 0.3 | 1.2 | E |
| D | 1954 | 4,000 | 9.669 | 414 | 0.4 | 1.7 | E |
| D | 1954 | 2,500 | 9.669 | 259 | 0.4 | 2 | E |
| D | 1955 | 3,000 | 9.669 | 310 | 0.4 | 2 | E |
| D | 1955 | 3,000 | 9.412 | 319 | 0 | 1.4 | E |
| D | 1956 | 59,100 | 156.417 | 378 | 0.7 | 2.1 | E |
| D | 1959 | 9,500 | 9.398 | 1,011 | 0.3 | 1.6 | E |
| D | 1959 | 13,500 | 9.398 | 1,436 | 0.4 | 1.7 | E |
| D | 1959 | 11,500 | 18.864 | 610 | 0.5 | 1.4 | E |
| D | 1959 | 10,000 | 9.691 | 1,032 | 0.6 | 2 | E |
| D | 1959 | *5,800 | 9.432 | 615 | 0.5 | 1.4 | E |
| D | 1959 | 12,000 | 9.700 | 1,241 | 0 | 1.4 | E |
| D | 1960 | 33,000 | 29.046 | 1,136 | 0.5 | 1.5 | E |
| E | 1949 | 1,500 | 9.412 | 159 | 0.1 | 2 | E |
| E | 1950 | 550 | 4.706 | 117 | 0 | 1.7 | E |
| E | 1950 | 17,500 | 120.000 | 145 | 1 | 2.8 | E |
| $E$ | 1950 | 1,500 | 4.706 | 319 | 0 | 1.5 | E |
| E | 1956 | 37,045 | 230 | 161 | 3.3 | 5 | E |
| E | 1956 | 76,000 | 76 | 1,000 | 2 | 3.7 | E |
| E | 1959 | 95,000 | 205.304 | 463 | 1.5 | 1.2 | E |
| E | 1959 | *50,700 | 179.403 | 283 | 3 | 4.5 | E |
| E | 1959 | * 40,500 | 143.523 | 282 | 3 | 4.5 | E |
| E | 1959 | *10,100 | 35.881 | 281 | 3 | 4.5 | E |
| E | 1960 | 66,000 | 110 | 600 | 2.2 | 3.5 | E |

TABULATION OF SALES
DOUG. (6)
DATA USED IN GRAPHICAL ANALYSIS
(Free from R.O.W. Acquisitions and Affiliated Sales)

| Zone | Year of Scale | Total Selling Price (*Improved Land) | Acres | Price Per Acre | Distance from Belleview South Miles | Drive Distance from Nrst. Interchng. Miles | E or W of Hwy. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| G | 1946 | *\$ 4,540 | 420 | \$ 11 | 12.5 |  |  |
| G | 1946 | 32,250 | 1,608 | 20 | 5 |  |  |
| G | 1946 | 8,500 | 640 | 13 | 6 |  |  |
| G | 1946 | 13,000 | 630 | 21 | 5 |  |  |
| G | 1947 | *39,290 | 3,410 | 12 | 10 |  |  |
| G | 1947 | 7,500 | 630 | 12 | 8 |  |  |
| G | 1947 | 1,000 | 40 | 25 | 6 |  |  |
| G | 1947 | *8,431 | 490 | 17 | 4 |  |  |
| G | 1948 | 10,000 | 644 | 16 | 4 |  |  |
| G | 1948 | 13,000 | 560 | 23 | 5 |  |  |
| G | 1949 | 39,000 | 1,124 | 35 | 6 |  |  |
| G | 1951 | 19,971 | 720 | 28 | 11 |  |  |
| G | 1951 | 51,000 | 1,124 | 45 | 6 |  |  |
| G | 1953 | 1,000 | 5 | 194 | 4 |  |  |
| G | 1953 | 2,000 | 10 | 200 | 4 |  |  |
| G | 1953 | 13,000 | 54 | 240 | 4 |  |  |
| G | 1953 | 7,500 | 25 | 304 | 4 |  |  |
| G | 1955 | 17,273 | 20 | 851 | 4 |  |  |
| G | 1956 | 50,000 | 193 | 259 | 4 |  |  |
| G | 1956 | 150,000 | 600 | 250 | 6 |  |  |
| G | 1956 | 54,500 | 226 | 241 | 10 |  |  |
| G | 1957 | 23,000 | 400 | 250 | 10 |  |  |
| G | 1957 | 78,685 | 401 | 196 | 9 |  |  |
| G | 1957 | *351,801 | 1,245 | 283 | 8 |  |  |
| G | 1959 | 18,500 | 60 | 308 | 10 |  |  |
| G | 1959 | 20,000 | 50 | 400 | 16 |  |  |
| G | 1959 | 108,000 | 480 | 225 | 8 |  |  |
| F | 1956 | 77,000 | 384 | 200 | 5 |  |  |
| F | 1956 | 36,000 | 160 | 225 | 4 |  |  |
| F | 1956 | 69,500 | 462 | 150 | 4 |  |  |
| F | 1957 | 33,374 | 154 | 217 | 4 |  |  |
| F | 1958 | 12,454 | 160 | 78 | 15 |  |  |
| F | 1960 | 80,000 | 100 | 800 | 4 |  |  |
| H | 1949 | 30,930 | 1,723 | 18 | 15 |  |  |
| H | 1949 | 25,000 | 535 | 47 | 5 |  |  |
| H | 1954 | 9,500 | 720 | 13 | 14 |  |  |
| H | 1955 | 91,500 | 640 | 70 | 5 |  |  |
| H | 1956 | 58,401 | 640 | 91 | 5 |  |  |

TABULATION OF SALES
DATA USED IN GRAPHICAL ANALYSIS
(Free from R.O.W. Acquisitions and Affiliated Sales)

| Zone | Year <br> of Sale | Total <br> STlling Price <br> ("Improved Land) | Acres | Price <br> Per Acre | Distance <br> from <br> Belleview <br> South <br> Miles | Drive <br> Distance <br> from Nrst. <br> Interchng. <br> Miles | E or <br> W of <br> Hwy. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| H | 1956 | $\$ 35,171$ | 65 | $\$ 537$ | 7 |  |  |
| H | 1956 | 80,000 | 480 | 167 | 5 |  |  |
| H | 1956 | 45,454 | 320 | 142 | 4 |  |  |
| H | 1956 | 500 | 16 | 31 | 6 |  |  |
| H | 1956 | 4,227 | 40 | 106 | 6 |  |  |
| H | 1956 | 4,272 | 40 | 106 | 6 |  |  |
| H | 1956 | 32,000 | 304 | 105 | 6 |  |  |
| H | 1956 | 10,411 | 240 | 43 | 6 |  |  |
| H | 1958 | 24,299 | 632 | 38 | 7 |  |  |
| H | 1959 | 90,000 | 320 | 281 | 6 |  |  |
| H | 1959 | 25,179 | 240 | 105 | 6 |  |  |
| H | 1959 | 14,000 | 56 | 250 | 4 |  |  |
| H | 1959 | 14,000 | 56 | 250 | 4 |  |  |
| H | 1959 | 7,000 | 28 | 250 | 4 |  |  |
| H | 1959 | 35,000 | 140 | 250 | 4 |  |  |
| H | 1959 | 73,723 | 640 | 115 | 5 |  |  |
| H | 1959 | 34,000 | 120 | 283 | 6 |  |  |

## Methodology

Inasmuch as this study had most strictly to do with land values, the method chosen involved the gathering of sales data from the county records. Insofar as the "highway-affected" parcels were concerned, title data in Department files were used as a beginning point and titles were extended during the period covered by the study. Since deeds of conveyance rarely state the full amount of consideration, it was, of course, necessary to rely to a certain extent upon the showing of documentary stamps. This information was supplemented by verifying with the purchaser, or seller, or both, in any case where it appeared to be necessary. The information was entered on forms developed for the purpose, during the field work, and tabulated in the office for analysis. (See sample forms in back of appendix.)

In 1957, the Colorado Legislature passed a bill requiring all deeds of conveyance to be accompanied by a sworn statement when filed for record. The statement, executed by the purchaser, disclosed the exact amount of consideration for any sale of real property; and its purpose was to supply data for studies authorized to be made of the ratio between assessed valuation and market value, for taxation purposes.

This statute furnishes invaluable information for future studies of this kind in providing accurate and reliable sales price data. However, as a source of information the certificates were ineffectual for the current study except on the latest sales.

With respect to sales in the control area, title searches were undertaken, using listings in the Assessor's Office for a beginning. Information was tabulated and analyzed in the same manner as with the so-called "highway affected" parcels.

Many of the parcels studied were improved properties, and while it is possible, by approved appraisal methods, to allocate the parts of the selling price to land and improvements respectively, this procedure was deemed to be too specialized and rather too technical for this study.

An effort was made to discover a building-land ratio from the assessment rolls and apply this ratio to sales for the purpose of allocation; but this technique was considered to be unadvisable in this assessment area, so all improved properties were cast out of the study and only those sales known to be of vacant land were used.

In Douglas County, however, the scarcity of data warranted the use of improved land, which was adjusted for the value per acre by the above mentioned ratio.

Land value is closely coupled with land use. The general area of the study was, until construction of the highway, and for a considerable time afterward predominantly agricultural. However, subdivisional development is now beginning and can be expected to increase from necessity.

Personal Interviews-Numerous interviews were conducted throughout the study to verify the transfers or to help shed light on some difficult problems. An effort was made to clarify such questions as how much money is involved; whether there was an affiliation between Buyer and Seller; were improvements involved and the value if known; whether a mortgage balance was deducted from the full purchase price for the purpose of computing; do the revenue stamps indicate the true value of sale, and other questions which could not be answered without a personal contact with the affected parties. (See appended form.) As an example, consider a case where an outstanding mortgage is excepted from the covenants in the warranty deed; it has been found risky to assume that the amount of the balance was deducted from the revenue stamps as it may be, for in some cases this is not done.

Personal opinion interviews were conducted along Santa Fe Drive (U. S. 85) in August of 1960, to determine if any important factors were overlooked. Businessmen were interviewed who had an important part in the development and establishment of Santa Fe Drive, who not only operated businesses but also bought and sold land extensively along Santa Fe Drive. This is one of the most difficult areas to analyze-the records have revealed it, the interviews have borne it out, and an actual survey of the area discloses the great mixture of businesses and the conditions which so greatly complicate its study. In back of the appendix is a form set of questions used in this survey.

In connection with these questions, a few of those interviewed thought the flucuating pattern in values were due to the run down areas of Santa Fe. All of the interviewed stated that the Martin Plant was one of the biggest economic boosts to the area. The owner of one large new motel chose its location particularly to secure business from Martin Company executives. The new Centennial Race Track is credited as an aid to business; but its seasonal limitations do not promote stability. It also seems desirable that light industry should, in time, take over the blighted areas. This, to some extent, has already begun. Most of those interviewed thought that the direct route along Santa Fe Drive into Denver's central business district is a factor in the growth of the area; however, they did believe that the new highway (U. S. 87) was hurting business, principally those catering to tourist needs. Many of the motels on Santa $F e$ are suffering this loss, and as a result are lapsing into a blighted condition. It has been thought by some that unreasonable rates have driven away the trade to other sources of accommodation and also the trend toward "camping" was taking its toll. On the other hand, the first class motels, it was stated, have no difficulty filling up.

On Question No. 7 one of the most outstanding men whose name appears often on the Arapahoe County real estate records, stated that if good zoning had been in effect years ago they might have avoided these many mixtures on Santa Fe. Some were inclined to think Santa Fe Drive may yet experience more economic growth in view of the development of the Rio Grande industrial park at Blakeland, which is now underway.

This Santa Fe survey disclosed little in the way of conclusive findings, save for the fact that it proved its unapplicableness as a control area, and especially in connection with the new route 87.

In the beginning of the work on Santa $F e$ over 200 ownerships were analyzed from Denver's city limits to Blakeland near Douglas County line. A considerable amount of activity was disclosed and there was a great deal of fluctuation in values within some years, as was mentioned previously.

Zoning-Refer to Map No. 5. In the course of the study, it was thought to be pertinent to devote some consideration to county zoning chonges especially those which affected remainders after the first right of way acquisitions by state. Zoning revisions - and requests for the same - indicate activity which might not be apparent from other records.

Many of the owners never carried out the purpose for which they sought and acquired revised zoning; but it seems important that they made a "first step" toward developing these remainders, for a higher and better use. Map No. 5 affirms that most of the activity is, obviously, at the intersections. Between the Highway Department's first acquisition in 1949-50, and the subsequent acquisitions made necessary by the Interstate standards, in 1956, the Department had adequate opportunity to observe-and pay for-valuations increased by zoning changes. (See Case 15, in Case Studies of Damage Payments.) Freeway zoning is a complex problem and by no means peculiar to Colorado. Dr. Levin of the Bureau of Public Roads states:
$\ddagger$ "If it were possible somehow to strengthen or eliminate the weaknesses in the zoning mechonism, it might be considered seriously as a possible solution to the interchange land use problem. It might be possible to contrive a new type of zone called an 'interchange zone' and to devise special regulations applicable to it alone calculated to reconcile more nearly private land use development and public facilities at the point of interchange."
The activity in Douglas County is not shown because of the transitional period the County is experiencing. Only recently has the County adopted comprehensive zoning. In one of their earlier actions, the Zoning Commission granted a change from agriculture to residential in a large area adjacent to the Douglas-Arapahoe county line which included $71 / 2$ sections. Involved in this change is a strip along the highway which was designated partly commercial and partly what is termed "transitional zoning," i.e. a zone allowing anything from roadside enterprises to light industries. There are now three subdivisions along the highway and others proposed, which are of course, replacing the old agriculture zoning, to some extent.

The Zoning Commission of Arapahoe County holds weekly meetings to consider petitions for proposed changes. The rapid suburban expansion in that county has made necessary the services of a full time planner to advise and counsel the Commission in its deliberations and to record and çorrelate its decisions.

[^4]Denver has had a considerable problem with its zoning because of new areas brought in through annexation and other changes within the city. In 1955 the whole city was completely rezoned and many new classifications added.

During the course of this study, it was apparent that several changes took place near but not on "highway affected land." To avoid making any assumptions with regard to their relation with the highway these changes have not been considered in this work. The only ones used in this study are those involving remainders left from partial takings.

About 33 changes occurred along the subject portion of the highway, all within the study period. Thirteen of these were commercial; two were industrial; ten were for multi-unit residence; seven were for single family residence, and one was to allow use of a tract for development which was otherwise non-conforming by reason of size.

Carl H. H. Bradley states:
$\ddagger$ "zoning, or lack of zoning, also has a great deal to do with property. values in our modern age. Good zoning may increase or stabilize values, while weak or poor zoning can depreciate values, even though a few property owners may benefit because of weak zoning. Poor over-all planning has an adverse effect on property values, and good over-all planning has a favorable effect."

[^5]
## ZONING CHANGES

## TO REMAINING LAND AFTER FIRST TAKEN BY THE STATE FROM 1949 TO 1960

Map 5


COMMERCIAL

RESIDENTIAL (MULT. UNIT).
RESIDENTIAL (SINGLE FAMILY)

## ZONING CHANGES

## TO REMAINING LAND AFTER FIRST TAKEN BY THE STATE FROM 1949 TO 1960

Map 5


COMMERCIAL
INDUSTRIAL

RESIDENTIAL (MULT. UNIT)
RESIDENTIAL (SINGLE FAMILY)

AGRICULTURE

## Controlled Access

One of the greatest and most difficult problems faced by highway departments generally is the control of access on a freeway facility. Access control -the acquisition or condemnation of access rights or the construction of service roads-is indispensable to the proper and adequate movement of high speed traffic. This problem has not been a light one-nor inexpensive-in connection with the subject highway. As mentioned heretofore, the new highway was assimilated into the interstate system at a date subsequent to its partial construction as a "limited access" freeway. Interstate standards necessitated the closing of openings provided for owners along the right of way, and the construction of grade separations at public access points. It is, of course, quite probable that access control has, to a greater or lesser extent, reduced the desirability of some parcels along the highway during the last few yearsespecially in Douglas County. Future studies may prove or disprove any present assumptions.

The editor of Highway Magazine in an article succinctly states the matter as follows: "The biggest problem, and the one having the greatest impact on municipalities, is the theory of so called limited access on the Interstate System. Instead of "limited access," it should be termed "planned access," which by definition also includes the use of city bypasses. The purpose of this provision in the highway bill is threefold. First of all, it preserves the traffic capacity of the highway. If you permit entronce to a highway at numerous indiscriminate points, then, to insure that the cross traffic can get across, you provide traffic lights, and you very materially cut down the capacity of the highway. Secondly, planned access very materially increases the safety of the highway. Records indicate that accidents can be cut at least in half by controlling the access. Lastly, and this applies primarily to bypasses, it provides a means for through travel to avoid the urban areas and thereby reduces congestion on business streets."

## Colorado Boulevard Interchange

The Valley Highway Interchange at Colorado Boulevard is the nucleus of intensive highway related activity. Three examples of this are considered in the "case studies of damage payments." (Cases Numbered 1, 2 and 3 in the appendix.)

The following four aerial photos reveal land use changes over a period of about 10 years. The 1951 photo was taken when the new facility was in its preliminary stage. Only two lanes were open for traffic and no interchange had been constructed.

In 1955 a local enterprise bought all the available land in the Northeast quadrant of the interchange and began construction of a highway hotel, shown on the 1958 photo. Building permits totaling over one million dollars were issued for this construction, and construction is currently under way on another million dollar annex, which should be ready for occupancy by the end of 1961. Success of the enterprise seems assured. The southwest quad-
rant of the Interchange is owned by the University of Denver and is not for sale in spite of many firm offers. The University proposes to build an apartment development to alleviate the student accommodation problem. The Northwest quadrant has been purchased by a group who plan an office building complex, a part of which will house regional offices of a national retail grocery chain.

Part of the activity in the Southeast quadrant is described to some extent in Case Study No. 3 (appendix).


$$
12 .
$$



## －

Site of the intersection of Valley Highway and Colo．Blvd．，showing land in its
original setting．
Site of the intersection of Valley Highway and Colo．Blvd．，showing land in its
original setting．

$\qquad$ ？ $(2)$

## $\square$

$\square$
$\square$
$\square$
$\square$ － $\square$

五



This early photo shows the intersection of Colorado Blvd. before the installation of the last link of the Denver Valley Highway. Also there were no underpasses at that time. The arrow indicates an apartment building which was one of the first highway related improvements upon the scene. Buildings inside of R.O.W. were soon removed.


This photo reveals a luxurious highway hotel; left of interchange (construction began in 1955) and a branch warehouse of a large moving and storage company right of highway, away from intersection.


By 1959 a construction company sold out to a national clothing firm, who subsequently constructed a large warehouse-retail store, which can be seen at right of interchange. (See Case No. 3: Appendix). Notice the development shown in upper right hand corner. One large company located there specifically for proximity to highway.

CASE STUDIES OF DAMAGE PAYMENTS


## Parcel No. 2 FI 002-2 (7)

Land was operated as a chicken farm prior to proposed route but apparently became dormant before time of highway acquisition. Entire property appraised as one ownership with several dwellings involved. Two of the subject houses had been deeded to owner's two sons. Land also had a small 3-unit apartment building renting for $\$ 65$ a unit, plus other buildings relative to the chicken farm, all in good condition.
1949 Area Before - 10 Acres $\pm$ @ \$1,500 Per Acres $\$ 15,000.00$ Improvements.... 42,500.00

TOTAL.
$\$ 57,500.00$
Area Tcken - 7.108 Acres @ \$1,899 Per Acre
\$13,500.00 Improvements.... 42,500.00
SEVERANCE DAMAGE....- 500.00
TOTAL
\$56,500.00
Area After - 2.892 Acres - After Value \$ 1,000.00
Owner soon purchased property (B) containing approximately 1.245 acres @ $\$ 2,442$ Per Acre, and along with remainder (A) formed a subdivision. They subsequently constructed a 6 -unit bungalow apartment, and a building for a boat sales business. (Photo above). A local enterprise tried several times to acquire this property but without success. Frontage road offers only point of access to parcel.
1957 Sale by owner 4.137 Acres (A + B, entire ownership) $\$ 42,000.00$ This sale included the improvements valued at approximately $\$ 34,312.00$
Before installation of highway, this property was about 30 to 40 minutes driving time from the CBD of Denver. It is now approximately 15 minutes.


## Parcel No. 3 FI 002-2 (7)

This land was used as a private residence, except that owner rented out a small 400 sq. ft. building at $\$ 46.00$ per month. The Highway acquisition took most of the land and improvements, but the owners retained the chicken house, moved it back to the remainder, and remodeled it for their living quarters.

1949 Area Before - 4.232士 Acres @ \$1,004 Per Acre................. \$ 4,250.00
Improvements.... $\frac{12,000.00}{}$ TOTAL... $\$ 16,250.00$
1949 Area Taken — 1.430 Acres @ \$1,014 Per Acre................... \$ 1,450.00
Improvements.... 12,000.00
(Irregular Shaped Frontage) SEVERANCE DAMAGE.... 800.00
TOTAL ....
\$14,250.00
1949* Area After - 2.802 $\pm$ Acres - After Value. $\qquad$ \$ 2,250.00

1949 Sale by Owner (A on Plat) 1.245 $\pm$ ac. @ \$2,442 per ac..... \$ 3,000.00
1953 Sale by Owner** (B on Plat) 1.753 $\pm$ acres 25,000.00

[^6]

## Parcel No. 5 FI 002-2 (7)

A Construction Company, an International Corp., had an equipment yard in Denver located on this property. After highway acquisition, they were able to continue operating in this location by acquiring additional property. (Shown on Plat as B.)
1949 Area Before - 3.581 Acres (48 Lots). ..... \$ 20,000.00
1949 Area Taken - 1.829 Acres @ \$4,893 Per Acre. ..... \$ 8,950.00
(Reduced frontage \& Irregular Shape of Lots)SEVERANCE DAMAGE.... 1,050.00TOTAL... \$ 10,000.001949 Area After - 1.752 Acres\$10,000.00
In November of 1949 the ConstructionCompany purchased B (Shown on Plat)
1.545 Acres @ \$6,472.00 Per Acre $\$ 10,000.00$
TOTAL \$ 20,000.00
1954 Scle by Owner - 0.116 Acres @ \$47,414 Per Acre. ..... \$ 5,500.00
(Additional ROW acquired by City of Denver to widen Colorado Blvd.)1959 Sale by Owner (A+B) 3.181 $\pm$ Acres @ \$56,586 Per Acre..\$180,000.00In this 1959 sale The Construction Company sold entire area to a National DryGoods firm and moved the yard out in Arapahoe County on E. Evans Ave.The new owners have now constructed a retail store and warehouse (Photoabove) at an approximate cost of $\$ 488,590.00$.

Land abutting Colorado Blvd. in this area was selling for around $90 \phi$ a sq. ft . (or \$39,000 per acre) in 1952.


## Porcel No. 37 A Rev. FI 002-2 (7)

This ownership involved most of the E½ of Sec. 31, T. 4 S., R. 67 W.

$$
1949 \text { Area Before — 263.972 } \pm \text { Acres @ \$700 Per Acre................ } \$ 184,780.00
$$

1949 (Sept.) Area Taken 19.065 Acres @ \$700 Per Acre.......... \$13,350.00 (Reduced Value of Remainder) SEVERANCE DAMAGE... 2,800.00 TOTAL ..... \$ 16,150.00
1949 Area After - 252.071 Acres (A on Plat) @ \$639 Per Acre ..... 161,073.00
11.901 Acres (B on Plat) @ \$639 Per Acre ..... 7,605.00
1950* (July) Sale by 2nd Owner 11.901土 Acres (All of B) $\$ 1,000$ Per Acre. ..... 12,000.00
1951* Sale by 2nd Owner 4.408士 Acres (Part of A) @ \$5,104 Per Acre. ..... 22,000.00
1953 Sale by 3rd Owner 8.490 $\pm$ Acres (Part of B) @ \$2,000 Per Acre ..... 17,000.00
1956 Second Taking by State 0.210 Acres (Part of B) @ \$16,190 Per Acre ..... 3,400.00
(Additional R.O.W. for Yale Ave. Interchange)

Both remainders A and B, with the exception of a few sites, are covered with houses ranging in value from $\$ 11,000$ to $\$ 14,700.00$. A is part of University Hills, and the Southern portion of B is Ralph's Subdivision.

[^7]

Parcels Nos. 39 Rev., 43 Rev. and 43-A FI 002-2 (7)
Prior to 1949 most of the land Southeast of Colorado Blvd. was undeveloped. The parcels under analysis were used for dry land farming and pasture-but by June of 1960, we see a well established better residential area known as "Belmont Heights" (C) and part of "University Hills No. 3" (A).
1949 Area Before - 40 Acres ${ }^{ \pm}$@ \$484 Per Acre \$19,360.00
1949 (July) Area Taken 8.268 Acres @ \$484 Per Acre................ \$4,000.00
(Irreg. shaped remainders and denial of access)
SEVERANCE DAMAGE.... 2,125.00
TOTAL
\$ 6,125.00
1949 Area After - 31.732 Acres $\pm$ @ $\$ 417$ Per Acre. 13,235.00
1950 (Dec.) Sale by Owner - 29.369 Acres @ \$562 Per Acre........ 16,500.00
The above photo reveals subsequent development, principally of the area of last sale which was transacted in 1957, shown as C on plat. This was discounted from the sales due to an affiliation between buyer and seller.
Severed Portion B still appears to remain dormant, showing no real estate activity.


Parcel No. 17 Rev. FI 002-2 (7)
Like many other properties before 1949, South of Denver, this property also was composed of a family residence with several other out buildings.
1949 Area Before - 12 L̇ots @ \$188 Per Lot..................................... \$2,250.00
Improvements.... 5,500.00
TOTAL $\ldots$. $\$ 7,750.00$
1949 Area Taken — 5.33 Lots @ \$150 Per Lot.......................................... 800.00
Improvements.... 250.00
(Irregular shape of remainder) SEVERANCE DAMAGE.... 400.00
TOTAL ....
$\$ 1,450.00$
1949 Area After - 6.67 Lots @ \$157 Per Lot..................................... $11,050.00$
Improvements.... 5,250.00
TOTAL... $\$ 6,300.00$

1951* Sale by Owner - 6.67 Lots @ \$380 Per Lot............................... $\$ 2,535.00$
Improvements.... 5,965.00
TOTAL.... \$8,500.00
Two years after highway acquisition the remainder sold for double its original value.
In 1957 the purchasers sold the remaining improvements for $\$ 250.00$ in order to clear the site for a new service station shown in above photo. The oil company has a 15-year lease from owner, with payments of $\$ 465$ per month.

[^8]

## Parcel Nos. 15 \& 18 FI 002-2 (7)

For many years this property was a livery stable maintaining about 35 horses which rented at $\$ 1.25$ per hour. The zoning regulations at that time would not allow re-establishment in this area, but owner has continued for several years in a non-conforming use.
1949 Area Before-67,870 Sq. Ft. @ 5e sq. ft................................. $\$ 3,300.00$
Improvements.... 9,200.00 TOTAL....
\$12,500.00
1949 Area Taken - 29,838 Sq. Ft. @ 6 $\phi$ sq. ft............................... $\$ 1,800.00$
Improvements.... 8,750.00
(Irregular Shape Remainder) SEVERANCE DAMAGE...... 450.00
TOTAL ...
\$11,000.00
1949 Area After - 38,032 Sq. Ft. @ 4c sq. ft..................................... 1,500.00
1955 Scle by Owner - 11,564 Sq. Ft. @ \$1.82 sq. ft......................... 21,000.00
An Oil Company was willing to pay this high amount in order to have station at this strategic location (photo) which is on service road to the S. bound ramp. It is noteworthy that the station is obscure to the vision of motorists on highway.
Unimproved land sales just to the East of subject property ranged from 10 to 33 cents a sq. ft. for 1955.


## Parcel No. 35 Rev. FI 002-2 (7)

Highway acquisition involved only a small portion of the suburban tract, not disturbing the principal improvements. Owner still resides on northerly portion of remainder.

1949 Area Before - 4.748 Acres @ \$1,493 Per Acre \$ 7,019.00
1950 Area Taken - 0.469 Acres @ \$1,493 Per Acre. ..... $\$ 700.00$
*(Reduced Frontage and Irregular Shape Remainder)

| SEVERANCE DAMAGE....800.00 |  |
| ---: | ---: |
| TOTAL.... | $\$ 1,500.00$ |
| 1,290 Per Acre After Value.... | $\$ 5,519.00$ |
| $(\mathrm{~B}+\mathrm{C})$ @ $\$ 6,272$ Per Acre....... | $\$ 18,000.00$ |

In 1956 the Buyer leased part of the SE Corner of remainder (C) and a Service Station (constructed by the Buyer at estimated cost of $\$ 22,000$ ) to a national oil company for approximately $\$ 400$ per month, which would show a land residual value of about $\$ 1.45$ per sq. ft.

[^9]

Colorado Department of Highways
Land Economic Studies
Phase 1: Value Changes
in Abutting Land
Part 2: Damage Payments

CASE 10 UNDEVELOPED

U.S. 87 at E. Yale Ave. in Arapahoe Co.

Parcel No. 37 Rev. FI 002-2 (7)
1949 Arec. Before - Approx. 5 Acres @ \$900 Per Acre. $\qquad$ \$ 4,500.00
1950 Area Taken — 0.953 Acres @ \$944 Per Acre............................ $\$ 900.00$

$$
\text { (Irreg. Shape Remainder) SEVERANCE DAMAGE.... } 300.00
$$

TOTAL....
1950 Area After - 4.047 Acres - After Value. $\qquad$
\$ 1,200.00

1951 Scle by Owner - 1.284 Acres, All of B @ \$11,682 Per Acre.....
\$ 3,300.00

1956 Second Taking by State 0.209 Acres (37 B on plat) @ \$19,139 Acre....\$ 4,000.00
1956 Second Taking by State 0.669 Acres (37 C on plat) @ \$19,170 Acre....\$12,825.00 These last two sales were additional R.O.W. for a frontage road. This land, prior to highway installation, was an undeveloped tract with R-1 zoning, but in 1954, four years after purchase of R.O.W. the remainder received a zone change to Residential 3 (Mult. Unit) which no doubt added much to the higher value of land.
B remainder is still undeveloped because it did not meet the requirements for mult. unit construction as did the property to the East adjoining it.


## Parcel No. 37 D FI 002-2 (37)

This ownership became involved with the highway at the time of a second acquisition for right of way. The land lay undeveloped prior to this.

1956 Area Taken — 19,235 Sq. Ft. @ 44 .......................................... $\$ 8,500.00$
DAMAGES..... 6,000.00
TOTAL
\$14,500.00
Damages accrued because it was believed that the remainder would be reduced in value from R-3 (Mult. Unit) to R-1 (single family residence).

However, in 1959 work began on a project consisting of three mult. unit brick apartment buildings at an approximate total cost of $\$ 108,000.00$. Work was in the final stages at time of above photo.


## Parcel No. 65-A FI 002-2 (7)

This property was used specifically as a wheat farm in the "before" situation. The taking separated land leaving improvements on remainder A.
1949 Area Before - 10 Acres $\pm$ @ \$200 Per Acre.................................... \$ 2,000.00
1949 Area Taken - 3.777 Acres @ \$225 Per Acre.......................... \$850.00
SEVERANCE DAMAGE....\$150.00

1949 Area After (A and C) 5.512 Acres士 @ \$161 Per Acre............... $\$ 886.00$
*(B) 0.711 Acres $\pm$ @ $\$ 161$ Per Acre.............. $\$ 114.00$
\$ 1,000.00
1952 Sale by Owner (C) 2.730 Acres @ \$5,495 Per Acre.
\$15,000.00
1955 Sale by 2nd Owner (C) 2.730 Acres @ \$10,623 Per Ácre......... \$29,000.00
1956**Second Taking (B-14) 0.324 Acres @ \$3,500 Per Acre.................... \$ 1,150.00
1956**Second Taking (B-15) 0.703 Acres @ \$14,225 Per Acre............. $\$ 10,000.00$
$1959 \begin{gathered}\text { Sale by Orig. Owner (A) Approx. } 1.808 \text { Acres } \\ \text { with run down house....................................................................... } \$ 30,000.00\end{gathered}$
1960 Sale by 3rd Owner (C) Approx. 2.030 Ac. @ \$14,778 Per Ac. \$30,000.00 B-15 had a payment of $\$ 20,000$ damage for denial of access and reduction of value to remainder (C). However, the new owner paid $\$ 60,000$ to acquire this land, $(A+C)$ and is now developing a private country club. Swimming pool was under construction at time of photo. Average price of land per acre in this area was $\$ 366$ for 1951 ; and $\$ 1,278$ for 1957.

[^10]

## Parcel No. 65 A FI 002-2 (7)

This property was a wheat farm. The taking separated (B) from the main improved land. (B) remainder only, will be considered below.
1949 Area Before-10 Acres $\pm$ @ $\$ 200$ Per Acre................................................ $\$ 2,000.00$
1949 Area Taken — 3.777 Acres @ \$225 Per Acre....................................... $\$ 850$
SEVERANCE DAMAGE.... \$150
TOTAL.... \$1,000.00
1949 Area After *(A and C) 5.512 Acres $\pm$ @ $\$ 161$ per acre................... $\$ 886$
(B and D) 0.711 Acres $\pm @ \$ 161$ per acre................... $\$ 114$
TOTAL.... $\$ 1,000.00$
1952 Sale by Owner (B) 0.711 Acres @ \$1,407 Per Acre............................... \$1,000.00
1954** Sale by 3rd Owner (B+ other land) 1.651 Acres with building..... $\$ 8,000.00$
1958***Sale by 4th Owner (B+ other land) 1.651 Acres with building..... $\$ 7,000.00$
This little remainder land has had quite a stormy history. The 2nd owner put up a building and began a wood working business. The enterprise soon folded up and was acquired by a 3rd owner under a T'reasurer's Deed. This 3rd owner subsequently sold entire holding to irrigation company. The Irrigation Company for some reason was not able to make a go of it and sold out for a price so low that the new owner did not want to verify it. Land is now occupied by a fence company.

[^11]

## Parcel No. 78 FI 002-2 (7)

Above photo reveals the present state of subject land.
1949 Area Before - 3 Acres @ \$150 Per Acre....................................... \$ 450.00
1949 Area Taken - 1.623 Acres @ \$150 Per Acre............................ $\$ 225.00$
(Reduced value of remainder) SEVERANCE DAMAGE.... 175.00 TOTAL....
\$ 400.00
1949 Area After - 1.377 Acres @ \$36 Per Acre After Value............ \$ 50.00
1954 (Mar.) Sale by Owner 1.343 Acres $\ddagger$ @ \$2,234 Per Acre............ \$3,000.00
1954 (Apr.) Sale by 2nd Owner 1.343 Acres $\pm$ @ 2,418 Per Acre.... \$3,247.00
The sales above took place while access was available to the highway via Orchard Road. However, the completion of a grade separation in 1958, in which the access to highway was closed, may seriously affect use of remainder.
Land sales in this area for 1954 ranged from $\$ 150$ to $\$ 300$ per acre.


Parcel No. 80 A FI 002-2 (7)
Owner lived on this dry land farm before and after highway installation and was able to continue there until a second acquisition removed the major improvements, all of which were on B.
1949 Area Before - 15 Acres @ \$150 Per Acre.
Improvements.... 5,000.00
TOTAL.... $\$ 7,250.00$
1949 Area Taken - 2.453 Acres @ \$150 Per Acre.......................... \$ 400.00 (Improvements left on small remainder)

SEVERANCE DAMAGE...._ 800.00 TOTAL....
1949 Area After - 10.009 Acres @ \$84 Per Acre (A \& C)............ \$ 838.00
2.538 Acres @ \$84 Per Acre (B)............ 212.00

Improvements....-5,000.00
TOTAL ....
\$ 6,050.00
1952 Sale by Owner* 13.960 Acres (A, C \& D) @ \$1,000 Per Acre
\$13,960.00
1953 Sale by 2nd Owner 13.960 Ac. (A, C \& D) @ \$1,319 Per Ac. \$18,410.00
1957 Second Taking - 3.053 Acres (C) @ \$6,797 Per Acre $\$ 20,750.00$
1957 Second Taking - 2.538 Acres (B) @ \$1,458 Per Acre.......... $\$ 3,700.00$ Improvements.....9,155.00
TOTAL_... $\$ 12,855.00$ The State acquired the land shown in the two 1957 transactions for a grade separation. Parcel C had a commercial zoning on it thereby bringing the high cost per acres, also $\$ 8,450$ in damage accrued for denial of access.
This case is a good example of what can happen when a tract of land receives a zone change. It enhanced the value by about $400 \%$. The land has had no physical change in over 10 years.

[^12]

## Parcel No. 90 FI 002-2 (7)

This well improved property was a wheat farm with Agr. III zoning, which required 20 acres to the family. Improvements were left on larger remainder after taking.
1949 Area Before - 28.5 Acres $\pm$ @ \$175 Per Acre.................... \$ 5,000.00
Improvements.... $20,000.00$
TOTAL.... \$25,000.00
1949 Area Taken - 6.057 Acres @ \$200 Per Acre.. $\qquad$ \$ 1,200.00
DENIAL OF ACCESS \& SEVERANCE DAMAGE.... $2,800.00$
1949 Area After - 22.443 $\pm$ Acres @ $\$ 45$ Per Acre. $\qquad$ \$ 1,000.00
Improvements.... $20,000.00$
TOTAL....
\$21,000.00
1955 Sale by Owner - 4.786+ Acres (C+D) @ \$1,358 Per Acre \$ 6,500.00
1956* Second Taking - 1.232 Acres (B) @ \$1,197 Per Acre......... 1,475.00
1957* Second Taking - 1.392 Acres (D) @ \$1,200 Per Acre........ 1,670.00
Prior to second State acquisition, Area C and D received an R-4 zoning which allowed Mult. Unit construction.

[^13]

## Parcels Nos. 14 Rev. \& 15 FI 002-2 (ll)

This ownership covers a large area of land just south and also to the East of present junction where U. S. 85 and U. S. 87 join. Land is still used for grazing and some farming.
1951 Area Before - 1,696.590 Acres @ Approx. \$83 Per Acre \$140,817.00
1951 Area Taken - 41.972 Acres @ \$83 Per Acre.................... $\$ 3,500.00$
DENIAL OF ACCESS AND SEVERANCE DAMAGE.... 4,100.00

$$
\begin{array}{lll}
\text { TOTAL_... } \$ 7,600.00
\end{array}
$$

1951 Area After - 1,655.618士 Acres @ Approx. $\$ 80$ Per Acre
After Value....
\$133,217.00
1957* Second 'I'aking - 8.491 Acres @ \$813 Per Acre............... $\$ 6,900.00$
DAMAGE.... $\$ 3,100.00$
TOTAL .... \$ 10,000.00
1959 Sale by Owner - 50 Acres (Part of A) @ \$400 Per Acre \$ 20,000.00
The last sale was for a school site purchased by Doug. Co.
Land values in Douglas County for 1959 ranged from $\$ 105$ to $\$ 283$ an acre.

[^14]

This portion of subject highway is in the Denver area, showing conformity of subdivisions to the highway design.


East Belleview is the Northerly boundary of the area used for the purpose of determining a trend between the highway and the control zone. Even in this late photo, which was taken in 1959, there is but little physical change; excepting at the intersections.

# TYPICAL VIEW OF DEVELOPMENT <br> ALONG <br> INTERSTATE 25 (U.S. 87) <br> IN <br> DENVER, EAST OF COLORADO BLVD. 


highway hotel and restaurant


RESIDENTIAL AREA HEDGED FOR PRIVACY

APARTMENT UNITS



APARTMENT BUILDINGS

hoUses facing freeway with service road


OFFICE BUILDINGS

## TYPICAL VIEW OF DEVELOPMENT ALONG INTERSTATE 25 (U.S. 87) <br> IN <br> ARAPAHOE COUNTY



MOTEL AT BELLEVIEW INTERCHANGE


ADVERTISING COMPANY AT BELLEVIEW INTERCHANGE


SUBURBAN ESTATES


COUNTRY CLUB AT BELLEVIEW INTERCHANGE


FARMS SELLING OUT TO DEVELOPERS


NEW EXCLUSIVE SUBDIVISION

# TYPICAL VIEW OF DEVELOPMENT ALONG INTERSTATE 25 (U.S. 87) <br> IN <br> DOUGLAS COUNTY 


new exclusive subdivision


NEW HOMES IN NORTHERN CASTLE ROCK


NEW HOME FOR THE AGED


SUbdivision near castle rock


SPOTTED SUBURBAN DEVELOPMENT THROUGHOUT thousands of acres of brush country


OUTLYING COMMERCLAL DEVELOPMENTS

## ECONOMIC IMPACT STUDY

## BEFORE



## ECONOMIC IMPACT STUDY <br> AFTER

Project No. $\qquad$
Designation $\qquad$
County $\qquad$
Parcel No. $\qquad$
This sale is: all $\qquad$ part $\qquad$ of primary " $A$ " $\qquad$ of severed "B" $\qquad$
Grantor:
Instrument $\qquad$
Recep. No. $\qquad$
Grantee:
Book $\qquad$ Page $\qquad$
Date: $\qquad$
Recorded: $\qquad$
Consideration: $\qquad$
Description:
I.R.S. $\qquad$
Indicated consideration \$ $\qquad$
Verified consideration \$ $\qquad$
by interview with seller $\qquad$
by interview with buyer $\qquad$
by conveyance certificate $\qquad$
Deed of trust stated on W.D. $\qquad$ Book $\qquad$ Page $\qquad$
Terms Balance due \$ $\qquad$
Deed of trust accompanying W.D. for \$ $\qquad$ Book $\qquad$ Page

Terms
Area of land $\qquad$ at \$ $\qquad$ per unit, or \$ $\qquad$
Improvements $\qquad$
Total value
\$
Assessed value 19 $\qquad$ Land \$ $\qquad$ Imp. \$ $\qquad$ Total \$ $\qquad$
Zone change: To Date of Change $\qquad$
Land use at date of sale: $\qquad$
Land use on date of investigation:
Improvements constructed subsequent to date of sale:
Description: Estimated value \$ $\qquad$
Conclusions and remarks:

Investigator: $\qquad$ Date of Investigation $\qquad$

## COMPARABLE

GRANTOR:

GRANTEE:

NO.
LOCATION
COUNTY
SECTION $\qquad$ T. $\qquad$ R.

INSTRUMENT: $\qquad$
RECEP. NO.
BOOK $\qquad$ PAGE
DATED:
RECORDED:
CONSIDERATION:
I.R.S.

INDICATED CONSIDERATION
DESCRIPTION:

DEED OF TRUST STATED ON W.D. BOOK $\qquad$ PAGE

TERMS
AREA OF LAND UNIT VALUE (B.Y I.R.S.)

ASSESSED 19 $\qquad$ LAND \$ $\times \ldots$ $\qquad$ LAND VALUE IMP. $\$ \times=\$ \quad$ IMP. VALUE TOTAL $\$ \times \quad \times \quad$ _ TOTAL VALUE
ZONE:
REMARKS:

DATE: BY R.O.W. SECTION, C.D.H.

# PERSONAL INTERVIEW FORM 

Land Economic Studies<br>Colorado Department of Highways

$\qquad$
GRANTOR
Address $\qquad$
Phone $\qquad$

TO GRANTEE
Address
Phone $\qquad$

Date of Sale $\qquad$ Instrument $\qquad$ Book $\qquad$ Page $\qquad$
Indicating
Rev. Stamps $\qquad$

1. PRINCIPAL QUESTION:
2. Do Rev. Stamps reflect true value of sale?
3. Was balance of mortgage deducted from Rev. Stamps?
4. Were there Improvements on land at time of sale?
5. Value of Improvements?
6. Was there an affiliation between Buyer and Seller?

REMARKS:

Date $\qquad$ By $\qquad$


# OPINIONATIVE QUESTIONNAIRE 

Relative to Santa Fe Drive

U. S. 85

Land Economic Studies
for

## Colorado Department of Highways

Mr..................................................................... Interviewed

1. Records show a fluctuating pattern of increases and decreases in land value on Santa Fe Drive. What in your opinion is happening out in this area?
2. What are the influencing factors, if any, of the Martin Plant?

Ramo-Wooldridge?
Centennial Race Track?
(Other)
3. Has the geographical location in relation to Denver any effect on Santa Fe Drive?
4. Is the new Valley Highway, U. S. 87, in your estimation, the largest contributing factor to the slump in the motel and other tourist related business?
5. How is the Valley Highway affecting other business on Santa Fe?
6. Have the high rates, plus the trend toward "camping" affected the motel business along Santa Fe?
7. Has zoning restrictions hampered the prosperity of Santa Fe Drive?
8. Do the two railways and the planned industrial park at Blakeland appear to affect the economy of Sonta Fe Drive?
9. (Any other factors?)

## Case Study：Severance Damage

COLORADO DEPARTMENT OF HIGHWAYS－LAND ECONOMIC IMPACT STUDY－C．D．H．FORM NO． 249 7－60

## A．GENERAL INFOHMATION

A． 1 Physical Location of Parcel
a．Street Address
b．Clty
c．Counly
d．State $\qquad$ 1．Parcel No
A－2 Nearest Urban Place（Community of 2500 or larger）
a．Name of Place
b．Population
c． 1960 d． 1950 e．Other

## B．HIGHWAY DESCRIPTION

B－1 Highway Dates
a．Date Hlghway Completed，Month $\qquad$ Year ar
b．Date of this investigation，Month Year

B－2 Highway Idenififeation
a．U．S．Roule Na $\qquad$
b．State Route No
c．Interatale Route No．
d．Other（Specify Type）
－Name of Highway，if any $\qquad$
B－3 Type of Highway Syslem（Check as Applicable）
a．$\square$ Interstate－Rural
b．$\square$ Interstale－Urban
c．Other F．A．P．－Rural
d．Oiher F．A．P．－Urban
e．$\square$ F．A．S．－Rural
1．$\square$ F．A．S．－Urban
g．$\square$ Other Stale
h．Local Rural
l．Local Urban
j．$\square$ Non－classified Federal
k．Toll Facility
B－4 Type of Highway Facility－By Access Control Type of Faeility

## a．$\square$ Arterial

b．$\square$ Expressway－Full Conirol e．$\square$ To－WA
c．Expressway－Partial Control £．$\square$ ，$\square$
d．Circumferential or By Pass
g．$\square$ k．$\square$
d．Circumierentiol or By－pass $\quad$ h．$\square$ \＆．$\square$
C．DESCRIPTION OF ENTIRE OWNERSHIP，PART TAKEN AND SEVERED REMANNDERS
C－1 Date of Acquisition by Slate：＿MONTH
C－2 Size of Parcels

| PARCEL IDENTITY | FEET FRONT | Aches | EA |
| :---: | :---: | :---: | :---: |
| Entire Ownership | a． | e | $日^{\prime \prime}$ |
| Parcel Taken | b． | ${ }^{\prime}$ | $\mathrm{f}^{\prime \prime}$ |
| Remaining Tract | c． | $\mathrm{g}^{\prime}$ | $\mathrm{g}^{\prime \prime}$ |
| Subsequent Sale of Remainder： |  |  |  |
| Parl | d－1 | h－1＊ | h－1 $\mathrm{l}^{\prime \prime}$ |
| All | d． 2 | h－2 ${ }^{\text {a }}$ | $\mathrm{h}-2^{\prime \prime}$ |

Area as Percentage of Entire Tract：
i．Ilem $\mathrm{f} \div$ Item $\qquad$ \％
f．（Item $\mathrm{g} \div$ lient ol $\qquad$ ＿\％
1．Number of Soles of Entire Remainder
m．Number of Sales of Parts of Remainder
D．zONING STATUS－BEFORE AND AFTEH THE TAKING

| URBAN |  |  | RURAL |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ZONE | BEFORE | AFTER | ZONE | BEFORE | AFTER |
| Restdential |  |  | Farm |  |  |
| Occupied | a．$\square$ | h．［］ | Occupied | －．$\square$ | น．$\square$ |
| Vacant | b．$\square$ | 1．$\square$ | Vacant | p．$\square$ | v．$\square$ |
| Commerclal |  |  | Non－Farm |  |  |
| Occupied | c．$\square$ | 1．口 | Residential | q．$\square$ | w．［］ |
| Vacant | d．$\square$ | k．$\square$ | Commercial | r．$\square$ | x．$\square$ |
| Indusitial |  |  | Indusirial | s．$\square$ | $Y$－$\square$ |
| Light | e．$\square$ | $1 . \square$ | Vacant | $1 . \square$ | $2 . \square$ |
| Heary |  | m．$\square$ | Other（tixplain） |  |  |
| Vacant | q．$\square$ | n．$\square$ |  |  |  |


q．Belore Taking

| －＿＿After Taking |
| :--- |
|  |

## E．ACCESS CONTHOL－BEFORE AND AFTER TAKING

F－1 Access Conirol－Before Taking（Peincipal Highway）

| Degrea of Control | IN ONE DIHECTION | IN BOAF DIAECITONS |
| :---: | :---: | :---: |
| Unrestricled | a．$\square$ | $\square$ |

Full Conitol－No Access b．$\square$
h．$\square$
Direct Access Restricted to Designaled
Point，c．$\square$ ，or Polntr，d．$\square$ e．$\square \quad$ i．$\square$
Direct Access to Rload Other Than
Princlpal HIghway
f．$\square$
j．$\square$
Travel Distance to Nearest Town or
Trading Center－to nearest $1 / 2$ mile，
F－2 Access Control－Atter Taking（New Highway lmprovernent） Degree of Control DINECTON DINBOTH

| Unreatricted | a．$\square$ | g．$\square$ |
| :--- | :--- | :--- |
| Full Control－No Access | b．$\square$ | h． |

Direct Access Restricted to Designaled
Point，c．$\square \square$ ，or Points，d．$\square$ e．$\square \square$
Direct Access to Frontage Hoad i．$\square$ I．$\square$
Travel Disiance to Main Hlghway Entrance
On－Rampi E．$\square$ ，Offamp，i．$\square$ ．Inlerchange，m．$\square$
to Nearest One－lenth of a Mile， n ．
Travel Distance to Nearest Town or
Trading Center－lo Nearest $1 / 2$ Milo－
In One Direction，
F－3 Other Access
Direct Access to Road Other Than Principal Highwoy Inlerseciling Now Highway
－b．
Travel Distance to Nearest Town or Trading Cenier－
10 Nearast $1 / 2 \mathrm{Mile}$－in One Direction，d

## G．ELEVATION．VIBGBLITY AND DESCRIPTION OF REMANDER

G－1 Elevation of Remainder at Highway
BEFORE
a．$\square$
$\mathrm{b} . \square$
At Grade
AFTER
a．$\square$
Feel Above Grade
Feel Below Grade
G－2 Visibility of Highway from Remainder

| BEFORE | Degree of Vialblity | AFTER |
| :---: | :---: | :---: |
| a．$\square$ | Fully Visible | d．$\square$ |
| b．$\square$ | Partially Visible | e．$\square$ |
| c．$\square$ | Not Visible | i $\square$ |

G－3 Description of Remander（Check as Applicable）
a．Separated $\square$
c．Lumd－Locted $\square$
b．Isolated $\square$
d．On Dead End $\square$

## 碞．COMPRNSATION PAD AT TAKING

H－1 How Delermined
Total Amount Month．Year Negotiated Settlement Administrative Setlement
$\qquad$ Month－Year Condemnalion
c．Jury $\square$ d．d．Commission $\square$ e $\qquad$ h
H－2 Analysis of Compensation Paid
Land Taken：$a^{\prime}$ $\qquad$ acres，or b－ $\qquad$ square leat
Price：a $\qquad$
$\qquad$
Improvements
Total－Land and Improvements
Amount Pald for Damage
Less Benelits－General $\qquad$
Net TOTAL Paid，Item e＋Item f－Item g）
$\qquad$ g．
$\qquad$


Analysis of Damage－Elements Considered
i．Proximity $\square \quad$ 1．Restriction of Access $\square$
j．Reduction in Size $\square$ m．Separated Remainders $\square$
k．Shape of Remoindes $\square \quad$ n．Other（Specify Below）$\square$
H． 3 Appraised Values and Paymenis for Damages
Before Taking－
a．Land Value
b．Improvementa
c．TOTAL
$\qquad$
Parcel Taken－
d．Land Value
Improveme
$\$$
e．Improvemenls


Damage to Remainder
g．To Land
h．To improverente
i．TOTAL
j．（TOTAL（Item filtem $)$
Value of Remainder－
k．Land，Ilem a－（liem diliem g）
l．Improvements．Itemb－（Ilemetilemh）
m TOTAL，liteme．Item j

## Femarks

$\qquad$
$\square$

## I. Subsequent salis of remaining parcel, or parcets

| SALE | DATE OF SALE | RECORD | BOOK | PAGE | AREA - ACRE | AREA - SQ. FEET | UNIT VALUE | SALE PRICE - LAND | SALE PRICE <br> OFIMPROVEMENTS | TOTAL <br> SALE PRICE |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| a |  |  |  |  |  |  |  |  |  |  |
| b |  |  |  |  |  |  |  |  |  |  |
| c |  |  |  |  |  |  |  |  |  |  |
| d |  |  |  |  |  |  |  |  |  |  |
| $e$ |  |  |  |  |  |  |  |  |  |  |

ADDITIONAL SALES, IF ANY, MAY BE LISTED IN SECTION K

- Code Land Use, Required Above, As Follows:

0. Vacant
1. Agriculture, Forestry, Fishing
2. Manufacturing, Construction, Mining
3. Transportation, Communication, Electric Power, etc.
4. Wholesale and Retail Trade
5. Services (Service Stations, Motels, etc.)
6. Government
. Rosidential
-1 Sketch Map of Property-Before Taking
Describe Land Use Briefly:

$\qquad$

7. 

. 2 Sketch Map of Property-After Taking

J-4 Pholograph of Property-After Taking

## E. ADDITIONAL INFORMATION AND REMARES

List here any additional information, and further details or supplementary facts pertaining to the Items shown above. If Dota listed here supplements one or more of the Items hereinabove set forth, indicate in the blocks, the letter and number of the lem so intended to be supplemented.

| $\square$ | $1 \square$ |
| :---: | :---: |
|  |  |
|  |  |
| $\square$ | $\square$ |
|  |  |
|  |  |
| $\square$ | $\square$ |
|  |  |
|  |  |
|  |  |
| $\square$ | - |
|  |  |
|  |  |

[^15]




[^0]:    F Denver Metropolitan Area Transportation Study-C.D.H. Planning and Research Division.

    * See map on page 5 for annexations near subject Highway.

[^1]:    * See example page 12.

[^2]:    \$ See example page 12 .

[^3]:    * $a$ and $b$ are the unknown components of $Y c$; $Y_{C}$ (calculated value of $Y$ ) is the plotting point of the trend line for each year. 9 (in 9a) is the number of years involved.

[^4]:    " "Land Use Development and the Highway Interchange" Eng. Bulletin of Purdue University-proceedings of the 46 th Annual Road School April 18-21, 1960.

[^5]:    Firector Division of Right of Way, Kentucky Dept. of Highways; "The Effects of New Roads on Values" Right of Way publication Feb. 1961 Volume 8 \#1.

[^6]:    * This sale was actually a trade reflecting this high value upon the land. A local enterprise tried for some time and finally succeeded in obtaining all the existing remainder in exchange for a new house, valued at $\$ 19,000.00$ (but the deal wasn't closed until they completely finished the basement, built a double garage, added a chain link fence, completely landscaped yard, also installed wall to wall carpeting and appliances).
    This land was still undeveloped by 1960, but the building was removed and new owners installed an electric sign. (Photo above).
    ** There is a discrepancy of about 0.196 acres between the "area after" and the two sales by owner, which cannot be accounted for.

[^7]:    * Entire remaining property was sold off by original owner. A few of these sales are not shown because of affiliation between Buyers and Seller.

[^8]:    * This is approximately 12 c a sq. ft . In 1951 a tract of land on Jewell Ave. near subject property sold for 5 c a sq. ft . Also $\alpha$ parcel of land, including a house sold for around 6c a sq. ft. in 1952 near this same location.

[^9]:    * The ownership originally fronted on E. Vassar Âve.

[^10]:    * See Case (13 B) for activity on this remainder.
    ** Purchased by State for an Interchange.

[^11]:    * See Case (13 A) for activity on this remainder.
    ** 2nd Owner lost property (B plus other land) through Tax Sale.
    *** Present owner states sale was under pressure, that 4th owner had to sell out. The third owner still has (D) in his possession.

[^12]:    * D came into the picture as being in the possession of owner's spouse which accounts for additional acreage.

[^13]:    * Second State acquisition for construction of interchanges, with payment of $\$ 4,730$ damage in the taking of Parcel D. Reasons being: Complete denial of access. However, a way of access was opened up which connected Arapahoe Road with Yosemite Street, Yosemite being a dedicated street. See X on plat.

[^14]:    * This sale was a second acquisition by highway for the installment of a Junction overpass. Reasons of Damage being: Denial of Access to Highway No. 87; median opening closed; reduction of highest and best use of remaining land.

[^15]:    Further Remarks-Background Information

