

They Put Denver on the "Main Street of America" CHAIRMAN

GOVERNOR



JOHN A. LOVE, Governor—"Completion of this section of Interstate 70 enhances our position on the great national highway network."

CHIEF ENGINEER



CHAS. E. SHUMATE, Chief Engineer, Colo. Department of Highway: — "This Freeway was made possible by the fine cooperation of federal and city officials."



CLAUDE A. LUEKENS, Chairman, Colorado Highway Commission — "This Freeway is an-other great step in our state-wide highway building program."

DEPARTMENT OF HIGHWAYS STATE OF COLORADO

GOVERNOR JOHN A. LOVE Chief Executive

STATE HIGHWAY COMMISSION

CLAUDE A. LUEKENS, Steamboat Springs, Chairman CARLYLE N. VICKERS, Lamar, Vice-Chairman STEVE CHRISTENSEN, Brush JAMES F. ELLIS, Greeley ROBERT W. HENDEE, Colorado Springs BEN H. JORGENSEN, Gunnison PETE E. MIDDLEMIST, Antonito CHARLES D. UNFUG, JR., Denver

> CHIEF ENGINEER CHAS. E. SHUMATE



THOMAS G. CURRIGAN, Mayor of Denver — "The new Freeway is second in importance only to the Valley Highway in Denver's trans-portation system."

FORMER CHIEF ENGINEER



MARK U. WATROUS, Former Chief Engineer, Colo. Department of Highways — "Congratula-tions to everyone who helped over the long, hard years."



The Colorado State Highway Commission, left to right: Chas. D. Unfug, Jr., Denver; Carlyle N. Vickers, Vice Chairman, Lamar; Ben F. Jorgensen, Gunnison; Steve

Christensen, Brush; Pete E. Middlemist, Antonito; Claude A. Luekens, Chairman, Steamboat Springs; James F. Ellis, Greeley, and Robert W. Hendee, Colo. Springs.

THESE ARE THE MEMBERS OF THE COLORADO STATE HIGHWAY COMMISSION FOR 1964

MAYOR

They Were Charged with Making a Dream a Reality



THESE ARE MEMERS OF THE STAFF of the Denver Metropolitan District (District 6) of the Colorado Department of Highways who were in charge of planning and constructing the East 46th Ave. Freeway. Left to right, seated: Resident Engineer Robert Linke, District Design Engineer William D. Wheeler, District Engineer Ed. N. Haase, Assistant Chief Engineer Fred K. Merten, District Construction Engineer

W. Boyd White, Resident Engineer H. D. Shapperd, District Materials Engineer Orlando E. Sanchez. Standing, left to right: Project Engineer Dean R. Ewy, Project Engineer Neil McLeod, Project Engineer William A. Schlingman, Inspector Robert C. Campbell, District Right of Way Engineer Guy O. Grimes and Project Engineer Robert C. Ridell.

Story of Freeway Planning Goes Back 35 Years

Work on a master plan for major vehicular arteries in Denver began some 35 years ago. Very little came of the efforts until the late Chief Engineer Charles D. Vail commissioned the consulting engineering firm of Crocker and Ryan to make a report on a north-south limited access highway through the city.

The report, submitted on December 9, 1944, recommended construction of the Valley Highway in substantially the same location as that on which it has been built. The report stated:

"At 46th Avenue an interchange of high type, eliminating all left turns on both highways, is imperative because 46th Avenue east of the Highway and 48th Avenue west of the Highway will undoubtedly be developed as a major east-west thoroughfare.

"Improvement of 46th Avenue east of the Highway and the connection from the interchange to 48th Avenue west of the Highway are included as an integral part of the Valley Highway project."

The City of Denver, on November 7, 1947, formally requested the old Highway Advisory Board to designate the 46th-48th Avenue route as a state highway from Sheridan Blvd. to Colorado Blvd., and that the portion from Navajo St. to Federal Blvd. be improved to throughway design.

Similar requests were made by the city in 1948, and in 1949 and also in 1950 the city officials asked the Advisory Board to begin engineering studies on a route from "the Rocky Mountain Arsenal to Inspiration Point." The Urban Planning Division of the Highway Department began its detailed study of the route in 1949. The first contract on the Valley Highway, beginning at the north city limits at 52nd Ave., was awarded in 1948. Progress was slow because of limited funds, and major impetus to construction of both the Valley Highway and the East 46th Ave. Freeway did not develop until the program for the great National Interstate and Defense Highway System was put into effect on July 1, 1956.

The East 46th Ave. Freeway is part of Interstate 70, popularly called the "Main Street of America." In Colorado, Interstate 70 enters from Kansas and goes to the Utah border.

The first contract for the present Freeway was awarded on July 6, 1961. Its total cost was \$129,357 and it was for a new bridge over the Platte River. This bridge was required for a detour route when major construction began, and it now is utilized as a ramp in the North Washington St. interchange. Altogether, six contracts were let for the Freeway, the largest for more than \$3 million.

The Freeway is the most spectacular highway in the city, and in addition to providing the utmost in safety and comfortit also offers excellent views of the mountains as well as of the skyscrapers in the downtown area.

The Freeway, a 10-lane facility with four lanes at the ground level and six lanes on the elevated portion, is 2.6 miles long and cost \$12,500,000.

Work is scheduled to begin soon on the West 48th Ave. link of Interstate 70, the companion highway to the East 46th Ave. Freeway on the west side of the Valley Highway.

The Freeway — Overall Sketch — What It Took

East 46th Ave. Freeway from Valley Highway through the Colorado Blvd. Interchange



All of the roads and ramps shown in solid black in the sketch above represent the work that was performed under the six contracts that carried the East 46th

Here Is What It Took

The East 46th Ave. Freeway, shown in the top sketch, is 2.6 miles long and cost \$12,500,000, of which \$2,000,000 represented expenditures for right of way. The Freeway is a 10-lane facility, with a four-lane divided highway on the ground and a six-lane limited access highway on the elevated section overhead.

Here are some of the statistics about its construction:

There are 2.7 miles of sewers and 2.1 miles of chain link fence.

The 13 miles of curb and gutter would reach from Denver almost to Golden.

There are 5 miles of aluminum hand railing, and one mile of metal guard rail.

The 5.4 miles of electrical conduit would carry a wire along Broadway from the State Capitol to Dartmouth Ave., and the 196 aluminum light standards, if laid end to end, would extend for 1.1 miles of that distance. Ave. Freeway from its western terminus at the 46th Ave, interchange through the Colorado Blvd. interchange.

The 297,300 cubic yards of earth handled would cover a city block up to a third-story window.

The 306,500 tons of gravel used would require the capacity of 6,100 gondola cars, or 61 full trains.

The 98,570 cubic yards of concrete required, if laid end to end in neat cubic yard cubes, would cover the shoulder of the highway solid!y from South Denver to Falcon Field at the Air Force Academy.

The 147,400 barrels of cement which went into the concrete would require the capacity of 368 railroad cars.

There are 523 piers supporting the elevated portion of the highway, and the columns, 42 inches in diameter, extend to bedrock. If the holes in which these columns rest were put together into the earth they would just reach sea level below Denver.

There are 2,495 tons of structural steel, and 11,870 tons of reinforcing steel. The total of 14,555 tons of all steel products used would be sufficient to produce 8,360 autos of average weight costing \$29,600,000.

The water used for all purposes would form a lake 39 acres in extent and 10 feet deep.

The East 46th Ave. Freeway from Mount Vernon Canon to Its Connection with US 40

The sketch below shows the full connections of the East 46th Ave. Freeway from US 40 at Mount Vernon Canon on the west, the route of Interstate 70 west of Denver, to US 40 east of Aurora, also part of Interstate 70. The solid black line shows the portion completed and the broken line shows the sections under construction or where future construction is planned.



This Was the Way It Was —





LEST WE FORGET, these photographs show the slowly moving traffic jam that existed on East 46th Ave. when it was regarded by most highway engineers and the motoring public as "the worst traffic bottleneck in Denver."

THE CONGESTION that eixsted at the intersection of East 46th Ave. and North Washington St. in 1961, the year that construction actually started on the East 46th Ave. Freeway, is shown in the upper photo. The view is looking east on East 46th Ave. across North Washington St. For the drivers it was largely a case of Watch the Traffic Lights—and Hang Onto Your Hat!

A DEAD STANDSTILL as traffic is halted at a traffic light. Photo, left, is looking west on East 46th Ave, a short distance east of North Washington St. There will be no traffic lights on the six-lane, elevated Freeway which is designed to handle through traffic, as well as that which desires to leave or enter the Freeway on the convenient tramps. Traffic lights will operate on the divided four-lane highway at the ground level underneath the Freeway.

A CRISS-CROSS of traffic is shown in the bottom photo looking east on East 46th Ave. at the junction of Vasquez Blvd. which curves in from the left center. Traffic signals are holding up vehicles on both East 46th Ave. and Vasquez Blvd. to permit traffic to enter the intersection from Clayton St. The elevated Freeway, of course, is constructed over East 46th Ave., which is shown running from the bottom to the top of the photo at the right.



A Highway Is Designed...the Boring of Holes Begins



THE DESIGN for the intersection at East 46th Ave. and Washington St. is superimposed on an aerial photograph of the area. The old bridge over the Platte River at the lower right of the photo at the left had to be removed.

HUGE AUGERS, six feet high, 42 inches in diameter and weighing a thousand pounds, bore 80 feet into the earth to provide the footings for the reinforced concrete columns which support the elevated Freeway. The bore holes are lined with steel casing, as shown in the photo at the lower left, and are belled at the bottom in shale to provide secure support.

THE AUGER shown at the lower right has been removed from the hole and is being whirled to remove dirt.





A Column Grows Until It Is Crowned as a Pier





A BUCKET OF CONCRETE is hoisted by a crane to be poured into the casing for one of the columns which will support the Freeway, as shown in the extreme left photo. Inside the casing an intricate network of reinforcing steel has been linked together to be embedded in the concrete as it cures.

THE CASING is removed by being pulled over the top of the solid column, as shown in the photo at the upper right.

A FOREST OF CONCRETE COLUMNS, flaunting its streamers of reinforcing steel, appears to have erupted from the ground like mushrooms, as is indicated in the photo at the lower left. There are four columns in each set that supports the Freeway. The columns shown at the extreme left and right of the photo are for ramps leading to and from the elevated highway. There are 523 piers in the Freeway.

A COLUMN achieves its destiny as a Pier when it is "capped" by the concrete cross member which, in this case, supports one of the ramps to the Freeway, as shown in the lower right photo.





Elaborate Falsework Enmeshes Columns In Its Web







WOODEN PILING is driven into the bed of the Platte River to support the falsework which will connect the two sets of columns shown in the photo at the upper left.

STEEL BEAMS are laid as a foundation for the forms into which concrete will be poured, as shown in the photo at the left center.

LATTICEWORK seems almost to hide the concrete columns, as shown in the photo at the lower left.

MANY HOUSES could be built with the lumber which fashions the forms atop the columns into which concrete will be poured for the girders and deck of the Freeway, as shown in the photo at the upper right.

MATCHSTICKS appear to have been laid crosswise of the columns in part of the photo at the lower right. The right side of the photo shows the forms in place and ready to receive their burden of concrete.





Steel Provides Backbone for the Concrete Highway







REINFORCING STEEL is laid out on the forms on a section of the elevated Freeway, as shown in the photo at the top. The completed section at the left of the photo will be divided from the unfinished portion by a median strip of concrete, which will be one foot high and three feet wide.

AN INTRICATE NETWORK of steel for an expansion joint is shown in the photo at the left center.

NEAT AS CROCHETING is the pattern of reinforcing steel as shown in the lower left photo.

STEEL GIRDERS, six feet high, and with a span of up to 155 feet, shown at the left and right foreground of the lower right photo will support the Freeway as it is carried over a set of railroad tracks.



Freeway Receives Its Permanent Shape of Concrete



IN THE BEGINNING, concrete had to be lifted by a crane from the mixer on the ground to the top of the Freeway, as shown in photo at the upper left.

THE MIXER moves "upstairs" when a portion of the elevated highway has been built, as indicated in the photo at the left center.

MOTORIZED BUGGIES carry the concrete from the mixer along a platform and pour it into the forms, as shown in the photo at the bottom left.

VIBRATORS agitate the concrete to make certain that the reinforcing steel will be firmly imbedded, as shown in the photo at the upper right.

A FINISHING MACHINE smooths the concrete deck, as shown in the photo at the lower right.









Ramps Provide Versatility for the Freeway



AN ARM of the highway is being developed in the photograph at the upper left. As the Freeway columns stand at attention an "on ramp" for the east-bound lanes of the highway is being fashioned. The photo shows reinforcing steel being laid on the forms preparatory to the pouring of concrete.



THE DECK for a portion of the ramp has been poured, as shown in the photo at the left center, and the falsework is being prepared to permit the connection of the ramp with the elevated highway. In the background, the Freeway is marching forward on its columns.



THE ARM AND THE BODY are

united in the lower left photo as the completed ramp is joined to the Freeway. This is the ramp which will permit east bound traffic to enter the Freeway at the Steel St. connection. The on and off ramps for the Vasquez Blvd. interchange are shown at the upper left of the photo.

Ceiling of Concrete Covers Old East 46th Avenue



ON THE GROUND the photo at the left shows both a completed and an unfinished portion of the Freeway. The unfinished section at the left will be joined to the completed portion, and the median strip for the six-lane highway will be put in place between the two elevated roadways.

READY FOR TRAFFIC is this newly paved ground level section of East 46th Ave. as shown in the photo on the right. Freed of the through traffic which will use the elevated highway, the four lane street level roadway will be able to operate with greater efficiency and convenience to motorists than ever before.





THE GREATEST EXPANSE of overhead concrete is shown in the photo at the left where both on and off ramps are joined with the elevated highway.

This Is Where Freeway Overpasses Underpass





THE OLD UNDERPASS which took East 46th Ave. under the Union Pacific Railroad tracks is shown in the photo at the upper left.

THE BEGINNING of the overpass above the underpass is shown in the photo at the upper right, where one of the concrete piers for the elevated highway is in place.

STEEL GIRDERS for the elevated highway over the railroad tracks are shown in place in the photo at the lower left.

THE COMPLETED OVERPASS is shown in the photo at the lower right. A Union Pacific passenger train is passing on the railroad overpass, and the top of one of the Vistadome cars is shown in the right center of the picture.





Evolution of an Intersection...And Jet Overpass

THIS WAS THE INTERSECTION of Colorado Blvd. and East 46th Ave. in 1958. In the photo below, Colorado Blvd. is shown running from left to right and East 46th Ave. goes from the bottom to the top of the picture.



THE COMPLETED INTERCHANGE at the intersection of Colorado Blvd. and East 46th Ave. is shown in the photo below. Colorado Blvd. runs from left to right in the photo and overpasses East 46th Ave.



JET AIRLINER SKIMS OVER TOP OF INTERSTATE 70 WITH EASE

A JET AIRLINER is starting to lift off the runway which overpasses East 46th Ave., north of Stapleton Field, as shown in the photo below. The jet runway is 752 feet wide, and was built to accommodate both take offs and landings of the newest and largest jet planes. The underpass is lighted for its entire length as an aid to vehicular traffic.



Closeup Views of Ramps and Interchanges







TRAFFIC MAY MOVE in any direction through the interchange at North Washington St. and East 46th Ave., as shown in the photo at the left. The East 46th Ave. Freeway crosses the photo from left to right, overpassing both the street and Platte River, and it is here that the elevated portion of the Freeway takes off from the ground.

A CURVED RAMP which leaves the eastbound lares of the Freeway at Humboldt St. brings' traffic almost to the front door of the Denver Coliseum, as shown in the photo at the left. An off ramp, at the right, outside the photo, takes westbound traffic to the ground at Brighton Blvd. An on ramp for westbound traffic joins the Freeway near the corner of Stockyards Stadium.

ON AND OFF RAMPS permit westbound traffic to reach the ground level at Steele St., and allow eastbound traffic to join the Freeway from the same street, as indicated in the photo at the left. The Steele St. ramps are the eastern legs of a diamondtype interchange, which includes additional access and exit ramps at Vasquez Blvd., which is outside the photo at the left.

East 46th Ave. Freeway as Seen from the Sky



LOOKING WEST from the Colorado Blvd: interchange, the photo above shows the East 46th Ave. Freeway reaching its western terminus at No. Washington St.

LOOKING EAST from the 46th Ave. interchange on the Valley Highway, the East 46th Ave. Freeway is shown in the lower left photo extending to the Colorado Blvd. interchange at the extreme top of the picture.



THE FUTURE CONTINUATION of Interstate 70 is shown in the lower right photo as the route proceeds westerly from the East 46th Ave. interchange in the center of the picture. The route runs diagonally toward the left of the photo and then follows West 48th Ave. to Federal Blvd., which extends across the bottom of the photo. The kink in the East 46th Ave. Freeway near the top center of the photo is overemphasized because the picture was taken with a telephoto lens.



Interchanges and Connections Add to Usefulness

LIMITED ACCESS HIGHWAYS, such as Interstate 70 on East 46th Ave., are required to restrict access to and exit from the Freeway to certain designated points. Such locations, frequently full interchanges but sometimes only on or off ramps, provide the flexibility of movement required by traffic. Good connections with other traffic arteries also are important in supplying the motorist with the fullest possible freedom of travel. Some of the interchanges on the East 46th Ave. Freeway are shown below, together with one of the major connections.

THE BRIGHTON BLVD. INTERCHANGE



THE STEELE-ST .- YASQUEZ BLVD. INTERCHANGE

THE OVERPASS CONNECTING COLORADO BLVD. WITH INTERSTATE 80-5 AND US 85





Scenes Along the Completed Portion of the East 46th Ave. Freeway East of Colorado Blvd.

Although the greatest emphasis has been placed on the completion of the elevated section of the East 46th Ave. Freeway, the highway, except for one bridge, has been completed to Havana St., about four miles east of Colorado Blvd. Additional projects are under way which will carry the highway to a connection with US 40, east of Aurora. The entire route is part of Interstate 70. Two of the major interchanges and one grade separation on the portion east of Colorado Blvd, are shown below. In each photo East 46th Ave, is the highway running from left to right across the photo.

THE MONACO PARKWAY OVERPASS



THE QUEEEC ST. INTERCHANGE



THE HAVANA ST. INTERCHANGE





Band-It Co., 4799 Dahlia St.



Burroughs Corp., 4701 Colorado Blvd.



Carpenter Paper Co., 4800 E. 48th Ave.



Caterpillar Tractor Co., 4705 E. 48th Ave.

These Are Among Public The Freeway Will Serve

It is an age-old axiom that progress follows the highway. Today, the highway is the lifeline for commerce, industry and pleasure, and at the same time it is the source from which springs growth and development, the very foundation for progress and prosperity.

Modern highways are designed to provide the greatest possible comfort and safety, and they also are planned to offer the utmost in the saving of time and operating expense.

All of these elements have increased the usefulness of the highway, and have resulted in the tremendous growth of businesses and industries alongside its path. At the same time, the highways have made possible the spread of suburban residential areas and a greater and higher use of adjacent land.

A highway is fulfilling its desired goal of usefulness only when it can be said that it is providing the greatest possible "service."

In order to indicate the full meaning of that phrase, and to portray, to a limited extent, the magnitude of such service, some of the major institutions and businesses, both public and private, in the area served by the East 46th Ave Freeway are shown on this and subsequent pages. These are but representatives of the numerous other firms and institutions which will benefit from the new highway.



Denver Chicago Trucking Co., Inc., 3888 E. 45th Ave.



Frontier Airlines, 5900 E. 39th Ave.



GMC Truck & Coach Co., 4715 Colorado Blvd.



Gold Bond Stamp Co., 4800 Dahlia St.



International Harvester Co., 4233 E .46th Ave.



McCollum-Law Corp., E. 48th Ave. & Colorado Blvd.

New Plants and Old

Many dealers in heavy equipment have been located in the area along East 46th Ave. for several years. Other firms, including one which deals in trading stamps—hardly a heavy machinery item—found the nearness of the highway attractive. The new Freeway will provide an even finer facility, with greater usefulness to seller and buyer alike.



McCoy Co., 6000 Colorado Blvd.



H. W. Moore Equipment Co., 5990 Dahlia St.



Parker Co., 4655 Colorado Blvd.



Pacific Intermountain Express, 3223 E. 46th Ave.

Business and Sports

Near the western terminus of the East 46th Ave. Freeway is the municipally-owned Denver Coliseum and the old Stockyards Stadium. East of Colorado Blvd. is the track of Mile High Kennel Club, Inc. All three attract thousands of persons, many of whom will use the new Freeway. Meantime, the establishments shown here are doing business day after day over the same highways.



B. K. Sweeney Mfg. Co., 6300 Stapleton S. Dr.



Safeway Stores, Inc., 4200 E. 46th Ave.



United States Rubber Co., 4800 Colorado Blvd.

The grandstand at the Mile High Kennel Club, Inc. race track



Follow the Signs to Make Your Route Connection

Going West on the Freeway

APPROACHING COLORADO BLVD. FROM THE EAST, the first photo below shows the signs you will see above the westbound traffic lanes. APPROACHING NORTH WASHINGTON ST. FROM THE EAST, the second photo below shows the signs above the westbound lanes.





Going East on the Freeway

APPROACHING NORTH WASHINGTON ST. FROM THE WEST, the first photo below shows the signs which will guide eastbound traffic. APPROACHING COLORADO BLVD. FROM THE WEST, the second photo below shows the signs as they will appear to eastbound traffic.





THERE ARE 174 SIGNS with 420 panels of the type designed for Interstate Highways on the East 46th Ave. Freeway. They were erected at a cost of \$144,000 and were designed to make the highway function smoothly and efficiently.

The signs range from the small ground signs to the huge overhead structures, some of which are 10 feet long and 44 inches high. They were fabricated of aluminum and mounted on permanent steel bridges.

Speed on the Freeway is 55 miles an hour, but is reduced for exit and access ramps.

In driving the Freeway, or any Interstate highway, it is necessary to know where to enter the facility, and where you intend leaving it. Once on the Freeway, make certain you are in the outside lane sufficiently ahead of the desired exit to be able to enter the deceleration lane at the proper time. The directional arrows will help you in making the necessary driving decisions.

AN ADVANCE EXIT WARNING SIGN is illustrated in the photo below.



New Freeway Provides Finer Service for Public



FULLY OPERATIONAL, the six-lane, elevated East 46th Ave. Freeway presents a broad area for safe travel, as is shown in the photo above.

Future Traffic Estimates

Through its 36 permanent traffic counters on the State Highway System and by means of special traffic counts, the Colorado Department of Highways maintains a record of the number of vehicles currently using the highways. Through the use of accepted formulae, the Department also is enabled to forecast future traffic volumes. The following table was prepared to show present traffic volumes and to give an interesting glimpse into future traffic on the elevated section of East 46th Ave. Freeway:

Point of Study	Present Traffic	I 975 Traffic
Valley Highway to North Washington St	51,800	68,300
North Washington St. to Humboldt St	47,100	66,500
Humboldt St. to Brighton Blvd	38,400	56,200
Brighton Blvd. to York St	43,200	67,700
York St. to Vasquez Blvd ,	35,200	54,700
Vasquez Blvd. to Colorado Blvd	28,200	45,800

All These Took Part

THE CONTRACTING FIRMS which constructed the East 46th Ave. Freeway are listed below, together with the consulting engineers, the public utility companies and the railroads which participated in the project:

PRIME CONTRACTORS

A. S. Horner Const. Co., Inc., Denver; Peter Kiewit Sons' Co., Denver; L. H. Kilgroe Const. Co., Denver; Leon K. Suhm, Inc., Denver.

CONSULTING ENGINEERS

Ken R. White Company, Denver.

PUBLIC UTILITIES

Denver Board of Water Commissioners, Mountain States Tel. & Tel. Co., Public Service Co. of Colo., Western Union Tel. Co.

RAILROAD COMPANIES

Atchison, Topeka & Santa Fe Railway Co., Chicago, Burlington & Quincy RR Co., Chicago, Rock Island & Pacific RR Co., Colorado & Southern Railway Co., Denver & Rio Grande Western RR Co., Union Pacific RR Co.

To the Public

THE COLORADO DEPARTMENT OF HIGHWAYS is pleased to turn over to Colorado's citizens and our visitors the East 46th Ave. Freeway (Interstate70) the latest section of our state's Interstate system to be completed.

The East 46th Ave. Freeway ranks second only to the Valley Highway in length and cost in the Denver area.

The Colorado State Highway Commission allocated the money for this important improvement from state and federal aid funds. Ninety per cent of its cost is being borne by Congressional appropriations from the National Highway Users Fund.

Special recognition is due Governor John A. Love, former Governor Steve McNichols, Mayor Thomas G. Currigan and his predecessors, and past and present members of the Denver City Council for the support they gave to this project. Close assistance has been provided by the offices of the Denver City Engineer and the Traffic Engineer, as well as by the U. S. Bureau of Public Roads. The Department also gratefully acknowledges the cooperation given by the contracting firms which actually built the facility and the several public utilities and railroads which were involved.

The East 46th Ave. Freeway is another monument to the vision and perseverance of former Chief Engineer Mark U. Watrous, and to the devoted effort and skill of members of the Department who worked with the consulting engineers, and who supervised its construction.

In behalf of the Colorado State Highway Commission and the Department, I extend to you the hope that this new facility will measure up to its expectations and that all of the benefits which we sought to incorporate into its design will be fully realized.

If utilized properly, this new Freeway will serve you well in comfort and safety.

Ches. E. Shumate Chief Engineer Colorado Department of Highways

Freeway Will Pay Dividends

A motorist using the 2.6 mile elevated portion of the East 46th Ave. Freeway will save approximately 3 cents a mile over the cost of driving on the old street at ground level, according to exacting formulae.

Costs included in these calculations include those for fuel, tires, oil, maintenance, depreciation, time and comfort.

There are nine stop lights on the street level, none on the elevated section. Average speed at ground level is estimated at 28 miles an hour, but is expected to increase to 40 miles an hour on the elevated section, which has a maximum posted speed of 55 miles an hour.

On the basis of anticipated traffic volume, the Freeway is expected to save motorists \$9,500 a day, or a total of approximately \$3,500,000 a year. The entire \$12,500,000 cost of the Freeway, therefore, will accrue as benefits to motorists using the facility in less than four years.

Freeway Already Has Acquired Interesting History



PLAYING DENTIST to the teeth of a prehistoric animal in the photo above are Clarence Greene and Jim Steele of the Department, who are studying fossils unearthed during construction of the West 46th Ave. interchange on the Valley Highway, western terminus of the East 46th Ave. Freeway.

MILLIONS OF YEARS ago, prehistoric animals roamed the Platte River Valley across which the East 46th Ave. Freeway has been constructed. More recently, high public officials and prominent citizens have added the dignity and prestige of their positions to several celebrations in connection with the various stages of the development of the Freeway. Even before it was completed, the Freeway had accumulated a history of its own.



MISS COLORADO, Jane McBurney, shown seated in the photo above. added her beauty to groundbreaking coremonies for the first project on the East 46th Ave. Freeway on August 1, 1961.



GROUND BREAKING CEREMONIES November 16, 1948 for the 46th Ave. interchange, the first major project on the Denver Valley Highway, are shown above. Left to right: Governor Lee Knous; A. V. Williamson, BPR; Alfred Ryan, Crocker & Ryan; Russel W. James, BPR; Chief Engineer Mark U. Watrous; President Benj. C. Essig, Denver Chamber of Commerce: City Councilman C. Paul Harrington; City Councilman James Fresquez; Mayor Quigg Newton and President J. Clinton Bowman, Downtown Association of Denver, Inc.



FEDERAL, STATE AND CITY OFFICIALS gathered in 1961 to dedicate the jet runway overpass, north of Stapleton Field, which goes over the six lanes of the East 46th Ave. Freeway, as shown in the photo above.



INSPECTION! INSPECTION! INSPECTION! These are the watchwords on every project of the Colorado Department of Highways to insure that the finished product will meet all of the rigid plans and specifications. Notebook in hand, Joe Siccardi, area engineer for the U. S. Bureau of Public Roads, in the photo above, scrutinizes the depth of a concrete sidewalk on the East 46th Ave. Freeway as Bob Campbell, Department project engineer, does the measuring, and Bill Schlingman, Department project engineer, double checks. It would be difficult to count the thousands of inspections that were performed on the construction of the Freeway which is shown taking shape in the background, but every one was designed to make certain that the highway would be the finest that expert workmen could make it.

CDOT LIBRARY REFERENCE BOOK

This booklet is the fifth in a series prepared in the public interest by the Colorado Department of Highways. Photographs by the Department, Leonard Dischner of the Peter Kiewit Sons' Co., Denver, and the Denver Chamber of Commerce, which sponsored the dedication ceremonies opening the East 46th Ave. Freeway on Interstate 70.

DOES NOT CIRCULATE