

TRANSPORTATION ADJUSTMENTS TO TOPOGRAPHY IN DALLAS, TEXAS*

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The outstanding physiographic feature of Dallas County is the White Rock Cuesta, which marks the western edge of the Austin Chalk limestone. Immediately below the chalk lies the easily eroded Eagle Ford Shale, hence the contact between the two strata is clearly marked by this westward facing cuesta, which extends from the southwest corner of the county to the middle northern border.

The Trinity River, an antecedent stream, has cut a gap through the cuesta about midway between the northern and southern boundaries of the county. Elm Fork and Mountain Creek, subsequent tributaries parallel to the cuesta face, join West Fork to form the Trinity River. "The valleys of both West and Elm Fork of the Trinity have a breadth of three to five miles. The two branches join west of White Rock cuesta. The valley of the combined streams narrows, hour-glass fashion, where the river cuts across the white rock at Dallas, until the flood plain is less than a mile wide. Having passed this constriction, the river again meanders over a broad flood plain".¹ The gap through the cuesta, and the narrowing of the Trinity River flood plain, are among the most important physical factors that influenced the early growth of Dallas. The gap provided the easiest crossing of the cuesta, and the narrowing of the flood plain made the shortest crossing of the river valley.

In a gently rolling prairie country, even slight variations in the relief exert a profound influence upon the economic development of the area. The map (Fig. 1) shows the cuesta, the gap, the narrowed flood plain, and the strategic position

*The second of a series of brief articles to appear in *Field & Laboratory* on the geographic background of Dallas.

¹Shuler, Ellis W., *The Geology of Dallas County*, University of Texas Bulletin No. 1818.

of Dallas for dominating the early trade of the region over the other contemporary settlements of Farmers Branch, Cedar Springs, Cedar Hill, and Lancaster. At first Farmers Branch and Lancaster outgrew the Dallas settlement, but when trade began between these pioneer communities and the outside world, Dallas, with its more favorable location with respect to the narrowed flood plain and the Trinity River gap, forged ahead.

The Early Roads and Trails of Dallas County

Colonization in the Southwest practically ceased during the Civil War period, but after the war Dallas again became an active commercial settlement. New settlers, mainly from the Old South, were moving westward. Railroads were still some distance from Dallas, hence the only connections with the outside were by wagon roads either to the ends of the railroads, or to the head of water transportation.

Of the several wagon roads radiating from Dallas, six were important (Fig. 1). Possibly the most used was the one from the east which came from Jefferson and Shreveport. This road entered Dallas County after crossing the East Fork of the Trinity River at Barnes' Ferry (Barnes' Bridge) in Rockwall County, and followed a general westwardly direction to the city, traversing all drainage lines at right angles. The second road, running south to Houston, crossed the Trinity at the narrowest part of the flood plain west of Dallas, and continued along the upland through the town of Lancaster. West of the Lancaster highway was a third road, leading to Austin, which crossed the river by the same ford and continued southwestward along the high rim of the escarpment through Cedar Hill. The fourth road led westward to Bird's Fort and to Ft. Worth. It crossed the river with the others, but instead of going over the upland and down the cuesta face as does the modern Ft. Worth pike, it followed through the gap, approximately along the route of the present Eagle Ford road. The fifth road was to Denton. Colonization in Denton County, a part of the Peters' Colony area, began about the same time as of Dallas, hence there was considerable travel between the two settlements. The road led

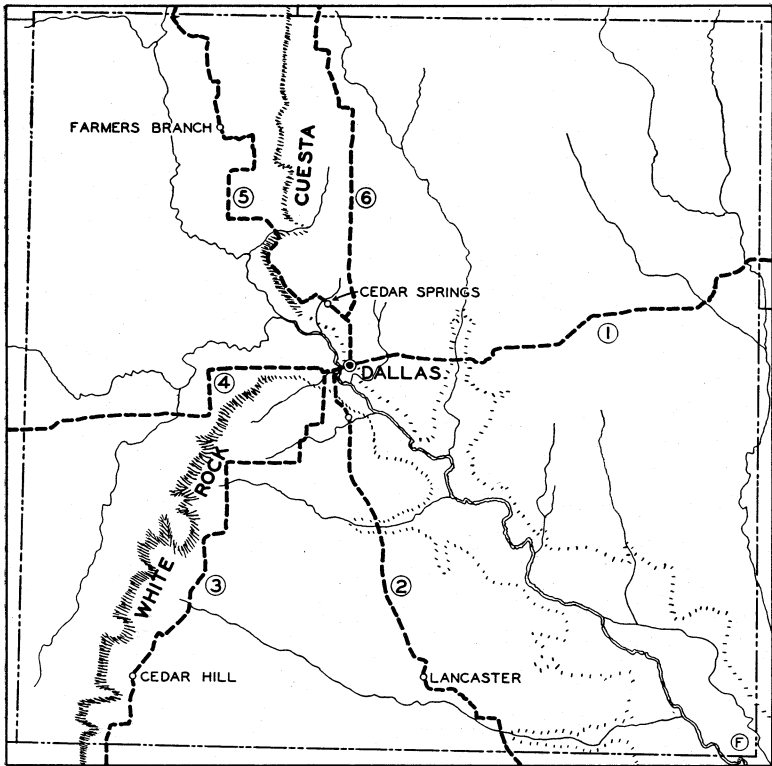


Fig. 1. Early wagon roads of Dallas County. These roads lead to (1) Jefferson and Shreveport, (2) Houston, (3) Austin, (4) Fort Worth, (5) Denton, and (6) Preston on the Red River.

northwest out of Dallas through the village of Cedar Springs, continued along the top of the bluff to the present Lemon Avenue crossing of Bachman's Creek, then followed a zig-zag course along a bench below the cuesta northward through Farmers Branch to the edge of the county and on to Denton. This highway seemed to have been surveyed to touch three sides of every farm. Preston Road, the sixth and last of the major wagon roads, followed its present course as far as the Alpha settlement, then turned northward to avoid crossing White Rock creek. It continued northward out of the county along the upland.

The influence of topography and drainage upon the loca-

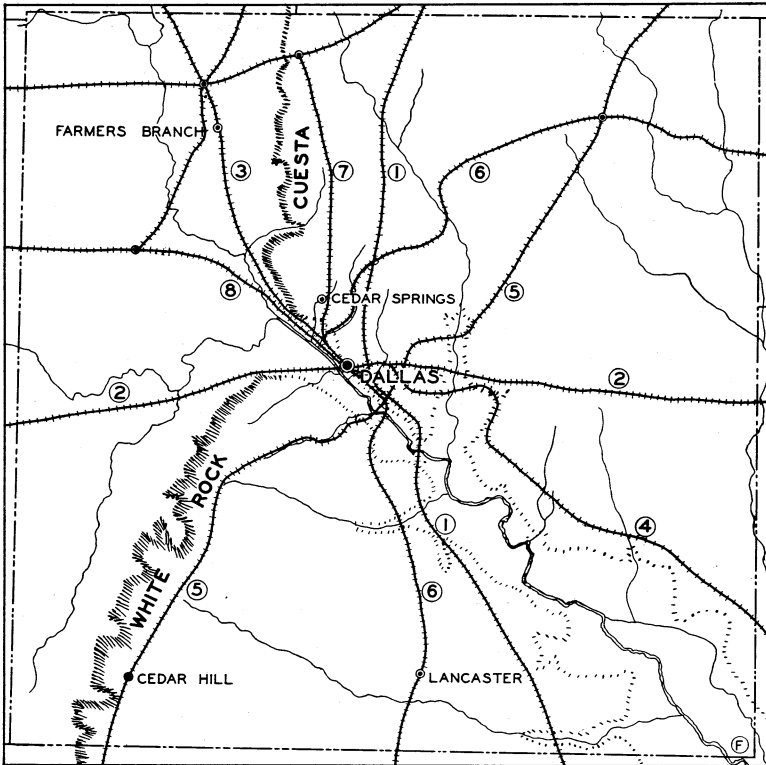


Fig. 2. Railroads of Dallas County. (1) Southern Pacific (Houston and Texas Central). (2) Texas and Pacific. (3) Missouri, Kansas and Texas (Denton Branch). (4) Southern Pacific (Texas and New Orleans). (5) Santa Fe. (6) Missouri, Kansas and Texas (main line). (7) Saint Louis Southwestern. (8) Rock Island.

tion of these roads is striking. Two of the roads crossed the river at the narrowest part of the flood plain and continued along the upland, thus avoiding most drainage ways. The road to the east had to traverse all drainage ways, but usually picked narrow places in the valleys to cross. The road west utilized the river gap through the cuesta, and followed the river. The Denton road remained on the cuesta as far as feasible, then meandered down along the lowland far enough back from the stream to be above flood dangers. Preston Road followed the upland out of the county swinging around the heads of the east flowing drainage, in con-

trast to the modern highway which bridges these streams. While topography and relief exerted the most important influences upon the routes, property lines often determined local crooks and turns in the roads. After the completion of the railroads, highway travel was forgotten until the coming of the automobile, and the roads of the county, poor at best, were all but abandoned.

Trinity River Navigation

Before 1871 the Trinity River offered another trade outlet. Skiffs and canoes had navigated the river since the early days of settlement, but the first steamboat did not reach Dallas until May, 1868, when Captain J. H. McGarvey arrived in the *Job Boat No. 1*. This small boat, 66 feet long by 20 feet wide, appeared to inaugurate a new era for the town. The next year the citizens of Dallas built a boat and started it down the river, but when it met a vessel coming up stream, the river proved too narrow for them to pass.² Plans were made for clearing the river, and for building locks at places where the current was swift. Some work was done, and a few locks built, but soon the entire project was abandoned and forgotten. The Houston and Texas Central Railroad completed its track into Dallas by the end of 1871. Having obtained one railroad, the citizens of Dallas became interested in securing others and soon forgot river navigation in favor of the new and more rapid means of transportation. The pre-railroad period closed with Dallas firmly established as the commercial center of the county, as well as of North Texas. The population increase during the last five years of the decade, 1860-70, was rapid.

The Railroad Period (1871-1903)

The first railroad entered Dallas from the south, completing its line by the end of 1871. At that time the Texas and Pacific was building westward from Longview. Its original route called for a direct line southwestward, to cross the Houston and Texas Central in Ellis County. Dallas, realizing that the first major railroad junction in North Texas

²Brown, John Henry, *History of Dallas County*, pp. 97-100 (1887).

would develop into an important commercial center, made plans to deflect the Texas and Pacific northward so that it would cross the other railroad in or near the "City on the Trinity". Through a bit of trickery, a note inserted in the charter of the Texas and Pacific railroad company required it to cross the Trinity River within one mile of Browder Springs. No one in the Legislature knew the location of Browder Springs, but after the charter was granted, those springs were found to be along Mill Creek in the present City Park. Dallas also offered a bonus of \$100,000 to the Texas and Pacific to complete their road to the city. In 1873, this road reached the city. Leading westward from Dallas, the Texas and Pacific utilized the gap in the cuesta to reach Ft. Worth and west Texas.

Since bonus money was raised so easily, by merely voting municipal bonds, Dallas immediately voted money for a third road, the Dallas and Wichita Falls (now the Denton branch of the Missouri, Kansas, and Texas). In 1874 the railroad entered the city from the northwest. The state legislature then prohibited the voting of municipal bonds for bonus money, but by that time, Dallas was firmly established as the leading railroad center in North Texas. As its commerce increased, population grew rapidly, and other railroads built into the city. The order in which the other lines entered is as follows:

1880 — Texas Trunk, now the Southern Pacific.

1881 — Chicago, Texas & Mexico, now the Santa Fe south.

1882 — Santa Fe northeastward to Paris.

1887 — Dallas and Greenville, now the Missouri, Kansas and Texas north.

1887 — Dallas and Waco, now the Missouri, Kansas and Texas south.

1903 — St. Louis Southwestern, branch from Addison.

1903 — Chicago, Rock Island and Gulf.

Since 1903 no new railroad lines have been built into Dallas, although several additional roads have entered the city on the tracks of other lines. The railroad map of the county

(Fig. 2) shows that even in an area of low relief, drainage courses, ridges, and gaps influence railroad routes. The Texas and Pacific, building westward, crossed the streams in the eastern part of the county at right angles, but utilized the narrow crossing of the Trinity Valley, and continued westward through the gap. The Denton branch of the Missouri, Kansas and Texas, followed Elm Fork into Dallas, also utilizing the gap. The Rock Island built along the north side of West Fork, through the gap, and down the east side of the main stream to Dallas. The Missouri, Kansas and Texas entering from the northeast, after crossing several drainage courses, descended the valley of White Rock, then crossed over the divide to Turtle Creek valley and followed it into Dallas. Continuing southward it utilized the main valley of the Trinity for a long distance. The St. Louis Southwestern, and the Houston and Texas Central north, stayed on the ridge between White Rock Creek and the cuesta. The Santa Fe entering from the northeast utilized White Rock valley for part of its route to Dallas. Southwestward it crossed the Trinity at its narrows, ascended the tributary valley of Cedar Creek to the upland, then followed the cuesta out of the county. The Houston and Texas Central south, crossed the river below Dallas, and followed the main valley out of the county. The Texas and New Orleans followed the east side of the Trinity Valley out of the county. In crossing White Rock bottom it made a broad swing to the east to remain against the bluff.

During the period of railroad building, Dallas grew rapidly at the expense of its neighbors. The two most important suburban cities adjacent to the city were East Dallas, and Oak Cliff (formerly Hord's Ridge). By 1905 both had been annexed, thereby materially increasing the size and population of Dallas.³

The railroad period for Dallas (1871-1903) corresponded roughly to the major railroad building of the United States. Since 1903 Dallas connections with the outside have taken other forms.

³Foscue, Edwin J., "The Growth of Dallas from 1850 to 1930", *Field & Laboratory*, Vol. 4, pp. 16-18.

Interurban Lines

The building of interurban lines commenced about the beginning of the present century. The Dallas-Ft. Worth interurban inaugurated service in July, 1902. The line to Sherman, put into operation in 1908, was extended to Denison through the purchase of the Denison & Sherman Railway. Two years later tracks were completed to Corsicana, and to Waco. The World War retarded interurban construction, but during that period the grade was established for a line to Greenville, although the rails were never laid. With the close of the war interest in electric road construction revived.

A new line was opened to Terrell in January, 1923, and the Denton Branch of the Missouri, Kansas and Texas was electrified, operation on the latter line beginning in October, 1924.

Soon other types of communication, particularly those of the motor bus over good highways, took away local traffic from the interurbans. Three of the electric lines have been abandoned, the Terrell and Denton lines discontinuing operations March 12, 1932, and the Dallas-Ft. Worth line, Dec. 24, 1934.

Modern Motor Highways

The automobile industry in the United States began before the end of last century, but did not gain momentum until after the World War. Improvements in automobiles demanded better highways, and improvement in highways created a further demand for automobiles. Dallas recognizing the importance of good highways in the building of a modern commercial center, repeated the tactics used to secure railroads and interurbans. A highway map of north Texas shows Dallas at the center of a well developed network of national and state roads, including U. S. highways Nos. 80, 77, 75, 67, and 175. With good highways came not only passenger cars, but also passenger and freight buses, essentials to the development of any modern American city. These new automobile highways followed the same drainage features in approaching Dallas that had been used by the wagon roads, railroads, and interurbans, showing again the influence of topography on transportation routes entering a city.