

EXPLANATION

- Interstate highway, four lane, divided
- Two-lane road, paved
- Two-lane road, improved
- Two-lane road, unpaved
- Bridge
- Bridge, Evidence of flood damage obvious
- Culvert, metal, Opening of symbol points downstream
- Culvert, concrete, Wide end of symbol points downstream
- Dip in road at drainage crossing, concrete lined
- Dip in road at drainage crossing, unpaved
- Abandoned-railroad grade
- Buried natural-gas pipeline
- High-voltage electric transmission line, Dots show locations of steel towers

TRANSPORTATION ROUTES

This map shows types of roads and highways, locations and types of drains beneath the roadways, location of the Arapahoe County Airport, large-diameter natural-gas pipelines and high-voltage electric-power transmission lines, and the abandoned railroad grade of the Colorado and Southern Railway, all as they existed in October 1971. Modifications after that date are not included. Users of the map may determine access to a point on the ground within the quadrangle by determining the location of their point of interest on the map and then tracing various routes to it.

Access to the Parker quadrangle from Denver is by two north-south-trending paved highways, Interstate Highway 25 Parkway Road (State Highway 83). Interstate Highway 25 is a four-lane divided highway that allows rapid access to downtown Denver and to Colorado Springs. This highway is situated to minimize the probability of flood damage. Parker Road is a two-lane paved highway that follows the east side of the valley of Cherry Creek. North of the quadrangle it connects with Interstate Highway 225, which is a link between Interstate Highways 25 and 70. If heavy rainfall were to occur in the drainage basins of either Piney Creek or Sulphur Gulch, Parker Road could be inundated or washed out at bridges over either creek. Both streams usually are dry, but in 1965 Piney Creek had a peak discharge at its mouth of 14,100 cubic feet of water per second from a storm during which the heaviest rainfall occurred in another basin. The Sulphur Gulch basin is about the same size as the Piney Creek basin, and could gather a similar amount of water in the event of a similar storm.

Interstate Highway 25 and Parker Road are connected in the northern part of the quadrangle and one-half mile west of the quadrangle by Arapahoe Road, which is paved between the two and which may be susceptible to inundation or to washout at its crossings of Cottonwood Creek and Cherry Creek. Arapahoe Road is unpaved east of Parker Road, and may be susceptible to inundation or to washout at many places where it crosses streams. West Parker Road, an unpaved road which connects Interstate Highway 25 and Parker Road in the southern part of the quadrangle, is susceptible to partial washout at Happy Canyon Creek and at Badger Gulch, at its unpaved crossing of Newlin Gulch, and at Cherry Creek. Aside from this flood susceptibility, West Parker Road is an all-weather road, surfaced and maintained, and well drained of surface water.

Other roads, parts of which are paved, connect points within the area, but are not major routes of access. Most of these roads are subject to inundation or washout where they cross creeks, gulches, and gullies. Principal among streams that may inundate these roads are lower Cottonwood Creek, Happy Canyon Creek at Jordan Road, Newlin Gulch at Jordan Road, an unnamed stream along the south line of sec. 28, T. 5 S., R. 66 W., at Parker Road, and Piney Creek at East Orchard Road.

Some unpaved roads in residential areas in the Parker quadrangle appear to be susceptible to inundation or to washout. Many of these roads cross streams without bridges or improved crossings, and most of these types of roads have no drains under the road for the stream. All streets in Grandview Estates subdivision are unpaved, and most are subject to local inundation and washout by storm runoff. Flood damage to roadways can be minimized if drains are installed at all natural drainageways. Roads should be sited not in the bottom of a stream drainage channel, where most of the storm runoff water flows, but far enough above the stream channel so that the road will not be washed out.

Natural vegetation commonly is removed at sites of new construction. Unless erosion control is practiced, the removal of vegetation will increase sediment load to streams and other drains during storm runoff. Increased sediment load causes silting of natural channels and manmade drains, alters the hydrologic characteristics of the drainages, and often leads to inundation of land away from the intended channel for the drainage. An excellent discussion of erosion-control methods at construction sites has been published by the U. S. Department of Agriculture (1970).

Unpaved roads in the Parker quadrangle commonly are surfaced with crushed arkosic

sandstone or with sandy alluvial gravel. Both materials are available locally; they should be compacted soon after they are spread on the roadway, however, because roads surfaced with uncompacted sand and gravel are nearly impassable when these materials are saturated with water. The map user is referred to the geologic map of the Parker quadrangle (Maberry and Lindvall, 1972) for locations of beds of arkosic sandstone and alluvial deposits of fine gravel.

The abandoned roadbed of the Colorado and Southern Railway between Denver and Colorado Springs traverses the Parker quadrangle from near Cherry Creek Reservoir on the north, southward to a point southeast of Parker. Most of the roadbed remains, and remnants of many bridges are preserved. The railroad grade might provide an interurban mass-transit route from the Parker area, once it becomes urbanized, to connect with Denver urban mass-transit facilities.

Air transportation facilities in the Parker quadrangle are at Arapahoe County Airport, which at present has north-south- and northwest-southeast trending bituminous-surfaced runways. The airport now offers services for light private and company aircraft, but has a potential for expansion of facilities to handle larger aircraft.

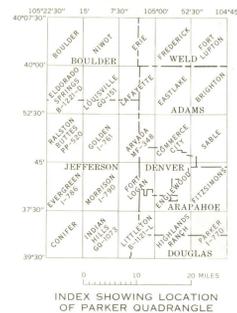
Two buried large-diameter natural-gas pipelines traverse the Parker quadrangle; one trends northwest-southeast across the middle of the map area, and the other trends generally east-west across the southern part of the area. Both are sited mostly in alluvial deposits, and are buried too deeply to be damaged by flooding, and neither is expected to be affected by other problems associated with the geologic environment. Both lines may influence the location of homesites and other building sites. The lines are part of the "belt" system of natural-gas pipelines that encompasses Denver and furnishes gas to the Denver metropolitan area.

A high-voltage electric-power transmission line crosses the Parker quadrangle, trending east-west near the southern boundary of the quadrangle. Most of the support-tower foundations are in sandstone bedrock. The line crosses an area of alternating high flat-topped ridges and deep steep-sided canyons.

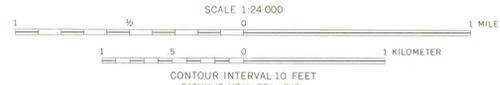
Telephone lines are too numerous to map or to enumerate. Underground telephone lines crisscross the quadrangle, providing service to developed areas and to areas of potential planned development. Information on the specific location of telephone cables is available to builders as a service of the telephone company. Cables normally are buried at shallow depths, and are not expected to encounter any problem connected with the geologic environment except possibly where they cross drainages; shallow cables in uncompacted geologic materials in or near drainages may be subject to damage by erosion during periods of severe flooding.

REFERENCES CITED

- Maberry, J. O., and Lindvall, R. M., 1972, Geologic map of the Parker quadrangle, Arapahoe and Douglas Counties, Colorado: U. S. Geol. Survey Misc. Geol. Inv. Map, I-770-A
- U. S. Department of Agriculture, 1970, Controlling erosion on construction sites: U.S. Govt. Printing Office, Wash., D. C., Agr. Inf. Bull. 347, 32 p.



Base from U. S. Geological Survey, 1965
Photorevised in 1972
10,000-foot grid based on Colorado coordinate system, central zone
1000-meter Universal Transverse Mercator grid ticks, zone 13, shown in blue



Conditions shown as of October 1971.
Observations made during detailed geologic mapping, 1970-71.

MAP SHOWING TRANSPORTATION ROUTES IN THE PARKER QUADRANGLE,
ARAPAHOE AND DOUGLAS COUNTIES, COLORADO

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1972