

## Section 3

### AIRPORT HISTORY AND LOCATION

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#### 3.1 WINDOW ROCK

Located in Black Creek Valley within Apache County, Arizona; Window Rock has a population of approximately 500 people. As the seat of government for the Navajo Tribe, Window Rock serves as the focal point for the entire Navajo population of 146,000 people. In addition to Tribal governmental offices, the Area Offices of the U.S. Department of Interior, Bureau of Indian Affairs and the U.S. Public Health Services are located in Window Rock.

Window Rock is situated in the southeast quadrant of the Reservation. State Highway 264 runs east-west through the community and provides the only paved access to Gallup, New Mexico. Some 26 miles to the southeast of Window Rock, Gallup is the nearest community with any scheduled airline service. Indian Service Road 12 runs north-south through Window Rock providing access to Fort Defiance to the north and Saint Michaels to the south.

The Black Creek Valley runs in a north-south direction. The slopes of the Defiance Plateau and southwestern slopes of the Chuska Mountains bound the valley. The Valley, consisting of flat grassy plains between low cuervas and hills, has an average width of two miles and is at an elevation of between 6,700 to 6,900 feet above sea level.

Window Rock is actually nestled against the southwest edge of the Chuska Mountains. A long narrow sandstone mesa, the western escarpment consists of steep slopes and vertical walled cliffs. To the west, the Defiance Plateau rises to an altitude approximately equal to Chuska Mountains (7,500 feet MSL), but does not have the steep slopes and cliffs.

The climate of Window Rock is strongly affected by its location in the high barren plateau county of northeastern Arizona. Moderate amounts of precipitation fall consistently only from about the middle of July to September. In some years, Window Rock receives moderately heavy precipitation during the winter. Usually, however, it is dry and windy. Average annual rainfall equals approximately 12 inches.

Average temperatures range from 27<sup>o</sup>F in the winter to 70<sup>o</sup>F in the summer. The mean maximum temperatures is 86<sup>o</sup>F with readings exceeding 90<sup>o</sup>F or higher occurring on less than fifteen days during an average summer.

The economy of the Window Rock area is dependent on livestock production, and the government activities of the Tribe, the Bureau of Indian Affairs, the Public Health Service, and the Indian Arts and Crafts Center. While agriculture, mainly livestock production, has traditionally been the main source of income for the majority of the Navajo people, the Tribal Council has actively sought to provide greater diversification of job opportunities for the Navajo. In particular, it has sought to provide greater employment opportunities on the reservation. Similarly, it has sought to provide greater access to goods and services on the reservations through development of service centers in the major communities.

Window Rock, as the seat of government, is the focal point of the Tribe's continuing relationship with the U.S. Government. Similarly, it is the focal point of the Tribe's negotiations with commercial interests seeking to establish commercial or industrial activities on the reservation. As the site for development of a service center, it is also experiencing visitations by corporate representatives of tenants of a new shopping center. In all cases, a substantial portion of these visitations are accomplished through the use of general aviation aircraft.

### 3.2 AVIATION HISTORY

The availability of historical records for Window Rock Airport are quite limited. It would appear that an active airport facility has existed at the current site since at least 1955. At that time, there were two runways: Runway 03/21 was approximately 5,200 feet long and Runway 07/25 was approximately 3,500 feet long. In the early 1970's, a new 7,000 foot asphalt runway was constructed on a 02/20 heading and the existing runways were abandoned. A portion of Runway 07/25 was converted to a service road/taxiway. In addition to the hangar facility now used by Window Rock Airways, a new terminal building, hangar facility and apron were constructed. Historical aviation activity is described in Section 4.

Formal airport planning encompassing Window Rock was initiated with the development of the Arizona State Airport System Plan. The ASASP recommended ultimate development of the Window Rock Airport to Basic Utility (BU) standards. A BU facility is the smallest airport design standard used by the Federal Aviation Administration. In 1975, the Navajo Tribal Airport System Plan was completed. It recommended that Window Rock Airport be developed to Basic Transport (BT) standards. A BT facility is of sufficient size as to accommodate the business jet weighing less than 60,000 pounds (gross take-off weight).

Due to an airport elevation of 6,737 feet above Mean Sea Level, there is not a significant difference in runway length requirements between the two recommended design standards. However, other components of airport development, to include pavement design strength, runway/taxiway widths and separation criteria, and land requirements are substantially different. They also represent substantial differences in potential development costs.

This study therefore addresses, in greater detail, the potential aviation demand at Window Rock, what size facility is required to support that demand, the most appropriate site for such a facility, and finally, the detailed layout and development costs for the airport.