

## Appendix B. Airport Replacement Values

### B.1. Introduction

In order to better understand the value of the National Plan of Integrated Airport Systems (NPIAS) airports within Nevada's state airport system, a high-level analysis of replacement costs of airport lands and facilities was conducted. This appendix details the methodology used to collect and analyze this data in order to determine approximate airport replacement values. This analysis focused on NPIAS airports within Nevada since these airports are federally or state funded and are most crucial to the Nevada airport system. As a note, Harry Reid International (LAS) and Reno/Tahoe International Airport (RNO) were not included in this analysis because the data collection needs required to make accurate estimates of their replacement value is outside of the scope of this high-level assessment.

This analysis assesses three categories of assets in order to better understand the general replacement costs for the airports included in this analysis. The asset categories are:

- Land
- Pavement
- Buildings

The pavement and buildings categories were further broken down to get a more accurate estimate of replacement costs based on pavement type and building functionality. To determine the value of each airport's lands and assets, multiple sources and methodologies were used. The following subsections provide details for each asset category and the methodology used for gathering and compiling data. Together, the methodologies result in estimated replacement costs for each of Nevada's NPIAS airports (except LAS and RNO) and provide a planning-level estimate of the total value of the aviation assets that comprise the airports included in this assessment.

### B.2. Methodology

As mentioned above, the methodology for calculating replacement values included three categories of assets. This section describes in more detail these categories and provides details regarding how unit costs were developed.

#### B.2.1. Land

The size of an airport's land envelope varies greatly across Nevada's system of airports. From as small as 100 acres, to as large as 5,000 acres, the size of an airport's property is a factor to account for in the overall valuation of an airport's replacement cost. Property acreage for each airport was sourced from the Federal Aviation Administration's (FAA) 5010 Airport Master Records.

In order to find the value of the land for each airport, the acreage was multiplied by the land value per acre. Nevada county assessors were contacted to obtain the estimated land value per acre that was used in this assessment. Information was requested for the specific land value of each airport within the individual county. For some airports, exact land values based on the parcel of land where the airport is located was provided by the county assessor. In these instances, the land values were highly accurate as

they came directly from the county assessor's office and did not have to be estimated. Additionally, exact land values for Henderson Executive (HND), Jean Sport (0L7), North Las Vegas (VGT), and Perkins Field Overton (U08) were provided by the Clark County Department of Aviation (CCDOA).

For the remaining airports where exact land values were not provided by the county assessor or other sources, an average value was calculated using the land values obtained from other Nevada counties. For Clark and Washoe counties (the most populated counties with the highest land value), an average was developed based on the land value that was provided for other airports in Clark and Washoe County. This average came out to be \$79,400 per acre. For the airports located outside Clark and Washoe counties, an average land value was calculated from all other airport land values outside Clark and Washoe counties. This average land value came to \$1,000 per acre. These values were then applied to the remaining airports to identify the value of airport lands of each airport included in the analysis.

### **B.2.2. Pavement**

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Airport pavement sizes also vary greatly across facilities within Nevada's system of airports. Pavement represents one of the costliest assets to replace at an airport as there can be millions of square feet and it requires routine monitoring and maintenance to maintain its quality. Airport pavement is separated into three sub-categories as each type of pavement requires different thickness and strength. The pavement sub-categories included in the replacement value assessment were runways, taxiways, and aprons. Where able, existing airport layout plans (ALPs) and data from the NAHSP Airport Inventory Data Collection Survey were used to determine the square footage of airport pavement by category. CCDOAs 2019 Pavement Condition Index (PCI) Report prepared under Clark County's Airport Pavement Management Program were referenced to obtain runway, taxiway, and apron square footage for Henderson Executive Airport (HND), Jean Sport Airport (0L7), North Las Vegas Airport (VGT), and Perkins Field (U08). When data was not readily available, measurements for the runways were sourced from 5010 Airport Master Records and measurements for the taxiways and aprons were gathered from geospatial analysis using Google Earth. This method resulted in estimated measurements that provided an adequate level of accuracy for this analysis.

Once the pavement square footage was collected and compiled, the value per square foot of pavement was obtained by consulting with airport professionals working at Nevada airports. Consideration was given to pavement costs based on the airport role or classification, as airport pavement depth and strength relate directly to the type of aircraft the airport serves. For Primary airports, \$15 per square foot of pavement was used. National airports were valued at \$13 per square foot, Regional and General airports were valued at \$12 per square foot, and Access airports were valued at \$10 per square foot of pavement. Using each of these values per square foot, the total value of each airport's pavement was calculated.

### **B.2.3. Buildings**

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In addition to the estimated value of an airport's land and pavement, this analysis also factored in the estimated value of each airport's existing buildings. It is recognized that some buildings may not be owned by the airport sponsor and may be privately owned, but for purposes of this analysis, an estimated replacement cost was developed for all identified buildings. For this evaluation, the category was split into

four sub-categories: terminal, conventional hangars, T-hangars, and air traffic control tower (ATCT). To obtain the value of airport-owned buildings (terminal, conventional hangars, and T-hangars), the square footage of each building type was obtained by reviewing currently available ALPs or estimating building dimensions in Google Earth when the ALP was not available. This method resulted in building estimations that were close enough to the total square footage needed for a high-level estimation of the replacement value of each airport's buildings.

Once the square footage of the terminal and covered aircraft storage buildings had been established, the value per square foot was obtained from local land development experts and Nevada airport professionals. These values were separated into three categories for T-hangars, conventional hangars, and terminal buildings. T-hangars were valued at \$200 per square foot, conventional hangars valued at \$275 per square foot, and terminals valued at \$350 per square foot. Using these values, the square footage of each building type was multiplied by their respective value and a total buildings value was calculated.

There were two general aviation (GA) airports included in this analysis that have ATCTs. Cost estimates for these ATCTs were based on development cost of similar facilities recently developed at similar airports.

### **B.3. Results**

After calculating the separate values of each airport's land, pavement, and building values, the totals were compiled in **Table B-1**. It is important to note that these values are planning-level estimates of the overall replacement value of an airport's facilities, and there are other factors that go into an airport's value that are not considered in this methodology. As demonstrated, the replacement value of airports encompassed by the NAHSP varies largely, from just over a million dollars to over half of a billion dollars. The highest replacement values were estimated for the Primary and more demanding GA airports that have more pavement and more facilities, such as Reno-Stead (RTS), North Las Vegas (VGT), and Henderson Executive (HND). On the other end of the total valuation range are more remote and low-traffic GA airports, such as Gabbs (GAB), Owyhee (10U), and Alamo Landing Field (L92). Even with shorter runways and fewer airport buildings, some of these airports total value is estimated to be over \$1 million. The smaller GA airports generate a larger percentage of their overall value from their lands, as the airports often sit on larger plots of lands as compared to commercial service airports, which can be contained within cities and populated areas.

**Table B-1: Airport Replacement Values**

| Associated City        | Airport Name                        | FAA ID | Land Value |               | Pavement Value |                 |               |              | Building Value |                   |               |             | Total Value   |               |
|------------------------|-------------------------------------|--------|------------|---------------|----------------|-----------------|---------------|--------------|----------------|-------------------|---------------|-------------|---------------|---------------|
|                        |                                     |        | Acres      | Value         | Runway (sq ft) | Taxiway (sq ft) | Apron (sq ft) | Value        | T-hangar (sf)  | Conventional (sf) | Terminal (sf) | ATCT        |               | Value         |
| <b>Alamo</b>           | Alamo Landing Field                 | L92    | 640        | \$646,000     | 261,700        | 90,700          | 100,100       | \$4,525,000  | N/A            | 2,000             | N/A           | None        | \$550,000     | \$5,721,000   |
| <b>Austin</b>          | Austin Airport                      | TMT    | 1,205      | \$1,216,000   | 449,900        | 50,900          | 161,300       | \$7,945,000  | N/A            | 2,000             | 2,500         | None        | \$1,425,000   | \$10,587,000  |
| <b>Battle Mountain</b> | Battle Mountain Airport             | BAM    | 1,066      | \$1,076,000   | 1,824,900      | 827,000         | 269,500       | \$29,214,000 | N/A            | 3,000             | 1,400         | None        | \$1,315,000   | \$31,604,000  |
| <b>Beatty</b>          | Beatty Airport                      | BTY    | 440        | \$394,000     | 336,900        | 53,200          | 105,200       | \$5,944,000  | N/A            | 6,500             | N/A           | None        | \$1,787,500   | \$8,124,500   |
| <b>Boulder City</b>    | Boulder City Airport                | BVU    | 530        | \$43,725,000  | 671,600        | 614,500         | 1,171,500     | \$36,864,000 | 25,000         | 300,000           | 11,000        | None        | \$91,350,000  | \$171,938,000 |
| <b>Carson City</b>     | Carson                              | CXP    | 632        | \$638,000     | 457,600        | 1,109,900       | 1,021,100     | \$31,063,000 | 200,000        | 150,000           | 4,000         | None        | \$82,650,000  | \$114,352,000 |
| <b>Elko</b>            | Elko Regional Airport               | EKO    | 700        | \$706,000     | 1,299,000      | 664,800         | 780,800       | \$41,169,000 | 40,000         | 25,000            | 35,000        | None        | \$27,125,000  | \$69,000,000  |
| <b>Ely</b>             | Ely Airport                         | ELY    | 4,999      | \$1,470,000   | 1,192,100      | 40,600          | 240,200       | \$17,675,000 | N/A            | 10,000            | 7,500         | None        | \$5,375,000   | \$24,519,000  |
| <b>Eureka</b>          | Eureka Airport - Booth Bailey Field | 05U    | 800        | \$320,000     | 438,000        | 287,700         | 168,700       | \$10,733,000 | N/A            | N/A               | 7,700         | None        | \$2,678,900   | \$13,730,900  |
| <b>Fallon</b>          | Fallon Municipal                    | FLX    | 440        | \$220,000     | 642,700        | 376,100         | 302,500       | \$15,856,000 | 30,000         | 75,000            | 2,000         | None        | \$27,325,000  | \$43,401,000  |
| <b>Gabbs</b>           | Gabbs Airport                       | GAB    | 880        | \$656,000     | N/A            | N/A             | N/A           | \$0          | N/A            | 1,500             | N/A           | None        | \$412,500     | \$1,068,500   |
| <b>Hawthorne</b>       | Hawthorne Industrial Airport        | HTH    | 901        | \$1,802,000   | 600,000        | 374,000         | 266,900       | \$14,891,000 | N/A            | 10,000            | 1,000         | None        | \$3,100,000   | \$19,793,000  |
| <b>Jackpot</b>         | Jackpot/Hayden Field                | 06U    | 325        | \$328,000     | 371,000        | 310,900         | 98,800        | \$9,368,000  | N/A            | 8,000             | N/A           | None        | \$2,200,000   | \$11,896,000  |
| <b>Jean</b>            | Jean Sport Airport                  | 0L7    | 232        | \$44,069,510  | 567,000        | 335,085         | 418,173       | \$15,843,000 | N/A            | N/A               | 7,000         | None        | \$2,450,000   | \$62,362,510  |
| <b>Las Vegas</b>       | Henderson Executive                 | HND    | 760        | \$637,974,404 | 1,025,000      | 1,353,626       | 3,079,470     | \$70,955,000 | 60,000         | 400,000           | 14,000        | \$7,000,000 | \$133,900,000 | \$204,855,000 |
| <b>Las Vegas</b>       | North Las Vegas                     | VGT    | 920        | \$367,503,743 | 1,042,791      | 1,528,069       | 4,393,812     | \$90,541,000 | 425,000        | 450,000           | 15,000        | \$7,000,000 | \$221,000,000 | \$679,044,743 |
| <b>Lovelock</b>        | Derby Field Airport                 | LOL    | 550        | \$715,000     | 414,700        | 131,200         | 60,300        | \$7,274,000  | N/A            | 4,000             | 1,500         | None        | \$1,625,000   | \$9,614,000   |
| <b>Mesquite</b>        | Mesquite Municipal Airport          | 67L    | 155        | \$7,130,000   | 384,100        | 223,900         | 270,600       | \$10,543,000 | 11,000         | 22,000            | 2,000         | None        | \$8,950,000   | \$26,623,000  |
| <b>Minden</b>          | Minden                              | MEV    | 996        | \$1,005,000   | 1,137,300      | 1,182,100       | 1,014,100     | \$40,002,000 | 200,000        | 120,000           | 10,000        | None        | \$76,500,000  | \$117,508,000 |
| <b>Owyhee</b>          | Owyhee Airport                      | 10U    | 135        | \$136,000     | 282,000        | 76,700          | 192,900       | \$5,516,000  | N/A            | N/A               | N/A           | None        | \$0           | \$5,652,000   |
| <b>Overton</b>         | Perkins Field Overton               | U08    | 250        | \$13,500,482  | 360,000        | 190,583         | 278,324       | \$9,947,000  | N/A            | 30,000            | 2,500         | None        | \$9,125,000   | \$32,572,482  |
| <b>Panaca</b>          | LC Airport - Panaca                 | 1L1    | 190        | \$192,000     | 276,400        | 36,300          | 121,500       | \$5,210,000  | N/A            | 3,500             | N/A           | None        | \$962,500     | \$6,363,500   |
| <b>Reno</b>            | Reno-Stead Airport                  | RTS    | 5,000      | \$397,000,000 | 2,491,200      | 1,680,600       | 2,284,400     | \$77,474,000 | 9,000          | 400,000           | 10,000        | None        | \$115,300,000 | \$589,775,000 |
| <b>Silver Springs</b>  | Silver Springs                      | SPZ    | 400        | \$404,000     | 450,100        | 307,600         | 130,300       | \$10,656,000 | 17,000         | N/A               | N/A           | None        | \$3,400,000   | \$14,460,000  |
| <b>Tonopah</b>         | Tonopah Airport                     | TPH    | 3,820      | \$2,850,000   | 820,000        | 539,300         | 353,100       | \$20,549,000 | N/A            | 9,000             | N/A           | None        | \$2,475,000   | \$25,874,000  |
| <b>Wells</b>           | Wells Muni Harriet Field            | LWL    | 708        | \$714,000     | 413,100        | 31,300          | 99,000        | \$6,521,000  | N/A            | 20,000            | 1,000         | None        | \$5,850,000   | \$13,086,000  |
| <b>Winnemucca</b>      | Winnemucca Municipal Airport        | WMC    | 968        | \$571,000     | 1,060,000      | 908,200         | 409,300       | \$28,530,000 | 25,000         | 10,000            | 4,000         | None        | \$9,150,000   | \$38,251,000  |
| <b>Yerington</b>       | Yerington                           | O43    | 101        | \$264,000     | 436,100        | 221,800         | 130,500       | \$9,461,000  | 15,000         | 60,000            | N/A           | None        | \$19,500,000  | \$29,225,000  |

Notes: Building square foot estimates and values rounded to the nearest hundred. Totals may not sum due to rounding. Exact pavement and land value data for HND, 0L7, U08, and VGT was provided by Clark County Department of Aviation (CCDOA) and was not rounded for this analysis.

Sources: FAA Form 5010, Google Earth, NV County Assessor's Office, Airport Layout Plans, Kimley-Horn