

# SUMMARY OF FINDINGS

## SYSTEM EVALUATION

Comprehensive analysis revealed adequacies, deficiencies, and overlaps for the current airport system. System performance measures guided the system evaluation process. Each performance measure has a set of quantifiable benchmarks which determine current performance. Results are used to establish targets for future system performance.

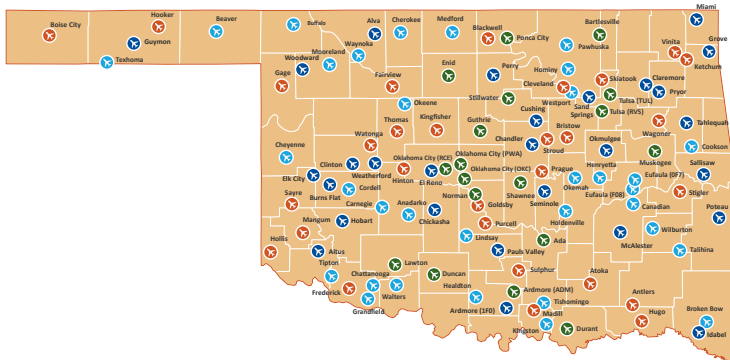
|                                      |                                    |
|--------------------------------------|------------------------------------|
| OKLAHOMA SYSTEM PERFORMANCE MEASURES | A SYSTEM THAT IS SAFE              |
|                                      | A SYSTEM THAT IS EFFICIENT         |
|                                      | A SYSTEM THAT IS ACCESSIBLE        |
|                                      | A SYSTEM THAT SUPPORTS THE ECONOMY |
|                                      | A SYSTEM THAT MEETS USER NEEDS     |

## AIRPORT ROLES AND FACILITY SERVICE OBJECTIVES

Each airport in Oklahoma plays a different role in their community based on the aircraft and customers it serves. Detailed investigation scored and ranked each airport to establish its system role as either a National Business, Regional Business, General, or Community airport. Each role category has facility and service objectives considered desirable for meeting user needs. Each airport's report card shows projects needed to meet system plan objectives. Report cards also reflect additional investment to address airport identified projects.

### AIRPORTS IN OKLAHOMA ARE ASSIGNED TO ONE OF FOUR STATE ROLES:

- NATIONAL BUSINESS
- GENERAL
- REGIONAL BUSINESS
- COMMUNITY



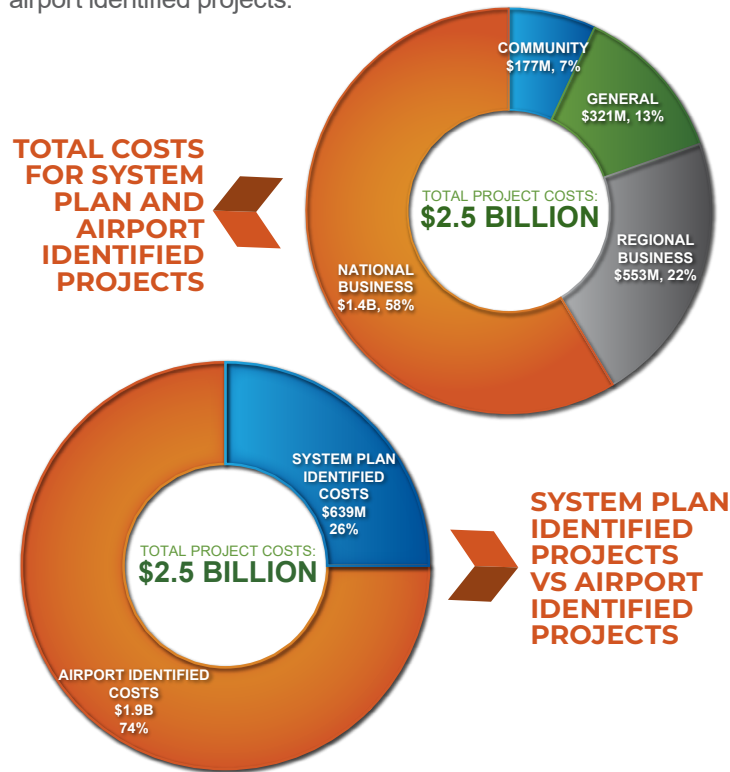
# CONCLUSIONS

## ESTIMATED COSTS

The Oklahoma airport system currently functions at a relatively high level, but if airports are able to meet their individual facility and service objectives, that performance could improve.

The final step in the system plan was to develop planning level cost estimates associated with improving system airports to meet their facility and service objectives. In addition, information was collected from study airports to identify other projects they plan to implement. Combining system plan identified projects with airport identified projects provides a more holistic understanding of the system's financial needs in the next 20 years.

Costs were summarized by airport role and allocated to show the costs needed to implement system plan identified projects and airport identified projects.



## POTENTIAL FUNDING GAP

Considering all investment needs, an average of **\$125.1 million** would be needed in each of the next 20 years to fully address the identified costs. Review of historic and anticipated FAA, state, and local funding sources shows an average of **\$85.8 million** in funding could be available if current funding levels continue. This leaves a potential annual funding gap of **\$39.2 million**; considering this gap, it is important that available funding be strategically invested. It is also important to note that while the airports have an annual investment need of **\$125.1 million**, the airports return an estimated **\$10.6 billion** to the state's economy each year.

The system plan provides important information to OAC, helping to direct available funding to airport projects most essential to meeting the state's transportation needs and economic objectives.



## OKLAHOMA AIRPORT SYSTEM PLAN

# STROUD MUNICIPAL AIRPORT

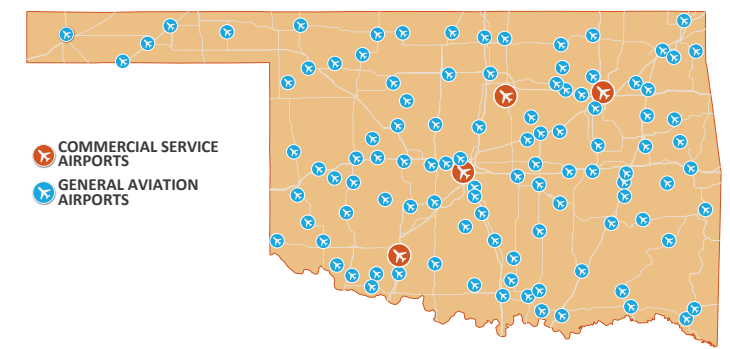
## STROUD, OKLAHOMA

In late 2020, the Oklahoma Aeronautics Commission (OAC) undertook a comprehensive update to its State Airport System Plan. The plan was completed in 2022. This report summarizes major statewide findings, but it focuses primarily on the findings and recommendations from the plan for **Stroud Municipal Airport**.

# OKLAHOMA AIRPORT SYSTEM PLAN

The update to the Oklahoma Airport System Plan followed Federal Aviation Administration (FAA) guidelines. Airports in Oklahoma provide businesses, residents, and visitors with a high level of accessibility to a wide variety of airports and aviation services. Implementing strategic improvements and focused investment recommendations from the plan can elevate the airport system's current performance.

## OKLAHOMA'S STATE AIRPORT SYSTEM



## SYSTEM CHARACTERISTICS

- 108 total system airports**
- 4 airports with commercial airline service**
- 104 general aviation airports**
- 90% of airports included in FAA's National Plan of Integrated Airport Systems (NPIAS)**

Airports included in the NPIAS are eligible for FAA funding. FAA, OAC, and airport sponsor partnerships are important for maintaining and improving the airport system.

## INVENTORY

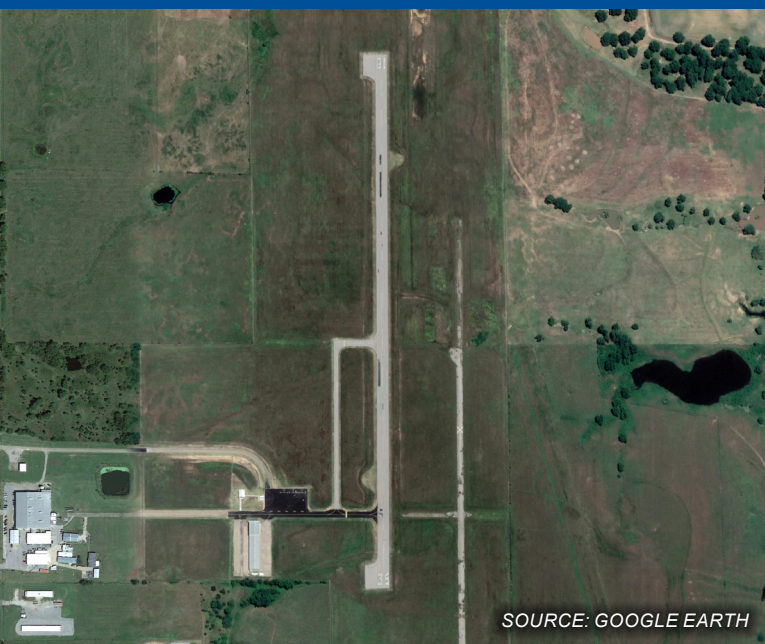
The plan started with a comprehensive inventory effort; information was collected on airport activity, facilities, and services. Special inventory efforts focused on:

- Airport control of runway protection zones (RPZs)**
- Runway safety areas (RSAs) meeting FAA standards**
- Parallel runways/taxiways meeting separation standards**
- Primary runways with clear 20:1 approaches**
- Airports with property open for development**
- Hangar storage and general aviation terminal building characteristics**



### OVERVIEW

The system plan identifies strategies for improving Oklahoma's 108 commercial and general aviation airports. Each airport's improvements identified in the system plan are focused on helping the airport meet its designated role in the state system. By implementing individual airport recommendations, a higher level of system-wide performance will be achieved. System plan findings and recommendations for **STROUD MUNICIPAL AIRPORT** are discussed in this report.



SOURCE: GOOGLE EARTH

## STROUD MUNICIPAL AIRPORT (SUD)

STROUD, OKLAHOMA

### KEY AIRPORT CHARACTERISTICS

FAA/NPIAS ROLE: BASIC

STATE ROLE: GENERAL

OWNER: CITY OF STROUD

PRIMARY RUNWAY: 18 / 36

APPROACH TYPE: VISUAL

BASED AIRCRAFT: 10

SERVICES: AVGAS / JET A FUEL, AIRCRAFT

MAINTENANCE



### AIRPORT ROLE

The system plan included detailed analysis to establish a role for each airport. The analysis assigned the **Stroud Municipal Airport** to the General role category. To determine the airport's role assignment, the following factors were considered:

- Total based aircraft, annual operations, and business jet activity
- Runway length, approach type, and air traffic control tower
- Airport reference code (ARC) and fuel type
- Community size and support, along with federal airport role
- Historic and projected rate of population and employment growth
- Business ready characteristics and annual economic impact

### STROUD MUNICIPAL AIRPORT



#### GENERAL AIRPORT CHARACTERISTICS

**MINIMUM RUNWAY LENGTH OBJECTIVE:** 4,000 FEET

**MARKETS SERVED:** PREDOMINANTLY SERVE SMALLER MID-SIZED COMMUNITIES IN OKLAHOMA

**AIRCRAFT SUPPORTED:** TWIN-ENGINE PLANES AND SMALL BUSINESS JETS

**SUITED FOR:** TRAVEL TO REGIONAL DESTINATIONS

**PRIMARY RUNWAY:** SERVED BY A PUBLISHED APPROACH

**FACILITY/SERVICE OBJECTIVES:** A PUBLIC TERMINAL AND 100LL FUEL

### AIRPORT REPORT CARD FOR STROUD MUNICIPAL AIRPORT

| AIRPORT ROLE: GENERAL (HIGH ACTIVITY) |   | AIRPORT NAME: STROUD MUNICIPAL   |                  | CITY: STROUD                       |   | LOCID: SUD         |  |  |
|---------------------------------------|---|----------------------------------|------------------|------------------------------------|---|--------------------|--|--|
| FACILITIES                            | OBJECTIVE                                 | ACTUAL                           | MEETS OBJECTIVE  | IMPROVEMENT NEEDED                 | ESTIMATED COST                            |                    |  |  |
| <b>AIRSIDE FACILITIES</b>             |   |                                  |                  |                                    |   |                    |  |  |
| Airport Reference Code                | B-1                                       | B-1 Small                        | No               | Meet B-1 ARC Standards             | *   |                    |  |  |
| Primary Runway Length                 | 4,000 ft                                  | 3,000 ft                         | No               | Lengthen Runway 1,000 ft           | \$2,000,000                               |                    |  |  |
| Primary Runway Width                  | 75 ft                                     | 60 ft                            | No               | Widen Runway 15 ft                 | \$1,350,000                               |                    |  |  |
| Taxiway Type                          | Partial Parallel & Turnaround             | Partial Parallel & Turnarounds   | Yes              | -                                  |   |                    |  |  |
| Runway Lighting                       | MIRL                                      | MIRL                             | Yes              | -                                  |   |                    |  |  |
| Taxiway Lighting                      | MITL                                      | None                             | No               | Install MITL                       | \$750,000                                 |                    |  |  |
| Approach Type                         | Non-Precision                             | Visual                           | No               | Establish Published Approach       | \$150,000                                 |                    |  |  |
| Approach Lighting System              | Not an Objective                          | None                             | Not an Objective | -                                  |   |                    |  |  |
| Rotating Beacon                       | Yes                                       | Yes                              | Yes              | -                                  |   |                    |  |  |
| Segmented Circle                      | Yes                                       | No                               | No               | Add Segmented Circle               | \$25,000                                  |                    |  |  |
| Wind Cone                             | Yes                                       | Yes                              | Yes              | -                                  |   |                    |  |  |
| Visual Guidance Slope Indicator       | 2 box PAPI both RWY ends                  | Both Ends 2 Box PAPI             | Yes              | -                                  |   |                    |  |  |
| Runway End Identifier Lights          | On RWY end with Approach                  | No REILs                         | No               | Install REILs one One RWY End      | \$50,000                                  |                    |  |  |
| Weather Reporting                     | AWOS or ASOS                              | None                             | No               | Install AWOS or ASOS               | \$170,000                                 |                    |  |  |
| Primary RWY PCI                       | 70  | 65                               | No               | Improve Pavement Condition Index   | *   |                    |  |  |
| Weight Capacity                       | 12,500 SW or 30,000 DW                    | 12,500 SW                        | Yes              | -                                  |   |                    |  |  |
| Covered Storage                       | 100% of Forecasted Based AC               | 100%                             | Yes              | -                                  |   |                    |  |  |
| Ramp Area                             | 7,000 SY (10 spaces)                      | 2,000 SY                         | No               | Increase Ramp Size by 5,000 SY     | \$1,350,000                               |                    |  |  |
| <b>GENERAL AVIATION FACILITIES</b>    |   |                                  |                  |                                    |   |                    |  |  |
| Terminal Building                     | 1,500 sqft                                | 1,200 sqft                       | No               | Increase Terminal Size by 300 sqft | \$195,000                                 |                    |  |  |
| Restroom (24/7 or key code)           | Yes                                       | Yes                              | Yes              | -                                  |   |                    |  |  |
| Conference Area                       | Not an Objective                          | Yes                              | Not an Objective | -                                  |   |                    |  |  |
| Pilot's Lounge                        | Yes                                       | Yes                              | Yes              | -                                  |   |                    |  |  |
| Office Space for Airport Manager      | Not an Objective                          | Yes                              | Not an Objective | -                                  |   |                    |  |  |
| Public Waiting Area                   | Not an Objective                          | Yes                              | Not an Objective | -                                  |   |                    |  |  |
| <b>SERVICES</b>                       |   |                                  |                  |                                    |   |                    |  |  |
| Fuel                                  | AvGas and Jet A                           | AvGas / Jet A                    | Yes              | -                                  |   |                    |  |  |
| Jet Fuel (24/7 trucking)              | Not an Objective                          | No                               | Not an Objective | -                                  |   |                    |  |  |
| Fixed-Base Operator                   | Not an Objective                          | No                               | Not an Objective | -                                  |   |                    |  |  |
| Aircraft Maintenance                  | Not an Objective                          | Major / Full Service Maintenance | Not an Objective | -                                  |   |                    |  |  |
| Ground Transportation                 | Yes                                       | Yes                              | Yes              | -                                  |   |                    |  |  |
| Overnight Aircraft Storage            | Not an Objective                          | 0 spaces                         | Not an Objective | -                                  |   |                    |  |  |
| GPU                                   | Not an Objective                          | No                               | Not an Objective | -                                  |   |                    |  |  |
| LAV Service Cart                      | Not an Objective                          | No                               | Not an Objective | -                                  |   |                    |  |  |
| <b>COMPLIANCE WITH FAA GUIDANCE</b>   |   |                                  |                  |                                    |   |                    |  |  |
| RPZ Control                           | Airport Controls all RPZs                 | Partial Control                  | No               | Secure Full Control of RWY End 18  | \$20,000                                  |                    |  |  |
| RSA Standards                         | Compliance with RSA Standards             | 120' x 240' beyond RWY end       | Yes              | -                                  |   |                    |  |  |
| Runway/Taxiway Separation             | 150 ft                                    | N/A                              | -                | -                                  |   |                    |  |  |
| Height Zoning                         | Jurisdiction with Height Zoning Ordinance | Stroud - Yes                     | Yes              | -                                  |   |                    |  |  |
| 20:1 Surface Obstructions             | 20:1 Surface Clear of Obstructions        | Obstruction on RWY End 18        | No               | Address Obstruction on RWY End 18  | *   |                    |  |  |
|                                       |   |                                  |                  |                                    | <b>System Plan Project Cost Subtotal:</b> | <b>\$6,060,000</b> |  |  |

\*Costs are provided only if available from airport identified project list

### FACILITY AND SERVICE OBJECTIVES

Airports in Oklahoma should ideally be equipped with facilities and services to fulfill their designated role in the state airport system. As part of the system plan a report card was developed for each airport. The report card compares current facilities and services to those for each airport's recommended role and any deficiencies are noted. Costs to address most noted deficiencies are also identified in the plan.

### INVESTMENT TO SUPPORT AIRPORT IMPROVEMENT

Over the next 20 years, a total cost of **\$10.4 million** was identified to improve the **Stroud Municipal Airport**. These costs include those needed to address both system plan and airport identified projects.

On an average annual basis, it is estimated that at least **\$520,000** will be needed to improve and maintain the airport. According to an OAC study, the airport has **\$460,000 in annual economic impact**. This benefit should be considered to provide context for the airport's estimated annual financial need.

### FINDINGS FOR STROUD MUNICIPAL AIRPORT

Ideally, all airports should be improved to meet their system plan identified projects. Prior to implementation, some projects will require demand justification, master planning, environmental analysis, and engineering/permitting. Some airports may have constraints that preclude them from developing all system plan identified projects.

A snapshot of some of the more notable projects identified for **Stroud Municipal Airport** follows. Appendix C of the System Plan's Technical Report contains a complete listing of airport and system plan identified projects for the airport.

|  |                                      |
|--|--------------------------------------|
| <b>SUD</b><br>PROJECTS FOR CONSIDERATION | <b>EXTEND AND WIDEN RUNWAY</b>       |
|  | <b>INSTALL MITL</b>                  |
|  | <b>ESTABLISH PUBLISHED APPROACH</b>  |
|  | <b>SECURE RPZ</b>                    |
|  | <b>REHABILITATE RUNWAY LIGHTING*</b> |

\*Indicates airport identified project