

# **AERONAUTICS COMMISSION**

**CITY OF GROVE  
PROJECT NUMBER  
GMJ-09-S**

## **TAXIWAY LIGHTING PROJECT**

**FOR THE PERIOD  
MARCH 12, 2009 THROUGH  
JANUARY 27, 2010**

# **OPERATIONAL AUDIT**



Oklahoma State Auditor  
& Inspector

**Audit Report of the  
Oklahoma Aeronautics Commission  
City of Grove - Project Number GMJ-09-S  
Taxiway Lighting Project**

**For the Period  
March 12, 2009 through January 27, 2010**

# STATE AUDITOR AND INSPECTOR

STEVE BURRAGE, CPA  
State Auditor

MICHELLE R. DAY, ESQ.  
Chief Deputy



2300 N. Lincoln Boulevard State Capitol, Room 100 Oklahoma City, OK 73105-4801 Phone (405) 521-3495 Fax (405) 521-3426 [www.sai.ok.gov](http://www.sai.ok.gov)

April 26, 2010

## TO THE OKLAHOMA AERONAUTICS COMMISSION

Pursuant to your request, this is the audit report for the Oklahoma Aeronautics Commission for the period March 12, 2009 through January 27, 2010. The Office of the State Auditor and Inspector is committed to serving the public interest by providing independent oversight and by issuing reports that serve as a management tool to the State. Our goal is to ensure a government that is accountable to the people of the State of Oklahoma.

We wish to take this opportunity to express our appreciation to the agency's staff for the assistance and cooperation extended to our office during the course of our engagement.

Sincerely,

A handwritten signature in blue ink, reading "Steve Burrage", is positioned above the printed name.

STEVE BURRAGE, CPA  
STATE AUDITOR & INSPECTOR

# Oklahoma Aeronautics Commission

## Operational Audit

### Background

The Oklahoma Aeronautics Commission (the Commission) was created to encourage, foster, and assist in the development of aeronautics in Oklahoma and to encourage the establishment and maintenance of public airports. This includes the preservation and improvement of the state's 114 public airports, which make up the state's airport system; and the promotion of the aviation industry, one of the top ten employers in Oklahoma, providing 143,700 jobs.

Oversight is provided by seven commission members. They are:

Kenneth Adams .....	Chair
Wes Stucky .....	Vice-Chair
Rick Armstrong .....	Secretary
Dave Amis .....	Member
Dr. David Conway .....	Member
Tom Stephenson .....	Member
Joe Harris .....	Member

The City of Grove (the Sponsor) applied for assistance from the Commission to improve pilot safety in low lighting conditions and at night by installing new stake-mounted lights and a direct-buried cable system along Taxiway Alpha and replacing an aging PAPI<sup>1</sup> regulator. The Commission committed \$387,963 to this \$431,170 project with the difference paid by the Sponsor.

### Purpose and Scope

This audit was conducted in response to the Commission's request.

The audit period covered was March 12, 2009 through January 27, 2010.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. This report is a public document pursuant to the Oklahoma Open Records Act (51 O.S. § 24A.1 et seq.), and shall be open to any person for inspection and copying.

**Objective 1 - Determine if expenditures paid to the City of Grove (state project number GMJ-09-S) were in accordance with "Exhibit B-1 - Program Narrative" and "Exhibit B-2 - Project Costs" of the airport construction agreement.**

### Conclusion

The expenditures paid to the City of Grove were in accordance with "Exhibit B-1 – Program Narrative" and "Exhibit B-2 – Project Costs" of the airport construction agreement.

### Methodology

To accomplish our objective, we performed the following:

- Reviewed the airport construction agreement;
- Interviewed the airport manager;
- Reviewed the bids submitted by contractors for the project;
- Reviewed all invoices submitted by the contractors and vendors to the Sponsor;

<sup>1</sup> The precision approach path indicator is a lighting system beside the runway that provides a visual indication of the aircraft's position on its descent path.

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- Reviewed all requests for reimbursement submitted by the Sponsor to the Commission;
- Documented the expenditure process related to the construction project; and
- Observed the completed project.

## APPENDIX

**Oklahoma Aeronautics Commission**  
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**Appendix – Project Costs (unaudited) and**  
**Close-out Documentation**

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The following information has been presented at the request of management. Our objective was to determine whether expenditures paid to the City of Grove (state project number GMJ-09-S) were in accordance with “Exhibit B-1 – Program Narrative” and “Exhibit B-2 – Project Costs” of the airport construction agreement. Therefore, we did not conclude on the following schedules and information.

<b>Category</b>	<b>Budget</b>	<b>Actual</b>	<b>Variance</b>
Construction	\$ 329,370.00	\$ 327,407.56	\$ 1,962.44
Engineering	55,100.00	55,100.00	-
Inspection	45,100.00	45,100.00	-
Other	1,600.00	1,600.00	-
Total Eligible			
Project Cost	<u>\$ 431,170.00</u>	<u>\$ 429,207.56</u>	<u>\$ 1,962.44</u>

Note: The variance presented here is one cent less than the variance presented on page 5 due to rounding in the invoicing process.



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**Close-out Documentation**

Construction Costs	Bid Qty	Per Unit Bid	Bid Price	Actual Qty	Per Unit Actual	Actual Cost	Variance on Qty	Variance on Cost
Embankments	280	\$ 50.00	\$ 14,000.00	280	\$ 50.00	\$ 14,000.00	0	\$ -
Third Party Insurance	1	100.00	100.00	1	100.00	100.00	0	-
Site Preparation	1	35,700.00	35,700.00	1	35,700.00	35,700.00	0	-
Dry Pit Boring 1-4"C Conduits	300	40.00	12,000.00	300	40.00	12,000.00	0	-
Dry Pit Boring 2-4"C Conduits	100	80.00	8,000.00	100	80.00	8,000.00	0	-
Existing Edge Light Removed	24	55.00	1,320.00	24	55.00	1,320.00	0	-
L-861T Edge Light Installed	162	540.00	87,480.00	162	540.00	87,480.00	0	-
Temporary Airfield Lighting	1	2,000.00	2,000.00	1	2,000.00	2,000.00	0	-
Trenching 8" Deep x 6" Wide	11,800	1.00	11,800.00	10,472	1.00	10,472.00	1,328	1,328.00
Trenching 18" Deep x 6" Wide	12,900	2.00	25,800.00	12,274	2.00	24,548.00	626	1,252.00
Trenching 18" Deep x 9" Wide	400	2.00	800.00	0	2.00	-	400	800.00
Trenching 24" Deep x 6" Wide	300	2.00	600.00	260	2.00	520.00	40	80.00
No. 8 AWG 5kV L-824C Cable Installed	18,900	1.80	34,020.00	16,725	1.80	30,105.00	2,175	3,915.00
No. 6 AWG Counterpoise Wire Installed	13,500	1.15	15,525.00	12,818	1.15	14,740.70	682	784.30
No. 6 AWG Stranded Ground Installed	370	4.10	1,517.00	358	4.10	1,467.80	12	49.20
Electrical Vault Modifications	1	7,800.00	7,800.00	1	7,800.00	7,800.00	0	-
L-828 15kW Lighting Regulator Installed	1	12,200.00	12,200.00	1	12,200.00	12,200.00	0	-
L-821 Lighting Remote Panel Installed	1	10,310.00	10,310.00	1	10,310.00	10,310.00	0	-
Non-encased Electrical Conduit 2"C	500	2.00	1,000.00	540	2.00	1,080.00	(40)	(80.00)
Concrete Encased Electrical Junction	2	1,040.00	2,080.00	2	1,040.00	2,080.00	0	-
Sodding	990	2.50	2,475.00	990	2.50	2,475.00	0	-
<b>Additive Alternate 1</b>							0	-
L-861T Edge Light Installed	39	540.00	21,060.00	39	540.00	21,060.00	0	-
Trenching 8" Deep x 6" Wide	1,700	1.00	1,700.00	1,956	1.00	1,956.00	(256)	(256.00)
Trenching 18" Deep x 6" Wide	1,700	2.00	3,400.00	2,428.50	2.00	4,857.00	(728.5)	(1,457.00)
No. 6 solid bare counterpoise wire	3,000	1.80	5,400.00	1,955	1.15	2,248.25	1,045	3,151.75
No. 6 stranded equipment ground	1,700	1.15	1,955.00	80	4.10	328.00	1,620	1,627.00
No. 8 5KV L-824C Cable Installed	80	4.10	328.00	5,311	1.80	9,559.80	(5,231)	(9,231.80)
<b>Additive Alternate 2</b>							0	-
Existing Lighting Regulator Removed	1	500.00	500.00	1	500.00	500.00	0	-
L-828 7.5kW Lighting Regulator Installed	1	\$ 8,500.00	8,500.00	1	\$ 8,500.00	8,500.00	0	-
<b>Total Construction Costs</b>			<b>\$ 329,370.00</b>			<b>\$ 327,407.55</b>		<b>\$ 1,962.45</b>



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Appendix- Project Costs (unaudited) and  
Close Out Documentation

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**FINAL INSPECTION REPORT**

Date: Dec. 15, 2009 Project No: OAC GMJ-09-S Airport: Grove Municipal (GMJ)

TO: Oklahoma Aeronautics Commission  
120 N. Robinson, Suite 1244W  
Oklahoma City, Oklahoma 73102  
(405) 604-6900 – phone  
(405) 604-6919 – fax

FROM: Jeremy P. Stahle – Garver

Project Engineer  
10015 E. 51<sup>st</sup> Street

Address  
Tulsa, OK 74146

City/Town and Zip Code  
918-250-5922

Area Code and Phone Number

Jeremy Stahle – Project Engineer

Final inspection on the above project was made by \_\_\_\_\_

(Project Engineer)

on December 8, 2009 11:00 AM at Grove Municipal Airport (GMJ)  
(Date) (Location)

**Personnel attending inspection:**

name-title-organization	name-title-organization
Terry Abercrombie-Airport Manager-Grove	Bart Gilbreath-Elec. Engineer-Garver
Berwin Kock-Airport Board Member-Grove	Greg Kinsey-Observer-Garver
Tom Melton-Airport Board Chair-Grove	Jerry McCall-J-Mac Electric
Earl Barnes-Grove Airport Light Maintenance	
Jeremy Stahle-Project Manager-Garver	

The project was found acceptable with the following exceptions:

**Vault Items:**

- Ground wire landed on panel ground bar going to T/W "A" CCR, either needs to be taped green on both ends or removed and replaced with a green insulated conductor.

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- Junction box needs to have a new commercially available front cover installed.
- Install laminated panel schedule in the main power panel.
- Fix the label for the runway regulator on the L-821 panel and front of the CCR to read "18-36" instead of "16-36".

**Field Items:**

- Fix light lenses that are not level on "A1".
- Fix lights that have stakes above ground greater than 1" on "A1".
- Secure all lenses on "A" – one lens clamp not secured near apron.
- Pick up trash along TW lights.
- Backfill any recessed dirt areas around light stakes.
- Light #124 needs straightened.
- Backfill trench on the south side of "A7", it is collapsing.

**Administrative Items:**

- Provide 20 spare lamps to owner per requirements in the specs.
- Provide 24 existing light fixtures to owner per the plans.
- Provide remaining submittals (including O&M Manuals).
- Final Megger test must be witnessed by engineer & owner.
- Give vault key back to owner.

Anticipated completion date for above exceptions: within one week. Verification of the completed exceptions is scheduled for Friday, December 18, 2009.

  
\_\_\_\_\_  
Signature of above named person

Project Manager

\_\_\_\_\_  
Title of above named person

Oklahoma Aeronautics Commission  
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FINAL ACCEPTANCE NOTICE

Date: December 18, 2009  
Project Number: OAC Proj. No. GMJ-09-S  
Airport: Grove Municipal Airport (GMJ)

TO: Oklahoma Aeronautics Commission  
120 N. Robinson, Suite 1244W  
Oklahoma City, Oklahoma 73102  
(405) 604-6900 – phone  
(405) 604-6919 – fax

FROM: Jeremy P. Stahle – Garver

Project Engineer  
10015 E. 51<sup>st</sup> Street

Address  
Tulsa, OK 74146

City/Town and Zip Code  
918-250-5922

Area Code and Phone Number

This is to advise you that the exceptions found at the final inspection have been  
completed or corrected. The project is accepted by Jeremy Stahle – Project Manager  
(Project Engineer, Mayor, City Manager)

on December 18, 2009 at Grove Municipal Airport  
(Date) (Location)

Jeremy P. Stahle  
Signature of above named person

Project Manager  
Title of above named person

NOTE: If no exceptions are found at the Final Inspection, submit this form at the  
same time the Final Inspection is completed, showing acceptance of the  
Project.

END



**OFFICE OF THE STATE AUDITOR AND INSPECTOR  
2300 N. LINCOLN BOULEVARD, ROOM 100  
OKLAHOMA CITY, OK 73105-4896**

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