

# Routine Airport Maintenance Program (RAMP) Guidebook



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## The RAMP Coordinator's Role

In our 25 TxDOT districts, six Routine Airport Maintenance Program (RAMP) coordinators are veterans who have been with the program from the early days. We also have ten new RAMP coordinators with one year or less experience in the program. This guidebook is intended to help introduce new RAMP coordinators to the program and provide assistance in managing district participation in airport maintenance.

When the diverse nature of our TxDOT districts is considered, along with associated differences in population density, metropolitan involvement, climate and topography due to the size of our state, the RAMP participation in each district is equally diverse.

Some districts do a lot of pavement maintenance contract sharing with their airports; a lot of districts don't do any. The most universal district service provided is herbicide application, and there are even some airports that choose to purchase the herbicide products for their licensed applicators, or hire a private applicator for the whole process. These are examples that demonstrate the difference in TxDOT district participation levels and this manual is a guide for those that can participate at the "grass roots" level.

We have many sponsors who are quite advanced in management and may participate in district services on a small scale, and then spend the remainder of their grant funds on sponsor contracted or purchased projects.

One of the most valuable contributions the RAMP coordinator can provide to local airports and the Aviation Division is their ability to have "boots on the ground" when alarms go off or emergencies occur. When a sponsor calls the Aviation Division because they have a large hole in their airside pavement, our local pavement experts in the TxDOT area maintenance offices are usually the first responders relaying critical information and photos to us. And often the district RAMP coordinator is the airport's first contact with the Aviation Division because of their personal contact history.

Whatever level of participation you can provide to the program is greatly appreciated by the Aviation Division. The RAMP Grant Program is a very successful and popular program and district participation is a large part of that success. So for our new RAMP coordinators, this guidebook is a start. Your fellow veteran coordinators can provide additional assistance and at any time I am available to provide whatever guidance I can.

Megan Caffall,

RAMP Program Manager



# Chapter 1—Routine Airport Maintenance Program (RAMP) Overview



Airport maintenance has been a challenge at many airports across the state. Communities in many instances do not have the resources to perform needed services, and funding is always an issue.

In 1996, the Texas Department of Transportation (TxDOT) Aviation Division began an annual Routine Airport Maintenance Program (RAMP) with five pilot TxDOT districts. The program was designed to assist communities with maintenance programs by offering state financial assistance. State funds were used to match local funds on a 50/50 basis with a \$10,000 maximum in state funds per airport per year. Airports could use the services of TxDOT local districts and their contracts for crack sealing, herbiciding, striping, marking, and other similar services.

The initial program was a success and has expanded to allow all publicly owned/operated airports, including non-hub primary commercial service airports, in the Texas Airport System Plan (TASP) to participate in the current program maximum of \$50,000 in state funds per airport per

RAMP is a cost share program between the TxDOT Aviation Division, the 25 TxDOT districts, and the general aviation airports in Texas.

year. Services have been expanded to include other items such as airport lighting and maintenance, airport entrance road construction, pilot lounges, environmental

compliance, and automated weather observing system (AWOS) maintenance.

Airport sponsors are now able to use the program for almost any item that will enhance and increase the functionality of the airport. Over the years, the program has grown from 30 participating airports with total expenditures of \$250,000 to over 200 airports with state grant funds of over \$3 million.

## RAMP Scope

RAMP is a 50/50 cost share program in which TxDOT will fund up to \$50,000 total per fiscal year for eligible items (see Appendix B. Eligible Work Items under RAMP Grants). The sponsor, or local government, match is 50 percent of the actual costs plus any amount in excess of \$100,000 in total costs. The total costs of a RAMP project can be any amount as long as it is a RAMP-eligible item; TxDOT's share is only up to \$50,000.

All RAMP grant work issued in a fiscal year *must* be completed in the same fiscal year. Fiscal years for TxDOT begin September 1 and end August 31 of the following year. For example, fiscal year 2013 begins September 1, 2012, and ends August 31, 2013.

A sponsor can be city, county, or entities such as river authorities, colleges, navigation districts, etc.

A grant must be executed prior to any work being performed. Until a sponsor is sure the

RAMP grant has been executed, it should not perform any work pertaining to the grant or that work cannot be paid for with TxDOT funds.



**Figure 1. Construction at T.P. McCampbell Airport in Ingleside.**

The use of sponsor work force, or force account labor, by municipal or county employees performing work at the airport is not eligible for RAMP funding. However, the materials being used by these forces could be and most likely will be RAMP eligible. An outside contractor or vendor can be used to perform RAMP grant work.

Airside improvements are the first priority before assistance with landside maintenance and improvements.

## Initiating a RAMP Grant

To initiate a RAMP grant, the sponsor should contact either the TxDOT Aviation Division or the district's RAMP coordinator (see Appendix C. Ramp Coordinators). The sponsor provides a detailed description of the project for which the grant is being requested and, if possible, an estimated cost of the project.

A list of eligible items and more details on the RAMP program can be found in Appendix B of this guidebook or on the TxDOT Aviation Division website at [http://ftp.dot.state.tx.us/pub/txdot-info/avn/ramp\\_grants.pdf](http://ftp.dot.state.tx.us/pub/txdot-info/avn/ramp_grants.pdf).



**Figure 2. Aviation fuel facility at Levelland Municipal Airport.**

## Before Engaging in a RAMP Project

Airports throughout Texas have benefited from RAMP grants. However, before contacting TxDOT to initiate a RAMP project, airport sponsor should ensure the following:

- Sponsor officials are aware of and in support of the proposed project.
- Sufficient matching funds are available before approaching TxDOT for a RAMP grant.
- Enough time can be devoted to the creation, execution, and completion of a RAMP grant within the fiscal year.
- An alternative plan is in place before submitting a RAMP grant. For example, if TxDOT forces are desired but their work schedule does not allow them to do the work, how will the airport handle the situation?

## RAMP Coordinators

Every TxDOT district assigns a RAMP coordinator, who is responsible for providing RAMP assistance and guidance to airports in their district. This guidebook is a reference document for RAMP coordinators.

RAMP coordinators should:

- Ensure that each airport has its own file that contains information such as contacts, maps, etc.
- Know the location of their airports.
- Become familiar with TxDOT's Aviation Division website (Figure 3) at <http://www.txdot.gov/inside-txdot/division/aviation.html>. The website contains current information on RAMP, airport directories, and information on each airport in a district. See Figure 3 on the following page for a screenshot of the TxDOT Aviation Division website.



Figure 3. Screenshot of the TxDOT Aviation Division website.

# Chapter 2—RAMP Grant Process



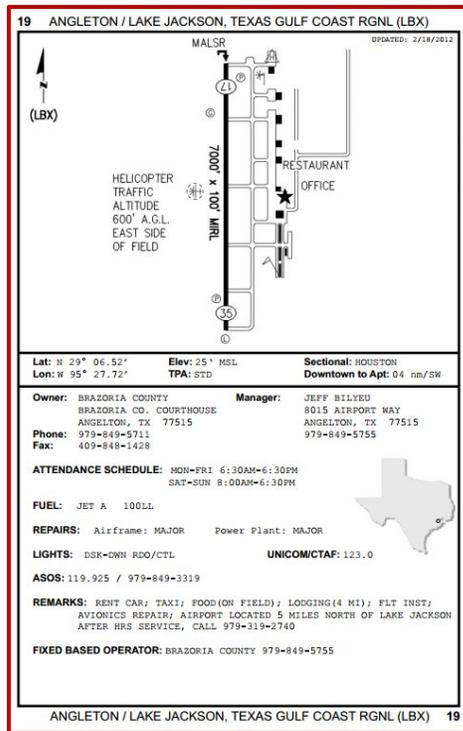
A successful relationship between RAMP coordinators and airport officials starts with visiting airports. This chapter explains how RAMP coordinators can best prepare for airport visits and also provides an overview of the RAMP grant process.

## Texas Airport Directory/AirNav.com

The Texas Airport Directory is a valuable resource for RAMP coordinators visiting an airport for the first time. A listing contains information such as an airport diagram, manager information, attendance schedule, and fixed-base operator. The Texas Airport Directory is available at <http://www.txdot.gov/inside-txdot/division/aviation/airport-directory-list.html>. The directory is also available in

hard copy, but the website will have the most current information. See Figure 4 on the following page for a directory listing example.

Another resource for RAMP coordinators is AirNav.com. The site publishes aeronautical and airport information released by the FAA such as runway distance, traffic patterns, airport frequencies, airport operations, facilities and services, chart location, navigational coordinates and locations, radio aids, ownership information, pilot feedback, and other pertinent information.



**Figure 4. Texas Airport Directory listing for Texas Gulf Coast Regional Airport.**

## Airport Visit Preparation

Before visiting an airport, always call ahead to set up an appointment with the airport manager. Before the appointment, prepare for the visit by:

- Reviewing basic airport terminology.
- Reviewing an airport diagram.
- Gathering necessary items.
- Recruiting expertise if needed.
- Bring personal protective equipment.

Necessary items include a camera with new or charged batteries, note pad, vehicle with overhead lights, RAMP eligibility printout, and a list of questions for the airport manager.

## Airport Safety

At airports, safe practices are especially important because of the physical characteristics of aviation. When at the airport, do not enter active aircraft operations areas without the airport manager or someone who has access and authority to use a radio and drive through secured gates. Review the safety standard rules and regulations document “Model Airport Rules and Regulations” available at <http://www.txdot.gov/inside-txdot/division/aviation/airport-rules.html>.

## Recruiting Expertise

Do not be afraid to ask someone who is more knowledgeable about pavements and preventative maintenance to accompany you on an airport visit.

Maintenance supervisors, area engineers, directors of maintenance, special crew supervisors, and assistant maintenance supervisors are only a few who can help contribute information and expertise. Often these people have knowledge of the airports and have worked with them in the past.

## What to Look For at an Airport

Figures 5 through 12 on the following pages show examples of

- various pavement failures,
- markings,
- signage,
- lighting, and

- other issues RAMP coordinators may encounter during an airport visit.

These are the most common needs that RAMP will address at an airport.



**Figure 5. Pavement exhibiting cracking. Cracking is the most common need to address at airports.**



**Figure 6. Poor drainage.**



**Figure 7. Damaged lighting.**



**Figure 8. Sun-bleached pavement.**



**Figure 9. Insufficient pavement markings.**



Figure 10. Pavement exhibiting spalling or shelling.



Figure 11. Cracked edges along pavement.



Figure 12. Grass growing through cracks in asphalt.

## Documenting Opportunities

If problems or issues are identified, make notes and take pictures. It is important to use an organized format to catalog and calculate a maintenance solution. Although there is currently no standard format for RAMP coordinators, ensure your data is presented in a neat, understandable method.

**Airport Routine Maintenance Assessment**

Airport Name: Winnboro Municipal Airport  
 Airport Sponsor: City of Winnboro  
 Airport Manager: Bill Ackers -- City of Winnboro  
 (903) 342-3655  
 Evaluation: 12/03/96  
 TxDOT Evaluators: Tim Thompson  
 Don Lay

**Routine Maintenance Needs**

Treatment	Location	Est. Quantity	\$/Unit	\$Cost
Crack seal				
Fog seal				
Edge seal	2" Band Runway	1450 SY	\$ 1.00	\$1450
Seal coat				
Microsurface				
Herbicide				
Striping				
Sweeping	All Paved Surfaces	8AC	\$20.00	\$ 160
Other (blading)	Taxiway Edges	8 HR	\$50.00	\$ 400
Other (overlay - 2")	Taxiway Crossovers	800 SY	\$ 7.00	\$5600
Other (hot mix - 6")	Base Failures	140 SY	\$21.00	\$2940
Other (blading)	Drainage at Hangers	2 HR	\$50.00	\$ 100
			Subtotal	\$ 10,650.00 (1)
			TxDOT cost share (50%) =	\$ 5,325.00 (2)
*Mowing (not a cost share item)				(3)
			Sponsor Share = \$	[(1)-(2)+(3)]

Notes: 2" overlay on taxiway would cost approximately \$31.25/ LF on taxiway

Figure 13. Sample airport maintenance assessment.

**NOTE:** Before you proceed in the documentation process, contact TxDOT Ramp Manager Megan Caffall at 512-416-4522 or [Megan.Caffall@txdot.gov](mailto:Megan.Caffall@txdot.gov) to check if the airport is scheduled for any capital improvement projects that would address the issues. If conditions are critical, discuss possible “band aids” to bridge over until capital improvement construction. Figure 13 above illustrates a sample airport maintenance assessment.

WOOD COUNTY AIRPORT RAMP AGREEMENT January 10, 2011					
CATEGORY	AVERAGE UNIT COSTS	ESTIMATED UNITS	TOTAL ESTIMATED COSTS	TXDOT SHARE	SPONSOR SHARE
<b>Materials</b>					
CMS1-P FOG SEAL	\$1.81 per gallon	6,400 gallons	\$11,596.00	\$5,798.00	\$5,798.00
STRIPING (Contract)	\$1.00 per LF	120 LF - 4" White SLD	\$120.00	\$60.00	\$60.00
	\$1.35 per LF	6,390 LF - 6" Yellow SLD	\$6,390.00	\$3,195.00	\$3,195.00
	\$4.00 per LF	320 LF - 12" Yellow SLD	\$1,280.00	\$640.00	\$640.00
	\$1,500.00 per symbol	1 - White & Blue Symbol	\$1,500.00	\$750.00	\$750.00
Misc. - tabs, covers, etc	\$1.00 ea per item	300 each	\$300.00	\$150.00	\$150.00
<b>Equipment</b>					
Asphalt Distributor(2)	\$62.50 PER HOUR	8 HOURS	\$500.00	\$250.00	\$250.00
Rotary Broom(1)	\$28.75 PER HOUR	3 HOURS	\$86.25	\$43.13	\$43.13
Pickup Truck(1)	\$13.75 PER HOUR	4 HOURS	\$55.00	\$27.50	\$27.50
<b>LABOR (6 PEOPLE)</b>					
	\$22.00 PER HOUR - 8 hrs ea	22 HOURS	\$1,056.00	\$528.00	\$528.00
<b>TOTAL</b>	N/A	N/A	\$22,883.25	\$11,441.63	\$11,441.63

Figure 14. Sample spreadsheet calculating RAMP costs.

## Presenting Your Data

Once the data is organized and the estimated costs spreadsheet is complete, submit them to the sponsor for approval (see Figure 14 above). Upon sponsor approval, convey the data to the Aviation Division for creation of a RAMP grant. It is important to keep all parties informed at all times and maintain a record of your communications.

## Forwarding Your Data to the Aviation Division

The Aviation Division will send a grant and an invoice for the airport share of the district work project to the sponsor.

When the grant is fully executed and sponsor funds are on deposit in Austin, the Aviation Division will notify you that work can begin on the project. Be sure that you let the airport manager and your area TxDOT people know that work cannot begin until the funds are received in Austin.

It is critical that sponsor funds are on deposit for the grant CSJ because when the work is done by district forces, the associated charges will need to be immediately posted by the local area office for payroll purposes.

**REMEMBER:** All jobs must be completed within the fiscal year.

Figure 15 on page 10 is a sample of a RAMP contract.

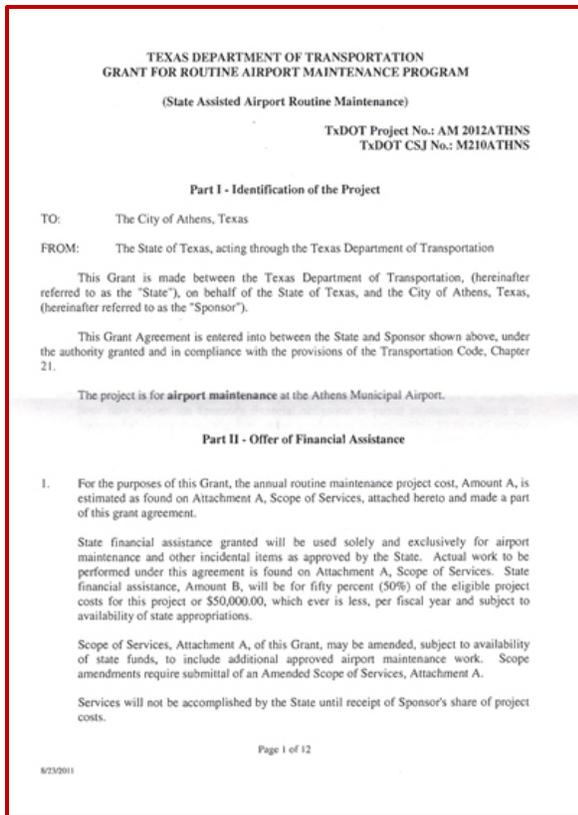


Figure 15. Sample front page of RAMP grant.

## Time Charges

Charges for RAMP projects will be charged to the grant CSJ—for example:

### M310ATHNS

**M3** is the RAMP grant year (2013)

**10** is the district number

**ATHNS** is the airport grant alpha ID

So the charges would go to Division 42, Segment 76, the CSJ NO., Function Code 870 and object of expenditure as appropriate.

# Appendix A. Resources

**Megan Caffall, C.M.**

RAMP Program Manager

[Megan.Caffall@txdot.gov](mailto:Megan.Caffall@txdot.gov)

512-416-4522

800-687-4568

Routine Airport Maintenance Program Grants webpage:

<http://www.dot.state.tx.us/business/governments/grants/airport.htm>

Aviation and Airports: <http://www.dot.state.tx.us/business/aviation/default.htm>

Texas Airport Directory: [http://www.dot.state.tx.us/travel/airport\\_directory\\_list.htm](http://www.dot.state.tx.us/travel/airport_directory_list.htm)



# Appendix B. Eligible Work Items under RAMP Grants

Airside Maintenance (First Priority)
Pavement: <ul style="list-style-type: none"> <li>• Crack sealing</li> <li>• Pavement rehabilitation</li> <li>• Markings</li> <li>• Sweeping</li> <li>• Rubber removal</li> </ul>
Drainage maintenance
Maintenance of runway and taxiway safety areas, runway protection zones
Maintenance/repair of beacon, lighting systems, approach aids
Replacement bulbs for airside lighting and approach aids
Herbicide (applied by TxDOT district, private applicator, or purchase of chemicals)
Parts replacement for AWOS not covered under warranty or maintenance agreement
AWOS Maintenance Contract, monthly NADIN fees
Pavement Management Program Software
After Airside Maintenance Has Been Addressed
Repair/maintenance of non-airside paving
Repair/maintenance of public auto parking
Auto parking stops and striping
Purchase of runway closure and threshold displacement markings
Purchase of lighted runway closure signs
Purchase of FOD sweeper
Repair and maintenance of existing fencing
Security camera systems
Security gates in existing fencing
Security gate openers, access control systems
Installation of security lighting on airport buildings and facilities
Terminal building rehab/remodel
Repair/replace/relocate existing septic systems
Landscaping and irrigation systems for terminal buildings
Landscaping and irrigation systems for airport entrance signs
Maintenance/replacement of utilities for hangar/terminal area development
Painting airport owned hangars and buildings
Purchase of existing hangars
Repair/installation/improvement of hangar doors
Maintenance/improvement of existing hangars
Install/repair concrete floors in existing hangars
Repairs/improvements to airport-owned fuel systems
New or replacement fuel tanks, credit card readers
Installation of roof structures for fuel tanks, dispensers, or card readers
Professional services for preparation and maintenance of Storm Water Pollution Prevention Plans (SWPPP), Spill Prevention Control and Countermeasure Plans (SPCC)
Maintenance/repair of air traffic control towers
Air traffic control tower improvements required by FAA
AWOS access road

Upgrade AWOS systems
ARFF truck repair/improvement to meet FAA requirements
Maintenance of fire extinguisher systems
Installation of bollards for equipment and building protection
Beacon and/or beacon tower replacements
Purchase of approach aid adjustment tools
Purchase of airfield lighting maintenance safety equipment
Insurance deductible on damage claims (including AWOS)
Tree trimming to meet approach threshold siting surface requirements
Planting of improved grasses on airside safety and protection
Fire ant control
<b>Small Capital Improvement Projects—Project Engineering and Design Costs Can Be Included (with Guidance from AVN Planning and Engineering)</b>
Professional services for FAA Form 7460-1 Notice of Proposed Construction
New terminal or hangar area auto parking
Hangar development
Hangar access pavement
Construction of pilot lounge, small terminal buildings
Terminal building additions
New or expanded aircraft apron
Apron and terminal area high mast lighting
New water wells, lines, sanitary sewer, and septic systems
Electrical utilities
New or improved airport entrance roads
Small maintenance equipment buildings
Security guard shack
Security fencing
Game fencing
Relocation of AWOS system
Purchase and installation of navigational aids
Relocation of airport beacon or approach aids
Solar taxiway lighting
Solar pavement edge markings
Helipad construction and lighting
Drainage improvements
Aircraft wash racks as indicated by SWPPP
Tree and brush removal/clearing in runway safety and protection zones

**Ineligible Work Items under RAMP Grants**

<b>Ineligible Work Items under RAMP Grants</b>
Mowing—may be done by TxDOT or TxDOT contract forces, but the cost is 100% sponsor responsibility
Purchase of capital outlay equipment except as allowed in above table
Operating expenditures
Consumables—unless listed in above table
Force account work by sponsor
<b>Work performed or purchases made prior to the grant being fully executed</b>