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**City of Las Cruces**<sup>®</sup>  
 PEOPLE HELPING PEOPLE

**Council Action and Executive Summary**

Item # 16

Ordinance/Resolution# 10-11-511

For Meeting of \_\_\_\_\_  
 (Ordinance First Reading Date)

For Meeting of October 3, 2011  
 (Adoption Date)

**TITLE: A RESOLUTION APPROVING A CONTRACT TO WOOLPERT, INC., OF PHOENIX, ARIZONA, IN THE AMOUNT OF \$440,620.00 PLUS NEW MEXICO GROSS RECEIPTS TAX, FOR THE DEVELOPMENT OF AN ELECTRONIC AIRPORT LAYOUT PLAN (eALP) FOR THE LAS CRUCES INTERNATIONAL AIRPORT, AUTHORIZING THE ACCEPTANCE OF A GRANT IN THE AMOUNT OF \$11,015.00 FROM THE NEW MEXICO DEPARTMENT OF TRANSPORTATION AVIATION DIVISION, AND ADJUSTING THE FY 2011/2012 BUDGET.**

**PURPOSE(S) OF ACTION:**

To enter into a professional services contract with Woolpert, Inc., for the development of an electronic Airport Layout Plan, accept a New Mexico Department of Transportation (NMDOT) grant, and adjust the budget.

<b>COUNCIL DISTRICT: 4</b>		
<b><u>Drafter/Staff Contact:</u></b> Lisa Murphy	<b><u>Department/Section:</u></b> Transportation/Airport	<b><u>Phone:</u></b> 541-2471
<b><u>City Manager Signature:</u></b>		

**BACKGROUND / KEY ISSUES / CONTRIBUTING FACTORS:**

The Airport Layout Plan (ALP) is a vital airport document that provides information on all natural and man-made objects on the airport, including runways, taxiways, aprons, buildings, navigational aids, fueling facilities, roads, topographical features, approach surfaces and future development plans. ALPs have historically been comprised of cumbersome sets of multiple large paper sheets, which often lead to outdated sheet sets when rapid airport development occurs.

In order to address the issues associated with paper ALPs, the Federal Aviation Administration (FAA) has started a program through their Airports GIS section to start the conversion from paper to electronic ALPs (eALP). The Las Cruces International Airport has been selected as one of the airports to participate in this program, and the FAA has offered Airport Improvement Program Grant AIP-03-035-0027-2011 to the City to cover most of the cost.

As development of an eALP is an extensive and highly technical process that exceeds the City's in-house capabilities, the services of a consulting firm were sought. A Request For Proposals (RFP) in conformance with FAA's eALP specifications, was developed, reviewed by the Selection

(Continue on additional sheets as required)

Advisory Committee (SAC) on March 8, 2011, and then advertised as RFP 10-11-511, Electronic Airport Layout Plan, starting on March 11, 2011. Seven responses to the RFP were received and reviewed by the SAC on May 10, 2011. Due to the close proximity in their scores, the four top ranked firms were invited back for in-person interviews with the SAC on June 14, 2011. After the scores were compiled, Woolpert, Inc., of Phoenix, Arizona, was the highest ranked firm. In conjunction with the FAA Airports GIS section, staff worked to develop a scope of work with Woolpert, Inc., and successfully negotiate a project cost of \$404,620.00, (plus New Mexico Gross Receipts Tax in the approximate amount of \$31,000.00 and administrative fees of \$5,000.00 for a project total of \$440,620.00) which is far less than the FAA's original estimated cost for a project of this type of approximately \$550,000.00. Additionally, the consultant's fee was reviewed through the Independent Fee Estimate process and found to be reasonable.

The scope of work will include surveys of existing data points, new aerial imagery, orthophotography, contour mapping, surveys of all runways, taxiways, navigational aids, approach surfaces and conversion of all data to GIS format, as well as data maintenance recommendations so the City can successfully manage the data collected. The data will be provided not only to the City but also to the FAA's Airports GIS portal, where it can be accessed and updated. The project is expected to take approximately 15 months to complete.

The project will be funded as follows: \$418,589.00 (95%) from FAA Airport Improvement Grant 03-035-0027-2011, \$11,015.00 (2.5%) from the NMDOT Aviation Division, and \$11,016.00 (2.5%) from the City. As this was an expected project, the City's match has already been budgeted in the airport's FY 2011/2012 budget. Authority to apply for and accept the FAA grant and adjust the budget was approved by City Council pursuant to Resolution 12-045 on September 6, 2011, but approval to accept the NMDOT Aviation Division grant is still needed. Thus, approval of this Resolution will not only award a contract to Woolpert, Inc., but will also accept the NMDOT grant in the amount of \$11,015.00 and adjust the airport's FY 2011/2012 budget by that amount to properly account for the funds.

#### **SUPPORT INFORMATION:**

1. Resolution.
2. Exhibit "A", Purchasing Manager's Request to Contract with Woolpert, Inc.
3. Exhibit "B", Professional Services Agreement with Woolpert, Inc., for the preparation of an electronic Airport Layout Plan (eALP).
4. Exhibit "C", NMDOT Aviation Division Grant.
5. Exhibit "D", Budget Adjustment Request.
6. Attachment "A", Proposal Evaluation Report.

(Continue on additional sheets as required)

**SOURCE OF FUNDING:**

<b>Is this action already budgeted?</b>	Yes	<input checked="" type="checkbox"/>	See fund summary below
	No	<input type="checkbox"/>	If No, then check one below:
	<i>Budget Adjustment Attached</i>	<input type="checkbox"/>	Expense reallocated from:
		<input checked="" type="checkbox"/>	Proposed funding is from a new revenue source (i.e. grant; see details below)
		<input type="checkbox"/>	Proposed funding is from fund balance in the Fund.

<b>Does this action create any revenue?</b>	Yes	<input checked="" type="checkbox"/>	Funds will be deposited into this fund: <u>4300 Airport Improvement Fund</u> in the amount of <u>\$11,015.00</u> for FY2012.
	No	<input type="checkbox"/>	There is no new revenue generated by this action.

**BUDGET NARRATIVE**

This project is funded 95% FAA Airport Improvement Program Grant, 2.5% NMDOT Aviation Division and 2.5% City of Las Cruces. The 2.5% local match will be taken from Fund #1010 (Airport Operations) which had already been set aside for this specific project.

**FUND EXPENDITURE SUMMARY:**

Fund Name(s)	Account Number(s)	Expenditure Proposed	Available Budgeted Funds in Current FY	Remaining Funds	Purpose for Remaining Funds
Airport Improvement Fund	43806050-710900-70B13	\$429,604.00	\$429,604.00*	\$0	N/A
Airport Operations Fund (CLC match)	40803020-710900-70B13	\$11,016.00	\$11,016.00	\$0	N/A

\*pending adjustment

**OPTIONS / ALTERNATIVES:**

- Vote "Yes"; this will allow staff to award a contract to Woolpert, Inc., of Phoenix, Arizona, for the development of an electronic Airport Layout Plan (eALP) in the amount of \$404,620.00 plus NMGRT in the approximate amount of \$31,000.00, will accept the NMDOT grant in the amount of \$11,015.00 and will adjust the FY 2011/2012 budget.

(Continue on additional sheets as required)

2. Vote "No"; this will result in no contract being awarded to Woolpert, Inc., of Phoenix, Arizona, for the development of an electronic Airport Layout Plan and no acceptance of the NMDOT grant. This would result in a significant delay in the completion of the project or even loss of the grant.
3. Vote to "Amend"; this would require specific City Council direction to staff as to what type of amendment is desired.
4. Vote to "Table"; this could delay the contract award to Woolpert, Inc., of Phoenix, Arizona, and acceptance of the NMDOT grant, and may result in loss of grant funding.

**REFERENCE INFORMATION:**

The resolution(s) and/or ordinance(s) listed below are only for reference and are not included as attachments or exhibits.

1. Resolution No. 12-045

(Continue on additional sheets as required)

**RESOLUTION NO. 10-11-511**

**A RESOLUTION APPROVING A CONTRACT TO WOOLPERT, INC., OF PHOENIX, ARIZONA, IN THE AMOUNT OF \$440,620.00 PLUS NEW MEXICO GROSS RECEIPTS TAX, FOR THE DEVELOPMENT OF AN ELECTRONIC AIRPORT LAYOUT PLAN (eALP) FOR THE LAS CRUCES INTERNATIONAL AIRPORT, AUTHORIZING THE ACCEPTANCE OF A GRANT IN THE AMOUNT OF \$11,015.00 FROM THE NEW MEXICO DEPARTMENT OF TRANSPORTATION AVIATION DIVISION, AND ADJUSTING THE FY 2011/2012 BUDGET.**

The City Council is informed that:

**WHEREAS**, the City of Las Cruces, New Mexico, a municipal corporation, is the owner of certain real property known as the Las Cruces International Airport; and

**WHEREAS**, the Federal Aviation Administration (FAA) has started an initiative to convert paper Airport Layout Plans into an electronic format; and

**WHEREAS**, the City has been offered a grant from the FAA AIP-03-35-0024-27 in the amount of \$418,589.00 and a grant from the New Mexico Department of Transportation Aviation Division in the amount of \$11,015.00 to help fund this project; and

**WHEREAS**, the City issued a Request for Proposals (RFP) for qualified firms to prepare an electronic Airport Layout Plan; and

**WHEREAS**, the Selection Advisory Committee (SAC) reviewed the responses and found Woolpert, Inc., of Phoenix, Arizona, to be the most qualified firm; and

**WHEREAS**, staff recommends the award of a contract to Woolpert, Inc., in the amount of \$440,620.00 plus New Mexico Gross Receipts Tax.

**NOW, THEREFORE**, Be it resolved by the governing body of the City of Las Cruces:

(I)

THAT the acceptance of a New Mexico Department of Transportation Aviation Division Grant in the amount of \$11,015.00 is hereby approved.

(II)

THAT the contract for the preparation of an electronic Airport Layout Plan is awarded to Woolpert, Inc., in the amount of \$440,620.00 plus New Mexico Gross Receipts Tax.

(III)

THAT the City's Fiscal Year 2011/2012 budget is adjusted as shown in Exhibit "D", attached hereto and made part of this Resolution.

(IV)

THAT City staff is hereby authorized to do all deeds as necessary in the accomplishment of the herein above.

DONE AND APPROVED this \_\_\_\_\_ day of \_\_\_\_\_, 2011.

APPROVED:

\_\_\_\_\_  
Mayor

ATTEST:

\_\_\_\_\_  
City Clerk

VOTE:

(SEAL)

Mayor Miyagishima:	_____
Councillor Silva:	_____
Councillor Connor:	_____
Councillor Pedroza:	_____
Councillor Small:	_____
Councillor Sorg:	_____
Councillor Thomas:	_____

Moved by: \_\_\_\_\_

Seconded by: \_\_\_\_\_

APPROVED TO FORM:

\_\_\_\_\_  
City Attorney

**CITY OF LAS CRUCES**

**PURCHASING MANAGER'S REQUEST TO CONTRACT**

For Meeting of: October 3, 2011

Resolution No.: 10-11-511

**Contract Purchase For  
Development of an Electronic Airport Layout Plan (eALP)**

The Las Cruces City Council is provided the following information concerning this request:

**RFP SOLICITATION INFORMATION:**

- 1. RFP No./ Due Date: RFP No. 10-11-511/April 12, 2011
- 2. Description: Development of an Electronic Airport Layout Plan (eALP)
- 3. Using Department: Facilities
- 4. Number of Responses Accepted: Seven (7)
- 5. Award Recommendation To: Woolpert, Inc. of Phoenix, AZ
- 6. Total Award Amount: \$440,620.00
- 7. Contract Duration: 15 Months

**LOCAL PREFERENCE FACTOR**

Local Preference Factor Applied Per LCMC §24-100	No	X	LCMC §24-100 not applicable to this solicitation
	Yes		Made A Difference To Awards(s)
			Made No Difference To Bid Award(s)

**PROCUREMENT CODE COMPLIANCE:**

The City of Las Cruces Procurement Code was administered in the conduct of this procurement and approval to purchase is hereby requested pursuant to **Section 24-92**.


10/14/11  
 Purchasing Manager Date

**CONFIRMATION OF FUND ENCUMBRANCE:**

REQUISITION or PURCHASE ORDER NUMBER:	TBD
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**PROFESSIONAL SERVICES AGREEMENT**

THIS AGREEMENT, made and entered into on this date, \_\_\_\_\_ 2011, by and between the City of Las Cruces, New Mexico, hereinafter called "CITY" and Woolpert, Inc., of 4050 E. Cotton Center Boulevard, Building 3, Suite 39, Phoenix, AZ 85040, hereinafter called "CONTRACTOR".

**1. PROJECT DESCRIPTION**

The City intends to develop, collect and convert GIS data in compliance with FAA Advisory Circular (AC) 150/5300-16A, -17B, and -18B with a goal of creating and submitting a completed and useable FAA approved eALP for Las Cruces International Airport (LRU).

**2. SCOPE OF SERVICES**

In a satisfactory and proper manner, the CONTRACTOR shall perform SERVICES as proposed in response to the CITY'S RFP No.10-11-511 incorporated herein by reference and as set forth in Exhibit A, attached hereto and made a part of this Agreement.

**3. APPROPRIATIONS**

The terms of this Agreement are contingent on sufficient appropriations and authorization being made by the City Council for the performance of this Agreement. If sufficient appropriations and authorizations are not made by the City Council, this Agreement shall terminate upon written notice given by the CITY to CONTRACTOR. The CITY'S decision as to whether sufficient appropriations and authorizations exist shall be accepted by CONTRACTOR and shall be final.

**4. COMPENSATION**

The CITY shall compensate CONTRACTOR for the performance of SERVICES under this Agreement an amount not to exceed \$404,620, plus applicable taxes of \$31,000. CONTRACTOR shall perform the SERVICES upon receipt of a written Notice to Proceed from the CITY. The CITY cannot authorize costs to be incurred prior to such written Notice to Proceed.

CONTRACTOR is responsible for payment of State of New Mexico Gross Receipts Tax levied on the amounts payable under this Agreement. CONTRACTOR agrees to comply with all federal and state tax payments and report all items of gross receipts as income from the operations of its business.

**5. DEVOTION OF ADEQUATE TIME**

CONTRACTOR will devote the necessary hours each week to the performance of project that is required by the CITY and it will serve the CITY diligently and faithfully, and according to its best ability in all respects and will promote the best interests of the City.

**6. TERM AND SCHEDULE**

This Agreement shall become effective on (date of award) for a term of 455 days through month/day/year.

CONTRACTOR shall perform the SERVICES in accordance with the time set forth as agreed upon by the CITY and CONTRACTOR in Exhibit B.

## 7. EXTENSIONS, CHANGES, AND AMENDMENTS

This Agreement shall not be extended, changed, or amended except by instrument in writing executed by the parties. The CITY shall not be liable for payment of any extra services nor shall CONTRACTOR be obligated to perform any extra services except upon such written agreement. Such written approval shall indicate the date said extension, change, or amendment is effective and shall be signed by the parties to this Agreement. In the event that the parties cannot reach agreement as to a particular change, the issue shall be resolved pursuant to Article 21.

## 8. CHANGES AND EXTRA SERVICES BY THE CITY

The CITY may make changes within the general scope of the SERVICES plus may also request CONTRACTOR to perform other extra services not incorporated within the Services set forth in this Agreement. If the CONTRACTOR is of the opinion that such change causes an increase or decrease in the cost and/or the time required for performing the changes or other services required by the City, CONTRACTOR shall so notify the CITY of that fact within five (5) business work days from the date of receipt of change by the CITY. The CITY shall provide written response to the CONTRACTOR within five (5) business work days from the date of receipt of CONTRACTOR'S written notification.

## 9. CHANGES AND EXTRA SERVICES BY THE CONTRACTOR

In the event a condition is identified by the CONTRACTOR which, in the opinion of the CONTRACTOR, changes the services, costs, and/or time required for performance under this Agreement, the CONTRACTOR shall provide written notification to the CITY within five (5) business work days of such identification. The CITY shall respond in writing to such notification within five (5) business work days from the date of receipt of CONTRACTOR'S notification.

## 10. DELAYS

In the event that performance of SERVICES is delayed by causes beyond reasonable control of CONTRACTOR, and without the fault or negligence of CONTRACTOR, the time and total compensation for the performance of the SERVICES may be equitably adjusted by written agreement to reflect the extent of such delay. CONTRACTOR shall provide the CITY with written notice of delay pursuant to Article 9 including therein a description of the delay and the steps contemplated or actually taken by CONTRACTOR to mitigate the effect of such delay. The CITY will make the final determination as to reasonableness of delays.

## 11. TERMINATION

This Agreement may be terminated by either party hereto upon fifteen (15) calendar days written notice in the event of substantial failure by the other party to perform in accordance with the terms of this Agreement through no fault of the terminating party. This Agreement may also be terminated by the CITY for its convenience or because the PROJECT has been permanently abandoned, but only upon fifteen (15) calendar days written notice to CONTRACTOR.

In the event of termination, CONTRACTOR shall be compensated for all services performed and costs incurred up to the effective date of termination for which CONTRACTOR has not been previously compensated.

Upon receipt of notice of termination from the CITY, CONTRACTOR shall discontinue the SERVICES unless otherwise directed and upon final payment from the CITY deliver to the

CITY the required number of copies of all data, drawings, reports, estimates, summaries, and such other information and materials as may have been accumulated by CONTRACTOR in the performance of this Agreement, whether completed or in process.

#### 12. RECORDS AND AUDITS

CONTRACTOR will maintain records indicating dates, length of time, and services rendered. The CITY has the right to audit billings both before and after payment, and contest any billing or portion thereof. Payment under this Agreement does not foreclose the CITY'S right to recover excessive or illegal payments.

#### 13. DISCLOSURE AND OWNERSHIP OF DOCUMENTS, PRODUCTS, DESIGN, ELECTRONIC FILES

All technical data, electronic files, and other written and oral information not in the public domain or not previously known, and all information, electronic files, and data obtained, developed, or supplied by the CITY will be kept confidential and CONTRACTOR will not disclose to any other party, directly or indirectly, without the CITY'S prior written consent unless required by lawful order.

All technical data, electronic files, products developed, operational parameters, blueprints, and other information and work of the CONTRACTOR shall be the sole property of the CITY and shall be delivered to the CITY when requested and at the end of the Agreement.

#### 14. INDEPENDENT CONTRACTOR

CONTRACTOR represents that it has, or will secure, at its own expense, all personnel required in performing the SERVICES under this Agreement. Such personnel shall not be employees of, nor have any contractual relationship with the CITY. CONTRACTOR, consistent with its status as an independent contractor, further agrees that its personnel will not hold themselves out as, nor claim to be officers or employees of the CITY by reason of this Agreement.

To the extent that CONTRACTOR employs any employees, CONTRACTOR shall be solely responsible for providing its own form of insurance for its employees and in no event shall CONTRACTOR'S employees be covered under any policy of the CITY.

CONTRACTOR'S retention hereunder is not exclusive. Subject to the terms and provisions of this Agreement: (i) CONTRACTOR is able, during the Term hereof, to perform services for other parties; and (ii) CONTRACTOR may perform for its own account other professional services outside the scope of this Agreement.

CONTRACTOR is and shall be an Independent Contractor and shall be responsible for the management of its business affairs. In the performance of the work under this Agreement, CONTRACTOR will at all times be acting and performing as an Independent Contractor, as that term is understood for federal and state law purposes, and not as an employee of the CITY. Without limitation upon the foregoing, CONTRACTOR shall not accrue sick leave, jury duty pay, retirement, insurance, bonding, welfare benefits, or any other benefits, which may or may not be afforded employees of the CITY. CONTRACTOR will not be treated as an employee for purposes of: Workers' Compensation benefits; the Federal Unemployment Tax Act; Social Security; other payroll taxes, federal or any state income tax withholding; or the employee benefit provisions described in the Internal Revenue Code of 1986, as amended. Neither the CITY, nor its agents or representatives, shall have the right to control or direct the manner,

details or means by which CONTRACTOR accomplishes and performs its services. Nevertheless, CONTRACTOR shall be bound to fulfill the duties and responsibilities contained in the Agreement.

#### 15. NO JOINT VENTURE OR PARTNERSHIP

Nothing contained in this Agreement shall create any partnership, association, joint venture, fiduciary or agency relationship between CONTRACTOR and CITY. Except as otherwise specifically set forth herein, neither CONTRACTOR nor CITY shall be authorized or empowered to make any representation or commitment or to perform any act which shall be binding on the other unless expressly authorized or empowered in writing.

#### 16. ASSIGNMENT.

CONTRACTOR shall perform all the services under this Agreement and shall not assign any interest in this Agreement or transfer any interest in same or assign any claims for money due or to become due under this Agreement without the prior written consent of the CITY.

#### 17. INSURANCE

CONTRACTOR shall obtain and maintain insurance at its own cost and expense during the life of this Agreement, and shall require Subcontractors, if any, to maintain during the life of his subcontract:

- a. Professional Liability: \$1,000,000 per claim

CONTRACTOR shall furnish the CITY with a certificate(s) of insurance showing CONTRACTOR and Subcontractors, if any, have complied with this Article. The CONTRACTOR shall provide insurance certificates before work is to start on the project and shall provide the CITY thirty (30) days written notification of cancellation of such policies.

#### 18. INDEMNITY AND LIMITATION

CONTRACTOR shall indemnify and hold harmless the CITY from and against claims, suits, actions, judgments, demands, losses, costs, expenses (including reasonable defense attorney's fees) damages and liability to the extent caused by the negligence or willful misconduct of Contractor.

#### 19. APPLICABLE LAW

This Agreement and the rights and obligations of the parties shall be governed by and construed by the laws of the State of New Mexico applicable to Agreements between New Mexico parties made and performed in that state, without regard to conflicts of law principles. Venue shall be in the Third Judicial District, State of New Mexico.

CONTRACTOR shall abide and be governed by all applicable state law, CITY ordinances, and laws regarding the CONTRACTOR'S services or any work done pursuant to this Agreement.

#### 20. BREACH

In the event CONTRACTOR breaches any obligation contained in this Agreement, prior to instituting any action or dispute resolution procedure, the CITY shall give CONTRACTOR written notice of such breach. In the event CONTRACTOR fails to remedy the breach within five (5) working days of receiving such written notice, the CITY, at its sole discretion, without any obligation to do so and in addition to other remedies available under applicable law, may

remedy CONTRACTOR'S breach and recover reasonable costs and expenses in so doing from CONTRACTOR.

21. DISPUTE RESOLUTION

In the event that a dispute arises between CITY and CONTRACTOR under this Agreement or as a result of breach of this Agreement, the parties agree to act in good faith to attempt to resolve the dispute.

In the event of termination, CONTRACTOR shall be compensated for all services performed and costs incurred up to the effective date of termination for which CONTRACTOR has not been previously compensated.

Upon receipt of notice of termination from the CITY, CONTRACTOR shall discontinue the SERVICES unless otherwise directed and upon final payment from the CITY deliver to the CITY the required number of copies of all data, drawings, reports, estimates, summaries, and such other information and materials as may have been accumulated by CONTRACTOR in the performance of this Agreement, whether completed or in process.

22. NOTIFICATION

All notices required or permitted under this Agreement shall be in writing and shall be deemed sufficiently served if served by Registered Mail addressed as follows:

TO CITY:           City of Las Cruces  
                      PO Box 20000  
                      Las Cruces, NM 88004  
                      ATTENTION: \_\_\_\_\_,

With Copies to:   City Attorney  
                          Purchasing Manager

TO CONTRACTOR:   Woolpert, Inc.  
                          4050 E. Cotton Center Boulevard, Building 3, Suite 39  
                          Phoenix, AZ 85040  
                          ATTENTION: Kevin Shirer

23. SCOPE OF AGREEMENT

This Agreement incorporates all of the agreements, covenants, and understandings between the parties hereto concerning the subject matter hereof and that all such covenants, agreements, and understandings have been merged into this written agreement. No prior agreement or understanding verbal or otherwise of the parties or their agents shall be valid or enforceable unless embodied in this agreement.

\_\_\_\_\_  
CONTRACTOR

THE CITY OF LAS CRUCES

771

BY: \_\_\_\_\_  
PRINCIPAL

BY: \_\_\_\_\_  
PURCHASING MANAGER

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

APPROVED AS TO FORM:

\_\_\_\_\_  
CITY ATTORNEY

**EXHIBIT A – SERVICES****Las Cruces International Airport - Airport GIS / Electronic Airport Layout Plan (eALP)****SCOPE OF SERVICES****PROJECT OVERVIEW**

City of Las Cruces, Las Cruces International Airport (City) intends to develop, collect and convert GIS data in compliance with FAA Advisory Circular (AC) 150/5300-16A, -17B, and -18B with a goal of creating and submitting a completed and useable FAA approved eALP for Las Cruces International Airport (LRU).

This project will also create a “reusable process” to allow the Airport to maintain the data deliverables beyond the initial eALP in order to make future eALP submissions.

Throughout this project, the City and the Woolpert Team (Woolpert) will work with the Federal Aviation Administration (FAA) to ensure that all collected data and analysis satisfies the requirements of the FAA’s Airports GIS (AGIS) program.

Woolpert will collect aerial photogrammetry, conduct an obstruction survey, develop planimetric data and collect and/or develop attribution in accordance with the guidance in the above-referenced ACs.

Woolpert will develop and deliver Geographic Information System (GIS) features for the airport configuration in accordance with AC 150/5300-18B. Woolpert will complete the tasks listed in FAA AC 150/5300: -13, -16,-17, and -18, specifically Table 2-1 for Airport Layout Plan of AC-18, and other scoped tasks.

Woolpert will also update the hard copy LRU Airport Layout Plan Drawing set to reflect new and updated data developed through this project.

**REQUIREMENTS****Advisory Circulars**

The ACs identified below define the data collection requirements and accuracies for the project. Woolpert will use the current ACs in place at the time the Statement of Work is approved by FAA unless a Task Order to comply with a revised AC is issued.

- AC 150/5300-16A “General Guidance and Specifications for Aeronautical Surveys: Establishment of Geodetic Control and Submission to the National Geodetic Survey.”
- AC 150/5300-17B “General Guidance and Specifications for Aeronautical Survey Airport Imagery Acquisition and Submission to the National Geodetic Survey.”
- AC 150/5300-18B “General Guidance and Specifications for Aeronautical Surveys to National Geodetic Survey: Field Data Collection and Geographic Information System (GIS) Standards.”
- AC 150/5300-13 (through Change 15) “Airport Design”
- AC 150/5070-6B “Airport Master Plans”
- FAA Southwest Region Checklist for Master Plan and Airport Layout Plan (ALP), revised May 2008.

## Datum Reference

The surveys will be based on the North American Datum of 1983 (NAD83) horizontally, and the North American Vertical Datum (NAVD88) vertically. All survey measurements will be referenced to the Geodetic Reference System of 1980 (GRS-80) while utilizing the national geoidal model of 2009 (GEOID09) for orthometric height calculation.

## PROJECT SCOPING/PROJECT DEFINITION

Detailed descriptions of each task required for completion of eALP project for Las Cruces Airport will be prepared. Project requirements will be developed jointly with the City and the Woolpert Team. These requirements and those drawn from the Federal Aviation Administration (FAA) will be integrated into the final Scope of Services (Scope). Initial and final draft copies of the Scope will be prepared and delivered to the City for comments. The final product of this task will be a Scope of Services (this document) which will be attached and made a part of the project contract documents.

Each task will have estimates developed for the number of hours/days required to complete the task by the appropriate team members in order to develop a draft project schedule. The schedule will be developed in MS Project format and will identify all major tasks with task dependencies, task durations and significant milestones for deliverables and required approvals. The draft and final schedule will be provided to the City for review and approval.

The final schedule will be used to develop cost estimates for staff resources and estimates for other direct costs: survey equipment, aerial imagery capture, vehicle usage, printing, and other direct expenses. The final project schedule and a summary of estimated cost per task will also be included as attachments to the final approved Scope of Services.

### Responsibilities:

- |              |  |
|--------------|--|
| Woolpert:    | Develop descriptions of all project tasks to be incorporated in the Scope of Services. Develop a MS Project schedule and budget estimates. Attend scoping teleconferences and meeting. |
| City:        | Review draft Scope of Services, schedule and budget. Approve of project tasks. Attend scoping teleconferences and meeting.   |
| Deliverable: | Final Scope of Services, schedule and budget to be included in the approved contract.  |

## TASK 1.0 PROJECT MANAGEMENT

**Description:** This task includes elements necessary to organize and oversee project completion including project meetings, schedule management, status and summary reports.

### Task 1.1 Kickoff Meeting

After Scoping and contract approval, Woolpert will formally begin the project, working with the City to prepare for a formal kickoff meeting. The formal kickoff meeting will include all key stakeholders and will provide a formal presentation on the scope and duration of the project, discuss tasks that may require input from various City staff members and provide a forum to coordinate the initial project tasks of field survey and aerial photogrammetry acquisition.

#### Deliverables

- Kickoff Meeting – Agenda, PowerPoint and Meeting Minutes

### Task 1.2 Project Coordination Meetings

Woolpert will coordinate with City's subject matter expert personnel through on site meetings or teleconferences to work through the project approach including the following issues:

- Data transfer policy, methods and specifications between City and Woolpert
- Project Deliverable processes
- Status reporting
  - At minimum, status reporting will be on a monthly basis to City.
  - Critical project items can be documented in special status reports or other documents.
  - Status reports will include meeting minutes, issues tracking and an updated Gantt chart.
- One round-table meeting at the airport with the FAA, airport staff and other industry stakeholders to share lessons learned on this project
- CAD/GIS Airport Standards & Policies
  - FAA AC-150/5300-16, -17 & -18 will be the default
  - For all data that falls outside of the FAA AC standards AIA National CAD or ESRI BIDSMS GIS standards will be utilized
  - City and Woolpert will identify specific features and attributes that are to be used and are applicable to the project
- City data storage requirements for airport imagery dataset and data deliverables to City
- Data development goals and refinement methodology

## Deliverables

- Technical Memo - Data Transfer Policy & Specifications
- Monthly Status Reports – 12 planned
- Lessons Learned Round Table Meeting
- Lessons Learned Round Table Meeting – Agenda & PowerPoint
- Lessons Learned Round Table Meeting – Meeting Minutes

### Task 1.3 Project Schedule

Woolpert will develop and keep current a schedule of major tasks and milestones using MS Project.

#### Deliverables

- MS Project Schedule – 12 updates planned

### Task 1.4 Status and “Lessons Learned” Reports

#### 1.4.1 Monthly Status Reports - AGIS

Woolpert will submit monthly status reports on the project through the AGIS website. The reports will contain progress updates and any significant issues with the project including deviations from the planned schedule.

#### Deliverables

- AGIS Monthly Status Reports – 12 planned

#### 1.4.2 Quarterly Status Reports – to FAA ADO

Quarterly eALP Pilot Program reports will be submitted to the City for forwarding on to the FAA ADO.

#### Deliverables

- Quarterly ADO Status Reports – 4 planned

#### 1.4.3 Lessons Learned Report – Interim and Final PPT

Woolpert will develop an interim “Lessons Learned” report half way through the project, and then a final document at the project end. This report will provide the FAA feedback and possible suggestions for improvement related to the processes, tools, and data standards that govern the AGIS and eALP programs.

The final Lessons Learned report will be accompanied with an on-site Power Point presentation to brief to Airport staff. This Power Point presentation will be included as a final deliverable to the Airport.

## Deliverables

- Lessons Learned Report – Interim
- Lessons Learned Report – Project End

## AGIS Submittal Summary

The core elements of this project will culminate with the formal submission and approval of the imagery and development of the eALP data to the FAA AGIS website and to the City in a CAD and/or GIS format. These will include, at a minimum:

## Deliverables

- FAA AGIS Statement of Work and AC-18B Feature Source List (AC-18B)
- Survey and Quality Control Plan (AC-18B)
- Imagery Acquisition Plan (AC-17B)
- Geodetic Control Plan (AC-16A, -18B)
- Imagery Report (AC-17B)
- Final Survey Report (AC-18B)
- AGIS Compliant Data Submission (AC-18B)
- Orthophotography (AC-17B)

Woolpert will submit the following plans in PDF format to AGIS: Survey and Quality Control Plan, Imagery Acquisition Plan and Geodetic Control Plan.

At the conclusion of this contract, all source data collected will be turned over to the City.

## TASK 2.0 EXISTING DATA REVIEW AND EVALUATION

**Description:** Existing Data Review and Gap Analysis is critical in evaluating the existing GIS data for reuse, evaluating the capabilities of the airport and providing a road map for future GIS data development.

### Responsibilities:

Woolpert: Conduct interview with airport staff to determine critical components of GIS dataset.

City: Meet with consultant, and provide feedback for needs of GIS dataset.

Deliverable: Gap Analysis report.

Woolpert will make maximum use of existing airport data that is traceable to the source and meets the requirements of this SOW.

Additional data collection will be conducted after all existing sources that are current (features that exist in the field at the time of NTP) and meet the accuracy requirements of this SOW are evaluated.

Data source types, whether existing data sources or field collected will be documented.

Data collected or proposed for use in a project must meet the tolerances specified in the above ACs at the 95% confidence level (RMSE) before being used in the project or as part of the required deliverables.

If data meets the FAA standards and is acceptable by NGS, Woolpert will utilize existing survey and planimetrics already collected whenever possible.

Acceptable existing data will be converted and supplemented with features required by the ACs that were not collected or is not acceptable.

Existing data sources to be evaluated include WAAS Survey data, airport layout plan, various CAD files for project within the past 5 years, and City-provided GIS files.

Data will be developed in AutoCAD 3D .DWG for submittal to AGIS. Once accepted, this data will be migrated to a Geodatabase or other acceptable data format for delivery to the City.

Woolpert will associate additional attribution and metadata to planimetric data from sources that may be other than planimetric in nature. Possible sources of additional attributes may be field survey, general airport information, or specific CAD files or other data provided by Airport staff.

## **Task 2.1 Source Data Collection & Evaluation**

Woolpert will coordinate with the Airport Manager and evaluate data on-site at the Airport or evaluate at Woolpert site after obtaining electronic files and hard copy data for off-site review.

The task will include collecting attribute data in a format that Woolpert can use to populate the GIS database feature attributes required by the FAA.

Map Data evaluated and collected and is determined to be the most current and accurate (CAD/GIS data previously converted and/or as-built drawings) will be utilized for data conversion in mapping feature locations.

AGIS required attribute data when not attainable through calculated values will be obtained from existing data sources.

Metadata will be populated in compliance with existing standards and will include data source details and confidence levels for data accuracy.

Data that is required but that do not meet this quality level for mapping will be either remotely surveyed or collected via field survey data collection methods.

Woolpert will provide an analysis of existing data viability for use in AC-18 database in Excel Table Format.

If additional features are required for data collection not defined in AC 150/5300-18B these features and attributes will be tracked separately from other data to be eligible for FAA funding.

### Deliverables

- AC-18B Feature Source List - Updated
- Existing Data Gap Analysis – Excel Spreadsheet Report to the City
- GIS Data – Draft

## TASK 3.0 AERIAL IMAGERY ACQUISITION AND DATA DEVELOPMENT

**Description:** Aerial imagery is the basis for a majority of the data development and airspace obstruction analysis. Imagery Acquisition task will be conducted within the first 90 days of notice to proceed, weather permitting and if seasonal conditions meeting requirements are available.

Woolpert will collect aerial imagery in accordance with AC150/5300-17B:

- Prepare an Imagery Plan and submit to AGIS for NGS review and approval
- Determine proper control points
- Comply with flight guidance, image quality, and weather/seasonal considerations

New imagery must also be collected for the eALP project under leaf on conditions to:

- Provide new aerial imagery to verify current features and compile current features where needed,
- Evaluate the airspace and potential obstructions for the approaches to all runways.

Stereo imagery will be submitted directly to NGS as required in AC 150/5300-17B, Paragraph 20, and Orthorectified imagery will be submitted to the FAA, as per AC 150/5300-17B, Paragraph 22.

Woolpert will coordinate with the Airport Manager and FAA FSS as appropriate for appropriate notifications regarding the flight mission, and access to any FAA NAVAID facilities.

### Deliverables

- Prepare Imagery Plan with flight line diagrams, imagery capture specifications and control points
- Aerial Imagery acquisition – planning

### Task 3.1 Aerial Imagery Acquisition and Georeferencing

Aerial imagery will be captured once appropriate ground control stations are set to supplement photo identifiable (PID) locations, and the tree canopies are in full bloom, providing full 'leaf-on' conditions.

The flight crew will collect imagery as defined in the flight layout, encompassing the critical areas of the obstruction identification surfaces.

Woolpert will use color negative film (Agfa X 400 and X 100) to ensure quality high resolution imagery, producing low contrast scan resolution.

The imagery collected will be at a scale of 1" = 800' for the area encompassed by the AC-18B Obstruction Identification Surfaces (OIS) and 1" = 300' scale within the airport property boundary

Imagery will be checked to ensure it meets the specifications in AC-17B before being scanned and georeferenced.

The 1" = 800' extents are defined by the 18-B airport airspace analysis surfaces and does not include the extended approach surface for the precision instrument approach to runway 30.

After the film "diapositives" (similar to negatives) are developed, they will then be scanned at 14-micron resolution to produce digital images, which will then be further processed electronically.

The scanned images will be checked for completeness, cleanliness, and image quality at the workstation and will conform to Intel TIFF (continuous tone raster graphics/non-compressed) file format. The resulting ground resolution of the scanned images will be 5-7 cm (for 1" = 300' scale) and 10-30 cm in size (for 1"=800' scale).

The scanned images will then be georeferenced (aerial-triangulated) in digital format to fix the imagery to real-world coordinates, utilizing the previously established ground control features or targets.

Once the imagery is georeferenced, the stereo models produced will be utilized for obstruction analysis.

Stereo imagery will be submitted directly to NGS as required in AC 150/5300-17B, Paragraph 20.

In the event the collected imagery does not meet the standards required in AC-17B, Woolpert will propose a plan for collection of new imagery that does meet the standards.

#### Deliverables

- Photo Identifiable Point (PID) Field Survey
- Aerial Imagery Acquisition – as per AC 17B standards and Imagery Plan
- Scanned stereo imagery to NGS for quality review and approval

## Task 3.2 Orthophotography

**Description:** The Orthophotography task will combine the many images collected in to one mosaic image covering all imagery extents; placing the various image pixels in the proper spatial locations to represent real-world features and correcting for distortions due to terrain relief. Orthophotography to the FAA is a required deliverable for an FAA AGIS project.

### Responsibilities:

Woolpert: Develop orthophotography and submit to City for approval.

City: Review and accept draft and final orthophotography.

Deliverable: See listing below.

Woolpert shall provide one copy of orthorectified imagery in 0.25 ft/pixel resolution for airport property and 0.5 ft/pixel resolution over the project area (AC-18B Obstruction Identification Surfaces).

Orthophotography data will be provided in the following formats:

- Uncompressed ArcGIS readable, TIFF format raster files accompanied by TFW header file, and
- MrSID (Multi- Resolution Seamless Image Database) with associated World File.

**NOTE:** Georeferencing information must not be embedded into the header of the MrSID image file. All georeferencing information shall be contained in the separate, but associated World Files.

The development of the orthophotography is dependent on the use of a digital terrain model (DTM). Woolpert will determine the existence of an acceptable DTM from existing airport data; and if one does exist, the resulting data accuracy that would result if used for new data development.

If no acceptable DTM exists, one will be developed based on collecting mass points, break lines and supplemental random mass points collected in a manner and accuracy that will attain a horizontal and vertical accuracy as follows:

- 1-foot contour generation defined by airport property boundary
- 2-foot contours for the 18-B vertically guided approach surface (VGAS) area.

This requirement will meet or exceed the American Society for Photogrammetry and Remote Sensing (ASPRS) National Map Accuracy Standards for the scale of this project, and will meet the standard identified in AC 150/5300-17B, Section 22.

Orthorectified imagery will be submitted to the FAA, as per AC 150/5300-17B, Paragraph 22.

## Deliverables

- Orthophotography – 0.25 ft/pixel resolution over the Airport Property
  - Uncompressed TIFF raster files with TFW image header files
  - MrSID raster file with associated World File
- Orthophotography – 0.5 ft/pixel resolution over the AC-18B OIS
  - Uncompressed TIFF raster files with TFW image header files
  - MrSID raster file with associated World File
- Orthophotography delivered to FAA as per AC-17B, Paragraph 22
- Digital Terrain Model sufficient to generate 1-foot contours on airport property and 2-foot contours for area beneath AC-18B OIS.
- 1-foot contour development for airport property and 2-foot contour development for AC-18B OIS

## Task 3.3 Feature Mapping and Quality Assurance

**Description:** The Feature Mapping task will develop planimetric data (points, lines and polygons) which represent real-world features on the airport property for later attribution as airport GIS features. AC-18B defines 100 different feature “layers” and during scoping it shall be determined which “layers” LRU desires. Generally, pilot AGIS/eALP projects attempt to collect as many layers as possible.

### Responsibilities:

**Woolpert:** Develop accurate features from aerial imagery meeting specifications of AC-18B.

**City:** Provide local airport knowledge to Woolpert so that features properly representing LRU features are developed and attribute data can be created by Woolpert where existing data gaps exist. Review and approve of draft and final features and attributes.

**Deliverable:** Draft and final planimetric features and attributes in CAD and/or GIS format.

All features listed in AC 150/5300-18B, Table 2-1 for Airport Layout Plan, that are present at the airport will be captured and attributed from the aerial imagery where existing data cannot be reused.

In the event a change in the airfield or surrounding area is detected and the features are required by AC-18B, Woolpert will complete the supplemental planimetric mapping using the stereo imagery collected.

All safety critical features (as defined in AC-18B, Table 4-1) collected via planimetric development will be field verified.

The imagery will be used to provide quality assurance to the ground control and airfield survey data collected by visual inspection.

For existing data, field collected or data extracted from the imagery, the imagery data will be used to provide feature attribution.

### Task 3.4 Future Data Development

**Description:** The Future Data Development task will collect a planned future development from the existing ALP, CIP and current needs and create features to be added to AGIS to complete the “eALP” portion of this project.

**Responsibilities:**

Woolpert: Obtain existing and future planned features and represent these projects in the new data.

City: Provide Woolpert Team with existing ALP data and other CIP projects that should be added to the ALP. Review and approve of project feature representation (extents) and proposed timing (near-, mid-, long-term development horizon).

Deliverable: Airport planimetric feature mapping and attribution – draft; in CAD and/or GIS format.

Woolpert will prepare data reflecting AIP projects and proposed future airport configuration(s). Woolpert will draw on the existing ALP and the airport CIP to identify these future projects.

During data attribution and conversion Woolpert will use the appropriate attribute “CodeStatus” to indicate future projects and their planned horizon based on information from the airport.

Noise Development Reuse attribute data will be utilized under “Future development” and/or parcel data.

Where any future, preliminary design effort and/or GIS data exists specific to a planned project, it will be converted and uploaded into the FAA database. It shall meet, at a minimum, the known FAA levels of accuracy as acceptable "for planning purposes only". If no detailed guidance is available, there will be coordination with FAA as to reasonableness and acceptability of data.

## TASK 4.0 FIELD DATA COLLECTION AND INVENTORY

The purpose of this task is to properly establish a proper geodetic reference network so that surveyed data and data developed from aerial imagery can be properly referenced back to the appropriate survey monumentation. Geodetic control data must meet the requirements set forth in AC-16A and AC-18B, and this task will establish the parameters for accomplishing field survey activities in a safe manner.

### Preparations and Communications

Prior to and throughout the survey project, the Woolpert team will communicate with appropriate airport officials regarding established safety, communication, airside restrictions and future airfield construction activity considerations. Woolpert shall begin this task by interviewing key airport staff regarding airport data and development.

Woolpert will utilize the FAA Interview checklist or equivalent when conducting interviews with key airport staff, at the start of the field activities. Interviews with the airport manager, engineering staff, maintenance personnel will be conducted. No ATC staff are currently based at LRU at this time.

## Safety Considerations and Coordination

Woolpert anticipates that additional site safety and coordination training may be needed prior to the start of field activities, and safety escorts may be required at all times if the requirements described below cannot be met.

- Woolpert and/or the survey subcontractor will use clearly identified company vehicles with integrated safety lighting to move safely about the airfield.
- All survey vehicles on the airfield will be outfitted with two-way, air-band radios for communication with the air traffic control for ground safety.
- Staff will attend classes at the airport to attain badging credentials if required. If there is a need for escorted airfield access, the appropriate airport staff will be notified a minimal 48 hours in advance.

### Task 4.1 Geodetic Control Survey

**Description:** Establish/validate proper geodetic control at LRU

**Responsibilities:**

Woolpert: Establish geodetic control in accordance with AC150/5300-16A.

City: Ensure survey team has required access to airport property

Deliverable: Completed survey and documents (see below).

It is assumed both the Primary Airport Control Station (PACS) and the Secondary Airport Control Stations (SACS) are established and acceptable, based on a review of the National Spatial Reference System (NSRS). These monuments will be recovered and observed in the field for validation.

It is assumed that additional monumentation will not be required. If it is determined that additional monumentation it is needed, existing ALP information will be utilized to ensure the location of new monumentation is safe from future demolition due to airfield improvement projects.

Woolpert will prepare a Geodetic Control Plan, submit to the AGIS website and work with the FAA/NGS to obtain all applicable reviews and approvals in accordance with published guidance.

The geodetic control survey will ensure the data compiled meets the requirements for ties to the NSRS.

Woolpert will develop all required documentation, digital images, and other data as specified in AC150/5300-16A for airport surveys.

### Deliverables

- Validate existing Geodetic control – Primary (PACS) and Secondary (SACS) control monumentation

- Preparation and submittal of a Geodetic Control Plan to FAA AGIS for FAA/NGS review and approval
- Development and submittal to FAA AGIS for all required documentation, digital images and other data required by AC 150/5300-16A for aeronautical surveys.

## Task 4.2 Photogrammetric Control Surveys

**Description:** Establish geodetic control in and around LRU to properly reference aerial imagery for processing and subsequent feature data development

### Responsibilities:

- Woolpert:** Establish photo control in accordance with AC150/5300-16A and AC 150/5300-17B
- City:** Ensure survey team has required access to airport property and coordinate with adjacent property owners (if needed).
- Deliverable:** Photo control points for use in aerial triangulation set up. Photo Control Report to City.

Ground control will be required to support the aerial mapping. Woolpert will determine the need for pre-establishing the ground control prior to the imagery acquisition.

The field crews will install control targets with paint or reflective material, or will find photo identifiable (PID) locations visible in the imagery.

All ground control locations shall be determined based upon the optimum location, quality, and accuracy for controlling the aero-triangulation solution.

Woolpert will determine the horizontal and vertical positions of each photo control point using Static and/or RTK GPS techniques, with direct ties to the temporary control (or PACS/SACS).

Woolpert Photogrammetrists will build a flight layout based on the specifications outlined in the SOW, and after reviewing and identifying the required approach and obstruction surfaces for the airport.

As required in AC-17B, Woolpert will also collect a minimum of 5 quality assurance points for the NGS to verify the aerial triangulation solution.

## Task 4.3 Runway and NAVAID Surveys

**Description:** Survey of runway end points and profile, and NAVAIDS are “safety critical” deliverables as defined in AC-18B due to their direct affect on establishing instrument approaches and obstruction analysis. Existing Runway and NAVAID survey data at LRU can be validated and updated where appropriate.

### Responsibilities:

- Woolpert:** Survey runways in accordance with AC 150/5300-18B
- City:** Ensure survey team has required access to airport property.

**Deliverable:** As described below for incorporation in AGIS data. No specific runway survey deliverable to City

### Task 4.3.1 Profile Surveys

Woolpert will validate existing runway profile data from the FAA WAAS survey developed for runways 12/30, 4/22 and 8/26 and collect new surveys if required as per AC-18B Section 2.6.10.2.6.

### Task 4.3.2 Critical Point Surveys

If an existing runway endpoint monument does not already exist at each runway end, displaced threshold, and stopway point, a survey nail and washer, pre-stamped with the letters 'WOOLPERT [Year]' will be set to aid in future identification.

A field recovery sketch and five digital photographs as required by AC-18B will be developed for each runway end, displaced threshold, and stopway.

Woolpert will determine runway lengths from the positions of the runway end points using NGS' INVERSE3D software.

Runway lengths will be computed while at the airport and will also be compared to the lengths published in the airport facility directory.

If the computed length, rounded to the nearest foot, differs from the published length by more than a foot, Woolpert will contact the airport manager for further information regarding the reasons for the difference.

If the lengths are consistent with the published length, no additional information will be required.

### Task 4.3.3 Navigation Aids (NAVAIDS) Inventory

Woolpert will observe and verify electronic and visual NAVAIDS associated with the airport that is required in AC-18B.

NAVAIDS for 8/26 were collected and approved under a previous project. These will need to be verified in the field and all NAVAIDS for all additional runways will need to be collected.

Woolpert will utilize airport officials for assistance in identifying specific information about the airport's NAVAID systems.

## Task 4.4 Airspace Analysis Survey

**Description:** Airspace analysis is used to determine if obstruction exist that may affect instrument approaches or departures. Previous LRU airspace analysis can be validated and updated.

### Responsibilities:

**Woolpert:** Conduct photogrammetric survey and airspace analysis in accordance with AC 150/5300-18B

**City:** Ensure survey team has required access to airport property for ground survey.

Deliverable: As described below for incorporation in AGIS data. No specific airspace analysis survey deliverable to City

#### Task 4.4.1 Photogrammetric Surveys

Woolpert will utilize the ClearFlite software developed by BAE for dual purposes. One, to measure and record obstructions, and two, to quality control any obstruction analysis completed via the ground survey.

The triangulated stereo models generated from the imagery are inspected for features (points, lines and polygons) that penetrate the required surfaces.

#### Task 4.4.2 Ground Surveys

Woolpert will utilize a variety of survey techniques for acquisition of features that are suspected of potentially penetrating the obstruction identification surfaces. Direct measurement (angle and distance), triangulation (angles from multiple locations), or RTK-GPS survey operations may be used.

Field measurements will be tied directly to the PACS/SACS.

#### Task 4.4.3 Obstruction Data Analysis

The obstruction data collected from the ground and photogrammetric surveys will be analyzed simultaneously in a 3D AutoCAD environment.

The surfaces, points, lines, and polygons collected will be inserted into AutoCAD and inspected to calculate and attribute the penetrations of the AC-18B Obstruction Identification Surfaces (OIS) developed for LRU.

The obstructions will be inserted in the final deliverable to the FAA and all obstructions will be provided to the airport manager for potential future obstruction clearing plans.

Obstructions will be analyzed and delivered based on the as-built runway positions for runways 12/30, 8/26 and 4/22.

#### Task 4.4.4 Vertically Guided Surface Analysis

Woolpert will locate, identify, and classify, according to AC 150/5300-18B, all vertical objects penetrating the obstruction identification surface definitions for a Runway with Vertical Guidance, Airspace Analysis Survey (Section 2.7.1).

The table below identifies the runway and the surfaces to be analyzed for the purpose of meeting the AC 150/5300-18B requirements.

Airspace Analysis Survey: Runway with Vertical Guidance		
Survey Locations	Survey Specifications Required	Comments
Runways 12/30, 4/22 and 8/26	Vertically Guided Approach Surface (VGAS)	Approach surface extending 20,200 feet from end of the physical runway end.
Additional Surfaces	Vertically Guided Runway Primary Surface (VGRPS)	1,000 foot wide rectangular surface longitudinally centered on the runway centerline.
	Vertically Guided Primary Connection Surface (VGPCS)	Connection between the VGRPS and the VGATS.
	Vertically Guided Protection Surface (VGPS)	A trapezoidal surface sloping at 62.5:1 beginning at the physical runway end extending outward 6,000 feet.
	Vertically Guided Approach Transitional Surface (VGATS)	Surface aligned with VGPCS and sloping upward toward the VGHS.
	Vertically Guided Horizontal Surface (VGHS)	Horizontal plane established 150 feet above the airport elevation for a distance of 10,000 feet.
	Vertically Guided Conical Surface (VGCS)	Sloping surface extending upward and outward from the VGHS for a distance of 7,000 feet.

## TASK 5.0 DATA DEVELOPMENT AND DELIVERY

The data development and delivery tasks documents how the data was developed for delivery to the FAA AGIS web portal for review by FAA/NGS in order to receive final approval. This project reporting task is a follow up to the earlier project plans task. The initial project plans described how the work was *going to be* conducted. The project reports describe how the data collection/development *was conducted* and any deviations from the earlier submitted plans.

### Task 5.1 AC Compliant Project Reports

Woolpert will deliver the data files and reports defined in AC 150/5300-16A, 17B, and 18B:

- A Geodetic Control Report must be sent to the NGS if new control is to be published. This is not applicable as it is assumed that the existing PACs and SACs are acceptable.
- An aerial imagery report must be sent to the NGS for use in imagery and obstruction verification.
- A final project completion report.

The final project completion report is an integral portion of the AGIS project. The report will include a complete synopsis of each of the data conversion, field survey and associated metadata. The final report will also provide conclusions to issues developed during the project, as well as provide statistical analysis of the data delivered.

## Deliverables

- Geodetic Control Report – if needed. Not anticipated to be needed
- Aerial Imagery Report – uploaded to AGIS for NGS review
- Final Project Completion Report – uploaded to AGIS

## Task 5.2 Digital Survey Data File Delivery

**Description:** The Digital Survey Data File Delivery task is the culmination of all the earlier tasks. Data is assembled from the various data sources: validated existing data, newly created features, newly created attributes or migrated from existing data. This data will be delivered for client review in stages to facilitate knowledge transfer of what it contains and how it should be maintained in the future.

### Responsibilities:

Woolpert: Develop data for FAA AGIS Submittal in accordance with AC 150/5300-18B

City: Review and approve of draft and final AGIS data file.

Deliverables: As described below.

## Quality Assurance

Quality control will be performed on the data as it is being prepared. A final independent quality assurance step will ensure that all of the data is compliant with FAA requirements before it is uploaded to the FAA's Airports GIS web site.

Features will be checked to ensure proper geometric construction according to the Data Capture rules defined in AC-18B.

Attributes will be checked to ensure that all attributes required by AGIS have a valid and appropriate attribute enumeration values as defined in AC-18B.

Non-required attributes will be completed with appropriate and valid enumeration values as per the AC-18B Feature Source List jointly developed by the City and Woolpert. The Feature Source List will be initially developed and submitted along with the Statement of Work to AGIS, based on available existing data and additional data development requirements. As the existing data is evaluated, the Feature Source list will be updated to guide the final AGIS data development effort.

## AGIS Data Delivery

Having passed the Quality Assurance step Woolpert will develop a digital file deliverable in the appropriate format (AutoCAD 3D .DWG) to be uploaded to the AGIS website (<https://airports-gis.faa.gov/public/>).

AC-18B outlines the requirements the digital deliverable must follow.

The digital deliverable will be delivered through the AGIS web portal, and will also be provided to the City separately. The data delivery to the airport will be either .SHP, File-based Geodatabase or AutoCAD 3D .DWG file format.

The data file will contain the critical items identified in Table 2-1 in AC-18B for an Airport Layout Plan, and will also contain 3D topographic airport features that exist and are required for ALP development.

## Deliverables

- AGIS Data Deliverable – AutoCAD Civil 3D .dwg file uploaded to AGIS website
- AGIS Data Deliverable – Copy of AGIS deliverable in .DWG, .SHP or file-based geodatabase provided to City on portable storage media

## Data Delivery Requirements

Woolpert will deliver a data file to the City in AC-18B compliant format, with accuracy and attribution duplicating the data set that is delivered to AGIS.

Woolpert will involve the City staff throughout the data preparation and submittal process to train an appropriate City staff on appropriate AGIS data submittal processes.

All data conversion and collection procedures will comply with airport and FAA AGIS standards for accuracy, format and content.

Woolpert and the City will develop Quality Assurance (QA) processes for both CAD and Airport GIS airport imagery data. At a minimum, Quality Assurance Processes and Procedures will include:

- Draft and final QC/QA of CAD airport imagery features prior to upload to FAA AGIS website
- Woolpert will respond to QA feedback from the airport within 10 days of notification and will be required to bring airport imagery data into compliance with FAA and NGS standards.
- Woolpert will comply with FAA provided QA and will provide the Airport with the results of that testing for their independent review/approval.
- Woolpert will correct any data errors generated through their work that are not identified through the quality assurance process, but are subsequently identified by the FAA/NGS, within a period of 30 days of notification of the error in question.

## **TASK 6.0 STANDARDS, MAINTENANCE & DATABASE DESIGN**

These tasks will provide the fundamental framework and future “roadmaps” to properly store and maintain the LRU AGIS/eALP data into the future as the airport configuration changes. This task develops technical recommendations in modular “memoranda” format to establish abridged data standards and recommendations that are easily referenced.

## Task 6.1 GIS/CAD Standards and Maintenance Procedure Recommendations

### Task 6.1.1 GIS/CAD Standards

Woolpert will work with City staff to develop a technical memorandum making recommendations for CAD/GIS data standards that comply with the FAA's AC 150/5300-18B as well as specific CAD/GIS data that is relevant to the airport that is not included in the FAA standards. Recommendations for appropriate data maintenance and data acceptance procedures and tasks will also be included.

### Task 6.1.2 Data Maintenance Procedures

Woolpert will work with the City to define a process to keep its data current, and will develop a set of recommendations that includes but is not limited to the following elements:

- Department responsible for creating and maintaining the data
- Events that should trigger new data creation or data maintenance
- Source of the new or changed data
- Application of the CAD/GIS standards to required projects
- Data interoperability issues and check-in and check-out procedures for data
- Enforcement language for project contracts

This Technical Memo will make recommendations for the City to later develop comprehensive guideline for producing geospatial data in a GIS format to facilitate the maintenance of the AC-18B data. The Standards and Maintenance Procedures recommendations will define the organization of CAD/GIS data in the following major areas:

1. CAD Layer/GIS Feature Class naming conventions
2. Attribute names
3. Domain values
4. Metadata elements
5. Coordinate system
6. Aerial imagery standards
7. Electronic file delivery formats
8. Electronic file naming conventions
9. Data maintenance procedures
10. Data acceptance procedures

The objective is to provide a road map for the City to follow at a later date as needed to develop data standards and elements of an effective data maintenance program to:

- Establish uniformity in the way in which GIS data is organized
- Provide the City with a standard that is compliant with the FAA GIS standards
- Account for and standardize other GIS features that are relevant to the airport
- Set common naming conventions and definitions for GIS data components
- Provide requirements for GIS data submittals to the airport

## Deliverables

- Standards and Maintenance Procedure Recommendations – Technical Memorandum (15 pages maximum anticipated)

## Task 6.2 Database Design/Schema Recommendations

Woolpert will develop a database schema and design recommendations specific to the needs of the airport, working closely with the City staff. The schema will use the AC-18B schema as a basis, and recommendations will include recommendations to fit specific data needs of the airport.

This task does not include developing a blank GIS schema structure or CAD template.

## TASK 7.0 SYSTEM ARCHITECTURE ASSESSMENT

### Task 7.1 Hardware/Network Assessment and Configuration

It is assumed that the airport has a limited hardware and network infrastructure in place.

Woolpert will work with the City IT staff to assess and recommend the ideal configuration for handling large data throughput, data storage, and ArcGIS software configuration and installation so the airport data can be viewed at the airport, with support from the City as appropriate.

It is assumed that the existing architecture is in place will not be modified under this tasks, and no systems configuration will need to be done. However if authorized, Woolpert will provide this task as an optional as needed task as separately scoped and directed.

### Task 7.2 Database Software Requirements

Woolpert will work with the City staff in evaluating the most cost effective database solution to meet current and future needs of the airport's GIS program.

Findings and recommendations will be documented and submitted to the City.

## SUMMARIZED LIST OF DELIVERABLES, ASSUMPTIONS & ALTERNATIVES

### Project Deliverables

- SOW finalized for FAA review by Woolpert and Airport staff, and approved by the FAA. The SOW will be uploaded to the AGIS web site (AC-18B)
- Survey Work Plan/Quality Control Plan detailing the field and office procedures, to be submitted to the AGIS Website by Woolpert (AC-18B)
- Imagery Plan detailing the aerial imagery acquisition process will be submitted to the AGIS website
- Geodetic Control Report
- Imagery Report detailing the collection of the aerial imagery, the aerial triangulation, and the final imagery, submitted to NGS via AGIS
- GIS/CAD Standards in compliance with FAA requirements and incorporating airport specific features and attributes
- Database schema/design
- Data Maintenance Procedures recommendations and processes
- System Architectures Assessment, database software recommendation and network configuration
- Final AGIS compliant data file delivered to AGIS for validation, verification and review by the FAA and NGS (AC-18B)
- A “copy” of the AGIS data in a format to facilitate merging with existing City GIS. The final data will be provided to City on and external hard drive.
- Final Survey Report summarizing the project submitted to the AGIS web site (AC-18B).
- On-Site Meetings – 1 Scoping, 1 Kickoff, 3 – in progress meetings, 1 – final close out
- Bi-Weekly teleconferences – Bi-weekly throughout the project duration
- “Lessons Learned” Reports and Power Point Presentation

### Assumptions and Constraints

- Airport staff will work with Woolpert to identify data sources for conversion and attribute harvesting.
- Airport staff will work with Woolpert to identify data conversion and collection priorities.
- Airport staff will review and provide comments to Woolpert within 15 business days of draft deliverable submittals.
- Deliverable milestones will be identified in the project schedule.
- PACs and SACs are assumed to be in place and acceptable to NGS and for the needs of this project.
- Profiles and runway centerlines will need verification as they have been collected in a recent project
- Computing and network hardware has already been acquired by the airport and potentially needs configuration only.
- ArcGIS v10 will be the standard GIS software that the airport plans to utilize. SDE is not currently owned by the airport and may need to be acquired, depending on system recommendations and database recommendations.
- Upon correction of all required data changes the airport will accept GIS data deliveries 15 business days after receipt of corrected changes.

## Valued Engineering and Alternatives

At the direction of the Airport, the following additional tasks authorized separately, may be included but are not limited to:

- Additional data development as directed by the Airport.
- Data maintenance support provided to the airport, both while working directly with the AGIS system or for the needs of the airport after current project is completed
- Additional data collection and attributing of features beyond scope of eALP/AC requirements
- Data collection and processing of new airport projects that may occur after initial data collection date, but prior to the FAA final submittal date.
- Any other tasks deemed appropriate by the Airport.

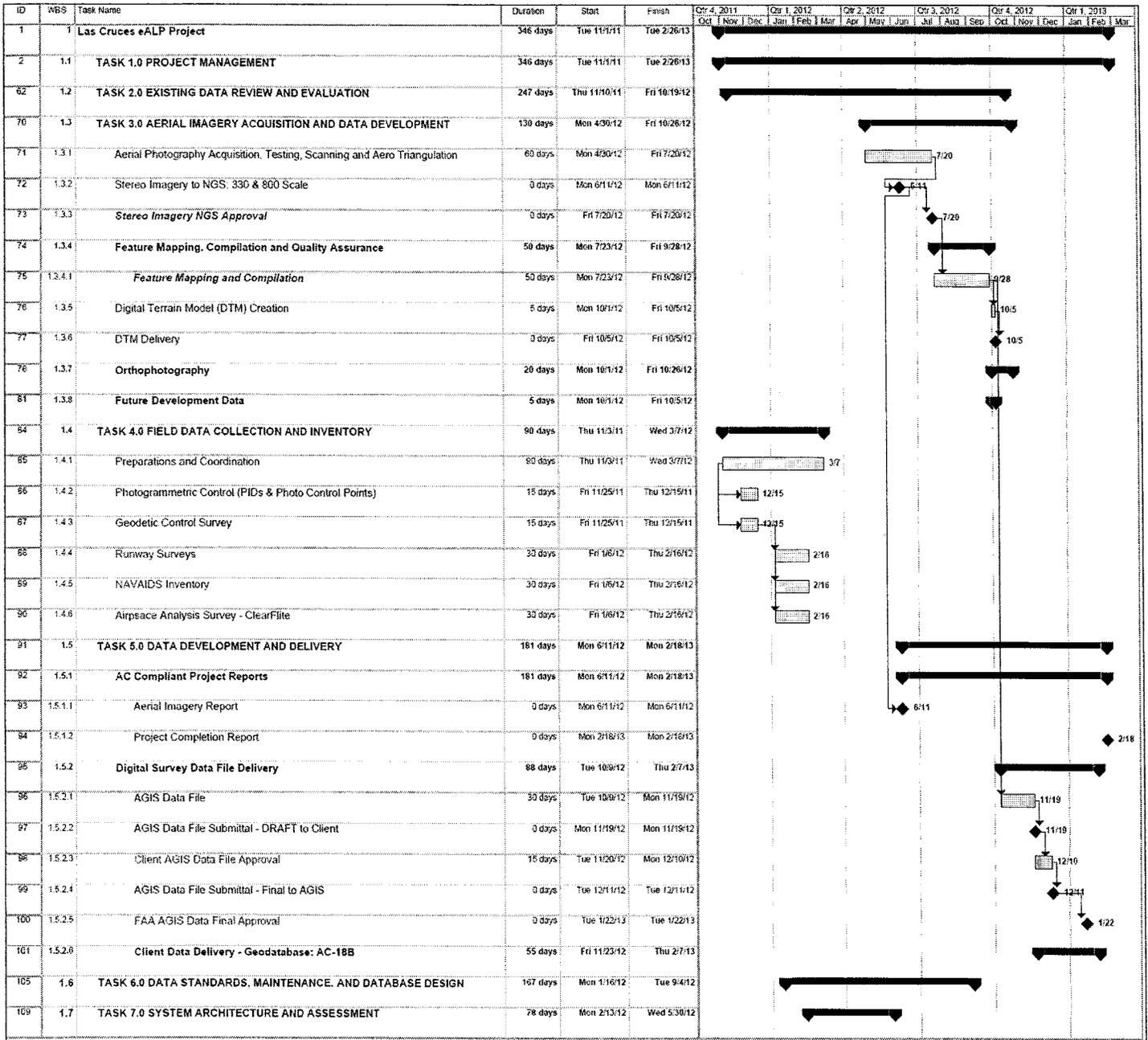
**eALP Fee Schedule**

Percent of  
Total Fee

	<b>Direct Labor</b>	<b>Direct Cost</b>	<b>Subtotal</b>	
<b>Task 1.0 - Project Management</b>	<b>\$56,840.00</b>	<b>\$4,200.00</b>	<b>\$61,040.00</b>	14.0%
<b>Task 2.0 - Existing Data Review and Evaluation</b>	<b>\$28,620.00</b>	<b>\$3,200.00</b>	<b>\$31,820.00</b>	7.3%
<b>Task 3.0 - Aerial Imagery Acquisition and Data Development</b>	<b>\$137,840.00</b>	<b>\$17,580.00</b>	<b>\$155,420.00</b>	35.7%
<b>Task 4.0 - Field Data Collection and Inventory</b>	<b>\$58,620.00</b>	<b>\$8,800.00</b>	<b>\$67,420.00</b>	15.5%
<b>Task 5.0 - Data Development and Delivery</b>	<b>\$68,800.00</b>	<b>\$4,200.00</b>	<b>\$73,000.00</b>	16.8%
<b>Task 6.0 - Standards, Data Maint. &amp; Database Design Recommendations</b>	<b>\$6,480.00</b>	<b>\$2,400.00</b>	<b>\$8,880.00</b>	2.0%
<b>Task 7.0 - System Architecture Assessment</b>	<b>\$5,240.00</b>	<b>\$1,800.00</b>	<b>\$7,040.00</b>	1.6%
<b>New Mexico Gross Receipts Tax</b>			<b>\$31,000.00</b>	7.1%
			<b>Total</b>	
			<b>\$435,620.00</b>	

794

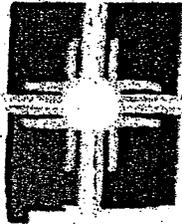
EXHIBIT B – SCHEDULE



796  
DATE

Exhibit "C"

# STATE GRANT AGREEMENT FOR AIRPORT PROJECTS



*New Mexico* DEPARTMENT OF  
**TRANSPORTATION**  
MOBILITY FOR EVERYONE

## AVIATION DIVISION

Sponsor Name

Respond to:  
NEW MEXICO AVIATION DIVISION  
PO Box 9830  
Albuquerque, NM 87119  
505-244-1788 phone  
505-244-1790 fax

Contract No. \_\_\_\_\_

Project No. \_\_\_\_\_

Vendor No. \_\_\_\_\_

Expiration Date \_\_\_\_\_

AGREEMENT between City of Las Cruces, New Mexico (hereinafter called the "Sponsor") and the State of New Mexico, acting through the New Mexico Department of Transportation, Aviation Division (hereinafter called the "Division"), for the purpose of carrying out the provisions of NMSA 1978, Section 64-1-13 of the Aviation Act (hereinafter called the "Act") and the Municipal Airport Law of 1978 (NMSA 1978, Section 3-39-1 et seq.). The Sponsor hereby makes application to the Division for state funds authorized in NMSA 1978, Section 64-1-13, for the purpose of aiding in financing an airport or aviation project (herein called the Project) at Las Cruces International Airport.

**Project Description:**

Electronic Airport Layout Plan

FUNDING	STATE	SPONSOR	OTHER	TOTAL
REQUEST	\$ 11,015	\$ 11,016	\$ 418,589	\$ 440,620

ROUND TO THE NEAREST DOLLAR

The site of development and items of work are more particularly described on the property map, "Exhibit A", attached hereto.

Items of work, cost and source of funds are stated in "Exhibit B", also attached hereto.

**REPRESENTATIONS**

The Sponsor hereby represents and certifies the following:

1. **Legal Authority** - The Sponsor has the legal power and authority: (1) to do all things necessary in order to undertake and carry out the Project in conformity with the provisions stated in the New Mexico Aviation Act and Rules and Regulations pursuant thereto; (2) to accept, receive and disburse grants of funds from the State of New Mexico in aid of the Project; and (3) to carry out all provisions stated in this "Grant Agreement for Airport Projects."
2. **Defaults** - The Sponsor is not in default on any obligation to the State of New Mexico relative to the development, operation or maintenance of any airport or aviation project except as stated in "Exhibit C"
3. **Possible Disabilities** - The Sponsor states, by execution of this AGREEMENT, there are no facts or circumstances (including the existence of effective or proposed leases, use agreements, or other legal instruments affecting use of the airport or the existence of pending litigation or other legal proceedings) which in reasonable probability might make it impossible for the Sponsor to carry out and complete the Project.
4. **Land** - The Sponsor holds the following property interest in the following areas of land which are to be developed or used as part of or in connection with the Project, subject to the following exceptions, encumbrances and adverse interests, of all which areas are identified in the aforementioned property map designated as "Exhibit A": The Sponsor further certifies that the aforementioned is based on a title examination by a qualified attorney or title company who has determined that the Sponsor holds the stated property interests.

**ASSURANCES**

The Sponsor hereby covenants and agrees with the Division as follows:

1. The Sponsor agrees that it will operate the airport receiving aid under this application for the use and benefit of the public on fair and reasonable terms, and without unjust discrimination.
2. The Sponsor specifically agrees that it will keep said airport open to all types, kinds and classes of aeronautical use without discrimination between such types, kinds, and classes: **provided**, that the Sponsor may establish such fair, equal and not unjustly discriminatory conditions to be met by all users of the airport as may be necessary for the safe and efficient operation of the airport; and **further provided**, that the Sponsor may with the approval of the Division prohibit or limit any given type, kind or class of aeronautical use of the airport if such action is necessary for the safe operation of the airport or necessary to serve the civilian aviation needs of the public.
3. The Sponsor agrees that in its operation of the airport and all facilities thereon, neither it nor any person or organization occupying space of facilities thereon will discriminate against any person or class of persons by reason of race, color, creed, or national origin in the use of the facility provided for the public on the airport; and further that any person, firm or corporation rendering service to the public on the airport will do so on a fair, equal and not unjustly discriminatory basis to all users thereof.
4. The Sponsor will operate and maintain in a safe and serviceable condition the airport and all facilities thereon and connected therewith which are necessary to serve the aeronautical users thereof and will not permit any activity thereon which would interfere with its use for airport purposes.
5. The Sponsor will, by acquisition of land interest, acquisition of easements, airspace zoning, or other accepted means, protect the runway approaches and the airspace in the immediate vicinity of the airport from the construction, alteration, erection or growth of any structure which would interfere with the use or operation of the airport.
6. The Sponsor agrees that no landing fee shall be charged any owner or operator of aircraft using said airport; which would be in violation of 64-1-16, NMSA 1978, as amended.
7. If said airport is on private land, the Sponsor has attached hereto, titled "Exhibit A-3," a duly executed agreement permitting public use of this land for airport purposes without limit as to time.
8. The Sponsor agrees to comply with the New Mexico Aviation Act and the rules and regulations promulgated there under.

## PROJECT AGREEMENT

It is understood and agreed that all development included in such Project will be accomplished in accordance with the New Mexico Aviation Act and all Rules and Regulations pursuant thereto. It is understood and agreed that the work approved under this application will be commenced within one hundred and twenty days from the date this application is approved unless such longer time is prescribed by the Division. It being further understood and agreed that should the Sponsor fail to do those things described and approved on or before one year from the date this agreement is approved or a later date as may be prescribed by the Division that said grant shall, without notice, be withdrawn and reverted to the "State Aviation Funds."

It is understood that the grant approved under this AGREEMENT shall be paid subject to the availability of funds from the "State Aviation Fund."

NOW THEREFORE, in consideration of the Sponsor's adoption and ratification of the representations and assurances contained and its acceptance of the terms of this AGREEMENT, the parties agree as follows:

### SECTION ONE - PURPOSE:

The Sponsor has submitted to the Division an AGREEMENT for a grant of State funds for a project at or associated with the aforementioned airport. The Division has approved the above referenced AGREEMENT and has agreed to pay, as the State's Share, 

50
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 % of the Sponsor's share of all allowable cost for the project.

### SECTION TWO - PROJECT FUNDING:

1. The funding for this project is as set forth on Exhibit B.
2. The maximum obligation of the State payable by the Division under this AGREEMENT is as set forth in Exhibit B.

### SECTION THREE - SPONSOR SHALL:

1. Pay all costs, perform all labor, and supply all material, except as described in SECTION TWO of this AGREEMENT, for the purpose as described in SECTION ONE.
2. Provide a representative from its organization who shall serve as the single point of contact for the Division.
3. Maintain in force a **Maintenance Resolution** by which the Sponsor agrees to establish an airport maintenance program and appoint an individual to be responsible for its effectuation.
4. Initiate engineering, survey, and all other design activities, inspect Project construction and, coordinate all meetings.

5. Be responsible for all design and preconstruction activities including, but not limited to:
  - a. drainage and storm drain design;
  - b. geotechnical investigations;
  - c. pavement design;
  - d. use analysis;
  - e. structural design;
  - f. environmental and archaeological clearances;
  - g. airport layout plans
  - h. hazardous substance waste site(s) contamination investigations.
6. Initiate and cause to be prepared all necessary documents including plans, specifications, and estimates (PS&E), and reports for this Project.
7. Assure that all design and PS&E are performed under the direct supervision of a Registered New Mexico Professional Engineer.
8. Design the Project in accordance with State and Federal guidelines and/or advisory circulars, hereby incorporated into this AGREEMENT.
9. Notify the Division's designated engineer when the plans and specifications are sufficiently complete for review.
10. Make no changes in design or scope of work without written approval of the Aviation Division.
11. Advertise for and contract for the construction of the Project.
12. Require the Engineer to prepare a final detail estimate of the work, indicating the bid items, the quantity in each item, the unit bid price and cost of the items based on low acceptable bid prices. Progress estimates shall be submitted to the Division in acceptable form so that details of quantities allowed on various items of work shall be shown on each progress payment. All detail estimates shall be in format approved by the Division.
13. The Sponsor shall take all steps, including litigation if necessary, to recover State funds spent fraudulently, wastefully, or in violation of State statutes, or misused in any other manner on any project upon which State funds have been expended. For the purposes of this AGREEMENT, the term "State funds" means funds, however used or disbursed by the Sponsor, that were paid by the Division pursuant to this AGREEMENT. The Sponsor shall obtain the approval of the Division as to any determination of the amount of the State share of such funds. It shall return the recovered State share, including funds recovered by settlement, order, or judgment, to the Division. It shall furnish to the Division, upon request, all documents and records pertaining to the determination of the amount of the State share of any settlement, litigation, negotiation, or the efforts taken to recover such funds. All settlements or other final dispositions by the Sponsor, in court or otherwise, involving the recovery of such State share shall be approved in advance by the Division.
14. The Sponsor shall, upon reasonable notice, allow the Division the right to inspect the project for the purposes of determining if it is being constructed in a good and workmanlike manner, and if the approved plans and specifications are being satisfactorily complied with. If such inspection discloses a failure to substantially meet such requirements and standards as, approved by the Division, the Division may terminate payment or payments until a mutually satisfactory remedy is agreed upon.

15. The Sponsor does hereby ratify and <sup>801</sup>adopt all assurances; statements, representations, warranties, covenants and, agreements contained in the AGREEMENT, and do hereby accept the Offer and by such acceptance agrees to comply with all of the terms and conditions in this AGREEMENT.
16. The Sponsor's acceptance of the Offer and ratification and adoption of the terms and conditions contained herein shall be evidenced by execution of this AGREEMENT, constituting the contractual obligations and rights of the Division and the Sponsor with respect to the accomplishment of the Project in accordance with all of the State's applicable laws and rules and in compliance with the assurances and conditions as provided herein. This AGREEMENT shall become effective upon the Divisions acceptance and upon complete execution of this AGREEMENT by all parties.

**SECTION FOUR - DIVISION SHALL:**

1. Assign a Technical Engineer as a contact person for this project.
2. Provide timely reviews of all submittals of scopes, plans, specifications, investigations or other documents.
3. Examine materials submitted for review; these items shall include the following:
  - a. Basic design concept;
  - b. Copies of plans, specifications, and estimates at 75% and 95% completion;
  - c. Required proofs of conformance with established design standards; and
  - d. Conformance with New Mexico Environment Department requirements, when applicable, with regard to the preliminary and final investigation of hazardous substance/waste site(s); and in conformance with the preliminary and final design for the removal of contaminates from the affected site(s).
4. The Division shall not provide an extensive check of any plans submitted by the Sponsor. Acceptance of plans by the Division does not relieve the Sponsor or its Consultant of their responsibility for errors and omissions.

**SECTION FIVE - BOTH PARTIES AGREE:**

1. Prior to the Notice to Proceed date, the Sponsor shall submit to the Division one complete set of plans and specifications which incorporate all comments and recommendations received during pre-bid activities and which have been fully executed by all involved parties.
2. The Sponsor shall obtain authorization from the Division prior to advertising the Project for bids.
3. If upon termination of this AGREEMENT there remain any properties, materials or equipment belonging to the Division, the Sponsor shall account for the same and dispose of them as directed by the Division.
4. The allowable costs of the Project shall not include costs determined by the Division to be ineligible for consideration under the Act.
5. The expenditure of any State money is subject to approval of all plans, specifications and other contract documents by the Division. The Sponsor shall comply with all applicable provisions of each of the referenced documents approved by the Division.

6. The Local Government's Road Funds<sup>803</sup> shall not be used to administer this program, and no Sponsor receiving a distribution pursuant to a program requiring matching funds shall use another distribution made pursuant to NMSA 1978, Section 67-3-28.2, as amended.

**SECTION SIX - COMPLIANCE WITH LAW:**

The Sponsor shall comply with all Federal, State, and local laws and ordinances applicable to the work called for herein.

**SECTION SEVEN - COMPLIANCE WITH EMPLOYMENT LAW AND COOPERATION WITH DEPARTMENT INVESTIGATIONS:**

The Sponsor shall comply with all applicable Federal, State, and Department laws, regulations and policies, including, but not limited to laws governing, civil rights, equal opportunity compliance, environmental issues, workplace safety, employer-employee relations and all other laws governing operation of the workplace, including laws and regulations hereafter enacted. The Sponsor shall furnish all information and reports required by, or pursuant to, the rules, regulations, and policies of the Department, and will permit access to, and the interview of, its employees, and the, except for legally privileged material, examination and copying of its employee records by investigators for the Department's Equal Opportunity Programs Bureau, Office of Inspector General, and Risk Management Bureau, the New Mexico Attorney General's Office, the New Mexico Department of Labor, and all branches of the United States Department of Transportation; and will otherwise fully cooperate with all such investigations.

**SECTION EIGHT - NEW MEXICO TORT CLAIMS ACT:**

By entering into this AGREEMENT, neither party shall be responsible for liability incurred as a result of the other party's acts or omissions in connection with this AGREEMENT. Any liability incurred in connection with this AGREEMENT is subject to the immunities and limitations of the New Mexico Tort Claims Act, Sections 41-4-1, et seq., NMSA 1978, as amended. This paragraph is intended only to define the liabilities between the parties hereto and it is not intended to modify, in any way, the parties' liabilities as governed by common law or the New Mexico Tort Claims Act. The Sponsor and its "public employees" as defined in the New Mexico Tort Claims Act, and the Department and its "public employees" as defined in the New Mexico Tort Claims Act, do not waive sovereign immunity, do not waive any defense and/or do not waive any limitation of liability pursuant to law. No provision in this AGREEMENT modifies and/or waives any provision of the New Mexico Tort Claims Act.

**SECTION NINE - ACCOUNTABILITY OF RECEIPTS AND DISBURSEMENTS:**

There shall be strict accountability for all receipts and disbursements relating hereto. The Sponsor shall maintain all records and documents relative to the Project for a minimum of three (3) years after completion of said Project. The Sponsor shall furnish the Division or State Auditor, upon demand, all records relevant to this AGREEMENT and allow them the right to audit all records which support the terms of this AGREEMENT.

**SECTION TEN - AUTHORIZATION OF EXPENDITURES:**

The terms of this AGREEMENT are contingent upon sufficient appropriations and authorizations being made by the Legislature of New Mexico, or the Congress of the United States if Federal funds are involved, for the performance of this AGREEMENT. If sufficient appropriations and authorizations are not made by the State Legislature or the Congress of the United States, if federal funds are involved, this AGREEMENT shall terminate upon written notice given by the Division to the Sponsor. The Division is expressly not committed to the expenditure of any funds until such time, as they are programmed, budgeted, encumbered and approved for expenditure by the Division. The Division's decision as to whether its funds are sufficient for the fulfillment of this AGREEMENT shall be final.

**SECTION ELEVEN - REIMBURSEMENTS:**

Funds expended by the Sponsor in accordance with the terms of this agreement shall be reimbursed by the Division to the Sponsor on a monthly basis. Interim reimbursement requests shall include a letter from the Sponsor requesting the amount due at that time and be accompanied by invoices from the parties to be paid by the Sponsor. The invoices shall total the amount to be paid at any time, of which the State share is a set percentage and/or fixed amount. Final reimbursement requests shall include a letter from the Sponsor requesting the amount due as the final payment and be accompanied by invoices from the parties to be paid by the Sponsor of which the State share is a set percent and/or fixed amount. The final payment request shall also be accompanied by proofs of payment that total the amount of money expended by the Sponsor on the Project. Proof of payment may be canceled checks or formal ledger entries. At the Sponsor's option, proofs of payment for interim pay requests may be submitted prior to the final payment request. All payment requests for projects in which the Sponsor is also directly receiving Federal money from the Federal Aviation Administration shall be accompanied by a copy of the Federal reporting form for reimbursement by which the Sponsor is requesting the federal share.

**SECTION TWELVE - TERMINATION:**

If the Sponsor fails to comply with any provision of this AGREEMENT, the Division has the option to terminate this AGREEMENT. By such termination, neither party may nullify obligations already incurred for performance or failure to perform prior to termination of this AGREEMENT. This AGREEMENT shall expire two years from date of execution by all of the parties hereto.

**SECTION THIRTEEN - MERGER:**

This AGREEMENT incorporates all the agreements, covenants, and understandings between the parties hereto concerning the subject matter hereof, and all such covenants, agreements and understandings have been merged into this written AGREEMENT. No prior agreement or understandings, verbal or otherwise, by parties or their agents shall be valid or enforceable unless embodied in this AGREEMENT. The terms of this AGREEMENT are lawful; performance of all duties and obligations herein shall conform with and do not contravene any State, local, or Federal statutes, regulations, rules, or ordinances.

**SECTION FOURTEEN - EXECUTION OF AGREEMENT:**

The AGREEMENT shall not take effect until executed by all of the parties hereto.

**SECTION FIFTEEN - SEVERABILITY:**

In the event that any portion of this contract is determined to be void, unconstitutional, or otherwise unenforceable, the remainder of this contract shall remain in full force and effect.

**SECTION SIXTEEN - AMENDMENT:**

This agreement shall not be altered, modified, or amended except by an instrument in writing and executed by the parties hereto.

Recommended by AVIATION DIVISION

Approved by the  
NMDOT Aviation Division Director

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

By: \_\_\_\_\_

By: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Approved as to form and legal sufficiency  
by the NMDOT Office of General Counsel

By: \_\_\_\_\_  
Assistant General Counsel

Date: \_\_\_\_\_

\_\_\_\_\_

Executed this 29th day of August, 2011.

CITY OF LAS CRUCES  
Name of Sponsor

By: [Signature]  
Sponsor's Designated Official Representative

Title: City Manager

(Seal)  
Attest: [Signature]  
Title: City Clerk

**Certificate of Sponsor's Attorney**

I, Ag. Alicia Landry acting as Attorney for the Sponsor, do hereby certify that in my opinion, the Sponsor is empowered to enter into the foregoing Grant Agreement under the laws of the State of New Mexico. Further, I have examined the foregoing Grant Agreement and the actions taken by said Sponsor related thereto, and find that the acceptance thereof by said Sponsor and Sponsor's official representative have been duly authorized and that the execution thereof is in all respects due and proper and in accordance with the laws of the said State and the Act. In addition, for grants involving projects to be carried out on property not owned by the Sponsor, there are no legal impediments that will prevent full performance by the Sponsor. Further, it is my opinion that the said Grant Agreement constitutes a legal and binding obligation of the Sponsor in accordance with the terms thereof.

Dated at Las Cruces, NM this 28th day of August, 2011

[Signature]  
Signature

**EXHIBIT A AIRPORT PROPERTY MAP OR ALP** (Submit with application/agreement)

**EXHIBIT A-1 PLANS AND SPECIFICATIONS** (Submit to Aviation Division Engineer for review when available)

**EXHIBIT A-2 PROJECT ENGINEERING**

(Project Engineer to provide the following information as it is available).

An estimate of the costs which would be incurred in providing the engineering data necessary to make an investigation, testing, estimates, prepare plans and specifications, supervise award of contract, prepare contract, stake the work, observe the work, make final inspection and final contract estimate. (Submit to Aviation Division Engineer for Review when available)

The work will be accomplished in accordance with the Federal Aviation Administration's Standards for Specifying Construction of Airports (Advisory Circular 150/5370-10, current edition).

**EXHIBIT A-3 AIRPORT ON PRIVATE LAND**

Attach duly executed agreement permitting public use of this land for airport purposes without limit as to time. If not applicable please note.

**EXHIBIT A-4 AIRPORT ZONING AND LAND USE**

Municipal Airport Law of 1978 (NMSA 1978, Section 3-39-1 et seq.)

Indicate if the city has adopted a zoning ordinance, date it was adopted and if a copy is on file with the NMDOT Aviation Division.

**EXHIBIT A-5 SPONSOR OBLIGATED/COMMITTED FUNDS**

This provides verification to the NMDOT Aviation Division that the Sponsor's share has been obligated / committed. The funds will be for use in defraying the costs of the project.

This must be submitted as part of the grant application/agreement to the NMDOT Aviation Division.

(Attach meeting minutes, resolution or other authorization stating the commitment of funding for the Sponsor's share of the cost of the project.)

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**EXHIBIT B PROJECT COSTS**

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**SPONSOR** City of Las Cruces

ITEM NO.	ITEM OF WORK AND DESCRIPTION	STATE FUNDS	SPONSOR'S FUNDS	OTHER FUNDS	TOTAL ESTIMATED COSTS
1	Electronic Airport Layout Plan	\$ 11,015	\$ 11,016	\$ 418,589	\$ 440,620

ITEM NO.	ITEM OF WORK AND DESCRIPTION	STATE FUNDS	SPONSOR'S FUNDS	OTHER FUNDS	TOTAL ESTIMATED COSTS
		\$	\$	\$	\$

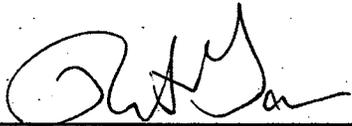
ITEM NO.	ITEM OF WORK AND DESCRIPTION	STATE FUNDS	SPONSOR'S FUNDS	OTHER FUNDS	TOTAL ESTIMATED COSTS
		\$	\$	\$	\$

ITEM NO.	ITEM OF WORK AND DESCRIPTION	STATE FUNDS	SPONSOR'S FUNDS	OTHER FUNDS	TOTAL ESTIMATED COSTS
		\$	\$	\$	\$

<b>TOTALS</b>	\$ 11,015	\$ 11,016	\$ 418,589	\$ 440,620
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**EXHIBIT C DEFAULT STATEMENT**

The Sponsor is not in default on any obligation to the State of New Mexico, or any agency of the State of New Mexico, relative to the development, operation or maintenance of any airport except as stated below in this Exhibit C.



Signature

City Manager

Title

8/29/11

Date

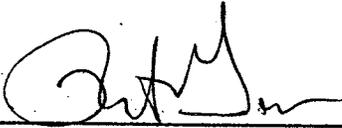
3-35-0024-027

Sponsor's Federal Identification Number

APPROVED AS TO FORM:  
  
City Attorney

**EXHIBIT C-1 SUSPENDED/DEBARMENT STATEMENT**

The Sponsor hereby specifically agrees that it shall not award the contract for which this grant is given, nor shall bidding documents be given to any contractor which or who is subject to suspension or debarment by the U.S. Department of Transportation or any of its agencies, or the New Mexico Department of Transportation at the time of the bidding or award of the contract. Violation of this provision shall void this grant.



Signature

City Manager

Title

8/29/11

Date

3-35-0024-027

Sponsor's Federal Identification Number

APPROVED AS TO FORM:  
  
City Attorney

**PROJECT CLOSE-OUT DOCUMENTS****CLOSE OUT REQUIREMENTS**

The final payment request shall also be accompanied by proofs of payment that total the amount of money expended by the Sponsor on the Project. Proof of payment may be canceled checks or formal ledger entries before the final reimbursement can be released by the Division.

**1. Final Inspection Forms**

Once a construction project is completed, a final inspection and acceptance of the project are required. The Division must be made aware of the time and place of the final inspection, in writing. Two weeks notice is preferred. One of the Division's staff will be in attendance. The following three forms are to be used for the final inspection/final acceptance process.

- a. Notice of Final Inspection
- b. Final Inspection Report
- c. Project Acceptance

**2. Financial and Compliance Project Audit**

A satisfactory financial and compliance audit of the project will be completed by the Division before the balance of funds will be released.

**3. Updated Airport Layout Plan**

After the project completion, if the project causes a facility change, another Airport Layout Plan will be submitted showing the scope of the project actually completed. The balance of the funds cannot be released until the revised ALP is received by the Division.

**4. Material Test Results**

Prior to final acceptance of the project, summary documentation of materials and construction quality tests shall be provided to the Division by the Sponsor or the Sponsor's Engineer.

**5. As - Built Plans**

After project completion and prior to release of final reimbursement the Sponsor will provide the Aviation Division a copy of the as - built plans and/or record drawings.

PER	LAST YEAR MONTHLY AMOUNTS		
	ACTUAL	ENCUMBRANCE	BUDGET
00	.00	.00	.00
01	.00	7,942.80	1,333.37
02	145.04	.00	1,333.33
03	12,824.93	-6,224.93	1,333.33
04	.00	.00	1,333.33
05	.00	.00	1,333.33
06	.00	.00	1,333.33
07	2,836.35	-1,717.87	1,333.33
08	.00	.00	1,333.33
09	.00	.00	1,333.33
10	.00	.00	1,333.33
11	.00	.00	1,333.33
12	.00	.00	1,333.33
13	.00	.00	.00
Tot:	15,806.32	.00	16,000.00

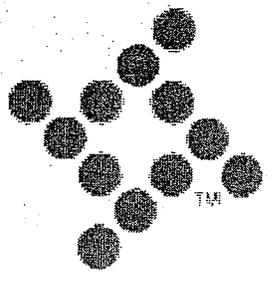
		PRIOR YEARS TOTAL AMOUNTS	
2010 Actual	15,806.32	2010 Orig Budget	16,000.00
2010 Closed @ YE	15,806.32	2010 Bud Tfr In	.00
2010 Encumbrance	.00	2010 Bud Tfr Out	.00
2010 Memo Bal	15,806.32	2010 C Fwd Budget	.00
2009 Actual	17,641.67	2010 Revsd Budget	16,000.00
2008 Actual	12,152.50		
2007 Actual	7,666.77	2009 Orig Budget	11,800.00
2006 Actual	.00	2009 Revsd Budget	19,800.00
2005 Actual	.00	2008 Orig Budget	20,000.00
2004 Actual	.00	2008 Revsd Budget	18,232.00
2003 Actual	.00		
2002 Actual	.00	2010	0.00
2001 Actual	.00	2009	0.00
		2008	0.00

		FUTURE YEAR AMOUNTS	
PER	2012 BUDGET	2012 DEPT	BUDGET
00	.00	52,750.00	.00
01	2,312.50	52,750.00	.00
02	2,312.50	52,750.00	.00
03	2,312.50	27,750.00	.00
04	2,312.50	27,750.00	.00
05	2,312.50	27,750.00	.00
06	2,312.50	2013 Estimate	.00
07	2,312.50	2014 Estimate	.00
08	2,312.50	2015 Estimate	.00
09	2,312.50	2016 Estimate	.00
10	2,312.50		
11	2,312.50	2012 Memo Bal	3,179.55
12	2,312.50	2012 Encumbrance	15,798.44
13	.00	2012 Requisition	.00
Tot:	27,750.00		

*eALP match will come out of this account*

----- ACCOUNT NOTES -----

\*\* END OF REPORT - Generated by Lisa Murphy \*\*



CITY OF LAS CRUCES  
ADOPTED BUDGET FY 2011/2012

FUND	DIVISION		FUND TYPE	
Airport Improvement Fund 4300	Transportation		Capital Project	
	FY 2010/11 UNAUDITED	FY 2011/12 Adopted	FY 2011/12 Adjustment	FY 2011/12 Adjusted
<b>RESOURCES</b>				
Beginning Balance	\$ 716,318	736,611		736,611
<b>REVENUES</b>				
570010 Interest Income	\$ 17,218	20,000		20,000
570015 Net Incr (Decr) Fair Value Investment	(1,803)	0		0
70B03 FAA Airport Lights/Sings	4,878	0		0
70B08 Impr. Grant Runway 12-30 Rehab	0	9,844		9,844
70B09 Runway 12-30 Reconstruction	373,183	929,647		929,647
70B10 Automated Weather Observation System FAA	160,822	160,673		160,673
70B12 Rehab Taxiway A	0	5,483,879		5,483,879
70B13 Electronic Airport Layout Plan (eALP)	0	418,589	11,015	429,604
70C00 FAA Grant - Air Traffic Control Tower Phase I	575,153	457,870		457,870
<b>Total Revenues</b>	\$ 1,129,451	7,480,502	11,015	7,491,517
<b>Total Resources</b>	\$ 1,845,769	8,217,113	11,015	8,228,128
<b>EXPENDITURES</b>				
70B08 Impr. Grant Runway 12-30 Rehab	0	9,844		9,844
70B09 Rehab Runway 12-30	373,183	929,647		929,647
70B10 Automated Weather Observation System FAA	160,822	160,673		160,673
70B12 Rehab Taxiway A	0	5,483,879		5,483,879
70B13 Electronic Airport Layout Plan (eALP)	0	418,589	11,015	429,604
70C00 Air Traffic Control Tower	575,153	457,870		457,870
<b>Total Expenditures</b>	\$ 1,109,158	7,460,502	11,015	7,471,517
<b>ENDING BALANCE</b>	\$ 736,611	756,611	0	756,611

PROPOSAL EVALUATION REPORT		POINTS DISTRIBUTION									
		TITLE: Electronic Airport Layout Plan RFP NO.: 10-11-511	Armstrong Consultants, Inc.	Atkins North America, Inc.	Burns & McDonnell Inc.	Coffman Associates, Inc.	Parkhill, Smith, & Cooper, Inc.	URS Corporation	Woolpert, Inc.	TOTAL POINTS POSSIBLE	
1. Technical Approach	400	270	270	260	320	270	290	300			
2. Capability/Competence	800	540	540	500	580	470	580	560			
3. Capacity/Capability	800	600	500	420	540	460	560	620			
4. Management Approach	800	540	520	460	560	460	560	560			
5. References	1000	775	450	500	825	625	750	725			
6. Clarity	200	140	135	120	135	115	145	135			
Rating Sheets Raw Scores	4000	2865	2415	2260	2960	2400	2885	2900			
Subtract Highest Scorer		470	400	320	445	365	430	440			
Subtract Lowest Scorer		300	235	230	285	260	305	280			
Rating Sheet Net Score		2095	1780	1710	2230	1775	2150	2180			
Top Net Score Minus 10%		2007.0	2007.0	2007.0	2007.0	2007.0	2007.0	2007.0			
Qualifies for Interview		Yes			Yes		Yes	Yes			
INTERVIEW EVALUATION RESULTS		1320			1260		1270	1330			
TOTAL SCORES		3415			3490		3420	3510			