GRAND JUNCTION
REGIONAL AIRPORT

Board Packet

Regular Board Meeting

March 28, 2017

GRAND JUNCTION REGIONAL AIRPORT AUTHORITY

Date: **March 28, 2017**

Location: ***COLORADO MESA UNIVERSITY***
1100 NORTH AVE
GRAND JUNCTION, CO 81501
UNIVERSITY CENTER MEETING ROOM 213

EXECUTIVE SESSION

Time: 3:30 PM

I. **Call to Order and Pledge of Allegiance**

II. **Approval of Agenda**

III. **Motion into Executive Session**

IV. *To confer with the Grand Junction Regional Airport Authority's legal counsel about ongoing litigation matters and to obtain legal advice on those pending matters, all as authorized by C.R.S. 24-6-402(4)(b) and to discuss personnel matters as authorized by CRS §24-6-402(4)(f).*

V. **Adjourn Executive Session**

Time: 5:15 PM

REGULAR BOARD MEETING AGENDA

I. **Approval of Agenda**

II. **Conflict Disclosures**

III. **Commissioner Comments**

IV. **Citizens Comments**

The Grand Junction Regional Airport Authority welcomes public comments at its meetings. The Citizens Comment period is open to all individuals that would like to comment. If you wish to speak under the Citizens Comment portion of the agenda, please fill out a comment card prior to the meeting. If you have a written statement for the Board, please have 10 copies available and give them to the Clerk for distribution to the Board. The Board Chairman will indicate when you may come forward and comment. Please state your name for the record.

V. **Consent Agenda**

The Consent Agenda is intended to allow the Board to spend its time on the more complex items on the agenda. These items are perceived as non-controversial and can be approved by a single motion. The public or Board Members may ask that an item be removed from the Consent Agenda and be considered individually.

A. February 21, 2017 Regular Meeting Minutes 1
B. Armstrong pay request AIP 52 2
C. Payment to Department of Justice 3
D. Pay Request: G4S 4

VI. Discussion/Informational Items

A. Final audit presentation by EKS&H (Commissioner Benton)_____ 5

VII. Staff Reports

A. Financial Update (Ty Minnick)_____ 6

B. Communications, Events and Activity Update (Jodi Doney)_____ 7

C. Projects Update (Eric Trinklein)_____ 8

VIII. Action Items

A. Chairman appointment (Board)_____ 9

B. At-large Commissioner selection (Board)_____ 10

C. Change order - AIP 52 (Eric Trinklein)_____ 11

D. Change order - AIP 54 (Eric Trinklein)_____ 12

E. Runway Consultant selection (Board)_____ 13

F. Air Traffic Control Tower lease (Eric Trinklein)_____ 14

G. Grand Valley Power easement (Eric Trinklein)_____ 15

IX. Any other business which may come before the Board

X. Adjournment

*****MEETING LOCATION CHANGE*****

COLORADO MESA UNIVERSITY

1100 NORTH AVE

GRAND JUNCTION, CO 81501

UNIVERSITY CENTER

MEETING ROOM 213

POSTED MARCH 24, 2017

GJRA Board Meeting

PARKING PERMIT

Valid: March 28, 2017

Valid in the CMU University Center Parking Garage

2nd Level and Above

NOT VALID IN PAY-TO-PARK SPACES ON 1st LEVEL

Also valid in all other *Commuter* Lots on campus.

PLEASE PRINT AND DISPLAY THIS PARKING PERMIT ON THE DASH OF YOUR VEHICLE.

Grand Junction Regional Airport Authority Board
Board Meeting
Meeting Minutes
February 21, 2017

REGULAR BOARD MEETING
Time: 5:15PM

I. Call to Order & Pledge of Allegiance.

Mr. Steve Wood, Board Chairman, called the Meeting of the Grand Junction RegionalAirport Authority Board to order at about 5:15PM on February 21, 2017 in Grand Junction, Colorado and in the County of Mesa.

Commissioners Present:	*Other:*
Steve Wood, Chairman	Shannon Kinslow, TOIL
Dave Murray	Drew Armstrong, Finance & Audit committee
Paul Nelson	Bob Jones, Kimley – Horn
Tom Benton	Wayne Clark, GJAUTA
Rick Taggart	David Hartmann, Armstrong
	Dennis Corsi, Armstrong
Airport Staff:	
Kip Turner	
Victoria Hightower, Clerk	
Ty Minnick	
Ben Johnson	
Ben Peck	
Chance Ballegeer	
Jodi Doney	
Eric Trinklein	

II. Approval of Agenda

Chairman Wood stated that staff asked for Directors Report to be replaced with a CAF presentation and have Action Items F. AIP 52 Change order and item G. AIP 52 pay request, be removed from the agenda.

The agenda was approved by major motion with the changes.

III. Conflict Disclosures

Commissioner Murray – None
Commissioner Nelson – None
Chairman Wood – Hangar Owner
Commissioner Ball – Absent

Commissioner Taggart – None
Commissioner Benton – None
Commissioner Brown - Absent

IV. Commissioner Comments

Chairman Wood read an excerpt from the settlement agreement because he felt like a lot of discussion taken place on this topic has been misleading to the public. *"The United States contends that it has certain civil claims under the false claims act against the airport arising from the false certifications and information provided to the FAA. In particular, the airport submitted knowingly false categorical exclusion (CatEx) forms as part of its environmental compliance for construction of an airport perimeter fence including entrance gates, (a.k.a. "The Fence Project"), AIP project number 308-0027-43. These airport sponsored categorical exclusion certifications were used to obtain approval of The Fence Project and to avoid additional analysis required by the National Environmental Policy Act, concerning the impact changes The Fence Project would cause to the general aviation community including businesses located at the airport. At the time the categorical exclusion forms are certified by the airport, it knew that The Fence Project was likely to have a substantial negative impact on existing business at the airport due to the restrictions on entry by the public to the businesses located within the boundaries of the fence. The categorical exclusion form certified by the airport on February 12, 2009 and on April 19, 2011, each contain false statements claiming that there would be no secondary induced impacts socioeconomic impacts, environmental justice, and children's environmental health and safety risks or cumulative impacts of the airports fence project on existing businesses. The CatEx form certified by the airport on August 8, 2011 when The Fence Project was already underway, contains false statements regarding the likely magnitude of projects negative impact on existing business at the airport, in reliance on these three false certifications the FAA allowed the airport to proceed with the fence project and to withdraw federal funds from the FAA for the project between January 18, 2011 and October 10, 2012."* Chairman Wood stated that he wanted to read that because he thinks it is important for people to understand that the issue was not a clerical error and from things that happened years ago this Board and the Board of the last three or four years has had a tremendous amount of work to do. Chairman Wood stated that he is not expressing personal opinion, he is simply stating the position of the United States.

V. Citizen Comments

Wayne Clark, GJAUTA

Mr. Clark thanked Chairman Wood for reading the excerpt and stated that he thinks it's extremely important that things be brought out that unfortunately the newspaper has forgotten to do. Mr. Clark asked the Board what was happening with the gates. Mr. Clark stated that they had an issue a couple of months ago with a broken gate where GA enters the airport. Mr. Clark said that if the other gate they had to use broke they would have been in trouble and would have had to be escorted by West Star because of the AOA, it would have been a burden on West Star and would have been a burden on the GA. Mr. Clark said that the he has noticed that for the last couple of Board meetings the gate issue has disappeared and he would like to have some answers.

Chairman Wood said that they will do their best to get an update on the status of the gate situation.

VI. Consent Agenda

A. January 17, 2017 Regular Meeting Minutes
B. Pay Request: G4S

Commissioner Nelson made a motion for the Board to approve the Consent Agenda as presented. Commissioner Benton seconded. Voice Vote. All Ayes.

VII. CAF Presentation (Randy)

VIII. Staff Reports

A. Financial/Activity Update

Mr. Minnick briefed the Board on the airport's current financial status. (Financial Results report created by Mr. Ty Minnick)

Financial Results

Assets –

- Cash showed a slight decrease as a result of an increase in the account receivables balance. This increase in A/R was mostly due to the timing of cash receipts after month end and $170,000 refundable amount from the RTR relocation.

Liabilities –

- The accrued liability balance includes the payment for approximately $520,000 due to the FAA. This payment is being discussed at the February board meeting.

Aeronautical Revenue – Landing fees were higher compared to prior, effected by the larger aircraft and increased frequency. Enplanements were up approximately 11% year over year. Aviation fuel tax is slightly lower than budget due to the timing of receipts.

Non-Aeronautical Revenue – This revenue category is consistent with budget and prior year.

Operating Expense – Expenses are slightly below budget with lower than budgeted legal services. All other operating expense categories are consistent with budget.

Non-operating Revenue/Expense – This revenue/expense category is consistent with budget and prior year.

Enplanements

			Variance	
	2016	2017	Passengers	Percent
January	15,735	17,441	1,706	10.8%

			Variance	
	5 Year Avg	2017	Passengers	Percent
January	16,463	17,441	978	5.9%

B. Communications/Events Update

Ms. Jodi Doney briefed the Board on enplanements. Ms. Doney said that with the upgrade of American airlines Dallas flight to the E-175, they also upgraded the Phoenix flight to a two cabin aircraft the CRJ-700. United has also started flying the 700 in their fleet coming into Grand Junction and then Delta with the additional flight to Salt Lake.

C. Projects Update

Mr. Eric Trinklein briefed the Board on current airport projects. Mr. Trinklein said that with the building at 800 Eagle Dr., staff has helped coordinate with the Grand Junction Economic Partnership (GJEP) to bring in some contractors for feasibility information for the foreign trade zone, at the same time staff is working with a small engineering firm to do structural analysis. Mr. Trinklein said that on the runway project, a request for qualifications (RFQ) was posted on the website on February 13th, are due March 15th and staff then staff will provide a recommendation to the Board at the regular March Board meeting. Mr. Trinklein said that an additional RFQ for the engineer of record, staff should have later this week to early next week. Mr. Trinklein said that staff is also working on a RFQ for architectural services for terminal renovations and the jet bridge. AIP 54 – airport staff realized that during work phases of the bid plans, parking only allowed for one commercial aircraft which would impede airport operations, solutions have been developed through additional phases to greatly reduce the impacts. AIP 52, regarding mill and overlay of the connector projects, took longer than expected and there have been a couple of correspondence with the contractor. Staff will make a decision on a solution to move forward on March 14th and the work will begin on May 30th. Mr. Trinklein said that in order to complete the project, airport staff will perform necessary engineering in accordance with FAA requirements, and at the end of the project a final change order will be required to reflect the final cost of the project.

IX. Action Items

A. Attorney Services RFQ selection

The Board interviewed three law firms that responded to an RFQ put out about three weeks ago. (Responses for all firms to the RFQ included in board packet)

1. **Karp Neu Hanlon**

Mr. Karl Hanlon introduced himself to the Board and stated that he is with the law firm Karp Neu Hanlon. Mr. Hanlon said that they have offices in Aspen, Glenwood Springs and Montrose. Mr. Hanlon has been doing government related work since the late 70s and he's been doing municipal and government special district authority work since 1996. Mr. Hanlon said that they have eleven attorneys in the Glenwood office, four more spread between offices and they range from a very active federal trial practice on a wide variety of issues all the way across the board to business, land use and all of the things to think of in a private transactional or litigation practice, as well as, a very robust municipal and governmental law practice.

Commissioner Benton congratulated Mr. Hanlon on the Martindale rating their firm received.

2. **Rose-Walker-Starr**
   Mr. Todd Starr introduced himself to the Board. Mr. Starr practiced law out of Nebraska but he grew up in Colorado. Mr. Starr believes that their practice is uniquely suited to an airport authority. Mr. Starr stated that there is probably not an airplane crash in this country that happens that their law firm doesn't get engaged to represent or defend a part 145 shop, and consequently they have relationships with maintenance facilities, manufactures, the NTSB and the FAA and they can bring those relationships to the benefit of the Airport Authority. Mr. Starr stated that the key to a successful airport authority is the airport manager and his job as the airports attorney is not just to keep the airport out of hot water but to council and advise them, but to be a partner to Mr. Turner and to make sure that as he puts the Board's policy into action, that he has a real partner to help him succeed.

   Chairman Wood asked, geographically, how readily available would Mr. Starr or someone from his firm be if the Board needs them in person.

   Mr. Starr said instantaneously, but if for some reason he couldn't make it then his partner in Denver, Paul Grant, would venture over from Denver and if for some reason Mr. Grand couldn't make it then Mr. Rose would be catch a flight out here from Dallas/Ft. Worth. Mr. Starr said that with two partners in Dallas, one in Denver and with Mr. Starr being in Pagosa Springs, they are pretty good at making geographical boundaries and thing of the past.

3. **Spencer Fane**
   Mr. Tom George with Spencer Fane introduced himself to the Board. Mr. George said that he grew up in Rifle and went to College at CU Boulder, he got his law degree in Arizona and went back to Denver. Mr. George stated that Spencer Fane is based out of Kansas City, they have about 200 attorneys across six states. Mr. George said that they have been representing special districts, local governments, and governmental entities for about 50 years. Mr. George said that they currently serve as general counsel to over 300 entities. Mr. George said that he left private

practice to go to the Attorney General's office and was there for about 3 years until this last summer. Mr. George said that their firm across all six states is a full service law firm, they have attorneys that specialize in just about anything. Mr. George said that their firm in Denver primarily focuses on the local government and governmental entity group with nine attorneys and five paralegals. Mr. George said that they have a large labor employment practice and they do a lot of personnel training for their governmental clients.

B. Board meeting times and location

Mr. Turner briefed the Board. Mr. Turner said that the current room that the Board meetings are held in will be taken over by Tailwinds tomorrow, so staff surveyed their options they had for continuing board meetings until they receive the office space back from TSA that they are anticipating sometime this year. Mr. Turner stated that in order for them to use the third floor TSA conference room, they would have to use it on the hours that they allow it to be used due to their security system. Staff has made a recommendation to avoid additional cost that they don't have budgeted for outside board room and to try to keep the meeting on site, they suggested a mid-day time that would allow them to use the room at no cost.

Chairman Wood said that the location change wouldn't be as much of a question as the time change.

Commissioner Murray said that it would be hard for him to do a mid-day, he might be able to, but he is worried about the public.

Commissioner Taggart volunteered to talk to someone at the City to see if board meetings could be held there on a temporary basis.

Commissioner Benton made a motion to investigate the opportunity for having the board meetings at City Hall as the primary location, followed secondarily by a location on campus without expense and then returning to the item suggested at 10am at the airport. Commissioner Taggart seconded. Voice Vote. All Ayes

C. FMLD Grand Application Resolution 2017-003

Mr. Ben Johnson briefed the Board and stated that they are back with another application. Mr. Johnson said that the Federal Mineral Lease District (FMLD) has opened up their spring grant cycle. This year the FMLD has right around $700,000 to give away so $350,000 in this particular cycle. Mr. Johnson said that staff would like to ask for a mini grant of $45,500 to purchase an SCBA bottle filling system. The SCBA is a self-contained breathing apparatus worn by firefighters to breathe clean air. Mr. Johnson said that they don't currently have a way to fill bottles, they have to take them to a local fire station to refill them so they don't get to train with them as often because of the inconvenience and for the risk of having those empty bottles. The mini grants do not require a match.

Commissioner Nelson made a motion to adopt the Resolution 2017-003 to allow the Executive Director to sign the grant application and then allow the Chairman to accept it if awarded. Commissioner Murray seconded. Roll Call Vote. Commissioner Murray: Aye, Commissioner Benton: Aye, Chairman Wood: Aye, Commissioner Nelson: Aye, Commissioner Taggart: Aye. Motion carries.

D. Payment to the FAA

Mr. Turner briefed the Board. Mr. Turner stated that this was originally approved by the Board back in July of 2016. Staff felt it was appropriate to come back with it one more time because the method of approval was for eight installments and after conversations with the FAA and with staff, it is a preferred method to resolve this in one payment. Staff is asking for a revision of the Board's recent approval as to how they move forward on this item.

Commissioner Murray made a motion to approve the payment to the FAA for $520,450.83 in a single payment to settle the amount owed to the FAA. Commissioner Taggart seconded. Voice Vote. All Ayes.

E. Rates and Charges

Mr. Minnick briefed the Board. Mr. Minnick stated that there are some minor changes throughout the document of just updating dates and application of the rates and charges. Mr. Minnick said that the main changes are on page 8 where he added transportation network companies (TNC) which will cover Uber and Lyft, which will pay a flat fee to the airport of $2.50, versus the other ground transportation companies such as taxis that pay a 10% fee of originated revenue. Mr. Minnick stated that the other change is on page 12, which is just striking out the language that sets a specific rate on new leases and instead will allow any new leases at the maximum rate that a current lease holder is paying. Mr. Minnick stated that on the last page of the rates and charges he included for CORA request items which is $20 per hour of staff time and $.25 per copied page. Anyone doing a CORA request would be required to pay before receiving those items.

Commissioner Benton made a motion regarding Resolution 2017-004 Rates and Charges, for the Board to approve as presented. Commissioner Nelson seconded. Roll Call Vote. Commissioner Taggart: Aye, Commissioner Nelson: Aye, Chairman Wood: Aye, Commissioner Benton: Aye, Commissioner Murray: Aye. Motion carries.

X. Discussion/Information Items

A. Audit Draft

Commissioner Benton and Mr. Minnick briefed the Board. Commissioner Benton shared a little bit of back ground on what occurred since the last meeting and Mr. Minnick went through some of the financial information in the audit. Mr. Minnick stated that if there are no material changes to the audit draft, they can finalize the audit and do a partner presentation at the March meeting.

B. At Large Board Member

Chairman Wood state that Commissioner Ball, the at-large board member, times out at the end of the month. Chairman Wood said that staff has posted the at-large position on the website and in the paper with a closing date of March 13th for applicants to apply. Chairman Wood said that as soon as it's closed, the Board asks staff to share the results. Chairman Wood said that it would be their hope to make a down select at the March meeting. Chairman Wood stated that according to the by-laws the at-large selection is done by the Board but is required to be ratified by the City and the County.

Mr. Turner said that the Board will receive the names and then go into executive session and then go into open meeting for public comment, so they will need to schedule an executive session.

Executive session will take place in the beginning of the regularly scheduled March meeting with a start time of 4pm.

XI. Motion in Executive Session

Commissioner Taggart moved for the Board to go into executive session to confer with the Grand Junction Regional Airport Authority's legal counsel about ongoing litigation and to discuss the potential resolution of that litigation and the terms and conditions upon which that matter could be finalized and concluded, as authorized by C.R.S. § 24-6-402(4)(b) and (4)(e)

XII. Adjourn Executive Session

Commissioner Nelson moved to adjourn executive session. Commissioner Murray seconded. Voice Vote. All Ayes. Executive session adjourned at 10:00pm

XIII. Any other business which may come before the Board

Commissioner Taggart recommended, based on presentations today, that they entertain utilizing services of Karp Neu Hanlon for legal services.

Commissioner Taggart moved that they contract with Karp Neu Hanlon for the Airport's Authority's legal services. Commissioner Nelson seconded. Voice Vote. All Ayes.

XIV. Adjournment

Commissioner Benton moved to adjourn the meeting. Commissioner Nelson seconded. Voice Vote. All Ayes

The Meeting adjourned at 10:06PM.

Steve Wood, Board Chairman

ATTEST:

Victoria Hightower, Clerk to the Board

Grand Junction Regional Airport Authority

Agenda Item Summary

TOPIC:	AIP 52 Pay Requests (Armstrong)
PURPOSE:	Information ☐ Guidance ☐ Decision ☒
RECOMMENDATION:	
LAST ACTION:	N/A
DISCUSSION:	The Airport has received an invoice for work completed on AIP 52. AIP 52 consists of three projects. However, this work effort is for the acceptance testing and additional construction administration services for the Taxiway A connector project. Armstrong has provided two invoices for this work A portion of the payment will be withheld until Armstrong corrects a portion of the thermoplastic marking which does not meet standards. $82,858.88 Additional Construction Administration $38,071.36 Additional Acceptance Testing ($17,565.00) Marking Correction Repair **$103,365.24 Total** The additional services will be deducted from Elam based on Change Order Number One to the contract.
FISCAL IMPACT:	Armstrong Consultants Invoices will be reduced from Elam's Contract for the project
ATTACHMENTS:	Armstrong Invoices
STAFF CONTACT:	Eric Trinklein etrinklein@gjairport.com Office: 970-248-8597

861 Rood Avenue
Grand Junction, Colorado 81501
Phone: 970.242.0101
Fax: 970.241.1769
www.armstrongconsultants.com
email: evliek@armstrongconsultants.com

Transmittal

To:	Mr. Eric Trinklein	**Date:**	3/8/2017
	Grand Junction Regional Airport	**Re:**	Airport
	800 Eagle Drive		
	Grand Junction, CO 81506	**Job No.**	156269

Copies	Date	Description
1	3/8/2017	Armstrong Consultants Invoice, for payment
1	3/8/2017	T&M Summary

☐ As Requested
☐ For Approval
☐ For Signature
☐ For Review and Comment
☐ Approved as Submitted
☐ Returned for Corrections
☐ For Your Use
☐ For Your Files

If enclosures are not as listed, please notify us at once.

Signed Erik Vliek

ARMSTRONG

Grand Junction Regional Airport
800 Eagle Drive
Grand Junction, CO 81506

DATE: 3/8/2017
INVOICE NO: 17-156269-TM

ATTN: Mr. Eric Trinklein

FOR PROFESSIONAL SERVICES RENDERED:
Grand Junction, Colorado
Grand Junction Regional Airport
Engineering Services
AIP # 3-08-0027-052-2015
CDOT # 15-GJT-01

Project 2 (Attachment D) - Rehabilitate Taxiways A1, A2, A3, A4, A5, A6 and A7

Additional Construction Services - T&M	:$	82,858.88	X 100%	=	$82,858.88
			Total Amount Earned to Date	=	$82,858.88
			Less Amount Paid	=	$0.00
			Total Amount Due this Invoice	=	$82,858.88

DIRECT EXPENSES					
Position	Regular Hourly Rate	Overtime Hourly Rate	Regular Hours	Overtime Hours	Total
Principal	$232	N/A	90.3	N/A	$20,949.60
Project Manager	$198	N/A	71.3	N/A	$14,117.40
Project Engineer	$127	N/A	157	N/A	$19,939.00
Field Eng Supervisor	$155	N/A	34	N/A	$5,270.00
Resident Inspector	$118	$177	165.75	0	$19,558.50
CAD Technician	$97	$146	17	0	$1,649.00
Clerical	$84	$126	0	0	$0.00
				TOTAL DIRECT FEES	$81,483.50

REIMBURSABLE EXPENSES			
Expense	Rate	Quantity	Estimated Total
Vehicle Expenses	$0.54/mile	847	$457.38
Per Diem	$51/day	18	$918.00
Misc. Expenses	$0	1	$0.00
		TOTAL REIMBURSABLE FEES	$1,375.38

TOTAL CONSTRUCTION INSPECTION FEES	$82,858.88



Type	Job #	Date	Project Name	Task / Expense Type	Hours/ Units	Owner	Billing Rate	Total Billed
Time Entry	156269	8/30/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01.02	1.00	athomas	$127.00	$127.00
Time Entry	156269	8/31/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01.02	0.50	athomas	$127.00	$63.50
Time Entry	156269	9/1/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01.02	0.50	athomas	$127.00	$63.50
Time Entry	156269	9/2/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01.02	0.50	athomas	$127.00	$63.50
Time Entry	156269	9/6/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01.02	1.50	athomas	$127.00	$190.50
Time Entry	156269	9/7/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01.02	0.50	athomas	$127.00	$63.50
Time Entry	156269	9/8/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01.02	0.25	athomas	$127.00	$31.75
Time Entry	156269	9/9/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01.02	3.00	athomas	$127.00	$381.00
Time Entry	156269	9/12/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01.02	2.00	athomas	$127.00	$254.00
Time Entry	156269	9/13/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	3.50	athomas	$127.00	$444.50
Time Entry	156269	9/13/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01.02	0.50	athomas	$127.00	$63.50
Time Entry	156269	9/14/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01.02	0.50	athomas	$127.00	$63.50
Time Entry	156269	9/15/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01.02	0.75	athomas	$127.00	$95.25
Time Entry	156269	9/16/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01.02	0.50	athomas	$127.00	$63.50
Time Entry	156269	9/19/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01.02	2.50	athomas	$127.00	$317.50
Time Entry	156269	10/13/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01.02	0.50	athomas	$127.00	$63.50
Time Entry	156269	10/14/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01.02	0.50	athomas	$127.00	$63.50
Time Entry	156269	11/15/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3013 - Site Visits and Travel	2.00	Chris	$198.00	$396.00
Time Entry	156269	11/23/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3014 - Misc. Client Meetings and Correspondence	3.50	Chris	$198.00	$693.00
Time Entry	156269	12/13/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3014 - Misc. Client Meetings and Correspondence	2.00	Chris	$198.00	$396.00
Time Entry	156269	1/3/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3014 - Misc. Client Meetings and Correspondence	1.5	Chris	$198.00	$297.00
Time Entry	156269	1/4/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3014 - Misc. Client Meetings and Correspondence	1.5	Chris	$198.00	$297.00
Time Entry	156269	11/10/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	Chris	$232.00	$464.00
Time Entry	156269	11/14/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	Chris	$232.00	$464.00
Time Entry	156269	11/21/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	Chris	$232.00	$464.00
Time Entry	156269	11/23/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	0.50	Chris	$232.00	$116.00
Time Entry	156269	12/7/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	Chris	$232.00	$464.00
Time Entry	156269	1/19/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1	Chris	$232.00	$232.00
Time Entry	156269	9/1/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	david	$232.00	$464.00
Time Entry	156269	9/2/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	david	$232.00	$464.00
Time Entry	156269	9/30/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	david	$232.00	$464.00
Time Entry	156269	11/4/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	david	$232.00	$464.00
Time Entry	156269	11/29/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	david	$232.00	$464.00
Time Entry	156269	11/30/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	4.00	david	$232.00	$928.00
Time Entry	156269	12/1/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	4.00	david	$232.00	$928.00
Time Entry	156269	12/2/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	3.00	david	$232.00	$696.00
Time Entry	156269	12/6/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	8.00	david	$232.00	$1,856.00
Time Entry	156269	12/12/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	4.00	david	$232.00	$928.00
Time Entry	156269	12/13/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	8.00	david	$232.00	$1,856.00
Time Entry	156269	12/14/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	david	$232.00	$464.00
Time Entry	156269	12/19/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	3.00	david	$232.00	$696.00
Time Entry	156269	12/20/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	david	$232.00	$464.00
Time Entry	156269	12/21/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	david	$232.00	$232.00

Time Entry	156269	12/22/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.00	david	$232.00	$232.00
Time Entry	156269	12/27/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	4.00	david	$232.00	$928.00
Time Entry	156269	12/28/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	4.00	david	$232.00	$928.00
Time Entry	156269	1/3/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2	david	$232.00	$464.00
Time Entry	156269	1/4/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2	david	$232.00	$464.00
Time Entry	156269	1/5/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2	david	$232.00	$464.00
Time Entry	156269	9/2/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	4.90	Dennis	$232.00	$1,136.80
Time Entry	156269	9/5/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	0.60	Dennis	$232.00	$139.20
Time Entry	156269	9/6/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	0.80	Dennis	$232.00	$185.60
Time Entry	156269	9/19/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	0.50	Dennis	$232.00	$116.00
Time Entry	156269	9/21/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	0.50	Dennis	$232.00	$116.00
Time Entry	156269	9/22/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	0.80	Dennis	$232.00	$185.60
Time Entry	156269	11/8/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	0.50	Dennis	$232.00	$116.00
Time Entry	156269	11/15/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	0.50	Dennis	$232.00	$116.00
Time Entry	156269	11/23/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2.50	Dennis	$232.00	$580.00
Time Entry	156269	12/12/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.00	Dennis	$232.00	$232.00
Time Entry	156269	12/12/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.20	Dennis	$232.00	$278.40
Time Entry	156269	12/13/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2.00	Dennis	$232.00	$464.00
Time Entry	156269	12/16/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.00	Dennis	$232.00	$232.00
Time Entry	156269	9/19/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3014 - Misc. Client Meetings and Correspondence	1.50	Eric Rivera	$127.00	$190.50
Time Entry	156269	9/1/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	3.50	Eric Rivera	$127.00	$444.50
Time Entry	156269	9/2/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	7.00	Eric Rivera	$127.00	$889.00
Time Entry	156269	9/6/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.00	Eric Rivera	$127.00	$127.00
Time Entry	156269	9/7/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	3.00	Eric Rivera	$127.00	$381.00
Time Entry	156269	9/8/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	4.00	Eric Rivera	$127.00	$508.00
Time Entry	156269	9/9/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2.00	Eric Rivera	$127.00	$254.00
Time Entry	156269	9/10/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.50	Eric Rivera	$127.00	$190.50
Time Entry	156269	9/11/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.50	Eric Rivera	$127.00	$190.50
Time Entry	156269	9/12/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	6.00	Eric Rivera	$127.00	$762.00
Time Entry	156269	9/13/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2.00	Eric Rivera	$127.00	$254.00
Time Entry	156269	9/17/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.00	Eric Rivera	$127.00	$127.00
Time Entry	156269	9/18/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.50	Eric Rivera	$127.00	$190.50
Time Entry	156269	9/19/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	6.50	Eric Rivera	$127.00	$825.50
Time Entry	156269	9/20/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	7.00	Eric Rivera	$127.00	$889.00
Time Entry	156269	9/21/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	6.00	Eric Rivera	$127.00	$762.00
Time Entry	156269	9/22/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	8.00	Eric Rivera	$127.00	$1,016.00
Time Entry	156269	9/26/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	3.00	Eric Rivera	$127.00	$381.00
Time Entry	156269	9/27/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	5.00	Eric Rivera	$127.00	$635.00
Time Entry	156269	9/30/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2.00	Eric Rivera	$127.00	$254.00

Time Entry	156269	10/10/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.00	Eric Rivera	$127.00	$127.00
Time Entry	156269	10/12/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	3.00	Eric Rivera	$127.00	$381.00
Time Entry	156269	10/19/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	4.00	Eric Rivera	$127.00	$508.00
Time Entry	156269	10/21/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2.00	Eric Rivera	$127.00	$254.00
Time Entry	156269	10/24/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	4.00	Eric Rivera	$127.00	$508.00
Time Entry	156269	10/25/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2.00	Eric Rivera	$127.00	$254.00
Time Entry	156269	10/27/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.00	Eric Rivera	$127.00	$127.00
Time Entry	156269	10/28/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2.00	Eric Rivera	$127.00	$254.00
Time Entry	156269	11/28/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2.00	Eric Rivera	$127.00	$254.00
Time Entry	156269	11/29/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.00	Eric Rivera	$127.00	$127.00
Time Entry	156269	11/30/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2.00	Eric Rivera	$127.00	$254.00
Time Entry	156269	1/6/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2	Eric Rivera	$127.00	$254.00
Time Entry	156269	1/12/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	3	Eric Rivera	$127.00	$381.00
Time Entry	156269	1/13/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2	Eric Rivera	$127.00	$254.00
Time Entry	156269	1/18/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2	Eric Rivera	$127.00	$254.00
Time Entry	156269	1/19/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.5	Eric Rivera	$127.00	$190.50
Time Entry	156269	1/20/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1	Eric Rivera	$127.00	$127.00
Time Entry	156269	1/25/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2	Eric Rivera	$127.00	$254.00
Time Entry	156269	1/27/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	6	Eric Rivera	$127.00	$762.00
Time Entry	156269	1/30/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1	Eric Rivera	$127.00	$127.00
Time Entry	156269	2/1/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.5	Eric Rivera	$127.00	$190.50
Time Entry	156269	2/2/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.5	Eric Rivera	$127.00	$190.50
Time Entry	156269	2/9/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.5	Eric Rivera	$127.00	$190.50
Time Entry	156269	2/10/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	4	Eric Rivera	$127.00	$508.00
Time Entry	156269	2/28/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	6	Eric Rivera	$127.00	$762.00
Time Entry	156269	8/30/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	5.50	etrinklein	$198.00	$1,089.00
Time Entry	156269	8/31/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	4.00	etrinklein	$198.00	$792.00
Time Entry	156269	9/1/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	4.00	etrinklein	$198.00	$792.00
Time Entry	156269	9/2/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	4.00	etrinklein	$198.00	$792.00
Time Entry	156269	9/5/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	4.00	etrinklein	$198.00	$792.00
Time Entry	156269	9/6/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.00	etrinklein	$198.00	$198.00
Time Entry	156269	9/6/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2.00	etrinklein	$198.00	$396.00
Time Entry	156269	9/6/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	4.00	etrinklein	$198.00	$792.00
Time Entry	156269	9/7/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.50	etrinklein	$198.00	$297.00
Time Entry	156269	9/7/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2.00	etrinklein	$198.00	$396.00
Time Entry	156269	9/8/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2.00	etrinklein	$198.00	$396.00
Time Entry	156269	9/9/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	2.00	etrinklein	$198.00	$396.00
Time Entry	156269	9/10/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.00	etrinklein	$198.00	$198.00
Time Entry	156269	9/11/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.00	etrinklein	$198.00	$198.00
Time Entry	156269	9/12/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.00	etrinklein	$198.00	$198.00
Time Entry	156269	9/12/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011 - Construction Project Management	1.00	etrinklein	$198.00	$198.00

Time Entry	156269	9/13/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	etrinklein	$198.00	$396.00
Time Entry	156269	9/19/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	etrinklein	$198.00	$198.00
Time Entry	156269	9/19/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	etrinklein	$198.00	$396.00
Time Entry	156269	9/20/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	etrinklein	$198.00	$198.00
Time Entry	156269	9/20/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	etrinklein	$198.00	$198.00
Time Entry	156269	9/21/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	etrinklein	$198.00	$198.00
Time Entry	156269	9/21/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	4.00	etrinklein	$198.00	$792.00
Time Entry	156269	9/22/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	etrinklein	$198.00	$198.00
Time Entry	156269	9/23/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	etrinklein	$198.00	$198.00
Time Entry	156269	9/28/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	etrinklein	$198.00	$198.00
Time Entry	156269	9/29/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	etrinklein	$198.00	$198.00
Time Entry	156269	9/29/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	etrinklein	$198.00	$198.00
Time Entry	156269	9/30/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	0.80	etrinklein	$198.00	$158.40
Time Entry	156269	9/30/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	etrinklein	$198.00	$396.00
Time Entry	156269	10/27/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3014 - Misc. Client Meetings and Correspondence	1.00	etrinklein	$198.00	$198.00
Time Entry	156269	10/25/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3007.01 - Specifications - Admin	1.50	scott	$155.00	$232.50
Time Entry	156269	10/27/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3007.01 - Specifications - Admin	1.00	scott	$155.00	$155.00
Time Entry	156269	11/9/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3007.01 - Specifications - Admin	3.00	scott	$155.00	$465.00
Time Entry	156269	12/1/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3007.01 - Specifications - Admin	1.00	scott	$155.00	$155.00
Time Entry	156269	12/7/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3007.01 - Specifications - Admin	1.00	scott	$155.00	$155.00
Time Entry	156269	8/30/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	scott	$155.00	$155.00
Time Entry	156269	9/2/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	scott	$155.00	$310.00
Time Entry	156269	9/6/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	scott	$155.00	$310.00
Time Entry	156269	9/7/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	scott	$155.00	$155.00
Time Entry	156269	9/8/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	scott	$155.00	$155.00
Time Entry	156269	9/9/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	0.50	scott	$155.00	$77.50
Time Entry	156269	9/10/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	scott	$155.00	$155.00
Time Entry	156269	9/11/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	scott	$155.00	$155.00
Time Entry	156269	9/12/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	scott	$155.00	$310.00
Time Entry	156269	9/16/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	scott	$155.00	$310.00
Time Entry	156269	9/20/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	2.00	scott	$155.00	$310.00
Time Entry	156269	9/22/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	scott	$155.00	$155.00
Time Entry	156269	9/23/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	3.00	scott	$155.00	$465.00
Time Entry	156269	9/26/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	4.00	scott	$155.00	$620.00
Time Entry	156269	9/27/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	scott	$155.00	$155.00
Time Entry	156269	9/29/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	scott	$155.00	$155.00
Time Entry	156269	9/30/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011 - Construction Project Management	1.00	scott	$155.00	$155.00
Time Entry	156269	8/30/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01 - Project Inspection	7.50	scott	$118.00	$885.00
Time Entry	156269	8/31/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01 - Project Inspection	8.50	scott	$118.00	$1,003.00
Time Entry	156269	9/1/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01 - Project Inspection	7.50	scott	$118.00	$885.00
Time Entry	156269	9/2/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01 - Project Inspection	1.00	scott	$118.00	$118.00
Time Entry	156269	9/2/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TWY	3011.01 - Project Inspection	2.50	scott	$118.00	$295.00

Time Entry	156269	9/2/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	3.00	scott	$118.00	$354.00
Time Entry	156269	9/3/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	6.50	scott	$118.00	$767.00
Time Entry	156269	9/5/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	1.00	scott	$118.00	$118.00
Time Entry	156269	9/6/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	4.50	scott	$118.00	$531.00
Time Entry	156269	9/8/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	8.50	scott	$118.00	$1,003.00
Time Entry	156269	9/9/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	7.50	scott	$118.00	$885.00
Time Entry	156269	9/10/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	7.50	scott	$118.00	$885.00
Time Entry	156269	9/11/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	7.50	scott	$118.00	$885.00
Time Entry	156269	9/12/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	6.50	scott	$118.00	$767.00
Time Entry	156269	9/13/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	8.00	Eric Rivera	$118.00	$944.00
Time Entry	156269	9/14/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	8.00	Eric Rivera	$118.00	$944.00
Time Entry	156269	9/15/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	8.00	Eric Rivera	$118.00	$944.00
Time Entry	156269	9/16/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	8.00	Eric Rivera	$118.00	$944.00
Time Entry	156269	9/17/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	8.00	Eric Rivera	$118.00	$944.00
Time Entry	156269	9/17/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	2.00	scott	$118.00	$236.00
Time Entry	156269	9/18/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	7.25	scott	$118.00	$855.50
Time Entry	156269	9/19/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	6.50	scott	$118.00	$767.00
Time Entry	156269	9/21/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	2.00	scott	$118.00	$236.00
Time Entry	156269	10/12/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	4.00	Eric Rivera	$118.00	$472.00
Time Entry	156269	10/13/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	8.00	Eric Rivera	$118.00	$944.00
Time Entry	156269	10/14/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	8.00	Eric Rivera	$118.00	$944.00
Time Entry	156269	10/19/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	2.00	Eric Rivera	$118.00	$236.00
Time Entry	156269	10/20/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	2.00	Eric Rivera	$118.00	$236.00
Time Entry	156269	10/26/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	2.50	scott	$118.00	$295.00
Time Entry	156269	11/15/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3011.01 - Project Inspection	2.00	scott	$118.00	$236.00
Time Entry	156269	2/14/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3005 - Construction Safety and Phasing Plan	4	Eric Rivera	$127.00	$508.00
Time Entry	156269	2/15/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3005 - Construction Safety and Phasing Plan	2	Eric Rivera	$127.00	$254.00
Time Entry	156269	12/5/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3008.01 - Construction Drawings	4.50	Lisa Bachman	$97.00	$436.50
Time Entry	156269	12/6/2016	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3008.01 - Construction Drawings	2.00	Lisa Bachman	$97.00	$194.00
Time Entry	156269	1/25/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3008.01 - Construction Drawings	1	Lisa Bachman	$97.00	$97.00
Time Entry	156269	1/27/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3008.01 - Construction Drawings	6.5	Lisa Bachman	$97.00	$630.50
Time Entry	156269	2/16/2017	156269 - GRAND JUNCTION, RECONSTRUCT CONNECTOR TW	3008.01 - Construction Drawings	3	Lisa Bachman	$97.00	$291.00
								$81,483.50

CONSTRUCTION SERVICES - TAXIWAY REHABILITATION		1	2	3	4	5	6	7			
Scope Item No.	CONSTRUCTION SERVICES PHASE (TAXIWAY)- 8/30/16 TO PRESENT	Principal	Project Manager	Project Engineer/ Planner	Field Eng Supervisor	Resident Inspector	CAD Technician	Clerical	Total Hours		Cost Summary
		$232.00	$198.00	$127.00	$155.00	$118.00	$97.00	$84.00			
1	Agreement, Review Bonds, Certs, Construction Schedule								0		$0.00
2	Review Contractor Safety Plan Compliance Document								0		$0.00
3	AGIS- NOT REQUIRED FOR THIS PROJECT								0		$0.00
4	Pre-Construction Meeting								0		$0.00
5	Provide Base Map								0		$0.00
6	Review Submittals, Shop Drawings								0		$0.00
7	Provide Technical Assistance and Recommendations	90.3	71.3	151	34				346.6		$59,514.00
8	Provide Full Time Inspection and Administration					165.75			165.75		$19,558.50
9	Prepare Change Orders, Supplemental Agreements			6			17		23		$2,411.00
10	Weekly Reports								0		$0.00
11	Prepare/Confirm Payment Requests								0		$0.00
12	Conduct Final Inspection								0		$0.00
13	Prepare Record Drawings and Final Report								0		$0.00
14	Update ALP								0		$0.00
	Estimated Total Man-hours	**90.3**	**71.3**	**157**	**34**	**165.75**	**17**	**0**	**535.35**		
	Summary Costs	**$ 20,949.60**	**$ 14,117.40**	**$ 19,939.00**	**$ 5,270.00**	**$ 19,558.50**	**$ 1,649.00**	**$ -**			$81,483.50
	Fixed Fee/Reimbursables										
	Per Diem					18			18 Days	$51.00	$918.00
	Mileage					847			847 Mi	$0.540	$457.38
									Total Reimbursable		$1,375.38
	Total Construction Phase Services (Taxiway)								**Total Construction Phase Services (Taxiway):**		**$82,858.88**

Grand Junction Regional Airport Authority
Checklist for Compliance - Task Order D (AIP 52) Performed by: Armstrong Engineers
11-29 Seal Coat / Rehab Connectors / Lighting and Segmented Circle

Section	Element	Deliverable	Met/Not Met/Unknown	Comments
	PHASE 1 - PRELIMANARY DESIGN			
1.1	Coordination with Owner and FAA including meetings		met	PreDesign Meeting and Notes
1.2	Prepare SOW and Contract	Y	met	Signed Scope of Work March 18
	Prepare cost estimates	Y	met	Included in Design Report
	Prepare schematic design	Y	met	Included in Design Report
1.3	Prepare CSPP	Y	met	Included in Design Report
1.4	Determine aircraft usage/coordination		met	Included in Design Report
1.5	Evaluate Local Conditions		met	Included in Design Report
	Inventory of local material suppliers, sources, capabilities		met	Included in Design Report
	Evaluate drainage alternatives		met	Included in Design Report
	Review electrical lighting layouts/system requirements		met	Included in Design Report
1.6	Review and evaluate project layout		met	Included in Design Report
1.7	Verify existing ALP dimension and data		met	Included in Design Report
1.8	Cat-X provided by owner (N/A)		N/A	N/A
1.9	Review alignments and additions, make recommendations to owner		met	Survey information used in Construction Plans
1.10	Prepare requirements for design survey for all elements		met	Survey information used in Construction Plans
	Prepare limits and time schedule for topographical surveying projects		met	Survey information used in Construction Plans
	Submit scope to sub consultants for determining fees		met	Survey information used in Construction Plans
1.11	Complete geotechnical investigation and geotechnical report		met	Survey information used in Construction Plans
	Analyze pavement and soils testing data		met	Included in Design Report
	Generate geotechnical conclusions		met	Included in Design Report
	Determine appropriate data for pavement design		met	Included in Design Report
	Input data for computer modeling w/ topographical survey data		met	Included in Plans
	Review pavement analysis w/ sponsor, state, and FAA Engineer		met	Final determinations in Design Report and Plans
	Prepare pavement data and soil info for incorporation w/ contract document		met	Included in Design Report and Plans
1.12	Prepare Construction Plans (Reference Task Order D Page #6 Deliverables)	Y	met	2/3 complete (Seal Coat & Rehab Complete)
1.13	Prepare contract documents	Y	met	2/3 complete (Seal Coat & Rehab Complete)
	Establish location of bid opening and description of work schedule	Y	met	2/3 complete (Seal Coat & Rehab Complete)
	Submit contract documents to the FAA and owner for review	Y	met	2/3 complete (Seal Coat & Rehab Complete)
1.14	Prepare technical specifications	Y	met	2/3 complete (Seal Coat & Rehab Complete)
1.15	Assist Owner with Federal Grant Application	Y	met	Grant Application Signed and Submitted to FAA
	Assist in preparing Federal Form 424		met	Included in Grant App
	Prepare Project Sketch to be included in FAA Grant App.		met	Included in Grant App
	Assist in preparing Program Narrative		met	Included in Grant App
	Prepare Preliminary Cost Estimate		met	Included in Grant App
	Assist in preparing Sponsor Certification		met	Included in Grant App
	Attach current grant assurances		met	Included in Grant App
	PHASE II - FINAL DESIGN			
1.1	Incorporate engineering phase design comments to request for additional info		met	Complete
1.2	Calculate Estimated Quantities	Y	met	Included in Design Report
1.3	Prepare Estimate of Probable Construction Cost for each Element	Y	met	Included in Design Report
	Prepare construction cost estimate	Y	met	Included in Design Report
1.4	Prepare engineer's design report	Y	met	Complete
	To include (summary of project, pavement, drainage design, schedule & cost estimates)	Y	met	Complete
1.5	Coordinate schedules of construction		met	Complete
1.6	Prepare and submit final plans and specifications.	Y	met	Complete
1.7	Assist Owner with the advertisement for bids / issue addendums		met	Complete

Grand Junction Regional Airport Authority
Checklist for Compliance - Task Order D (AIP 52) Performed by: Armstrong Engineers
11-29 Seal Coat / Rehab Connectors / Lighting and Segmented Circle

Section	Element	Deliverable	Met/Not Met/Unknown	Comments
1.8	Attend and assist owner with bid opening		met	Complete
1.9	Prepare an abstract of bids and make recommendations for award	Y	met	Complete
1.10	Assist in award notification to successful bidder		met	Complete
	Notify and return bid bonds to unsuccessful bidders		met	Complete
1.11	Assist sponsor w/ DBE Plan	Y	met	DBE Plan Submitted to Civil Rights
	Update sponsor DBE plan		met	Included in DBE Plan
	Calculate new goal to reflect current projects		met	Included in DBE Plan
	Determine availability of potential DBE contractors		met	Included in DBE Plan
	Prepare preliminary construction estimates and establish potential DBE work item		met	Included in DBE Plan
	Finalize DBE plan and goals for substantial to the FAA Civil Rights Office for approval		met	Included in DBE Plan
1.12	Prepare and/or assist w/ necessary forms			
	Sponsor Quarterly Report			
	Strategic Event Coordination Form		met	
	Standard Form 271		progress	SF271 included in RFR Package
	Standard Form 425			
	CONSTRUCTION SERVICES			
2.01	Prepare Agreement. Review Bonds, Insurance, and Schedules	Y	met	
2.02	Review Safety Plan Compliance Document	Y	met	
2.03	No AGIS Required			
2.04	Pre-Construction Conference	Y	met	Complete
2.05	Provide Base Map for Survey Control	Y	met	Complete
2.06	Review Submittals	Y	met	Complete
2.07a	Provide Technical Assistance (7/31/2016 to 8/29/2016)		met	Complete
2.07b	Provide Additional Technical Assistance (8/30/2016 to Present)		progress	Additional assistance as required due to extended const period (Invoiced T&M)
2.08a	Full Time Resident Inspection		met	Complete
2.08b	Additional Full Time Resident Inspection		progress	Additional inspection as required due to extended const period (Invoiced T&M)
2.09a	Prepare Change Orders and Supplemental Agreements (7/31/2016 to 8/29/2016)		met	Complete
2.09b	Prepare Additional Change Orders and Supplemental Agreements (8/30/2016 to Present)		progress	Additional coordination of change orders/contractrual agreements regarding corrective action work (Invoiced T&M)
2.10	Prepare Weekly Reports	Y	met	Complete
2.11	Confirm Contractor Pay Requests	Y	progress	complete except for taxiway work
2.12	Conduct Final Inspection	Y	progress	complete except for taxiway work
2.13	Prepare Record Drawings and Final Report	Y	progress	Draft complete, pending completion of taxiway work
2.14	ALP to be updated by others			
	ADDENDUM TO TASK ORDER D - ACCEPTANCE TESTING			
1.1	Project Coordination		met	Complete
1.2	Acceptance Testing Services	Y	met	Complete - Data included in Draft Test Summary
1.3	Additional Acceptance Testing Services	Y	met	Complete - Data included in Draft Test Summary Documented in 12/8/16 Elam Withholdings Letter

861 Rood Avenue
Grand Junction, Colorado 81501
Phone: 970.242.0101
Fax: 970.241.1769
www.armstrongconsultants.com
email: evliek@armstrongconsultants.com

Transmittal

To:	Mr. Eric Trinklein	**Date:**	2/2/2017
	Grand Junction Regional Airport	**Re:**	Airport
	800 Eagle Drive		
	Grand Junction, CO 81506	**Job No.**	156269

Copies	Date	Description
1	2/2/2017	Armstrong Consultants Invoice, for payment
1	2/2/2017	Progress Report

☐ As Requested ☐ For Review and Comment ☐ For Your Use
☐ For Approval ☐ Approved as Submitted ☐ For Your Files
☐ For Signature ☐ Returned for Corrections

If enclosures are not as listed, please notify us at once.

Signed Erik Vliek

ARMSTRONG

Grand Junction Regional Airport
800 Eagle Drive
Grand Junction, CO 81506

DATE: 2/2/2017
INVOICE NO: 17-156269-01

ATTN: Mr. Ty Minnick, Finance Manager

FOR PROFESSIONAL SERVICES RENDERED:
Grand Junction, Colorado
Grand Junction Regional Airport
Engineering Services
AIP # 3-08-0027-052-2015
CDOT # 15-GJT-01

Project 2 (Attachment D) - Rehabilitate Taxiways A1, A2, A3, A4, A5, A6 and A7

Project 2 - Design						
Phase 1 - Preliminary Design	:$	68,000.00	X	100%	=	$68,000.00
Phase 2 - Final Design	:$	63,000.00	X	100%	=	$63,000.00
Construction Services	:$	110,003.00	X	90%	=	$99,002.70
Addendum # 1 - QA Testing	:$	27,000.00	X	100%	=	$27,000.00
Additional QA Testing*	:$	38,071.36	X	100%	=	$38,071.36
				Total Amount Earned to Date	=	$295,074.06
				Less Amount Paid	=	-$257,002.70
				Total Amount Due this Invoice	=	$38,071.36

861 Rood Avenue Grand Junction, CO 81501
T: 970.242.0101 | F: 970 241 1769
Grand Junction, CO | Denver, CO | Phoenix, AZ | Albuquerque, NM
www.armstrongconsultants.com

Grand Junction Regional Airport Authority
Checklist for Compliance - Task Order D (AIP 52) Performed by: Armstrong Engineers
11-29 Seal Coat / Rehab Connectors / Lighting and Segmented Circle

Section	Element	Deliverable	Met Not Met Unknown	Comments
	PHASE I - PRELIMANARY DESIGN			
1.1	Coordination with Owner and FAA including meetings		met	PreDesign Meeting and Notes
1.2	Prepare SOW and Contract	Y	met	Signed Scope of Work March 16
	Prepare cost estimates	Y	met	Included in Design Report
	Prepare schematic design	Y	met	Included in Design Report
1.3	Prepare CSPP	Y	met	Included in Design Report
1.4	Determine aircraft usage/coordination		met	Included in Design Report
1.5	Evaluate Local Conditions		met	Included in Design Report
	Inventory of local material suppliers, sources, capabilities		met	Included in Design Report
	Evaluate drainage alternatives		met	Included in Design Report
	Review electrical lighting layouts system requirements		met	Included in Design Report
1.6	Review and evaluate project layout		met	Included in Design Report
1.7	Verify existing ALP dimension and data		met	Included in Design Report
1.8	Cat-X provided by owner (N A)		N A	N A
1.9	Review alignments and additions, make recommendations to owner		met	Survey information used in Construction Plans
1.10	Prepare requirements for design survey for all elements		met	Survey information used in Construction Plans
	Prepare limits and time schedule for topographical surveying projects		met	Survey information used in Construction Plans
	Submit scope to sub consultants for determining fees		met	Survey information used in Construction Plans
1.11	Complete geotechnical investigation and geotechnical report		met	Survey information used in Construction Plans
	Analyze pavement and soils testing data		met	Included in Design Report
	Generate geotechnical conclusions		met	Included in Design Report
	Determine appropriate data for pavement design		met	Included in Design Report
	Input data for computer modeling w topographical survey data		met	Included in Plans
	Review pavement analysis w/ sponsor, state, and FAA Engineer		met	Final determinations in Design Report and Plans
	Prepare pavement data and soil info for incorporation w contract document		met	Included in Design Report and Plans
1.12	Prepare Construction Plans (Reference Task Order D Page #6 Deliverables)	Y	met	2 3 complete (Seal Coat & Rehab Complete)
1.13	Prepare contract documents	Y	met	2 3 complete (Seal Coat & Rehab Complete)
	Establish location of bid opening and description of work schedule	Y	met	2 3 complete (Seal Coat & Rehab Complete)
	Submit contract documents to the FAA and owner for review	Y	met	2 3 complete (Seal Coat & Rehab Complete)
1.14	Prepare technical specifications	Y	met	2 3 complete (Seal Coat & Rehab Complete)
1.15	Assist Owner with Federal Grant Application	Y	met	Grant Application Signed and Submitted to FAA
	Assist in preparing Federal Form 424		met	Included in Grant App
	Prepare Project Sketch to be included in FAA Grant App		met	Included in Grant App
	Assist in preparing Program Narrative		met	Included in Grant App
	Prepare Preliminary Cost Estimate		met	Included in Grant App
	Assist in preparing Sponsor Certification		met	Included in Grant App
	Attach current grant assurances		met	Included in Grant App
	PHASE II - FINAL DESIGN			
1.1	Incorporate engineering phase design comments to request for additional info		met	Complete
1.2	Calculate Estimated Quantities	Y	met	Included in Design Report
1.3	Prepare Estimate of Probable Construction Cost for each Element	Y	met	Included in Design Report
	Prepare construction cost estimate	Y	met	Included in Design Report
1.4	Prepare engineer's design report	Y	met	Complete
	To include (summary of project, pavement, drainage design, schedule & cost estimates)	Y	met	Complete
1.5	Coordinate schedules of construction		met	Complete
1.6	Prepare and submit final plans and specifications	Y	met	Complete
1.7	Assist Owner with the advertisement for bids issue addendums		met	Complete
1.8	Attend and assist owner with bid opening		met	Complete
1.9	Prepare an abstract of bids and make recommendations for award	Y	met	Complete
1.10	Assist in award notification to successful bidder		met	Complete

Grand Junction Regional Airport Authority
Checklist for Compliance - Task Order D (AIP 52) Performed by: Armstrong Engineers
11-29 Seal Coat / Rehab Connectors / Lighting and Segmented Circle

Section	Element	Deliverable	Met Not Met Unknown	Comments
	Notify and return bid bonds to unsuccessful bidders		met	Complete
1.11	Assist sponsor w DBE Plan	Y	met	DBE Plan Submitted to Civil Rights
	Update sponsor DBE plan		met	Included in DBE Plan
	Calculate new goal to reflect current projects		met	Included in DBE Plan
	Determine availability of potential DBE contractors		met	Included in DBE Plan
	Prepare preliminary construction estimates and establish potential DBE work item		met	Included in DBE Plan
	Finalize DBE plan and goals for substantial to the FAA Civil Rights Office for approval		met	Included in DBE Plan
1.12	Prepare and or assist w necessary forms			
	Sponsor Quarterly Report			
	Strategic Event Coordination Form		met	
	Standard Form 271		progress	SF271 included in RFR Package
	Standard Form 425			
	CONSTRUCTION SERVICES			
2.01	Prepare Agreement, Review Bonds, Insurance, and Schedules	Y	met	
2.02	Review Safety Plan Compliance Document	Y	met	
2.03	No AGIS Required	N A		
2.04	Pre-Construction Conference	Y	met	Complete
2.05	Provide Base Map for Survey Control	Y	met	Complete
2.06	Review Submittals	Y	met	Complete
2.07	Provide Technical Assistance	N	progress	Pending assistance with final punchlist items
2.08	Full Time Resident Inspection	Y	met	Complete
2.09	Prepare Change Orders, if required	N A		
2.10	Prepare Weekly Reports	Y	met	Complete
2.11	Confirm Contractor Pay Requests	Y	progress	complete except for taxiway work
2.12	Conduct Final Inspection	Y	progress	complete except for taxiway work
2.13	Prepare Record Drawings and Final Report	Y	progress	In Progress
2.14	ALP to be updated by others	N A		
	ADDENDUM TO TASK ORDER D - ACCEPTANCE TESTING			
1.1	Project Coordination	N	met	Complete
1.2	Acceptance Testing Services	Y	met	Complete - Data included in Draft Test Summary
1.3	Additional Acceptance Testing Services	Y	met	Complete - Data included in Draft Test Summary Documented in 12 8 16 Flam Withholdings Letter

GJT Taxiway P-401 Cost for Testing

Date	Person Performing Work	Cost for Labor	Expenses	# Sublots	Cost for Sublot	Daily Total	Total to Date	Daily Tons	Total Tons to Date	ACI	EIAM	
										$ 32,085.60	$ 38,071.36	
7/31/2016	Mickey L. Bryan	$ 170.00	$ 4.90		$ -	$ 174.90	$ 174.90		0	$ 174.90		
8/1/2016	Timothy L. Harn	$ 201.00	$ -		$ -	$ 249.02	$ 423.92		0	$ 249.02		
	Trey Harn	$ -	$ 48.02							$ -		
8/2/2016	Timothy L. Harn	$ 402.00	$ -		$ -	$ 830.92	$ 1,254.84		0	$ 830.92		
	Mickey L. Bryan	$ 425.00	$ -							$ -		
	Trey Harn	$ -	$ 3.92							$ -		
8/3/2016	Scott W. Richards	$ 62.50	$ -		$ -	$ 62.50	$ 1,317.34		0	$ 62.50		
8/5/2016	Scott W. Richards	$ 62.50	$ -		$ -	$ 1,522.00	$ 2,839.34		0	$ 1,522.00		
	Timothy L. Harn	$ 670.00	$ -							$ -		
	Mickey L. Bryan	$ 765.00	$ 20.58							$ -		
	Trey Harn	$ -	$ 3.92							$ -		
8/6/2016 (TS #1)	Timothy L. Harn	$ 268.00	$ -	3	$ 1,230.00	$ 2,190.25	$ 5,029.59	114.94	0	$ -	$ 2,190.25	
	Mickey L. Bryan	$ 680.00	$ 4.90							$ -		
	Trey Harn	$ -	$ 7.35							$ -		
8/7/2016	Timothy L. Harn	$ 335.00	$ 16.17		$ -	$ 436.17	$ 5,465.76		0	$ -	$ 436.17	
	Mickey L. Bryan	$ 85.00	$ -							$ -		
8/8/2016 (TS #2)	Timothy L. Harn	$ 670.00	$ 16.17	3	$ 1,230.00	$ 2,602.05	$ 8,067.81	112.76	0	$ -	$ 2,602.05	
	Mickey L. Bryan	$ 680.00	$ 5.88							$ -		
8/9/2016 (TS #3)	Timothy L. Harn	$ 335.00	$ 16.17	3	$ 1,230.00	$ 2,270.97	$ 10,338.78	125.14	0	$ -	$ 2,270.97	
	Mickey L. Bryan	$ 680.00	$ 9.80							$ -		
8/10/2016	Timothy L. Harn	$ 201.00	$ -		$ -	$ 460.90	$ 10,799.68		0	$ 460.90		
	Mickey L. Bryan	$ 255.00	$ 4.90							$ -		
8/11/2016	Timothy L. Harn	$ 134.00	$ -		$ -	$ 134.00	$ 10,933.68		0	$ 134.00		
8/12/2016	Timothy L. Harn	$ 335.00	$ 16.17		$ -	$ 1,058.57	$ 11,992.25		0	$ -	$ 1,058.57	3 extra tests for Elam
	Mickey L. Bryan	$ 510.00	$ 4.90							$ -		
	Stuart L. McCluskey	$ 192.50	$ -							$ -		
8/13/2016 (Passed TS #4)	Timothy L. Harn	$ 335.00	$ -	3	$ 1,230.00	$ 2,166.86	$ 14,159.11	125.68	125.68	$ 2,166.86		
	Mickey L. Bryan	$ 595.00	$ 6.86							$ -		
8/14/2016	Timothy L. Harn	$ 603.00	$ -	4	$ 1,640.00	$ 2,947.50	$ 17,106.61	186.06	251.74	$ 2,947.50		
	Mickey L. Bryan	$ 680.00	$ 9.88							$ -		
	Trey Harn	$ -	$ 18.62							$ -		
8/15/2016	Timothy L. Harn	$ 335.00	$ -	4	$ 1,640.00	$ 2,679.99	$ 19,786.60	125.06	416.8	$ 2,679.99		
	Mickey L. Bryan	$ 680.00	$ 6.37							$ -		
	Trey Harn	$ -	$ 18.62							$ -		
8/16/2016	Timothy L. Harn	$ 335.00	$ -		$ -	$ 595.88	$ 20,382.48		416.8	$ 595.88		
	Mickey L. Bryan	$ 255.00	$ 5.88							$ -		
8/17/2016	Timothy L. Harn	$ 603.00	$ -	4	$ 1,640.00	$ 2,947.99	$ 23,330.47	127.41	544.21	$ 2,947.99		
	Mickey L. Bryan	$ 680.00	$ 6.37							$ -		
	Trey Harn	$ -	$ 18.62							$ -		
8/18/2016	Timothy L. Harn	$ 670.00	$ -	4	$ 1,640.00	$ 3,142.00	$ 26,472.47	127.41	671.62	$ 3,142.00		
	Mickey L. Bryan	$ 807.50	$ 5.88							$ -		
	Trey Harn	$ -	$ 18.62							$ -		
8/19/2016	Timothy L. Harn	$ 134.00	$ -		$ -	$ 870.22	$ 27,342.69		671.62	$ 870.22		
	Mickey L. Bryan	$ 722.50	$ 6.37							$ -		
	Trey Harn	$ -	$ 7.35							$ -		
8/20/2016	Timothy L. Harn	$ 871.00	$ -	4	$ 1,640.00	$ 3,385.99	$ 30,728.68	169.58	841.2	$ 3,385.99		
	Mickey L. Bryan	$ 850.00	$ 6.37							$ -		
	Trey Harn	$ -	$ 18.62							$ -		
8/21/2016	Timothy L. Harn	$ 603.00	$ 22.05	4	$ 1,640.00	$ 3,415.44	$ 34,144.12	113.09	954.29	$ 3,415.44		
	Mickey L. Bryan	$ 1,070.00	$ 5.39							$ -		
	Scott W. Richards	$ 125.00	$ -							$ -		
8/22/2016	Timothy L. Harn	$ 536.00	$ 22.05		$ -	$ 1,413.93	$ 35,558.05		954.29	$ 1,413.93		
	Mickey L. Bryan	$ 850.00	$ 5.88							$ -		
8/23/2016	Timothy L. Harn	$ 603.00	$ 22.05	4	$ 1,640.00	$ 3,120.44	$ 38,678.49	127.8	1082.09	$ 3,120.44		
	Mickey L. Bryan	$ 850.00	$ 5.39							$ -		
8/24/2016	Timothy L. Harn	$ 402.00	$ 22.05		$ -	$ 1,279.93	$ 39,958.42		1082.09	$ 1,279.93		
	Mickey L. Bryan	$ 850.00	$ 5.88							$ -		
8/25/2016	Mickey L. Bryan	$ 680.00	$ 5.39		$ -	$ 685.39	$ 40,643.81		1082.09	$ 685.39		
										End of contract days including weather and air traffic days		
8/27/2016	Mickey L. Bryan	$ 850.00	$ 28.91	4	$ 1,640.00	$ 3,333.81	$ 43,977.62	201.45	1283.54	$ -	$ 3,333.81	End of Invoice 1
	Ryan Hogge	$ 820.00	$ 4.90									
8/28/2016	Timothy L. Harn			4	$ 1,640.00	$ 2,733.32	$ 46,710.94	244.16	1527.7		$ 2,733.32	Start of Invoice 2
	Mickey L. Bryan	$ 340.00	$ 28.42							$ -		
	Ryan Hogge	$ 720.00	$ 4.90									
8/29/2016	Timothy L. Harn	$ 460.00		5	$ 2,050.00	$ 3,029.39	$ 49,740.33	299.24	1826.94		$ 3,029.39	
	Mickey L. Bryan	$ 255.00	$ 5.39							$ -		
	Scott W. Richards	$ 250.00										
8/30/2016	Timothy L. Harn	$ 201.00			$ -	$ 290.90	$ 50,031.23		1826.94		$ 290.90	
	Mickey L. Bryan	$ 85.00	$ 4.90							$ -		
8/31/2016	Timothy L. Harn	$ 335.00			$ -	$ 635.39	$ 50,666.62		1826.94		$ 635.39	
	Mickey L. Bryan	$ 170.00	$ 5.39							$ -		
	Scott W. Richards	$ 125.00										
9/1/2016	Timothy L. Harn				$ -	$ -	$ 50,666.62		1826.94		$ -	
	Mickey L. Bryan									$ -		
9/2/2016	Timothy L. Harn				$ -	$ -	$ 50,666.62		1826.94		$ -	
	Mickey L. Bryan									$ -		
9/3/2016	Timothy L. Harn				$ -	$ -	$ 50,666.62		1826.94		$ -	
	Mickey L. Bryan									$ -		
9/4/2016	Timothy L. Harn				$ -	$ -	$ 50,666.62		1826.94		$ -	
	Mickey L. Bryan									$ -		

9/5/2016	Timothy L. Ham					$ -	$ -	$ 50,666 62		1826 94
	Mickey L. Bryan									
9/6/2016	Timothy L. Ham					$ -	$ -	$ 50,666 62		1826 94
	Mickey L. Bryan									
9/7/2016	Timothy L. Ham	$ 402 00	$ 3 92			$ -	$ 497 78	$ 51,164 40		1826 94
	Mickey L. Bryan	$ 85 00	$ 6 88							
9/8/2016	Timothy L. Ham	$ 469 00	$ 18 62	4	$ 1,640 00	$ 2,388 99	$ 53,553 39	317 97	2144 91	
	Mickey L. Bryan	$ 255 00	$ 6 37							
9/9/2016	Timothy L. Ham	$ 402 00	$ 18 62	4	$ 1,640 00	$ 2,321 99	$ 55,875 38	456 68	2601 59	
	Mickey L. Bryan	$ 255 00	$ 6 37							
9/10/2016	Timothy L. Ham	$ 469 00	$ 9 80	4	$ 1,640 00	$ 2,512 08	$ 58,387 46	209 62	2811 21	
	Mickey L. Bryan	$ 382 50	$ 10 78							
9/11/2016	Timothy L. Ham	$ 402 00	$ 18 62	4	$ 1,640 00	$ 2,361 50	$ 60,748 96	328 85	3140 06	
	Mickey L. Bryan	$ 170 00	$ 5 88							
	Scott W Richards	$ 125 00								
9/12/2016	Timothy L. Ham	$ 402 00	$ 18 62	4	$ 1,640 00	$ 2,882 57	$ 63,631 53	236 85	3376 92	
	Mickey L. Bryan	$ 255 00	$ 12 25							
	Ryan Heggie	$ 540 00	$ 14 70							
9/13/2016	Timothy L. Ham					$ -	$ 345 88	$ 63,977 41		3376 92
	Mickey L. Bryan	$ 340 00	$ 5 88							
9/14/2016	Timothy L. Ham	$ 335 00	$ 18 62	5	$ 2,050 00	$ 2,500 38	$ 66,477 79	446 05	3822 97	
	Mickey L. Bryan	$ 85 00	$ 11 76							
9/15/2016	Timothy L. Ham	$ 402 00	$ 18 62			$ -	$ 596 99	$ 67,074 78		3822 97
	Mickey L. Bryan	$ 170 00	$ 6 37							
9/16/2016	Timothy L. Ham	$ 402 00	$ 18 62	4	$ 1,640 00	$ 2,321 50	$ 69,396 28	180 19	4003 16	
	Mickey L. Bryan	$ 255 00	$ 5 88							
9/17/2016	Timothy L. Ham					$ -	$ 260 88	$ 69,657 16		4003 16
	Mickey L. Bryan	$ 255 00	$ 5 88							
9/18/2016	Timothy L. Ham					$ -	$ -	$ 69,657 16		4003 16
	Mickey L. Bryan									
9/19/2016	Timothy L. Ham					$ -	$ -	$ 69,657 16		4003 16
	Mickey L. Bryan									
9/20/2016	Timothy L. Ham					$ -	$ -	$ 69,657 16		4003 16
	Mickey L. Bryan									
9/21/2016	Timothy L. Ham					$ -	$ -	$ 69,657 16		4003 16
	Mickey L. Bryan									
9/22/2016	Timothy L. Ham					$ -	$ 500 00	$ 70,157 16		4003 16
	Mickey L. Bryan									
	Scott W Richards	$ 500 00								
9/23/2016	Timothy L. Ham					$ -	$ -	$ 70,157 16		4003 16
	Mickey L. Bryan									
9/24/2016	Timothy L. Ham					$ -	$ -	$ 70,157 16		4003 16
	Mickey L. Bryan									
9/25/2016	Timothy L. Ham					$ -	$ -	$ 70,157 16		4003 16
	Mickey L. Bryan									

Total Quantities and Costs	Total Labor Cost	Total Expense Cost	# Sublets	Total Sublet Cost	Total Cost	Total Tons
	$ 35,761 00	$ 776 16	82	$ 33,620 00	$ 70,157 16	4,003 16

	$ -	$ -
	$ -	$ -
	$ -	$ 497 78
	$ -	$ 2,388 99
	$ -	$ 2,321 99
	$ -	$ 2,512 08
	$ -	$ 2,361 50
	$ -	$ 2,882 57
	$ -	$ 345 88
	$ -	$ 2,500 38
	$ -	$ 596 99
	$ -	$ 2,321 50
	$ -	$ 260 88
	$ -	$ -
	$ -	$ -
	$ -	$ -
	$ -	$ 500 00
	$ -	
	$ -	
	$ -

Grand Junction Regional Airport Authority

Agenda Item Summary

TOPIC:	Settlement Agreement for United States of American v. Grand Junction Regional Airport Authority
PURPOSE:	Information ☐ Guidance ☐ Decision ☒
RECOMMENDATION:	Staff recommends the board approve the payment to the US Department of Justice for $16,500.
LAST ACTION:	None.
DISCUSSION:	Authority attorney, Kelly and Walker, received a letter from US Department of Justice dated March 8, 2017 with the wire instructions for the payment of $16,500. Payment amount is referenced in the Terms and Conditions Section of the Settlement Agreement.
FISCAL IMPACT:	$16,500.
COMMUNICATION STRATEGY:	None
ATTACHMENTS:	Letter from US DOJ
STAFFCONTACT:	Kip Turner

U.S. DEPARTMENT OF JUSTICE

Robert C. Troyer
Acting United States Attorney
District of Colorado
Financial Litigation Unit

1225 Seventeenth Street, Suite 700 *(303) 454-0100*
Seventeenth Street Plaza *FAX (303) 454-0400*
Denver, Colorado 80202

March 8, 2017

Via E-mail: jwalker@kellywalkerlaw.com

Grand Junction Regional Airport Authority
c/o Julie Walker, Esq.

RE: Settlement Agreement
Parties: United States of America v. Grand Junction Regional Airport Authority
Wiring Instructions

Dear Ms. Walker:

Enclosed is the wiring instructions for the payment of $16,500.00 referenced in the Terms and Conditions Section of the Settlement Agreement referred to above.

Please contact this office after wiring the funds, so that we may insure proper receipt and application of the funds. You can reach me at (303) 454-0131.

Sincerely,

/s

PATRICIA MCGEE-WAKE
Paralegal Specialist
Financial Litigation Unit

Enclosure - as stated

Grand Junction Regional Airport Authority

Agenda Item Summary

TOPIC:	G4S Invoice
PURPOSE:	Information ☐ Guidance ☐ Decision ☒
RECOMMENDATION:	Staff recommends the Board authorize the payment of G4S Invoice 8114955 for the amount of $10,981.99
LAST ACTION:	Approved January Invoice.
DISCUSSION:	This invoice is the monthly billing for February 2017 for the ongoing monthly costs for security guard services in the Terminal. This cost is recovered from signatory air-carriers. The invoice exceeds $10,000, therefore requiring Board approval. Staff has verified the amount and the scope of work has been completed.
FISCAL IMPACT:	$10,981.99
COMMUNICATION STRATEGY:	N/A
ATTACHMENTS:	G4S Invoice 8114955
STAFF CONTACT:	Chance Ballegeer Email: cballegeer@gjairport.com Office: 970-248-8586

INVOICE

G4S Secure Solutions (USA) Inc.
1395 University Blvd | Jupiter FL 33458

Website: www.g4s.com/us
Contact Us: (303) 341-4433
Federal ID: 590857245

Securing Your World

Bill To: Chance Ballegeer
Grand Junction Regional Airport Authorit
2828 Walker Field Dr Ste 301
Grand Junction CO 81506-8667

Service Location: 2828 Walker Field Dr Ste 301
Grand Junction CO 81506-8667

Invoice No:	8114955
Amount Due:	$10,981.99
Invoice Date:	02/28/2017
Terms:	Payment Due 30 Days
Due Date:	03/30/2017
Customer No:	134423
PO Number:	

Please include the invoice number with your payment and remit to:
PO Box 277469
Atlanta GA 30384-7469

Have billing questions? Email us:

Purchase orders: poinfo@usa.g4s.com
Other inquiries: billinghelp@usa.g4s.com

Services Rendered for: 02/01/2017 through 02/28/2017

Invoice Description:

CUSTOM PROTECTION SERVICES
Grand Junction
ional Airport

Week Begin	Week End	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total Hours	Other Qty	Amount ($)
Adams,Bryndan C											
01/30/2017	02/05/2017	0.00	0.00	0.00	0.00	8.00	9.00	8.25	25.25	0.00	
02/06/2017	02/12/2017	6.00	0.00	0.00	0.00	7.00	8.75	6.00	27.75	0.00	
02/13/2017	02/19/2017	0.00	0.00	0.00	0.00	8.00	9.00	9.00	26.00	0.00	
02/20/2017	02/26/2017	6.00	0.00	0.00	0.00	8.08	10.75	6.50	31.33	0.00	
02/27/2017	03/05/2017	6.00	0.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	
Armbruster,Scott E											
01/30/2017	02/05/2017	0.00	0.00	6.75	7.00	0.00	0.00	6.00	19.75	0.00	
02/06/2017	02/12/2017	0.00	5.00	7.00	8.50	0.00	0.00	8.00	28.50	0.00	
02/13/2017	02/19/2017	6.00	5.00	6.00	7.00	0.00	0.00	9.00	33.00	0.00	
02/20/2017	02/26/2017	0.00	5.00	6.00	9.50	0.00	0.00	9.00	29.50	0.00	
02/27/2017	03/05/2017	0.00	6.00	0.00	0.00	0.00	0.00	0.00	6.00	0.00	
Baughman,John B											
02/13/2017	02/19/2017	7.00	0.00	0.00	0.00	0.00	0.00	0.00	7.00	0.00	
Falk,Darin E											
01/30/2017	02/05/2017	0.00	0.00	9.33	8.00	4.50	0.00	0.00	21.83	0.00	
02/06/2017	02/12/2017	7.00	8.00	7.00	7.00	6.00	0.00	0.00	35.00	0.00	
02/13/2017	02/19/2017	0.00	8.00	7.00	8.00	4.50	0.00	0.00	27.50	0.00	
02/20/2017	02/26/2017	7.00	8.00	7.00	8.00	5.00	0.00	0.00	35.00	0.00	
02/27/2017	03/05/2017	7.00	7.00	0.00	0.00	0.00	0.00	0.00	14.00	0.00	

Armed CPO-REGULAR	373.41	Regular Hours	at 29.41	10,981.99
Subtotal			373.41	10,981.99
Invoice Total				10,981.99

PI=4600452:CONS=000000:HD=00001:DEPT=GEN:CUST=134423:ADR=1:PROJECT=0123606:INV#=8114955:SORT=2,187:SEQ=1
"Chance Ballegeer" <cballegeer@gjairport.com>

Grand Junction Regional Airport Authority

Agenda Item Summary

TOPIC:	2016 Audit presentation		
PURPOSE:	Information ☒	Guidance ☐	Decision ☐
RECOMMENDATION:	None.		
LAST ACTION:	At the February 2017 board meeting the board approved the audit draft with minor changes and to have the final audit presentation at the March 2017 meeting.		
DISCUSSION:	The audit firm of EKS&H was engaged by the board at the November 2016 board meeting to perform the annual audit. EKS&H previously performed the audit for the years ended 2014 and 2015. EKS&H audit partner, Lisa Meacham, will be making the final audit presentation to the board via telephone per request of the Audit Committee Chairman.		
FISCAL IMPACT:	N/A		
COMMUNICATION STRATEGY:	None		
ATTACHMENTS:	None		
CONTACT:	Tom Benton & Ty Minnick		

GRAND JUNCTION REGIONAL AIRPORT AUTHORITY

Financial Statements
and
Independent Auditors' Report
December 31, 2016 and 2015

EKS&H
AUDIT | TAX | CONSULTING

GRAND JUNCTION REGIONAL AIRPORT AUTHORITY

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EKS&H
AUDIT | TAX | CONSULTING

7979 E. Tufts Avenue, Suite 400
Denver, Colorado 80237-2521
P: 303-740-9400
F: 303-740-9009
www.EKSH.com

INDEPENDENT AUDITORS' REPORT

Board of Commissioners
Grand Junction Regional Airport Authority
Grand Junction, Colorado

REPORT ON THE FINANCIAL STATEMENTS

We have audited the accompanying financial statements of Grand Junction Regional Airport Authority (the "Authority"), which are comprised of the statements of net position as of December 31, 2016 and 2015, and the related statements of revenues, expenses, and changes in net position and cash flows for the years then ended, and the related notes to the financial statements.

MANAGEMENT'S RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

Management is responsible for the preparation and fair presentation of these financial statements in accordance with auditing standards generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

AUDITORS' RESPONSIBILITY

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

OPINION

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the business-type activities of Grand Junction Regional Airport Authority as of December 31, 2016 and 2015, and the changes in its financial position and its cash flows for the years then ended in accordance with auditing standards generally accepted in the United States of America.

OTHER MATTERS

Required Supplementary Information
Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 4 - 13 and the pension information on pages 39 - 40 be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audit of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information
Our audits were conducted for the purpose of forming an opinion on the financial statements as a whole. The accompanying schedule of expenditures of federal awards, as required by Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards,* and the schedule of expenditures of passenger facility charges, as required by the Federal Aviation Administration, are presented for purposes of additional analysis and are not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audits of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of federal awards and the schedule of expenditures of passenger facility charges are fairly stated, in all material respects, in relation to the financial statements as a whole.

OTHER REPORTING REQUIRED BY *GOVERNMENT AUDITING STANDARDS*

In accordance with *Government Auditing Standards*, we have also issued our report dated March 1, 2017, on our consideration of the Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements, and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control over financial reporting and compliance.

EKS&H LLLP

EKS&H LLLP

March 1, 2017
Denver, Colorado

GRAND JUNCTION REGIONAL AIRPORT AUTHORITY

Management's Discussion and Analysis

The following discussion and analysis of the financial performance and activity of the Grand Junction Regional Airport Authority (the "Authority" or "GJRA") is to provide an introduction and overview that users need to interpret the financial statements of the Authority for the years ended December 31, 2016 and 2015. This discussion has been prepared by management and should be read in conjunction with the financial statements and the notes thereto, which follow this section.

OPERATIONAL AND FINANCIAL ACTIVITY

Enplanements

Enplanements increased 3% from 2015 to 2016 from 218,946 to 225,504, respectively. The cost per enplanement decreased in 2016 to $7.89 from $7.96 in 2015. During the year 2016, the following flights were available to passengers of Grand Junction Airport ("GJT"):

- United Airlines ("United") offered daily service to Denver International Airport ("DIA")
- Delta Air Lines ("Delta") offered daily service to Salt Lake City International Airport ("SLC")
- American Airlines ("American") offered daily service to Dallas/Fort Worth International Airport ("DFW") and to Phoenix Sky Harbor International Airport ("PHX")
- Allegiant offered two flights per week to Las Vegas McCarran International Airport ("LAS") and a seasonal flight to Los Angeles International Airport ("LAX")
- Charter flights were available from Denver Air Connection with flights to airports near Denver: Rocky Mountain Metro Airport in Jefferson County and Centennial Airport in Centennial, Colorado

The largest number of enplanements by carrier from 2012 through 2014 had been United. However, the merger of American with US Airways resulted in American having the most enplanements in 2016 with approximately 95,000 and United second with approximately 67,000. In 2016 United discontinued service to Houston, which accounted for an average of 15,500 annual enplanements from 2012 to 2015.

Year	Allegiant	American (Adjusted with US Airways)	Delta	United	Other	Total
2012	23,716	73,850	30,086	86,540	5,451	219,643
2013	20,126	75,925	29,345	84,287	8,001	217,684
2014	19,328	77,806	29,145	85,721	7,252	219,252
2015	17,797	84,849	27,255	81,928	7,119	218,948
2016	17,466	94,898	38,557	66,717	7,866	225,504

Aircraft Operations

Aircraft operations are departures or arrivals for two components:

1. Itinerant airlines – composed of air carriers, air taxi (commuter), general aviation, and military
2. Local airlines – composed of local general aviation and local military

Total aircraft operations have increased from 2015 to 2016 year over year, with increases in both itinerant and local operations, representing an overall increase of approximately 4.4%. The increase in aircraft operations reflects the increase in enplanements of 3% and other general aviation and military operations.

Year	Total Itinerant	Total Local	Total
2015	33,890	9,234	43,124
2016	35,161	9,870	45,031

Cargo Operations

Airfreight was provided primarily by FedEx, which accounted for 91% of freight in 2016 versus 90% in 2015. The other airfreight was provided by a smaller freight company and passenger air carriers. Total cargo pounds of airfreight increased to approximately 12,465,000 pounds in 2016 from approximately 11,024,000 pounds in 2015. Revenue to the airport is generated from cargo operations through landing fees.

Carrier	FY 2016 Pounds	FY 2015 Pounds
FedEx	11,346,000	9,900,000
Key Lime	1,104,000	1,100,000
Passenger airlines	15,000	24,000
Total	12,465,000	11,024,000

Rental Car Operations

Rental Car Revenue

Rental car revenue is comprised of four components:

- Minimum Annual Guarantee ("MAG")
  MAG is the minimum amount the rental car company must pay the Authority each month. Each rental car company has a different MAG based on the individual contract. However, they all must pay the greater of MAG or 10% of gross revenue.

Rental Car Operations (continued)

Rental Car Revenue (continued)

- Terminal rent
  Terminal rent is charged at $30.30 per square foot. Each on-airport rental car company has a terminal space of 536 square feet.

- Service area land and building leases
  There are three rental car service area facilities. The rent received is based on the amount of land and the square feet of the building that occupies the land. All land areas are the same size; however, the building size ranges from approximately 800 to 2,100 square feet.

- Fuel sales
  The rental car companies had a fuel service area built as part of the Colorado State Infrastructure Bank ("SIB") loan as discussed below. The Authority operates the fuel site, supplies all of the fuel, and charges the rental car companies a maximum markup of $1.00 per gallon. The total amount charged to the rental car companies is based on the Authority's purchase price of fuel.

The total rental car revenue has slightly increased from approximately $1,151,000 for the year ended December 31, 2015 to approximately $1,159,000 for the year ended December 31, 2016.

Customer Facility Charges ("CFC")

In 2009, GJRA borrowed $4,000,000 from the SIB to finance construction of a rental car parking lot and rental car service area. The Board of Commissioners approved a facility use fee of $3.80 and $4.00 in 2015 and 2016, respectively, per on-airport rental car per day to fund the quarterly principal and interest payments. The loan has an annual interest rate of 3% and is to be re-paid over 10 years with quarterly principal and interest payments of $116,122 starting on September 1, 2009. The SIB loan has a remaining balance of approximately $1,115,000 as of December 31, 2016 and approximately $1,538,000 as of December 31, 2015. The CFC revenue was approximately $706,000 and 176,500 rental days for the year ended December 31, 2016 versus revenue of approximately $599,000 and 157,000 rental days for the year ended December 31, 2015. The increase in revenue is related to the 12% increase in the number of rental days as a result of the increase in annual enplanements; additionally, as previously discussed, the daily CFC was increased by 5%. CFC revenue is restricted and used to pay the principal and interest on the SIB loan.

Terminal Rent Revenue

Terminal rent revenue is received from four elements:

- Airline terminal space
  The airlines paid $30.30 per square foot for the main ticket counter, with square feet ranging from approximately 600 to 3,200. In addition to the airlines' individual space, they also must pay for shared space that is utilized by all of the airlines. The shared space is comprised of three components: baggage processing area, boarding area, and ticketing area. In addition, there is an allocation for security services. The monthly shared space charge of approximately $85,000 is prorated based on each airline's reported enplanements. The 2016 budget and actual revenue from airline terminal space was approximately $1,181,800.

- Rental car counter space
  Rental car counter space rent is discussed in the rental car operations section.

- Office space
  Office space is rented to the Transportation Security Administration ("TSA"). The TSA rents approximately 8,400 square feet at a price of $28.63 per square foot for a total annual rent of approximately $240,000. The 2016 budget of $180,000 anticipated a reduction in the rental space occupied by the TSA; however, the TSA maintained the 8,400 square feet. In September 2016, the TSA exercised the option on their lease expiring September 2021 at a rate of $30.30 per square foot for a total annual rent of approximately $255,600.

- Restaurant and retail space
  In 2016, the restaurant and retail space were combined under one concession agreement. This combined space rent is the greater of an annual MAG rent of $60,000 or the following based on gross revenue:

  Gross sales up to $1,000,000.00:
  Food, beverage, and retail - 10%
  Liquor - 12%
  Gross sales between $1,000,000.01 and $1,200,000.01:
  Food, beverage, and retail - 12%
  Liquor - 14%
  Gross sales of $1,200,000.01 and above:
  Food, beverage, and retail - 14%
  Liquor - 16%

The total amount of restaurant and retail space rent for 2016 was approximately $95,000.

Parking and Ground Transportation Revenue

The Authority has an agreement with Republic Parking Inc. to manage parking operations for the airport. Commissions from parking and ground transportation revenue were higher in 2016 due in part to an increase in the maximum daily rate from $9 to $10. This increased revenue from approximately $1,291,000 to $1,432,000 for the years ended December 31, 2015 and 2016, respectively, compared to a budget of $1,312,000. The Authority has a two-tier system that requires payment to the Authority of the greater of annual MAG of $350,000 or 80.45% of gross revenues up to $500,000 plus 91.50% of gross revenues in excess of $500,000.

Fuel Flowage Revenue

The Authority receives $0.1017 for every gallon pumped for Avgas, Jet A, and military Jet A based on the Rates and Charges approved by the Board of Commissioners, excluding commercial airlines. Fuel providers shall pay a fuel flowage fee to the Authority on all fuel sold at the airport to military, government, and general aviation aircraft fuel purchasers. Unless specified in an airline operating agreement, Part 121 air carriers are excluded from fuel flowage fees. As part of an agreement from 2007 between the Authority and West Star Aviation, an additional $0.10 per gallon is collected from West Star Aviation for capital improvement funding. This additional fee will be paid until a total of $3,800,000 is collected by the Authority from West Star Aviation. As of December 31, 2016, a total of approximately $2,111,000 had been received.

Fuel flowage revenue decreased approximately $11,500 from approximately $466,000 to approximately $454,500 for the years ended December 31, 2015 and 2016, respectively, compared to a budget of $466,000.

Other Revenue Sources

Landing Fees

Commercial signatory aircraft over 12,500 pounds landing weight pay a landing fee of $1.70 per 1,000 pounds. Landing fees were up from $475,000 to approximately $507,000 for the years ended December 31, 2015 and 2016, respectively, compared to a 2016 budget of $470,000.

Land and Building Leases

The Authority leases land and buildings for general aviation hangars and other customers. The land and building leases revenue was up from $592,000 to approximately $616,000 for the years ended December 31, 2015 and 2016, respectively. The increase in revenue is due to the addition of a land lease in August 2015 along with annual adjustment to existing leases.

Other Revenue Sources (continued)

Aviation Fuel Tax Disbursements

Aviation fuel tax disbursements are made based on the formula of $0.04 per gallon on aviation gasoline and jet fuel and 65% of the sales taxes collected on jet fuel used for commercial operations as reported to the Colorado Department of Revenue by the fuel providers. The revenue decreased from approximately $257,000 to approximately $209,000 for the years ended December 31, 2015 and 2016, respectively.

Airport Financial Statements

The Authority engages in business-type activities. These are activities that are intended to recover all or a significant portion of costs through user fee charges to external parties for goods or services. The Authority reports its business-type activities in a single enterprise fund, meaning that its activities are operated and reported like a private-sector business. The Authority's financial report includes statements of net position; statements of revenues, expenses, and changes in net position; and statements of cash flows. Also included are notes to the financial statements, which provide more detailed data. These financial statements are prepared in accordance with accounting principles generally accepted in the United States of America as promulgated by the Governmental Accounting Standards Board ("GASB").

Statements of Net Position

The statements of net position present the financial position of the Authority at the end of the fiscal year and include all assets, deferred outflows of resources, liabilities, deferred inflows of resources, and net position of the Authority.

Airport Financial Statements (continued)

Statements of Net Position (continued)

A summarized comparison of the Authority's statement of financial position is as follows:

	December 31,	
	2016	2015
Current assets	$ 8,670,736	$ 6,866,945
Restricted assets	11,596,160	4,110,867
Capital assets, net	58,240,193	58,942,759
Total assets	78,507,089	69,920,571
Deferred outflows of resources	850,586	331,456
Total assets and deferred outflows of resources	$ 79,357,675	$ 70,252,027
Current liabilities	$ 3,054,284	$ 2,455,892
Non-current liabilities	24,348,769	16,142,379
Total liabilities	27,403,053	18,598,271
Deferred inflows of resources	74,342	105,192
Net position		
Net investment in capital assets	35,456,160	43,638,337
Restricted for debt service and capital assets	10,748,391	3,421,604
Unrestricted	5,675,729	4,488,623
Total net position	51,880,280	51,548,564
Total liabilities, deferred inflows of resources, and net position	$ 79,357,675	$ 70,252,027

The increase in assets is due to the refunding of the 2007 Bonds and incurring the 2016 Bonds. The 2016 Bonds added a $9,000,000 project fund along with an approximately $13,420,000 escrow fund for the remaining 2007 Bonds that will be retired in 2017. This also resulted in an increase in liabilities that reflect not on the 2016 Bonds but the remaining 2007 Bonds. The change in net investment in capital assets is a result of the addition of the 2016 Bonds for $19,670,000 and the related 2016 Bond Premium for approximately $2,000,000. As the 2016 Bonds mature and the remaining 2007 Bonds are retired in 2017, the net investment in capital assets will increase. Additionally, the change in restricted for debt service and capital assets will be reduced in 2017 once the 2007 Bonds are retired and the bond escrow fund of approximately $13,420,000 is fully utilized. The $9,000,000 2016 Bond project fund, once used, will reduce this account as well.

Airport Financial Statements (continued)

Statements of Net Position (continued)

Additional changes to the statements of net position are due to the following:

	December 31,	
	2016	2015
Deferred outflows	$ 850,586	$ 331,456
Net pension liability	$ 2,837,459	$ 2,136,600
Deferred inflows	$ 74,342	$ 105,192

See Note 7 in the notes to the consolidated financial statements for additional discussion of pension plan, the implementation of GASB 68 and GASB 71, and the effect on the 2015 and 2016 statements of net position.

Capital Assets

The Airport Improvement Program ("AIP") provides grants to public agencies for the planning and development of public-use airports. There were two projects that were completed during the year, AIP 49 and AIP 53, with a final cost of approximately $1,728,000 and $835,000, respectively. There was also a continuation of work on AIP 52 with a construction-in-progress balance of approximately $2,306,000 and the start of AIP 54 with a cost of approximately $38,000.

Construction in progress:

	Beginning Balance	Additional Cost	Transfer to Capital Asset	Ending Balance
AIP 49 - Runway environmental assessments (completed in 2016)	$ 1,670,694	$ 56,832	$ 1,727,526	$ -
AIP 52 - Rehabilitate runway, taxiway, and connectors	270,651	2,379,560	835,209	1,815,002
AIP 53 - Apron design (completed in 2016)	761,812	-	-	761,812
AIP 54 - Rehabilitate apron	-	38,152	-	38,152
Grading and drainage RW 11/29	36,161			36,161
27 1/4 road relocation	2,975	-	-	2,975
RTR relocation	156,078	-	-	156,078
Administration/ARFF building	4,074,814	12,931	-	4,087,745
Security solutions	91,510	117,516	-	209,026
Total	$ 7,064,695	$ 2,604,991	$ 2,562,735	$ 7,106,951

Note 3 to the financial statements provides additional information on the Authority's capital asset activity.

Airport Financial Statements (continued)

Statements of Net Position (continued)

Long-Term Debt

Capital acquisitions are funded using a variety of financing mechanisms, including federal and state grants, passenger facility charges, public debt issues, and airport operating revenues. During 2016, the Authority refunded the 2007 Revenue Bonds with the 2016 Revenue Bonds, resulting in a $9,000,000 project fund. As of December 31, 2016, the balance due on the 2016 Bonds was $19,760,000. In addition, the Authority has approximately $1,115,000 outstanding on a note payable to the Colorado State Infrastructure Bank to finance construction of a rental car parking lot and rental car service area. Note 5 to the financial statements provides additional information regarding the Authority's debt activities.

Statements of Revenues, Expenses, and Changes in Net Position

The statements of revenues, expenses, and changes in net position reflect the operating activity of the Authority for the year using the accrual basis of accounting, similar to private sector companies. The change in net position is an indicator of whether the overall fiscal condition of the Authority has improved or worsened during the year.

The change in net position for the years ended December 31, 2016 and 2015 was an increase of approximately $332,000 and reduction of approximately $778,000, respectively.

	For the Years Ended December 31,	
	2016	2015
Total operating revenues	$ 6,230,407	$ 6,400,317
Total non-operating revenues	923,320	879,050
Total revenues	7,153,727	7,279,367
Total operating expenses	4,299,327	3,942,275
Depreciation expense	4,187,322	4,379,094
Net non-operating expense	1,258,768	749,253
Total expenses	9,745,417	9,070,622
Loss before capital contributions and CFC revenue	(2,591,690)	(1,791,255)
Capital contributions and CFC revenue	2,923,406	1,013,337
Change in net position	$ 331,716	$ (777,918)

Airport Financial Statements (continued)

Statements of Revenues, Expenses, and Changes in Net Position (continued)

Aeronautical revenue remained relatively flat year over year, while non-aeronautical revenue showed a decrease. This decrease was due to the discontinued management by the Authority of the airport restaurant facility. The restaurant was operated by a restaurant and retail concessionaire that provides a net revenue to the Authority versus gross revenue that was reported in 2015. The increase in operating expenses is due to a review of the terminal area plan, enhancement of information technology, and higher-than-expected legal fees. Non-operating expense was a result of the debt issuance costs related to the 2016 Revenue Bonds. Capital contributions increased with the Authority receiving federal and state grants for AIP 49, AIP 52, AIP 53, and AIP 54. In addition, the increase in CFC revenue was a result of the increase in the daily CFC rate from $3.80 to $4.00, as previously discussed.

	December 31,	
	2016	2015
AIP 49 - Runway environmental assessments	$ 24,536	$ 42,190
AIP 52 - Rehabilitate runway, taxiway, and connectors	1,986,046	243,556
AIP 53 - Apron design	67,320	100,440
AIP 54 - Rehabilitate apron	32,080	-
State of Colorado grants	107,901	19,110
Federal Mineral Lease District	-	9,118
Total capital contributions	$ 2,217,883	$ 414,414

Financial Contact

The Authority's financial statements are designed to present interested parties (customers, tenants, creditors, and the community) with a general overview of the Authority's finances and to demonstrate the accountability to all interested parties. If you have any questions concerning this report or need additional financial information, please contact the Grand Junction Regional Airport Authority, 800 Eagle Drive, Grand Junction, Colorado 81506 or at 970-244-9100. Additionally, the individual Authority staff members may be contacted via e-mail in the "Contact Us" section of the Authority's website.

GRAND JUNCTION REGIONAL AIRPORT AUTHORITY

Statements of Net Position

	December 31, 2016	December 31, 2015
Assets		
Current assets		
Cash and cash equivalents	$ 8,143,863	$ 6,265,142
Receivables		
Accounts receivable	444,789	501,573
Grants	13,175	22,379
Prepaid expenses	68,909	77,851
Total current assets	8,670,736	6,866,945
Restricted cash, cash equivalents, and investments		
Passenger facility charges	1,211,727	1,779,152
Revenue bond reserve fund	9,536,664	1,460,000
Revenue bond sinking fund	-	182,452
Rental car improvements	687,036	538,310
Lease deposits	160,733	150,953
Total restricted cash, cash equivalents, and investments	11,596,160	4,110,867
Capital assets, net	58,240,193	58,942,759
Total non-current assets	69,836,353	63,053,626
Total assets	78,507,089	69,920,571
Deferred Outflows of Resources		
Deferred amortization related to pension plan	850,586	331,456
Total deferred outflows of resources	850,586	331,456
Total assets and deferred outflows of resources	$ 79,357,675	$ 70,252,027
Liabilities		
Current liabilities		
Accounts payable	$ 234,244	$ 166,671
Accounts payable - capital assets	365,519	463,701
Accrued expenses	982,588	305,736
Lease deposits	160,733	150,953
Current portion of revenue received in advance	38,477	70,188
Current portion of note payable	435,932	423,096
Current portion of revenue bonds payable	836,791	875,547
Total current liabilities	3,054,284	2,455,892
Non-current liabilities		
Notes payable, net of current portion	678,832	1,114,764
Revenue bonds payable, net of current portion	20,832,478	12,891,015
Net pension liability	2,837,459	2,136,600
Total non-current liabilities	24,348,769	16,142,379
Total liabilities	27,403,053	18,598,271
Deferred Inflows of Resources		
Deferred amortization related to pension plan	74,342	105,192
Total deferred inflows of resources	74,342	105,192
Total liabilities and deferred inflows of resources	27,477,395	18,703,463
Commitments and contingencies		
Net Position		
Net investment in capital assets	35,456,160	43,638,337
Restricted for debt service and capital assets	10,748,391	3,421,604
Unrestricted	5,675,729	4,488,623
Total net position	51,880,280	51,548,564
Total liabilities, deferred inflows of resources, and net position	$ 79,357,675	$ 70,252,027

See notes to financial statements.

GRAND JUNCTION REGIONAL AIRPORT AUTHORITY

Statements of Revenues, Expenses, and Changes in Net Position

	For the Years Ended December 31,	
	2016	2015
Operating revenues		
Aeronautical revenue		
Passenger airlines revenue		
Passenger airlines landing fees	$ 506,670	$ 474,514
Terminal rent	1,181,845	1,181,845
Other	90,611	87,015
Total passenger airlines revenue	1,779,126	1,743,374
Non-passenger airline revenue		
Landing fees from cargo	106,434	96,294
Cargo and hangar rentals	50,631	50,630
Aviation fuel tax	208,930	256,975
Fuel flowage fees	454,497	466,040
Other	3,750	11,370
Total non-passenger airline revenue	824,242	881,309
Total aeronautical revenue	2,603,368	2,624,683
Non-aeronautical revenue		
Land and building leases	565,339	541,343
Terminal - food and beverage	61,216	446,702
Terminal - retail	34,129	35,498
Terminal - other	245,613	241,466
Rental cars	1,158,797	1,150,665
Parking and ground transportation	1,432,442	1,290,840
Other	129,503	69,120
Total non-aeronautical revenue	3,627,039	3,775,634
Total operating revenues	6,230,407	6,400,317
Operating expenses		
Personnel compensation and benefits	2,025,827	2,063,862
Communications and utilities	289,490	284,701
Supplies and materials	405,993	556,840
Contract services	930,041	536,955
Repairs and maintenance	450,339	269,023
Insurance	91,037	89,692
Other	106,600	141,202
Total operating expenses	4,299,327	3,942,275
Operating income, before depreciation	1,931,080	2,458,042
Depreciation	4,187,322	4,379,094
Operating loss	(2,256,242)	(1,921,052)
Non-operating revenues (expenses)		
Passenger facility charges	894,064	874,101
Interest income	29,256	19,630
Interest expense	(696,874)	(749,253)
Customer facility charges	705,523	598,923
Capital contributions	2,217,883	414,414
Other expenses	(561,894)	(14,681)
Total non-operating revenues	2,587,958	1,143,134
Change in net position	331,716	(777,918)
Net position at beginning of year	51,548,564	52,326,482
Net position at end of year	$ 51,880,280	$ 51,548,564

See notes to financial statements.

GRAND JUNCTION REGIONAL AIRPORT AUTHORITY

Statements of Cash Flows

	For the Years Ended December 31, 2016	2015
Cash flows from operating activities		
Cash received from customers and users	$ 6,255,480	$ 6,480,822
Cash paid to vendors for goods and services	(1,540,007)	(1,904,047)
Cash paid to and for employees	(1,870,779)	(2,082,823)
Net cash provided by operating activities	2,844,694	2,493,952
Cash flows from non-capital financing activities		
Receipts of lease deposits, net	9,780	36,238
Net cash provided by non-capital financing activities	9,780	36,238
Cash flows from capital and related financing activities		
Grants received	2,227,087	510,747
Customer facility charges received	705,523	598,923
Passenger facility charges received	894,064	874,101
Interest paid	(681,159)	(753,385)
Acquisition and construction of capital assets	(3,616,616)	(457,055)
Proceeds from sale of assets	36,750	-
Bond reserve balance (increase) reduction	(8,076,664)	80,000
Proceeds from bond issuance	21,685,252	-
Defeased bond cash reserve	(12,885,000)	-
Principal payments on note and bonds payable	(1,320,641)	(1,251,185)
Net cash used in capital and related financing activities	(1,031,404)	(397,854)
Cash flows from investing activities		
Bond issuance costs	(564,964)	-
Interest received on cash equivalents	29,244	19,630
Net cash flows (used in) provided by investing activities	(535,720)	19,630
Net increase in cash and cash equivalents	1,287,350	2,151,966
Cash and cash equivalents at beginning of year	8,916,009	6,764,043
Cash and cash equivalents at end of year	$ 10,203,359	$ 8,916,009

(Continued on the following page)

See notes to financial statements.

GRAND JUNCTION REGIONAL AIRPORT AUTHORITY

Statements of Cash Flows

(Continued from the previous page)

Reconciliation of loss from operations to net cash provided by operating activities:

	For the Years Ended December 31,	
	2016	2015
Operating loss	$ (2,256,242)	$ (1,921,052)
Adjustments to reconcile operating loss to net cash provided by operating activities		
Depreciation expense	4,187,322	4,379,094
Changes in certain assets and liabilities		
Receivables	56,784	58,261
Prepaid expenses	8,942	(41,384)
Accounts payable	67,571	37,164
Accrued liabilities	661,149	19,252
Net pension liability and pension-related deferred inflows and outflows of resources	150,879	(59,627)
Revenue received in advance	(31,711)	22,244
	5,100,936	4,415,004
Net cash provided by operating activities	$ 2,844,694	$ 2,493,952

Non-cash investment and capital and related financing activities:

	December 31,	
	2016	2015
Net change in capital assets purchased with payables	$ (98,182)	$ (34,821)

Statements of net position cash and cash equivalents:

	December 31,	
	2016	2015
Operating cash	$ 8,143,863	$ 6,265,142
Restricted cash and cash equivalents		
Revenue bond sinking fund	-	182,452
Passenger facility charges	1,211,727	1,779,152
Rental car improvements	687,036	538,310
Lease deposits	160,733	150,953
Net cash and cash equivalents	$ 10,203,359	$ 8,916,009

See notes to financial statements.

Note 1 - Organization and Summary of Significant Accounting Policies

Organization

The Grand Junction Regional Airport Authority (the "Authority") was established in 1971 under the provisions of the Public Airport Authority Act of 1965 when all assets of the city/county-owned airport were transferred to the Authority. The Authority's Board of Commissioners (the "Board") consists of seven members with three members appointed by the Mesa County Commissioners, which may include one commissioner; three members appointed by the Grand Junction City Council, including one council member; and one member appointed by the other six members, with the concurrence of the Mesa County Commissioners and the Grand Junction City Council.

As noted above, neither the city of Grand Junction nor Mesa County appoint a voting majority of the Authority's Board; however, both have signed a supplemental co-sponsorship agreement between the Authority and the Federal Aviation Administration ("FAA"). The co-sponsorship mandates that the city of Grand Junction and Mesa County would be liable for the financial commitments of the sponsor under the grant agreements should the Authority not be able to satisfy the financial commitments out of the new revenues generated by the operation of the airport.

The reporting entity of the Authority includes those activities and functions over which the Authority is considered to be financially accountable. The Authority's financial statements include the accounts and operations of all of the Authority's functions. The Authority is the primary government and does not include any component units using the criteria set forth in accounting principles generally accepted in the United States of America ("GAAP").

The Authority is a special-purpose government engaged only in business-type activities. For this type of government, only enterprise financial statements are presented.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, deferred outflows of resources, liabilities, and deferred inflows of resources and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

The financial statements include some amounts that are based on management's best estimates and judgments. The most significant estimates relate to depreciation and useful lives and contingencies. These estimates may be adjusted as more current information becomes available, and any adjustment could be significant.

Note 1 - Organization and Summary of Significant Accounting Policies (continued)

Basis of Accounting

The Authority's records are maintained on the accrual basis of accounting and economic resource measurement focus in accordance with GAAP, including all applicable statements of the Governmental Accounting Standards Board ("GASB"). Revenue is recognized when earned, and expenses are recognized when the liability is incurred. Depreciation is computed and recorded as an operating expense. Expenditures for property and equipment are shown as increases in assets. When both restricted and unrestricted resources are available for use, it is the Authority's policy to use restricted resources first with the exception of the debt service on the revenue bonds that is paid partially from the restricted passenger facility charges ("PFC") and partially from operating funds.

The operations of the Authority are accounted for on a fund basis in a single enterprise fund. Enterprise funds may be used to account for operations (a) that are financed and operated in a manner similar to business enterprises where the intent of the governing body is that the costs (expenses, including depreciation) of providing goods and services to the general public on a continuing basis be financed or recovered primarily through user charges; or (b) where the governing body has decided that periodic determination of revenues earned, expenses incurred, and/or changes in net position is appropriate for capital maintenance, public policy, management control, accountability, or other purposes.

Cash and Cash Equivalents

The Authority considers all highly liquid instruments purchased with an original maturity of three months or less to be cash equivalents.

Receivables

The Authority provides an allowance for doubtful accounts equal to the estimated uncollectible amounts. The Authority's estimate is based on historical collection experience and a review of the current status of accounts receivable. It is reasonably possible that the Authority's estimate of the allowance for doubtful accounts will change and that losses ultimately incurred could differ materially from the amounts estimated in determining the allowance. Based on the Authority's review of accounts receivable, no allowance for doubtful accounts has been established as of December 31, 2016 or 2015.

Grants receivable represent reimbursements due from the federal government for allowable costs incurred on federal award programs.

Budgeting Requirements

The Authority's budgeting process is a financial planning tool used to establish the estimated revenues and expenditures for the airport. The budget is prepared by the Authority and approved by the Board in accordance with the State of Colorado's *Financial Management Manual* and in accordance with Colorado Revised Statutes. The initial budget is submitted to the Board by October 15 and the Authority adopts an appropriation resolution for the next fiscal year by December 31. The Board may amend the appropriation resolution at any time during the year if warranted by circumstances.

Note 1 - Organization and Summary of Significant Accounting Policies (continued)

Budgeting Requirements (continued)

The Authority appropriates, and may not exceed appropriations, at a total fund level. Appropriations for the year ended December 31, 2016 were $18,264,280.

The budget basis of accounting differs from the GAAP basis in that debt proceeds are included as revenue, outlays for acquisition of capital assets and debt principal payments are included as expenditures, and depreciation is not included in expenditures.

Restricted Assets

Passenger Facility Charges

The Authority received approval from the FAA to impose and use a PFC of $4.50 per eligible enplaned passenger from August 2011 through August 2019. During 2007, the Authority was approved to collect PFCs of $15,857,760. The PFCs are restricted for use in the construction of certain airport improvements and related construction debt as approved by the FAA. As of December 31, 2016, the Authority had collected $9,277,380 of the approved charges. With approval of the FAA, the PFC receipts are recognized and recorded as non-operating revenue in the year collected. PFCs are paid by the carriers, with unexpended amounts reflected as a restriction of net position.

Revenue Bond Reserve and Sinking Funds

The debt service account is used to segregate resources accumulated for debt service payments. The bond reserve account is used to report resources set aside to subsidize potential deficiencies from operations that could adversely affect debt service payments. Unexpended amounts are reflected as a restriction of net position.

Rental Car Improvements

During 2008, the Authority began assessing a daily use fee, or Customer Facility Charge ("CFC"), of up to $3.25 per on-airport rental car per day. These funds are being used to make payments on debt for construction of new rental car parking and on-airport rental car service areas. In 2015, the CFC was increased to $3.80 per on-airport rental car per day. In 2016, the CFC was increased to $4.00.

Lease Deposits

The Authority requires lease deposits from the lessees for the duration of the lease. The deposits are refunded when the tenants vacate, provided the tenants are current on rental payments.

Capital Assets

Capital assets are defined by the Authority as assets with an initial individual cost of more than $2,500. Capital assets purchased by the Authority are stated at historical cost. Depreciation is computed using the straight-line method over the estimated useful lives of the assets, ranging from five to fifty years. Depreciation of construction-in-progress assets begins when an asset is placed in service.

Note 1 - Organization and Summary of Significant Accounting Policies (continued)

Capital Assets (continued)

Interest incurred during construction periods is capitalized and included in the cost of property and equipment. Maintenance and repairs are expensed as incurred.

Long-Lived Assets

The Authority evaluates the recoverability of long-lived assets whenever events or changes in circumstances indicate that the service utility of the asset's carrying amount may not be recoverable. Such circumstances could include, but are not limited to (1) a significant decrease in the market value of an asset, (2) a significant adverse change in the extent or manner in which an asset is used, or (3) an accumulation of costs significantly in excess of the amount originally expected for the acquisition of an asset. The Authority measures the carrying amount of the asset against the estimated undiscounted future cash flows associated with it. Should the sum of the expected future net cash flows be less than the carrying value of the asset being evaluated, an impairment loss would be recognized. The impairment loss would be calculated as the amount by which the carrying value of the asset exceeds its fair value. The fair value is measured based on quoted market prices, if available. If quoted market prices are not available, the estimate of fair value is based on various valuation techniques, including the discounted value of estimated future cash flows. The evaluation of asset impairment requires the Authority to make assumptions about future cash flows over the life of the asset being evaluated. These assumptions require significant judgment, and actual results may differ from assumed and estimated amounts. As of December 31, 2016 and 2015, no events or changes in circumstances were identified that would require the Authority to impair any of its long-lived assets.

Components of Net Position

Net investment in capital assets - This amount is derived by subtracting the outstanding debt incurred by the airport to buy or construct capital assets shown on the statements of net position. Capital assets cannot readily be sold and converted to cash.

Restricted - This category represents restrictions imposed on the use of the Authority's resources by parties outside of the government or by law through constitutional provisions or enabling legislation. As of December 31, 2016 and 2015, the Authority reported restricted net position of $10,748,391 and $3,421,604, respectively, for debt service and PFCs.

Unrestricted - This category consists of net position that does not meet the definition of net investment in capital assets or restricted.

Revenue Received in Advance

During March 1997, the Authority granted a lease to the Bureau of Land Management ("BLM") for use of airport land for a term of 20 years. The BLM prepaid the entire lease in the amount of $150,000. The prepayment is reflected as revenue received in advance and is being amortized over the life of the lease in the amount of $7,500 per year. As of December 31, 2016 and 2015, the unamortized balance was $0 and $7,500, respectively.

Note 1 - Organization and Summary of Significant Accounting Policies (continued)

Revenue Received in Advance (continued)

Terminal space rentals and land and building lease payments collected in advance are recorded as a liability and recognized into revenue in the applicable period. As of December 31, 2016 and 2015, the amount of prepaid rent was $38,477 and $62,688, respectively.

Compensated Absences

In accordance with the vesting method provided under GASB Statement No. 16, *Accounting for Compensated Absences*, accumulated vacation and personal time is accrued based on assumptions concerning the probability that certain employees will become eligible to receive these benefits in the future.

Federal and State Grants

Outlays for airport capital improvements are subject to reimbursement from federal grant programs through the Airport Improvement Program ("AIP") of the FAA. Funds are also received for airport development from the State of Colorado. Funding provided from government grants is considered earned as the related approved capital outlays are incurred. Costs claimed for reimbursement are subject to audit and acceptance by the granting agency.

Contributions

Certain expenditures for airport capital improvements are significantly funded through the AIP of the FAA, with certain matching funds provided by the State of Colorado, or from various state allocations of grant programs. Capital funding provided under governmental grants is considered earned as the related allowable expenditures are incurred. Grants for capital asset acquisition, facility development and rehabilitation, and eligible long-term planning studies are reported in the financial statements after non-operating revenues and expenses as capital contributions.

Risk Management

The Authority is exposed to various risks of loss related to torts; errors and omissions; violations of civil rights; theft of, damage to, and destruction of assets; and natural disasters. These risks are covered by commercial insurance. There has been no significant reduction in insurance coverage, and settlement amounts have not materially exceeded coverage for the current or prior three years.

Note 1 - Organization and Summary of Significant Accounting Policies (continued)

Pension Plan

During the year ended December 31, 2015, the Authority implemented GASB Statement No. 68, *Accounting and Financial Reporting for Pensions, an Amendment of GASB Statement No. 27*, and GASB Statement No. 71, *Pension Transition for Contributions Made Subsequent to the Measurement Date - an Amendment of GASB Statement No. 68*, which revise and establish new financial reporting requirements for most governmental entities that provide their employees with pension benefits. For purposes of measuring the net pension liability; deferred outflows of resources and deferred inflows of resources related to pensions and pension expense; information about the fiduciary net position of the Local Government Division Trust Fund ("LGDTF"), a cost-sharing multiple-employer defined benefit pension plan; and additions to/deductions from the LGDTF's fiduciary net position have been determined on the same basis as they are reported by the Public Employees' Retirement Association of Colorado ("PERA"). For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with benefit terms. Investments are reported at fair value.

Recently Issued Accounting Pronouncements

During the year ended December 31, 2016, the Authority adopted GASB Statement No. 72, *Fair Value Measurement and Application*, which clarifies the definition of fair value for financial reporting purposes, establishes general principles for measuring fair value, provides additional fair value application guidance, and enhances disclosures about fair value measurement. Upon adoption, management reviewed the assets and liabilities of the Authority, established the unit of account for the assets and liabilities subject to fair value recognition and disclosure, and determined the fair value hierarchy that each unit of account should be classified under. As a result of the adoption, there were no changes in the measurement of assets or liabilities previously held by the Authority. GASB Statement No. 72 is retroactively applied to both fiscal years presented.

Subsequent Events

The Authority has evaluated all subsequent events through the auditors' report date, which is the date the financial statements were available for issuance. There were no material subsequent events that required recognition or disclosure.

Note 2 - Cash Deposits

The Colorado Divisions of Banking and Financial Services are required by statute to monitor the naming of eligible depositories and reporting of the uninsured deposits and assets maintained in the collateral pools. Eligible collateral includes municipal bonds, U.S. government securities, mortgages, and deeds of trust.

Note 2 - Cash Deposits (continued)

The Authority's deposits include the following:

	December 31,	
	2016	2015
Cash and cash equivalents	$ 8,143,863	$ 6,265,142
Restricted cash	11,596,160	4,110,867
Restricted cash netted against bonds payable	12,885,000	-
Total deposits and investments	$ 32,625,023	$ 10,376,009

The bank balances on deposit were $32,642,250 and $10,552,639 at December 31, 2016 and 2015, respectively.

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligation. Colorado statutes authorize the Authority to invest in obligations of the U.S. Treasury and U.S. agencies; obligations of the State of Colorado or of any county, school district, and certain towns and cities therein; notes or bonds secured by insured mortgages or trust deeds; obligations of national mortgage associations; certain repurchase agreements; and local government investment pools.

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer. The Authority places no limit on the amount the Authority may invest in any one issuer.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment.

Investments

The Authority does not have a formal investment policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates. Colorado statutes limit authorized investments to investments having maturities of five years or less, unless the entity's governing body specifically authorizes longer maturities.

Note 3 - Capital Assets

A summary of changes in capital assets is as follows as of December 31, 2016:

	Beginning Balance	Increases	Decreases	Ending Balance
Capital assets, not being depreciated				
Land	$ 2,416,058	$ -	$ -	$ 2,416,058
Construction in progress	7,064,695	2,604,991	2,562,735	7,106,951
Total capital assets, not being depreciated	9,480,753	2,604,991	2,562,735	9,523,009
Capital assets, being depreciated				
Buildings and improvements	17,242,750	520,451	-	17,763,201
Land improvements	84,784,115	2,594,479	-	87,378,594
Equipment	4,718,518	361,249	100,574	4,979,193
Total capital assets, being depreciated	106,745,383	3,476,179	100,574	110,120,988
Less accumulated depreciation for				
Buildings and improvements	9,459,965	694,194	-	10,154,159
Land improvements	44,909,161	3,094,131	-	48,003,292
Equipment	2,914,251	398,997	66,895	3,246,353
Total accumulated depreciation	57,283,377	4,187,322	66,895	61,403,804
Total capital assets, being depreciated, net	49,462,006	(711,143)	33,679	48,717,184
Capital assets, net	$ 58,942,759	$ 1,893,848	$ 2,596,414	$ 58,240,193

A summary of changes in capital assets is as follows as of December 31, 2015:

	Beginning Balance	Increases	Decreases	Ending Balance
Capital assets, not being depreciated				
Land	$ 2,416,058	$ -	$ -	$ 2,416,058
Construction in progress	6,583,538	481,157	-	7,064,695
Total capital assets, not being depreciated	8,999,596	481,157	-	9,480,753
Capital assets, being depreciated				
Buildings and improvements	17,242,750	-	-	17,242,750
Land improvements	84,771,418	12,697	-	84,784,115
Equipment	4,824,990	12,733	119,205	4,718,518
Total capital assets, being depreciated	106,839,158	25,430	119,205	106,745,383
Less accumulated depreciation for				
Buildings and improvements	8,776,957	683,008	-	9,459,965
Land improvements	41,611,424	3,297,737	-	44,909,161
Equipment	2,620,396	398,349	104,494	2,914,251
Total accumulated depreciation	53,008,777	4,379,094	104,494	57,283,377
Total capital assets, being depreciated, net	53,830,381	(4,353,664)	14,711	49,462,006
Capital assets, net	$ 62,829,977	$ (3,872,507)	$ 14,711	$ 58,942,759

Note 4 - Accrued Expenses

Accrued expenses consist of the following:

	December 31, 2016	December 31, 2015
Vacation	$ 158,182	$ 161,000
Compensation and related	67,054	60,065
Interest	74,700	58,985
Other	682,652	25,686
	$ 982,588	$ 305,736

Note 5 - Long-Term Debt

Changes in long-term obligations for the year ended December 31, 2016 are as follows:

	Beginning Balance	Additions	Reductions	Ending Balance	Due in One Year
Revenue bonds, Series 2016A and 2016B	$ -	$19,670,000	$ -	$19,670,000	$ 645,000
Revenue bonds, Series 2007	13,760,000	-	(875,000)	12,885,000	12,885,000
Bond premium	6,562	2,015,252	(22,545)	1,999,269	191,791
Colorado State Infrastructure Bank note	1,537,860	-	(423,096)	1,114,764	435,932
Less bond reserve fund to satisfy Revenue bonds, Series 2007	-	-	12,885,000)	12,885,000)	12,885,000)
Total long-term obligations	$15,304,422	$21,685,252	$14,205,641)	$22,784,033	$ 1,272,723

Changes in long-term obligations for the year ended December 31, 2015 are as follows:

	Beginning Balance	Additions	Reductions	Ending Balance	Due in One Year
Revenue bonds, Series 2007	$14,600,000		$ (840,000)	$13,760,000	$ 875,000
Bond premium	7,109	-	(547)	6,562	547
Colorado State Infrastructure Bank note	1,948,498	-	(410,638)	1,537,860	423,096
Total long-term obligations	$16,555,607	$ -	$ (1,251,185)	$15,304,422	$ 1,298,643

Note 5 - Long-Term Debt (continued)

2016 Bonds

The Authority issued Airport Revenue Bonds, Series 2016A and 2016B, dated November 22, 2016, in the amount of $19,670,000, for the purpose of refunding the 2007 Series bonds. The bonds are secured by net operating revenues of the Authority. The bonds bear interest from 2.3% to 5.0% with interest payable semi-annually on June 1 and December 1, with principal payable annually on December 1 and maturing on December 1, 2036.

The debt service requirements to maturity, excluding any unamortized premium, are as follows:

Year Ending December 31,	Principal	Interest	Total
2017	$ 645,000	$ 863,416	$ 1,508,416
2018	680,000	824,523	1,504,523
2019	695,000	810,183	1,505,183
2020	715,000	790,375	1,505,375
2021	735,000	767,850	1,502,850
2022-2026	4,195,000	3,323,100	7,518,100
2027-2031	5,320,000	2,195,000	7,515,000
2032-2036	6,685,000	839,825	7,524,825
	$ 19,670,000	$ 10,414,272	$ 30,084,272

2007 Bonds

The Authority issued Airport Revenue Bonds, Series 2007, dated May 1, 2007, in the amount of $19,560,000, for the purpose of funding a portion of the costs of new road improvements to the airport and refunding the 2003 Series bonds. The bonds are secured by net operating revenues of the Authority and a reserve account in the amount of $12,885,000 funded from the net proceeds of the 2016 Series bonds. The bonds bear interest from 4.4% to 5.0% with interest payable semi-annually on June 1 and December 1, with principal payable annually on December 1. The outstanding principal as of December 31, 2016 is to be paid in full subsequent to year-end with cash received from the 2016 Series bonds (as noted above). As the cash was received prior to December 31, 2016 with the stated purpose of refunding the bond, the liability has been netted against cash held for refund on the statement of financial position. In accordance with the 2007 bond agreement, the complete payoff of the 2007 Series bonds will take place in December 2017.

Colorado State Infrastructure Bank Note

The Authority borrowed $4,000,000 from the Colorado State Infrastructure Bank on May 29, 2009 for the purpose of funding complete reconstruction of the rental car parking lot, including construction and installation of all supporting infrastructure and the design phase of the vehicle service area. The note is secured by an on-airport rental car facility fee. The note carries an interest rate of 3% and is to be paid in quarterly installments of principal and interest of $116,122 through June 2019.

Note 5 - Long-Term Debt (continued)

Colorado State Infrastructure Bank Note (continued)

The debt service requirements to maturity are as follows:

Year Ending December 31,	Principal	Interest	Total
2017	$ 435,932	$ 28,555	$ 464,487
2018	449,158	15,329	464,487
2019	229,674	2,571	232,245
	$ 1,114,764	$ 46,455	$ 1,161,219

Note 6 - Future Rental Revenue

The Authority leases a portion of its property under non-cancelable operating lease agreements for airline operations, concessions, and other commercial and private purposes.

The following is a summary of approximate future minimum rental payments to be received under non-cancelable operating leases:

Year Ending December 31,	
2017	$ 1,793,000
2018	1,743,000
2019	1,636,000
2020	1,116,000
2021	547,000
Thereafter	948,000
	$ 7,783,000

Note 7 - Pension Plans

Defined Benefit Pension Plan

Plan Description

The Authority contributes to the LGDTF, a cost-sharing multiple-employer defined benefit pension plan administered by PERA. The LGDTF provides retirement and disability, post-retirement annual increases, and death benefits for members or their beneficiaries. All employees of the Authority are members of the LGDTF. Title 24, Article 51 of the Colorado Revised Statutes ("CRS"), as amended, assigns the Authority to establish benefit provisions to the state legislature. PERA issues a publicly available annual financial report that includes financial statements and required supplementary information for the LGDTF. That report may be obtained online at www.copera.org; by writing to Colorado PERA, 1301 Pennsylvania Street, Denver, Colorado 80203; or by calling PERA at 1-800-759-PERA (7372) or 303-832-9550.

Funding Policy

The Authority is required to contribute member and employer contributions to PERA at a rate set by Colorado statute. The contribution requirements of plan members and the Authority are established under Title 24, Article 51, Part 4 of the CRS, as amended. The contribution rate is 8.00% of covered salary for members and 10.00% of covered salary for the Authority. A portion of the Authority's contribution (1.02% of covered salary) is allocated for the Health Care Trust Fund. The Authority is also required to pay an amortized equalization disbursement ("AED") equal to 2.20% of the total payroll for calendar year 2016. Additionally, the Authority is required to pay a supplemental amortization equalization disbursement ("SAED") equal to 1.50% of the total payroll for calendar year 2016. If the Authority rehires a PERA retiree as an employee or under any other work arrangement, it is required to report and pay employer contributions (including AED and SAED) on the amounts paid for the retiree; however, no member contributions are required. The Authority's contributions to LGDTF for the years ended December 31, 2016 and 2015 were $179,788 and $201,249, respectively, which is equal to the required contributions for each year.

Benefits Provided

LGDTF provides retirement and disability, post-retirement annual increases, and death benefits for members or their beneficiaries. Retirement benefits are based upon a defined or fixed multiplier, age, years of credited service, and Highest Average Salary ("HAS"). For most employees, HAS is one-twelfth of the average of the highest annual salaries that are associated with three periods of 12 consecutive months under PERA-covered employment. The basic retirement benefit equals *2.5% x HAS x Years of Service*. Employees with 25 years of continuous service are eligible to retire at age 50. Employees are eligible for service-related disability benefits with five or more years of service. Disability benefits are divided into a two-tier disability program consisting of a short-term disability program and a disability retirement benefit. At benefit commencement, the member can choose from different payment options, some of which can continue after the retiree's death to a named beneficiary, and for which the benefit amount is appropriately adjusted.

Note 7 - Pension Plans (continued)

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At December 31, 2016 and 2015 the Authority reported a liability of $2,837,459 and $2,136,600, respectively, for its proportionate share of the net pension liability. The net pension liability was measured as of December 31, 2015 and 2014, and the total pension liability used to calculate the net pension liability was determined as of December 31, 2015 using standard rollforward techniques on an actuarial valuation as of December 31, 2014. The Authority's proportion of the net pension liability was based on a projection of the Authority's long-term share of contributions to the pension plan relative to the projected contributions of all participating local governments, actuarially determined. At December 31, 2015, the Authority's proportion was 0.2576%, which was a decrease of 0.0192% from its proportion measured as of December 31, 2014.

For the years ended December 31, 2016 and 2015, the Authority recognized pension expense of $330,667 and $141,624, respectively. The Authority reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	December 31, 2016	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 21,289	$ 91
Changes of assumptions	-	51,972
Net difference between projected and actual earnings on pension plan investments	539,232	-
Changes in proportion and differences between the Authority's contributions and proportionate share of contributions	110,277	22,279
The Authority's contributions subsequent to the measurement date	179,788	-
Total	$ 850,586	$ 74,342

Note 7 - Pension Plans (continued)

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions (continued)

	December 31, 2015	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ -	$ 429
Net difference between projected and actual earnings on pension plan investments	115,868	-
Changes in proportion and differences between the Authority's contributions and proportionate share of contributions	14,339	104,763
The Authority's contributions subsequent to the measurement date	201,249	-
Total	$ 331,456	$ 105,192

Deferred outflows of resources related to pensions resulting from the Authority contributions subsequent to the measurement date of $179,788 will be recognized as a reduction of the net pension liability in the year ended December 31, 2017. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year Ending December 31,	
2017	$ 177,956
2018	155,602
2019	142,050
2020	120,848
	$ 596,456

Actuarial Assumptions

The total pension liability in the December 31, 2014 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Price inflation	2.80%
Salary increases	3.90% - 10.85%, average, including inflation
Long-term investment rate of return	7.50%, net of pension plan investment expense, including inflation

Note 7 - Pension Plans (continued)

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions (continued)

Actuarial Assumptions (continued)

Mortality rates were based on the RP-2000 Combined Mortality Table for Males or Females, as appropriate, with adjustments for mortality improvements based on Scale AA to 2020, with males set back one year and females set back two years.

The LGDTF total pension liability was determined by actuarial valuations as of December 31, 2014, and accepted actuarial procedures were applied to roll forward the pension liability to December 31, 2015. The actuarial assumptions used in the December 31, 2014 valuations were based on the results of an actuarial experience study for the period of January 1, 2008 through December 31, 2011.

The long-term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of geometric real rates of return for each major asset class are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
U.S. equity - large-cap	26.76 %	5.00 %
Core fixed income	24.05	0.98 %
Non-U.S. equity - developed	22.06	5.29 %
Real estate	7.00	5.09 %
Private equity	7.00	7.15 %
Non-U.S. equity - emerging	6.24	6.76 %
U.S. equity - small-cap	4.40	5.19 %
High yield	1.53	2.64 %
Long duration government/credit	0.53	1.57 %
Emerging market bonds	0.43	3.04 %
Total	100 %	

Note 7 - Pension Plans (continued)

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions (continued)

Discount Rate

The discount rate used to measure the total pension liability was 7.5%. The projection of cash flows used to determine the discount rate assumed that member contributions will be made at the current contribution rate and that contributions from the local governments will be made at equal to the fixed statutory rates specified in law, actuarially determined. Based on those assumptions, the plan's fiduciary net position was projected to be available to make all projected future benefit payments of current members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the Authority's Proportionate Share of the Net Pension Liability to Changes in the Discount Rate

The following presents the Authority's proportionate share of the net pension liability calculated using the discount rate of 7.5%, as well as what the Authority's proportionate share of the net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.5%) or one percentage point higher (8.5%) than the current rate:

	1% Decrease	Current Discount Rate	1% Increase
Authority's proportionate share of the net pension liability	$ 4,348,955	$ 2,837,459	$ 1,582,861

Pension Plan Fiduciary Net Position

Detailed information about the pension plan's fiduciary net position is available in the separately issued PERA LGDTF financial report.

Post-Employment Health Care Benefits

Plan Description

The Authority contributes to the Health Care Trust Fund ("HCTF"), a cost-sharing multiple-employer healthcare trust administered by PERA. The HCTF benefit provides a health care premium subsidy to PERA-participating benefit recipients and their eligible beneficiaries. Title 24, Article 51, Part 12 of the CRS, as amended, assigns the authority to establish the HCTF benefit provisions to the state legislature. PERA issues a publicly available comprehensive annual financial report that includes financial statements and required supplementary information for the HCTF. That report may be obtained online at www.copera.org; by writing to Colorado PERA, 1301 Pennsylvania Street, Denver, Colorado 80203; or by calling PERA at 1-800-759-PERA (7372) or 303-832-9550.

Note 7 - Pension Plans (continued)

Post-Employment Health Care Benefits (continued)

Funding Policy

The Authority is required to contribute at a rate of 1.02% of covered salary for all PERA members as set by statute. No member contributions are required. The contribution requirements for the Authority are established under Title 24, Article 51, Part 4 of the CRS, as amended. The apportionment of the contributions to the HCTF is established under Title 24, Article 41, Section 208 of the CRS, as amended. The Authority's contributions to HCTF for the years ended December 31, 2016 and 2015 were $14,921 and $14,947, respectively, which is equal to the required contributions for each year.

Defined Contribution Plan

The Authority has a 401(k) plan (the "Plan") to provide retirement and incidental benefits for its full-time employees who have completed at least one year of service. The Authority matches employee contributions dollar for dollar up to a maximum of 4% of the employee's gross pay per calendar year. All matching contributions vest immediately. In addition, the Plan provides for discretionary contributions as determined by the Authority's Board. Such contributions to the Plan are allocated among eligible participants in proportion of their salaries to the total salaries of all participants. For the years ended December 31, 2016 and 2015, the Authority's contributions to the Plan totaled $31,190 and $31,280, respectively.

Note 8 - Commitments and Contingencies

Tax, Spending, and Debt Limitations

In November 1992, voters passed an amendment to the Constitution of the State of Colorado, Article X, Section 20, which has several limitations, including revenue raising, spending abilities, and other specific requirements of state and local governments. The amendment excludes enterprises from its provisions. Enterprises, defined as government-owned businesses authorized to issue revenue bonds and receiving less than 10% of their annual revenue in grants from all state and local governments combined, are excluded from the provisions of the amendment. It is the Authority's opinion that it qualifies for the exclusion and is, therefore, excluded from the provisions of the amendment.

Federally Assisted Grant Programs

The Authority participates in federally assisted grant programs. These programs are subject to the provisions of the Single Audit Act of 1996 and the Uniform Grant Guidance. The amount, if any, of expenditures that may be disallowed by the granting agency cannot be determined at this time, although the Authority expects such amounts, if any, to be immaterial.

Note 8 - Commitments and Contingencies (continued)

Contingencies

The Authority learned of a criminal investigation into its affairs by the U.S. Department of Justice ("DOJ") in November 2013. The criminal investigation of the airport was concluded on May 12, 2014, by execution of a Non-Prosecution Agreement between the Authority and the DOJ. Pursuant to that agreement, the U.S. government agreed not to prosecute the Authority criminally, in light of substantial remediation and cooperation already completed by the Authority and in exchange for the pledge by the Authority to complete plans to enhance compliance infrastructure at the airport and to continue to cooperate with the U.S. government in its ongoing investigation into matters involving public corruption, procurement integrity, and fraud associated with the affairs of the Authority in the past. Performance of the Authority's obligations under the Non-Prosecution Agreement is continuing.

The DOJ is conducting a civil investigation relating to the same subject matter as the criminal investigation that led to the execution, on May 12, 2014, of a Non-Prosecution Agreement between the Authority and the DOJ. It is not unusual in such circumstances for the U.S. government or a private party acting in the interests of the U.S. government to assert civil claims on behalf of the U.S. government under the federal False Claims Act. The Non-Prosecution Agreement concluded with the DOJ and did not address or resolve the civil investigation and did not preclude assertion of civil claims. Such a civil action, whether brought directly by the U.S. government or by a private individual acting qui tam, would be filed under seal in federal district court. During 2016, such an action was unsealed and, based on current information available, the claim is not significant to the financial statements; therefore, no amount has been accrued as of December 31, 2016.

The Authority is aware of the existence of an asserted administrative claim of the FAA against the Authority in the amount of approximately $520,000 for funds reimbursed to the Authority for the electrification of the Authority's perimeter security fence, which the FAA considers to have been an unallowable cost mistakenly reimbursed by the FAA. This has been included in accrued expenses as of December 31, 2016. The Authority paid this claim in full in February 2017.

The Authority is party to a dispute with an engineering services firm regarding billings in the amount of approximately $225,000, of which approximately $90,000 has been accrued as of December 31, 2016. In conjunction with this dispute, the Authority has counterclaimed for negligence, fraud, and other items in an amount in excess of the claim against the Authority; therefore, no additional accrual is considered necessary as of December 31, 2016.

Note 9 - Service Concession Arrangements

In April 2011, the Authority renewed an agreement with Republic Parking Inc. ("Republic"), a privately held corporation, under which Republic will operate, maintain, and retain fees from the airport's terminal building public parking areas through March 2016. In January 2016, the current agreement was extended for one additional five-year term, terminating on March 31, 2021 at the mutual agreement of the Authority and Republic. Republic is required to operate and maintain the public parking areas in accordance with the Parking Lot Operating Agreement; this agreement also regulates the parking rates and fees that may be charged. In consideration of its operating rights hereunder, Republic shall pay the Authority the greater of (a) the Applicable Percentage of Annual Gross Revenues, or (b) the Minimum Annual Guarantees for each year the Agreement is in effect as amended. The term "Applicable Percentage of Annual Gross Revenues" means 80.45% of gross revenues from $0 up to and including $500,000 plus 91.50% of gross revenues in excess of $500,000. The term "Minimum Annual Guarantees" means for each year the Agreement is in effect, as amended, and shall be $350,000 each year. Pursuant to the service concession arrangement, except for personal property of Republic, which may be removed from the premises by the Authority at the termination of this Agreement, title to any equipment and improvements installed or furnished by Republic shall vest in the Authority upon installation of such equipment and improvements. The Authority reports the public parking areas and related improvements as capital assets with a carrying amount of approximately $9,533,000 at year-end.

In May 2015, the Authority renewed agreements with various rental car companies or concessionaires, under which the rental car companies are granted the right to operate and retain fees from a non-exclusive rental car concession from the Authority, lease motor vehicles from the rental car office and ticket counter area located in the airport terminal building assigned to the respective companies, and to park and store motor vehicles owned or leased by it in the parking lot spaces assigned to the respective companies through April 2020. The rental car companies are required to operate and maintain the rental car areas in accordance with the Airport Facilities Lease and Rental Car Concession Agreement. In consideration of its operating rights hereunder, the rental car companies shall pay the Authority the guaranteed minimum concession fee set forth for each period of the concession term set forth on the bid proposal, or 10% of their gross revenue for each such period of the concession term, whichever amount is greater. For each of the subsequent years of the concession term, the annual guaranteed minimum concession shall be the year-one MAG or 85% of 10% of their previous contract year's annual gross revenue, whichever is greater. Pursuant to the service concession arrangement, upon such expiration or termination of this Agreement, title to all improvements, additions, and fixtures erected or installed upon the terminal office and ticket counter area and rental car parking lot area by the Authority or the rental car companies shall automatically vest in the Authority, without payment by the Authority to the respective rental car companies of any compensation whatsoever, and shall thereafter be owned by the Authority free and clear of any claim of right, title, or interest of the respective rental car companies, any mortgagee, or of any third party of any kind or nature whomsoever. The Authority reports the rental car areas and related improvements as capital assets with a carrying amount of approximately $2,651,000 at year-end.

Note 9 - Service Concession Arrangements (continued)

In May 2016, the Authority entered into a service concession agreement with a company, Tailwind, under which the company is granted the right to operate a restaurant and retail space in the airport through April 30, 2021, with an option to extend the term of the contract by two additional one-year terms. In consideration of its operating rights hereunder, the company shall pay the Authority the guaranteed minimum annual fee of $60,000, prorated monthly, or a graduated percentage of gross revenue for each such period of the concession term, whichever is the greater amount.

In 2016, the minimum concession fees were approximately $1,110,000, which includes minimum concession fees from rental car companies, Republic, and Tailwind of approximately $700,000, $350,000, and $60,000, respectively.

ACCOMPANYING INFORMATION

GRAND JUNCTION REGIONAL AIRPORT AUTHORITY

Required Supplementary Information
Schedule of the Authority's Proportionate Share of the Net Pension Liability
Local Government Division Trust Pension Plan

	December 31,	
	2015	2014
Authority's proportion of the net pension liability	0.25758 %	0.23838 %
Authority's proportionate share of the net pension liability	$ 2,837,459	$ 2,136,600
Authority's covered-employee payroll	$ 1,559,838	$ 1,389,005
Authority's proportionate share of the net pension liability as a percentage of its covered-employee payroll	181.91 %	153.82 %
Plan fiduciary net position as a percentage of the total pension liability	76.87 %	80.72 %

Note: The amounts presented for each fiscal year were determined as of December 31.

GRAND JUNCTION REGIONAL AIRPORT AUTHORITY

Required Supplementary Information
Schedule of Authority's Contributions
Local Government Division Trust Pension Plan

	December 31,	
	2016	2015
Contractually required contribution	$ 186,871	$ 200,476
Contributions in relation to the contractually required contributions	(179,788)	(201,249)
Contribution deficiency (excess)	$ 7,083	$ (773)
Authority's covered-employee payroll	$ 1,368,791	$ 1,559,838
Contributions as a percentage of covered-employee payroll	13.65 %	12.85 %

Note to Required Supplementary Information

There were no changes to benefit terms, changes in the size or composition of the population covered by benefit terms, or the use of different assumptions, which would affect trends significantly in the amounts reported for the plan during the years ended December 31, 2016 and 2015.

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INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

Board of Commissioners
Grand Junction Regional Airport Authority
Grand Junction, Colorado

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the financial statements of the business-type activities of Grand Junction Regional Airport Authority (the "Authority") as of and for the year ended December 31, 2016, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements, and have issued our report thereon dated March 1, 2017.

INTERNAL CONTROL OVER FINANCIAL REPORTING

In planning and performing our audit of the financial statements, we considered the Authority's internal control over financial reporting ("Internal Control") to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Authority's Internal Control. Accordingly, we do not express an opinion on the effectiveness of the Authority's Internal Control.

A deficiency in Internal Control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or combination of deficiencies, in Internal Control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A significant deficiency is a deficiency, or combination of deficiencies, in Internal Control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of Internal Control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in Internal Control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit, we did not identify any deficiencies in Internal Control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Board of Commissioners
Grand Junction Regional Airport Authority

COMPLIANCE AND OTHER MATTERS

As part of obtaining reasonable assurance about whether the Authority's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, non-compliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit; accordingly, we do not express such an opinion. The results of our tests disclosed no instances of non-compliance or other matters that are required to be reported under *Government Auditing Standards*.

PURPOSE OF THIS REPORT

The purpose of this report is intended solely to describe the scope of our testing of Internal Control and compliance and the results of that testing and not to provide an opinion on the effectiveness of the entity's Internal Control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's Internal Control and compliance. Accordingly, this communication is not suitable for any other purpose.

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March 1, 2017
Denver, Colorado

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INDEPENDENT AUDITORS' REPORT ON COMPLIANCE FOR EACH MAJOR FEDERAL PROGRAM AND REPORT ON INTERNAL CONTROL OVER COMPLIANCE

Board of Commissioners
Grand Junction Regional Airport Authority
Grand Junction, Colorado

REPORT ON COMPLIANCE FOR EACH MAJOR FEDERAL PROGRAM

We have audited Grand Junction Regional Airport Authority's (the "Authority") compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of the Authority's major federal programs for the year ended December 31, 2016. The Authority's major federal programs are identified in the summary of auditors' results section of the accompanying schedule of findings and questioned costs.

Management's Responsibility

Management is responsible for compliance with federal statutes, regulations, and the terms and conditions of its federal awards applicable to its federal programs.

Auditors' Responsibility

Our responsibility is to express an opinion on compliance for each of the Authority's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* ("Uniform Guidance"). Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether non-compliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the Authority's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of the Authority's compliance.

Opinion on Each Major Federal Award

In our opinion, the Authority complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended December 31, 2016.

REPORT ON INTERNAL CONTROL OVER COMPLIANCE

Management of the Authority is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the Authority's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal program and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the Authority's internal control over compliance.

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, non-compliance with a type of compliance requirement of a federal program on a timely basis. A material weakness in internal control over compliance is a deficiency, or combination of deficiencies, in internal control over compliance such that there is a reasonable possibility that material non-compliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A significant deficiency in internal control over compliance is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

PURPOSE OF THIS REPORT

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

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March 1, 2017
Denver, Colorado

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INDEPENDENT AUDITORS' REPORT ON COMPLIANCE WITH REQUIREMENTS APPLICABLE TO THE PASSENGER FACILITY CHARGE PROGRAM AND ON INTERNAL CONTROL OVER COMPLIANCE IN ACCORDANCE WITH THE PASSENGER FACILITY CHARGE AUDIT GUIDE FOR PUBLIC AGENCIES

Grand Junction Regional Airport Authority
Board of Commissioners
Grand Junction, Colorado

COMPLIANCE

We have audited the Grand Junction Regional Airport Authority's (the "Authority") compliance with the compliance requirements described in the *Passenger Facility Charge Audit Guide for Public Agencies* (the "Guide"), issued by the Federal Aviation Administration, for its passenger facility charge program for the year ended December 31, 2016. Compliance with the requirements of laws and regulations applicable to its passenger facility charge program is the responsibility of the Authority's management. Our responsibility is to express an opinion on the Authority's compliance based on our audit.

We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the Guide. Those standards and the Guide require that we plan and perform the audit to obtain reasonable assurance about whether non-compliance with the types of compliance requirements referred to above that could have a direct and material effect on the passenger facility charge program occurred. An audit includes examining, on a test basis, evidence about the Authority's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion. Our audit does not provide a legal determination of the Authority's compliance with those requirements.

OPINION

In our opinion, the Authority complied, in all material respects, with the requirements referred to above that could have a direct and material effect on the passenger facility charge program for the year ended December 31, 2016.

INTERNAL CONTROL OVER COMPLIANCE

Management of the Authority is responsible for establishing and maintaining effective internal control over compliance with the requirements of laws and regulations applicable to federal programs. In planning and performing our audit, we considered the Authority's internal control over compliance with the requirements that could have a direct and material effect on the passenger facility charge program to determine the auditing procedures for the purpose of expressing our opinion on compliance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the Authority's internal control over compliance.

A deficiency in internal control over compliance exists when the design or operation of an internal control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, non-compliance with a type of compliance requirement of a federal program on a timely basis. A material weakness in internal control over compliance is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material non-compliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be deficiencies, significant deficiencies, or material weaknesses. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses, as defined above.

This report is intended solely for the information and use of the Honorable Mayor, Members of the Board of the County Commissioners, management of the Authority, and federal and state awarding agencies and is not intended to be and should not be used by anyone other than these specified parties.

EKS&H LLLP

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March 1, 2017
Denver, Colorado

GRAND JUNCTION REGIONAL AIRPORT AUTHORITY

Schedule of Findings and Questioned Costs
Year Ended December 31, 2016

Section I - Summary of Auditors' Results

Financial Statements

Type of auditors' report issued - *Unmodified*

Internal control over financial reporting:

• Material weakness(es) identified?	☐ Yes	☑ No
• Significant deficiencies identified?	☐ Yes	☑ None reported
Non-compliance material to financial statements noted?	☐ Yes	☑ No

Federal Awards

Internal control over major programs:

• Material weakness(es) identified?	☐ Yes	☑ No
• Significant deficiencies identified?	☐ Yes	☑ None reported

Type of auditors' report issued on compliance for major programs - *Unmodified*

Any audit findings disclosed that are required to be reported in accordance with section 2 CFR section 200.516(a)?	☐ Yes	☑ No

Identification of major programs:

Name of Program	CFDA#
Airport Improvement Program	20.106

Dollar threshold used to distinguish between type A and B programs: $750,000

Auditee qualified as a low-risk auditee?	☐ Yes	☑ No

Section II - Financial Statement Findings

None

Section III - Federal Award Findings and Questioned Costs

None

Section IV - Prior Year Findings and Questioned Costs - Major Federal Award Programs Audit

None

GRAND JUNCTION REGIONAL AIRPORT AUTHORITY

Schedule of Expenditures of Federal Awards
For the Year Ended December 31, 2016

Federal Grantor/ Pass-Through Grantor	Program Title	CFDA Number	Contract Number	Expenditures Year Ended December 31, 2016
U.S. Department of Transportation, Federal Aviation Administration	Airport Improvement Program	20.106	Various	$ 2,227,090

GRAND JUNCTION REGIONAL AIRPORT AUTHORITY

Notes to Schedule of Expenditures of Federal Awards
For the Year Ended December 31, 2016

Note 1 - Basis of Presentation

The accompanying schedule of expenditures of federal awards includes the federal grant activity of the the Authority and is presented on the accrual basis of accounting. The information in this schedule is presented in accordance with the requirements of Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*.

Note 2 - Indirect Rate

The Authority did not elect to use the 10% de minimis indirect cost rate and has not requested reimbursement for indirect costs.

GRAND JUNCTION REGIONAL AIRPORT AUTHORITY

Schedule of Expenditures of Passenger Facility Charges
For the Year Ended December 31, 2016

Grantor/Program	Application Approved Number	Unliquidated Passenger Facility Charges at December 31, 2015	Passenger Facility Charge Revenue	Expenditures	Unliquidated Passenger Facility Charges at December 31, 2016
Passenger facility charges	06-07-C-02-GJT	$ 1,779,152	$ 899,364	$ (1,466,789)	$ 1,211,727

See accompanying notes to schedule of expenditures of passenger facility charges.

GRAND JUNCTION REGIONAL AIRPORT AUTHORITY

Notes to Schedule of Expenditures of Passenger Facility Charges
For the Year Ended December 31, 2016

Note 1 - Basis of Presentation

The schedule of expenditures of passenger facility charges includes agreements entered into directly between the Authority and the FAA. The information in this schedule is prepared on the accrual basis of accounting and is presented in accordance with the provisions of the *Passenger Facility Charge Audit Guide for Public Agencies*, issued by the FAA in September 2000.

Note 2 - Passenger Facility Charges

Revenue consists of passenger facility fees and investment earnings on restricted cash related to passenger facility charges. Expenditures represent airport construction-related costs incurred at the Authority. Unliquidated passenger facility charges represent the net restricted cash and passenger facility fees receivable and accounts payable as of year-end.

FEBRUARY 2017 PERFORMANCE

FINANCIAL RESULTS

Assets – Cash showed a slight decrease as a result of the $520,000 payment to the FAA and an increase in the account receivable balances. This increase in A/R was mostly due to the timing of cash receipts after month end, there are no significant balances greater than 30 days. Additionally, the $170,000 refundable amount from the FAA for the RTR relocation is also in accounts receivable.

Liabilities – The accrued liability balance was reduced in February for the payment for approximately $520,000 due to the FAA.

Aeronautical Revenue – Landing fees were higher compared to prior, consistent with the larger aircraft flying to GJT. Terminal rent is higher than budget due to the retention of the third floor office space held by the TSA.

Non-Aeronautical Revenue – Parking revenue is higher than budget and prior year due to the increase in enplanements.

Operating Expense – Operating expenses are consistent with budget and prior year.

Non-operating Revenue/Expense – PFC revenue is ahead of budget and slightly behind prior year due to the timing of PFC disbursements from airlines.

Grand Junction Regional Airport Authority
Statements of Changes in Net Position
Unaudited - subject to change

	YEAR TO DATE			MONTH		
	Actual 2/28/2017	Budget 2/28/2017	Actual 2/29/2016	Actual 2/28/2017	Budget 2/28/2017	Actual 2/29/2016
Operating revenue						
Aeronautical revenue						
Passenger airline revenue						
Passenger airline landing fees	83,585	65,000	68,429	41,418	30,900	33,128
Terminal rent	224,343	197,000	196,974	125,182	98,500	98,487
Other	19,525	17,000	16,400	15,825	12,000	13,600
Total passenger airline revenue	327,453	279,000	281,803	182,425	141,400	145,215
Non-passenger airline revenue						
Landing fees from cargo	14,137	14,400	13,464	6,732	6,700	6,059
Cargo and hangar rentals	8,438	8,400	8,438	4,219	4,200	4,219
Aviation fuel tax	19,015	39,800	34,416	11,477	20,700	34,416
Fuel flowage fees	72,010	73,900	62,779	29,786	37,500	32,584
Other	240	2,000	570	120	1,000	570
Total non-passenger airline revenue	113,840	138,500	119,667	52,334	70,100	77,849
Total aeronautical revenue	441,293	417,500	401,470	234,759	211,500	223,064
Non-aeronautical revenue						
Land and building leases	101,426	102,300	108,765	45,283	46,900	55,381
Terminal - restaurant & retail	19,646	13,800	11,339	9,802	6,900	5,681
Terminal - other	42,592	31,800	40,244	21,296	15,900	20,122
Rental cars	138,544	127,400	145,423	72,253	64,900	80,048
Parking and ground transportation	234,557	224,800	223,269	121,786	108,700	110,957
Other	10,946	12,400	11,009	5,660	6,200	4,989
Total non-aeronautical revenue	547,711	512,500	540,049	276,080	249,500	277,178
Total operating revenues	989,004	930,000	941,519	510,839	461,000	500,242
Operating expenses						
Personnel compensation and benefits	324,433	329,588	319,166	159,923	164,957	136,218
Communications and utilities	55,869	63,671	57,103	24,122	28,164	25,556
Supplies and materials	59,973	54,688	35,727	26,867	26,674	19,345
Contract services	153,499	160,192	182,489	56,558	53,631	109,128
Repairs & maintenance	37,124	39,938	44,637	21,872	20,468	22,107
Insurance	15,196	15,196	15,166	7,598	7,598	7,583
Other	55,508	56,431	4,308	29,283	28,483	1,244
Total operating expenses	701,602	719,704	658,596	326,224	329,975	321,181
Operating gain (loss)	287,402	210,296	282,923	184,616	131,025	179,061
Non-operating revenues (expenses)						
Passenger facility charges	123,601	118,000	147,966	65,931	56,000	94,420
Interest income	12,045	3,200	4,196	9,352	1,600	1,887
Interest expense	(149,399)	(149,400)	(117,969)	(74,700)	(74,700)	(58,985)
Customer facility charges	80,056	76,000	78,850	40,072	36,000	45,528
Capital contributions	-	-	-	-	(0)	-
Capital expenditure	(625)	-	(103,083)	(625)	-	(103,083)
Debt principal payments	(107,876)	(107,875)	(104,746)	(107,876)	(107,875)	(104,746)
Debt issuance costs	-	-	-	-	-	-
Total non-operating revenue	(42,198)	(60,075)	(94,786)	(67,845)	(88,975)	(124,978)
Excess of revenues over (under) expens	245,204	150,221	188,137	116,771	42,050	54,083

Grand Junction Regional Airport Authority
Statements of Net Position
Unaudited - subject to change

	2/28/2017	12/31/2016
Current assets		
Cash and cash equivalents	7,315,717	8,143,863
Accounts receivable & prepaid expense	933,896	526,874
Total current assets	8,249,613	8,670,737
Restricted assets		
Bond project & restricted cash	11,680,961	11,596,160
Pension deferred outflow	850,586	850,586
Capital assets, net	58,240,193	58,240,193
Total non-current assets	70,771,740	70,686,939
Total assets	79,021,353	79,357,676
Current liabilities		
Accounts payable & accrued expenses	1,200,028	1,781,561
Current portion of note payable	435,932	435,932
Current portion of bonds payable	836,791	836,791
Total current liabilities	2,472,751	3,054,284
Non-current liabilities		
Net pension liability	2,837,459	2,837,459
Pension deferred inflow	74,342	74,342
Note payable, net of current portion	678,832	678,832
Bonds payable, net of current portion	20,832,478	20,832,478
Total non-current liabilities	24,423,111	24,423,111
Total liabilities	26,895,862	27,477,395
Net position		
Net investment in capital assets	35,456,160	35,456,160
Restricted for debt service and capital assets	10,880,451	10,748,391
Unrestricted	5,788,880	5,675,730
Total net position	52,125,491	51,880,281
Total liabilities and net position	79,021,353	79,357,676

Grand Junction Regional Airport Authority

Agenda Item Summary

TOPIC:	Projects Update		
PURPOSE:	Information ☒	Guidance ☐	Decision ☐
RECOMMENDATION:	N/A		
LAST ACTION:	N/A		
DISCUSSION:	Item to provide monthly project status update.		
FISCAL IMPACT:	N/A		
ATTACHMENTS:	Engineer Project Update		
STAFF CONTACT:	Eric Trinklein etrinklein@gjairport.com Office: 970-248-8597		

Grand Junction Regional Airport

2828 Walker Field Drive

Grand Junction, CO 81506

PROJECT UPDATE
MARCH 2017
Presented by: Eric Trinklein

Runway Project

The Request for Qualifications was posted to the website on February 13. The posting was advertised on AAAE website and the Daily Sentinel starting on February 15.

Three proposals were received on March 15.

BLM has requested that Grand Valley Power and the Airport choose from three options for future administration of the right-of-way across the land to be conveyed. The easement crosses the 80-acre parcel to be acquired by the airport for the runway project. FAA has signed the Finding of No Significant Impact (FONSI) Record of Decision (ROD). BLM and FAA are finalizing the application letter.

Jet Bridge Modification

Located at Gate 3

Modification to the existing bridge to accommodate A319 narrow body aircraft

Work to occur on March 27-23

RFQ for Engineering Services

Staff posted a request for qualifications for general engineering services to retain a new Engineer of Record on March 8. The posting is advertised on AAAE website and the Daily Sentinel. Proposals are due April 4.

RFQ for A/E Services

Staff posted a request for qualifications for Architectural services for the Terminal Modifications shown on the 2017 CIP including HVAC, Code Compliance, Roofing, Escalators, and the new Jet Bridge Tunnel projects on March 8. The posting is advertised on AAAE website and the Daily Sentinel. Proposals are due April 4.

AIP 52 Connector Taxiway Project

Immediately after marking installation several cracks in the pavement and within the markings themselves have also appeared. The work was completed late in the calendar year and temperatures precluded any further construction work in these areas.

A work stoppage for the project was granted with respect to contract days and construction activity. However, as the prime contractor, Elam Construction is required to bring these areas to an acceptable

state when temperatures return to levels compatible with appropriate construction activities. Any deliverables provided not meeting the project specifications will result in a pay reduction as outlined in the change order. Additionally, work to date currently is under 101 days of liquidated damages and additional Acceptance Testing. The work will begin May 30. All work will be performed at night after the last commercial flight arrives and prior to 5:30am. Only one connector will be allowed to be closed at a time. Work will be completed in seven days. Liquidated damages will be in effect for all calendar work days beginning on May 30.

After execution of the final course of action, the project will be examined to determine quantities that are acceptable for payment. Execution of the crack repair plan will result in a pay reduction of the affected areas.

AIP 54 East Terminal Air Carrier Apron

The project was awarded to IHC on August 16, 2016 for $4,696,415.

In November, Airport Staff realized that during certain work phases of the bid plans show parking for only one commercial aircraft. This would greatly impede airport operations since both Delta and United currently use this side of the Apron. Staff worked with Armstrong to develop phasing which would maintain at least three (3) commercial aircraft spots throughout the project. During this process staff also realized that the original plan had significant impacts to operations including haul routes crossing the West Commercial Apron operations. Additionally impacts to passenger loading, baggage haul routes, and the bus access used by Denver Air would have required going under the terminal in order to complete these operations. Solutions have been developed through additional phases to greatly reduce impacts by the project.

In order to accomplish the required phasing, which adds three phases.

IHC will require 40 additional days moving the contract calendar day requirement from 110 days to 150 days.

IHC will agree to change the haul route to minimize impacts to operations.

IHC has committed to providing additional screening fence to buffer construction operations from aircraft loading.

IHC has committed that these changes will not change the project cost.

Airport staff will have to complete a Security Amendment for the revised access.

The project footprint has been decreased by 514 square yards.

The proposal modifies the milled concrete section which was going to be an asphalt overlay with a methacrylate. This is in the review process for approval from FAA.

Grand Junction Regional Airport Authority

Agenda Item Summary

TOPIC:	Chairman selection		
PURPOSE:	Information ☐	Guidance ☐	Decision ☒
RECOMMENDATION:	None.		
LAST ACTION:	At the January 2017 board meeting Steve Wood was nominated and approved to retain the role as Chairman.		
DISCUSSION:	Effective March 10, 2017 Mr. Wood resigned from his position as Chairman and Commissioner. This requires the Board to elect a new Chairman to succeed Mr. Wood.		
FISCAL IMPACT:	N/A		
COMMUNICATION STRATEGY:	None		
ATTACHMENTS:	None		
CONTACT:	Board of Commissioners		

Grand Junction Regional Airport Authority

Agenda Item Summary

TOPIC:	At-large Board Member		
PURPOSE:	Information ☐	Guidance ☐	Decision ☒
RECOMMENDATION:	None.		
LAST ACTION:	At the February 2017 board meeting the board discussed the expiration of Commissioner Ball's term at the end of February. Staff posted the at-large position on the web site and newspaper with an application closing date of March 13.		
DISCUSSION:	The at-large board member position is up for recommendation to the City and County for a term of March 2017 – February 2021. The current Directors shall discuss the applicants and identify the person to be the at-large Director and then take any public comments on the person identified at the regular board meeting.		
FISCAL IMPACT:	N/A		
COMMUNICATION STRATEGY:	None		
ATTACHMENTS:	None		
CONTACT:	Board of Commissioners		

Grand Junction Regional Airport Authority

Agenda Item Summary

TOPIC:	AIP 52 Change Order Number One (Elam)		
PURPOSE:	Information ☐	Guidance ☐	Decision ☒
RECOMMENDATION:	Staff recommends the Board approve change order number one for AIP 52.		
LAST ACTION:	N/A		
DISCUSSION:	AIP 52 consists of three projects: 1. Fog Seal and Re-Stripe of Runway 11/29 and Taxiway A 2. Move Segmented Circle/Wind Cone and Lighting Modifications 3. Surface reconditioning of all Taxiway A connectors <u>Mill and Overlay Connector Taxiways A1 through A7</u> Under the contract dated April 28, 2016, Elam Construction agreed to perform the mill and overlay of connector taxiways A1 through A7. Under the contract the work was to be completed in 21 days from July 31, 2016 until August 20, 2016. On September 2, 2016, day 34 of the contract, the airport expressed its consideration of declaring a Contractor Default. On September 5, Elam provided a plan to have the project complete by September 18. However, paving was not complete until September 19, and the other project work items including final pavement markings and in-pavement lighting were not complete until November 2. Upon completion the airport noticed cracking along the edges and within the Thermoplastic Markings. Based on this discovery, the airport required Armstrong and Elam to develop a solution to provide an acceptable project meeting the project specifications which did not include cracking. A letter was received on December 13 from Elam and Armstrong which provided a work stoppage on 12/5 withholding $155,421.36: • $101,000 (Liquidated Damages (LD) for 101 days as of 12/5) • $38,071.36 (Additional Acceptance Testing by Armstrong) • $16,350 (future crack seal) Armstrong provided two more letters (1) outlining a plan for the repair work; and (2) providing a basis for cost reduction for any		

	product less than what was originally bid (letters are included in change order). The change order process is outlined in the contract documents, and will be submitted to FAA. The change order outlines pay reduction determination methods for work not meeting project requirements as bid for any of the options. All work efforts will be performed at Elam's expense including Acceptance Testing and Inspection March 14 an evaluation was made by airport staff. The recommendation from the evaluation is for Elam to repair only the cracked pavement and cracked thermoplastic and reduce payment to Elam for the deliverable. The work will begin May 30. All work will be performed at night after the last commercial flight arrives and prior to 5:30am. Only one connector will be allowed to be closed at a time. Work will be completed in seven days. Liquidated damages will be in effect for all calendar work days beginning on May 30. In order to complete this project, airport staff will perform all necessary engineering determinations, inspections, and reporting in accordance with FAA requirements, and provide proper adjustments necessary for any work determined to not meet project requirements originally bid. A final change order (deductive) will be required at project completion reflecting final costs.
FISCAL IMPACT:	
ATTACHMENTS:	Change Order Number One including backup documentation
STAFF CONTACT:	Eric Trinklein etrinklein@gjairport.com Office: 970-248-8597

CONTRACT CHANGE ORDER NO. ONE

AIRPORT Grand Junction Regional Airport **DATE** March 17, 2017

LOCATION Grand Junction, Colorado **AIP PROJECT NO.** 3-08-0027-052-2015

CONTRACTOR Elam Construction, Inc.

See attached letters

Item No.	Description	Unit	Unit Price	Quantity	Amount
	Additional Acceptance Testing	ls	($38,071.36)	1	($38,071.36)
	Cost Reduction	ls	($26,594.43)	1	($26,594.43)
This Change Order Total		**$(64,665.79)**			
Previous Change Order(s) Total		**$**			
Revised Contract Total		**$1,127,178.71**			

See Section 3 for Cost Reduction Calculation

The time provided for completion in the contract is **unchanged**. This document shall become an amendment to the contract and all provisions of the contract will apply. Changes are shown on the attached documents.

Recommended by: _____ _____
Engineer **Date**

Approved by: _____ _____
Owner **Date**

Accepted by: _____ _____
Contractor **Date**

Concurred by: _____ _____
State Aeronautics (if applicable) **Date**

Approved by: _____ _____
Federal Aviation Administration **Date**

NOTE: Change Orders and Supplemental Agreements require FAA approval prior to construction, otherwise no Federal participation can be granted. State Aeronautics concurrence is required when state participation is anticipated.

AIP PROJECT NO. 3-08-0027-052-2015 **CHANGE ORDER NO.** One

AIRPORT Grand Junction Regional Airport **LOCATION** Grand Juction, Colorado

JUSTIFICATION FOR CHANGE

1. Brief description of the proposed contract change(s) and location(s).

Cracks in the pavement around the perimeter of several thermoplastic marking appeared nearly immediately after marking installation. Several cracks in the pavement and within the markings themselves have also appeared. The work was completed late in the calendar year and temperatures precluded any further construction work in these areas.

A work stoppage for the project was granted with respect to contract days and construction activity. However, as the prime contractor, Elam Construction is required to bring these areas to an acceptable state when temperatures return to levels compatible with appropriate construction activities. Anything deliverables provided not meeting the project specifications will result in a pay reduction as outlined in the attached documents. Additionally work to date currently is under 101 days of liquidated damages and additional Acceptance Testing. The work will begin May 30. All work will be performed at night after the last commercial flight arrives and prior to 5:30am. Only one connector will be allowed to be closed at a time. Work will be completed in seven days. Liquidated damages will be in effect for all calendar work days beginning on May 30.

After execution of the final course of action, the project will be examined to determine quantities that are acceptable for payment. Execution of the crack repair plan will result in a pay reduction of the affected areas. Execution of the removal and repair option will result in no acceptance or payment of the thermoplastics in the affected area, but instead payment for acceptable paint in those areas.

2. Reason(s) for the change(s) *(Continue on reverse if necessary)*

The current condition of the thermoplastic markings and the pavement around the perimeter of the thermoplastics that has cracking is not acceptable for full payment. As a result, Elam has agreed to remediate the pavement and thermoplastic markings in accordance with an agreed upon method by as outlined by the attached letters and final work effort determined during the March 14 evaluation. This will include crack sealing the affected pavement, sealing and patching the thermoplastic material as necessary.

In addition to the method of remediation, the final payment to the contractor will be deducted in accordance with the letter dated January 26, 2017 (Attached).

AIP PROJECT NO. 3-08-0027-052-2015 **CHANGE ORDER NO.** One

AIRPORT Grand Junction Regional Airport **LOCATION** Grand Juction, Colorado

3. Justifications for unit prices or total cost.
Drawings showing the repair areas are attached. Calculations are as follows:

	GROSS	ASPHALT	THERMOPLASTIC	ASPHALT/THERMOPLASTIC	NET AREA IMPACTED
			AREA (SQUARE FEET)		
A1	2,126	157		90	1,879
A2	2,575	275		29	2,271
A3	2,480	370		98	2,012
A4	2,480	124		107	2,249
A5	2,459	271		55	2,133
A6	2,117	283		33	1,801
A7	2,397	357		77	1,963
TOTAL (SF)	16,634	1,837	0	489	14,308
$/SF		$2.31	$26.50	$28.81	$2.31
PERCENTAGE		100%	100%	100%	25%
REDUCED COST		$4,243.47	$0.00	$14,088.09	$8,262.87
					$26,594.43

4. The sponsor's share of this cost is available from: The work will be performed at the contractor's expense.

5. If this is a supplemental agreement involving more than $2,000, is the cost estimate based on the latest wage rate decision? Yes ☐ No ☐ Not Applicable ☒.

6. Has consent of surety been obtained? Yes ☐ Not Necessary ☒.

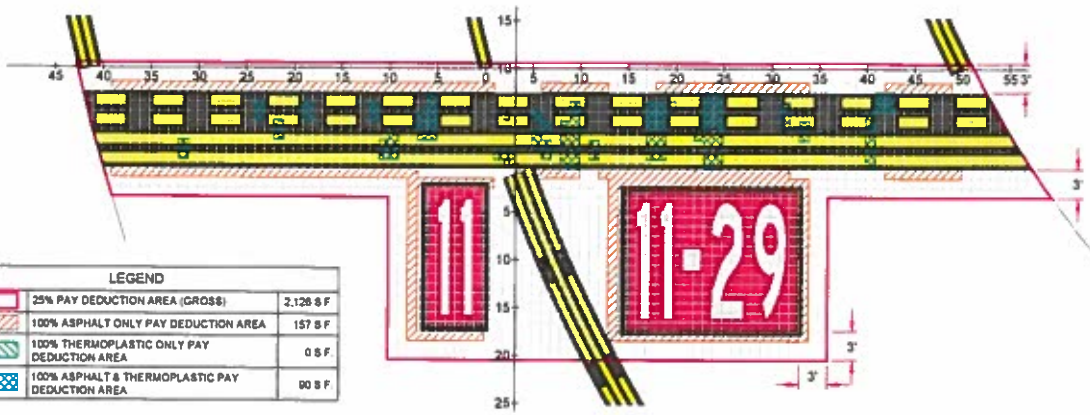
7. Will this change affect the insurance coverage? Yes ☐ No ☒.

8. If yes, will the policies be extended? Yes ☐ No ☐.

9. Has this (Change Order) (Supplemental Agreement) been discussed with FAA officials?
Yes ☒ No ☐ When Jan-Feb 2017 With Whom Marc Miller

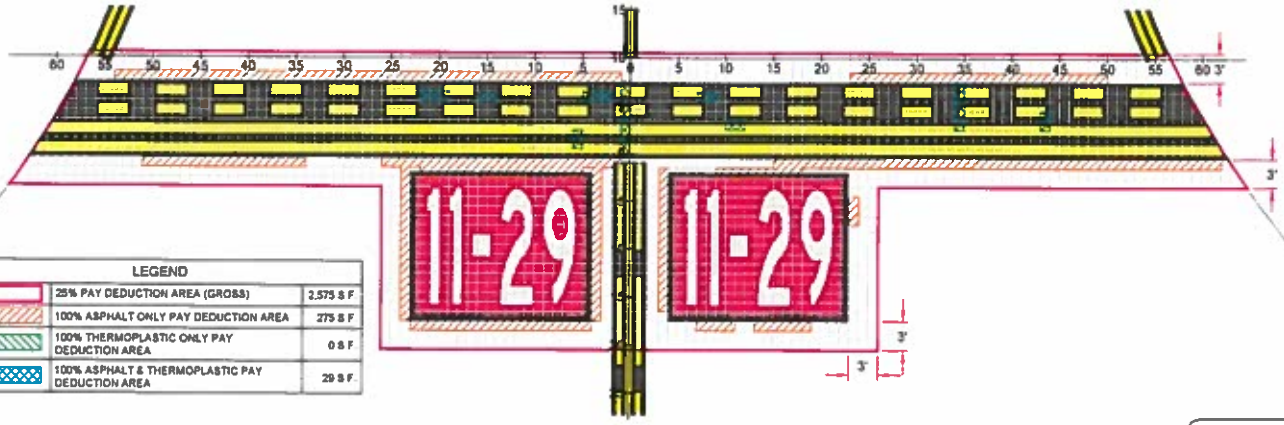
Comment _____

Submit 4 copies to the FAA



LEGEND		
	25% PAY DEDUCTION AREA (GROSS)	2,126 S.F.
	100% ASPHALT ONLY PAY DEDUCTION AREA	157 S.F.
	100% THERMOPLASTIC ONLY PAY DEDUCTION AREA	0 S.F.
	100% ASPHALT & THERMOPLASTIC PAY DEDUCTION AREA	90 S.F.

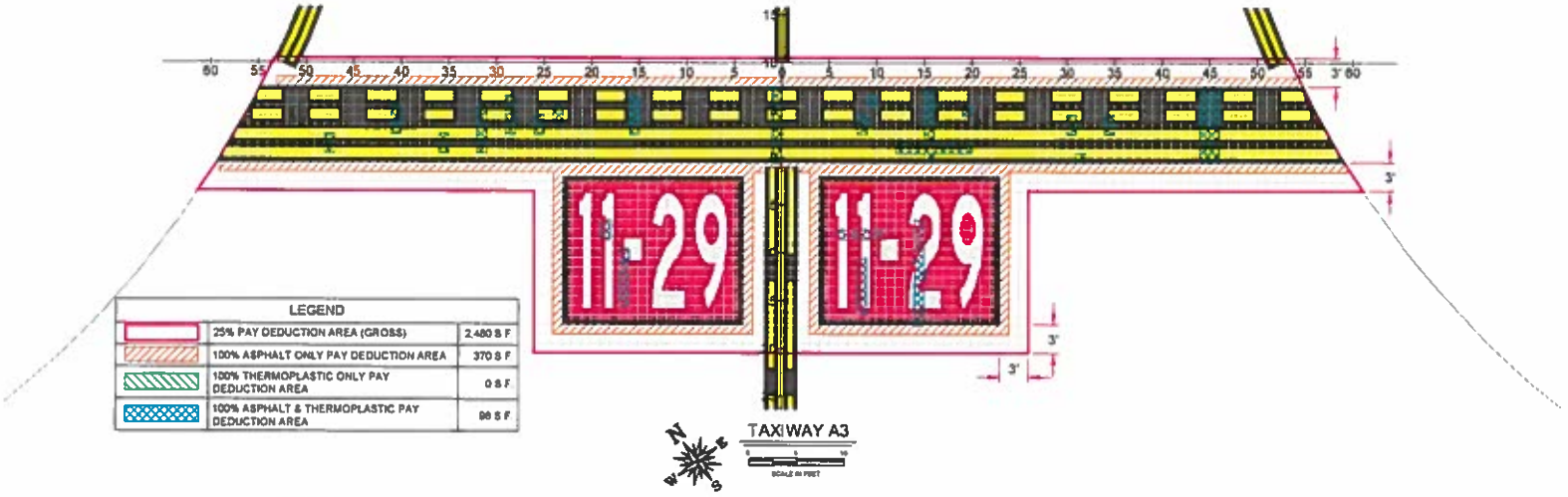
TAXIWAY A1



LEGEND		
	25% PAY DEDUCTION AREA (GROSS)	2,575 S.F.
	100% ASPHALT ONLY PAY DEDUCTION AREA	275 S.F.
	100% THERMOPLASTIC ONLY PAY DEDUCTION AREA	0 S.F.
	100% ASPHALT & THERMOPLASTIC PAY DEDUCTION AREA	29 S.F.

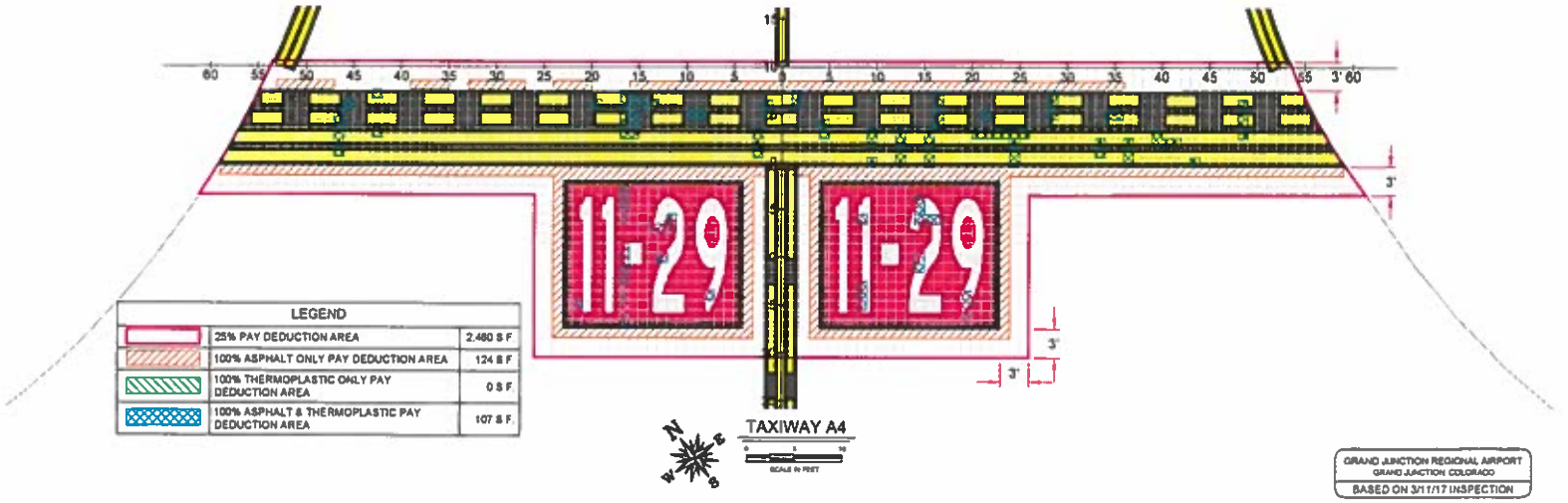
TAXIWAY A2

GRAND JUNCTION REGIONAL AIRPORT
GRAND JUNCTION, COLORADO
BASED ON 3/11/17 INSPECTION



LEGEND		
	25% PAY DEDUCTION AREA (GROSS)	2,480 S.F.
	100% ASPHALT ONLY PAY DEDUCTION AREA	370 S.F.
	100% THERMOPLASTIC ONLY PAY DEDUCTION AREA	0 S.F.
	100% ASPHALT & THERMOPLASTIC PAY DEDUCTION AREA	98 S.F.

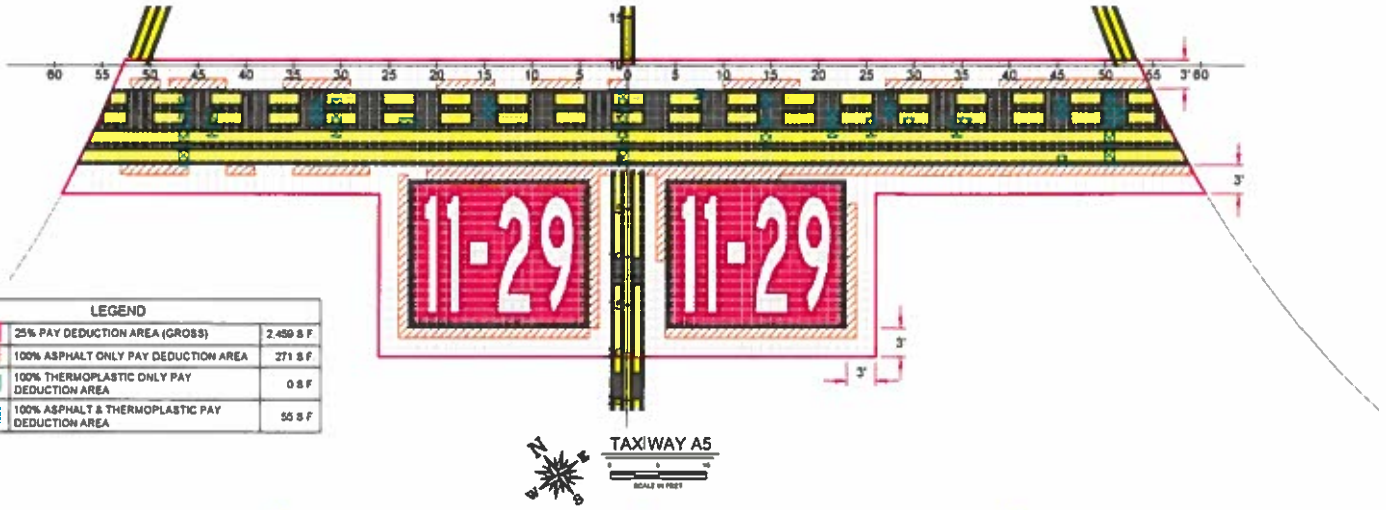
TAXIWAY A3



LEGEND		
	25% PAY DEDUCTION AREA	2,480 S.F.
	100% ASPHALT ONLY PAY DEDUCTION AREA	124 S.F.
	100% THERMOPLASTIC ONLY PAY DEDUCTION AREA	0 S.F.
	100% ASPHALT & THERMOPLASTIC PAY DEDUCTION AREA	107 S.F.

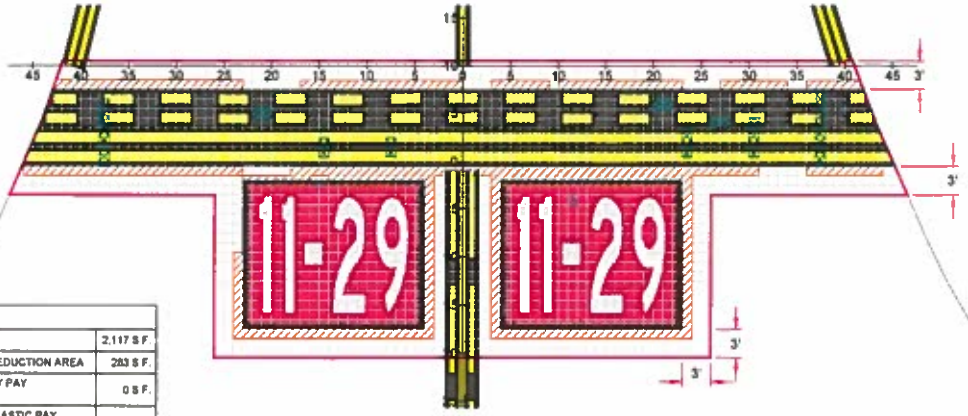
TAXIWAY A4

GRAND JUNCTION REGIONAL AIRPORT
GRAND JUNCTION, COLORADO
BASED ON 3/11/17 INSPECTION



LEGEND		
	25% PAY DEDUCTION AREA (GROSS)	2,459 S.F.
	100% ASPHALT ONLY PAY DEDUCTION AREA	271 S.F.
	100% THERMOPLASTIC ONLY PAY DEDUCTION AREA	0 S.F.
	100% ASPHALT & THERMOPLASTIC PAY DEDUCTION AREA	55 S.F.

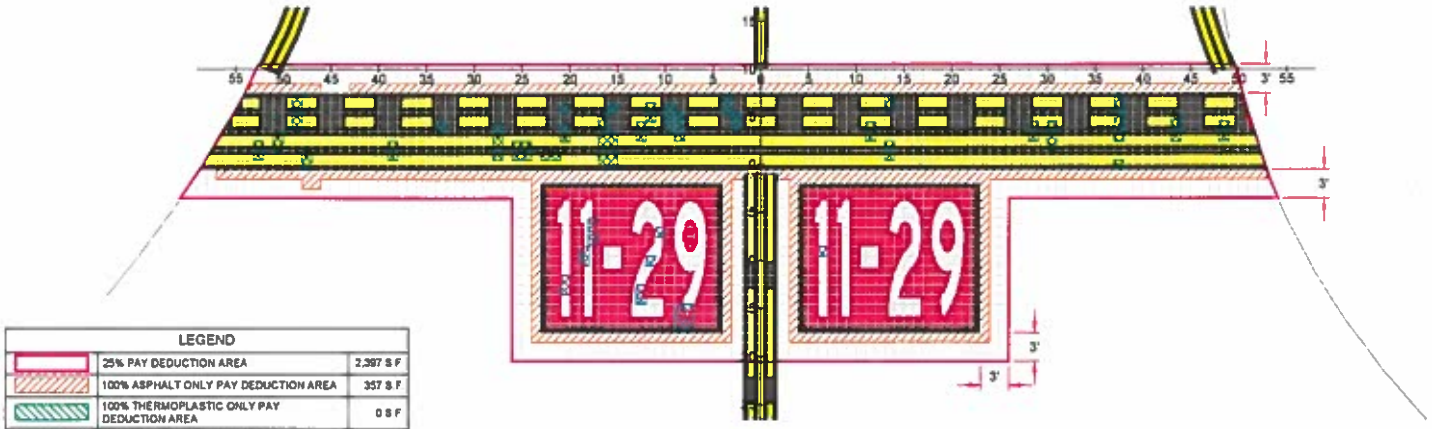
TAXIWAY A5



LEGEND		
	25% PAY DEDUCTION AREA	2,117 S.F.
	100% ASPHALT ONLY PAY DEDUCTION AREA	283 S.F.
	100% THERMOPLASTIC ONLY PAY DEDUCTION AREA	0 S.F.
	100% ASPHALT & THERMOPLASTIC PAY DEDUCTION AREA	33 S.F.

TAXIWAY A6

GRAND JUNCTION REGIONAL AIRPORT
GRAND JUNCTION, COLORADO
BASED ON 3/11/17 INSPECTION



LEGEND		
	25% PAY DEDUCTION AREA	2,397 S.F.
	100% ASPHALT ONLY PAY DEDUCTION AREA	357 S.F.
	100% THERMOPLASTIC ONLY PAY DEDUCTION AREA	0 S.F.
	100% ASPHALT & THERMOPLASTIC PAY DEDUCTION AREA	77 S.F.

GRAND JUNCTION REGIONAL AIRPORT
GRAND JUNCTION, COLORADO
BASED ON 3/11/17 INSPECTION

ARMSTRONG

December 8, 2016

Elam Construction
556 Struthers Ave
Grand Junction, CO 81501
(970) 242-5370

Re: Grand Junction Regional Airport, Rehabilitate Taxiways A1-A7

Mr. Aggen:

The following amounts will be withheld from the payment made in response to Pay Application 1 (Elam Invoice 2700019-1F) dated November 9, 2016 for the above noted project to offset expenses incurred by the Sponsor in the form of liquidated damages, as defined in Article 4 of the Contract Agreement executed between Elam Construction, Inc. and the Grand Junction Regional Airport Authority on April 28, 2016 and General Provisions Section 80-08 of the Contract Documents incorporated by reference into Article 1 of the Contract Agreement, and for additional QA testing expenses incurred by the Sponsor.

The amounts shown below include liquidated damages assessed through December 5, 2016. Additional liquidated damages may be assessed if it is determined that additional work is required to correct the issues that have been noted with the thermoplastic markings or any other punch-list items that may be noted as a result of subsequent inspections. At a minimum, crack sealing is needed on the cracked pavement around the thermoplastic markings and is anticipated to be installed in the spring of 2017. The estimated cost to install up to 3 tons of crack seal material by Elam Construction, or another party, has been retained as shown below. However, this may not be a final remedy for the unacceptable construction items upon final assessment.

Liquidated Damages [101 days (as of 12/5/2016) @ $1,000.00/day]:	$101,000.00
Additional QA Testing:	$38,071.36
Future Crack Sealing Cost (Estimated 3 tons)	$16,350.00
Total Withheld:	**$155,421.36**

The summary of payment to be made to Elam Construction, Inc. by the Grand Junction Regional Airport Authority for Pay Application 1 is summarized below:

Gross Amount Due Pay Application 1:	$994,426.99
Less 10% Retainage:	($99,442.70)
Withheld Payment:	($155,421.36)
Amount Due Pay Application 1:	**$739,562.93**

This letter must be signed, notarized, and returned to Armstrong Consultants, Inc. on or by December 14, 2016 at the close of business. If Elam Construction chooses not to agree with the items included in this letter, the Airport will explore all other available options including default.

The above is hereby acknowledged and agreed to by:

Armstrong Consultants

JANA DORLAC
Notary Public
State of Colorado
Notary ID 19984024470
My Commission Expires [illegible] 2018

June 22, 2018

(Signature) 12/13/16 (Date)

David J. Hartmann V.P.
(Printed Name) (Title)

(NOTARY SEAL)

Elam Construction:

(Signature) 12-13-16 (Date)

Russell A. Larsen C.O.O
(Printed Name) (Title)

(NOTARY SEAL)

Subscribed and affirmed (or sworn to) before me in the county of Mesa, State of Colorado, this 13th day of December ~~December~~ 2016.

Karen Binder
Commission Expires: 12/10/19

KAREN BINDER
Notary Public
State of Colorado
Notary ID 20154047528
My Commission Expires Dec 10, 2019

ARMSTRONG

January 20, 2017

Elam Construction
Attn: Mr. Aggen
556 Struthers Ave
Grand Junction, CO 81501

Re: Grand Junction Regional Airport, Rehabilitate Taxiways A1-A7

Mr. Aggen:

As you are aware, the current state of the project in and around the vicinity of the thermoplastic markings is unacceptable for payment.

Cracks in the pavement at numerous locations around the thermoplastic markings' perimeters appeared nearly immediately after the markings' installation. Several cracks in the pavement and within the markings themselves have also appeared. The work was completed late in the calendar year and temperatures precluded any further construction work in these areas. Subsequently, the project was put on hold with respect to contract days and construction activity. However, as the prime contractor, Elam Construction is required to bring these areas to an acceptable state when temperatures return to levels compatible with appropriate construction activities. Based on historical models, average daytime temperatures return to 65 degrees F on or about May 27th. Barring colder-than-average temperatures, Elam's work to mitigate these problem areas must begin May 30th, 2017.

Over the course of the next several months, Armstrong will continue to monitor and measure these problem areas. Elam shall be prepared with multiple courses of action, one plan for if the damage stays the same, another plan if the damage gets worse, and one if the pavement needs removed and replaced. We understand these plans are generally outlined in your 1/13/17 email (enclosed). Clarification is provided below.

Existing Crack Damage Proves Static
Elam Construction will proceed with sealing the cracks outside the thermoplastic markings as outlined in your 1/13/17 letter. No cracks are wider than ¼-inch, therefore there will be no routing of the cracks. Cracks inside the markings shall be repaired per your letter and attachments.

Pavement and Marking Crack Damage Proves Dynamic
Elam Construction will proceed with sealing the cracks outside the thermoplastic markings as outlined in your 1/13/17 letter. Proposed routing locations must be approved by the engineer prior to routing those locations. Cracks inside the markings shall be repaired per your letter and attachments.

Pavement Removal and Replacement
If the pavement damage, either localized or widespread, becomes so significant that pavement removal and replacement is warranted, that course of action will need to be executed. Conditions that would warrant pavement removal include:

HMA pavement that becomes loose or broken
Rutting, shoving, or raveling as defined by the FAA's Pavement Surface Evaluation and Rating (PASER) manual (enclosed)

Armstrong will continue monitoring and measuring these areas twice monthly through March. Cracked areas are noted with cracks classified as being either larger or smaller than ¼-inch wide. Elam is welcome to send someone with Armstrong on these site visits and also welcome to the documentation from previous site visits. Final evaluation of the project pavement, relative to static, dynamic, or needed-removal damage conditions, will occur by Armstrong and airport staff no later than March 14th, 2017. At that time, the plan for addressing the damaged areas will be decided and logistics for completion of the work should begin.

Construction Operations and Phasing

As with the rest of the work completed so far under this contract, phasing and work hours are critical. The work time for any of the action outlined above must occur after the last commercial flight arrives and completed no later than 5:30 a.m. Only one connector taxiway may be closed, with prior approval by the airport, at one time during the day. If pavement removal and repair is required, only one connector will be closed at a time, at all times. The total number of calendar days used, from May 30th through completion of acceptable work, will be subject to liquidated damages. The estimated days allowed for each course of action are outlined below.

Static damage repair	3 days
Dynamic damage repair	7 days
Pavement removal and replacement	21 days

An estimated cost has been developed for each of the repair options that have been proposed including full removal and replacement, sealing the asphalt cracks, and sealing and patching the thermoplastic material. The estimated costs of each option are presented below and detailed in the enclosed cost estimate breakdown sheets:

Static damage repair	$11,500
Dynamic damage repair	$21,550
Pavement removal and replacement	$162,988

After execution of the final course of action, the project will be examined to determine quantities that are acceptable for payment. Execution of either crack repair plan will result in a pay reduction of the affected areas. Execution of the removal and repair option will result in no acceptance or payment of the thermoplastics in the affected area, but instead payment for acceptable paint in those areas.

We look forward to getting this project completed.

The above is hereby acknowledged and agreed to by:

Armstrong Consultants

(Signature) 1/23/17 (Date)

(NOTARY SEAL)

DAVID J. HARTMANN (Printed Name) V.P. (Title)

Elam Construction:
(970) 242-5370

(Signature) 1/23/17 (Date)

(NOTARY SEAL)

JOHN AGGEN (Printed Name) 1/23/17 (Title)

Enclosures:
Elam 1/13/17 Email Letter
PASER Manual
Cost Estimates

KAREN BINDER
Notary Public
State of Colorado
Notary ID 20154047528
My Commission Expires Dec 10, 2019

State of Colorado
County of Mesa
The foregoing instrument was acknowledged before me this 23rd day of January 2017 by John Aggen of Elam Construction.

Karen Binder 1/23/17
Karen Binder 1/23/17

Commission Expiration Date: 12/10/19

David Hartmann

From: John Aggen [John.Aggen@elamconstruction.com]
Sent: Friday, January 13, 2017 8:20 AM
To: David Hartmann
Cc: Russ Larsen; Chad Saunders; Gene Duran
Subject: Grand Junction Airport Thermoplastic Markings Action Plan
Attachments: AirMark Training Manual Page 41 & 42.pdf

David,

Below is an outline displaying Elam's plan for proceeding forward.

For clarification, there are two types of cracking to be discussed:

1. Cracks in the asphalt surrounding the perimeter of the thermoplastic markings.
2. Cracks within the thermoplastic markings themselves.

Also, you mentioned that you would like to see two different courses of action; one, if the cracks and other damage stay as they are right now, or the other, if the damage gets worse over the course of the winter.

I think that our resolution is more clear if we separate our courses of action by the width of crack for both types listed above.

1. Cracks less than or equal to ¼".
2. Cracks greater than ¼".

In spring of 2017, Elam Construction Inc. is proposing to mobilize to the Airport. All cracks will be assessed and documented for any changes/no changes. Two separate crews will proceed with repairing the two types of cracks.

The asphalt cracks will be sealed with the crack seal material specified in the bid documents. Squeegees and putty knives will be used for cracks less than or equal to ¼". Asphalt cracks greater than ¼" will be routed and blown out prior to placing the material with squeegees. In addition, Elam construction is offering, at no cost to the owner, to perform the same crack seal operation on any and all cracks within the seven taxiway areas that were paved in the 2016 project.

The thermoplastic markings that have cracking within the markings themselves will be repaired as follows:
Hairline cracks approximately ¼" inch in width or smaller that require repair will be sealed with Clear Flex Shot or Flex Seal - Flex Shot and Flex Seal are thick rubber adhesives that should bond well to the AirMark material. This product comes in a variety of colors, but we cannot guarantee the color will match with AirMark's material. If the owner is okay with a "like" color, the option of Red, Yellow, Black, or White Flex Seal in lieu of clear is available.
Cracks that exceed roughly a ¼ inch or greater – Please refer to the attached pdf, AirMark's Application Training Manual, Pages 41 & 42 address a step-by-step process of cutting out and replacing AirMark material. Small hairline cracks would require a 1" wide strip for replacement. Larger cracks would require the entire area with damage to be replaced.
Both repair methods will require a small vehicle with minimal tools to perform the repairs and have short cure times. Consequently, these quick repairs should have little to no impact on airport traffic.

Elam construction has documented every crack occurring in and around the thermoplastic markings on Taxiways A1 – A7. The affected surface area to be repaired measured out to be less than 5% of all thermoplastic markings installed. Based on this percentage of unaffected surface area, Elam Construction Inc. is requesting a partial payment for the functional/acceptable thermoplastic markings that have no flaws/cracking/etc.

Thank you,

John Aggen
Elam Construction Inc.
Grand Junction
Construction Area Manager
556 Struthers Ave, Grand Junction CO 81501
Office: 970-242-5370
Cell: 970-210-4418
John.Aggen@elamconstruction.com



Marking Maintenance: Patching Damaged AirMark®:

Small areas of AirMark® can be patched with fresh material as long as the perimeter bond around the material loss is good. In the example below, an AirMark® marking was abraded through to the substrate by an idling snow brush truck. See figure 1.



Figure 1: AirMark® damaged by idling snow brush truck

To repair the damaged marking the following steps were taken:

1) The AirMark® marking was lightly heated with a Magnum torch and using a box cutter the area was scored and boxed off. See figure 2.



Figure 2: Damaged area heated, scored, and boxed off.

2) Using a sharp wood chisel and hammer, the marking was removed from the scored edge to the interior of the marking. See figure 3.



Figure 3: Damaged area removed with wood chisel and hammer.

3) After the AirMark® removal, cut material from the patching kit to fill the damaged area and reapply 2 part sealer to the exposed substrate using a small 3 in. sponge roller. See figure 4. Be careful to avoid getting sealer on the surrounding material.



Figure 4: Fresh material cut from patching kit.

4) Using a Magnum torch, lightly apply heat at a distance of 8-10 in. over the marking until either the indents close or until the seams flow together and proper bead embedment is achieved. See figure 5.



Figure 5: Heated AirMark® patch

5) The surrounding oxidized AirMark® will quickly char if care is not taken during the heating process. While charring is not aesthetically pleasing it does not affect retroreflectivity and with some traffic will wear away. Also over time the patch will blend with the surrounding marking. See figure 6 below.

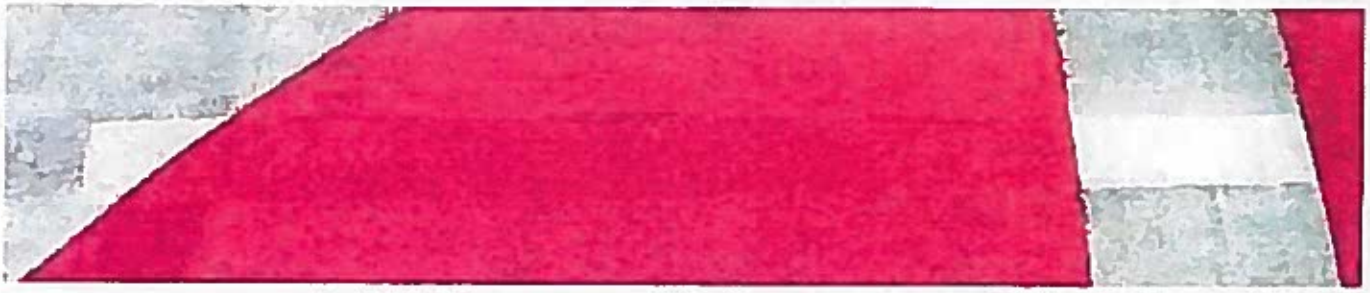


Figure 6: AirMark® patch after several months of wear.

COST ESTIMATES RE: 1/19/2017 LETTER

Asphalt Pavement Crack Sealing Around the Perimeter of the Thermoplastics

This cost estimate includes the sealing of the cracks in the pavement that have developed or may develop around the perimeter of the thermoplastic markings. The cost assumes that the cracks may need to be routed prior to being sealed. This estimate does not address the cracking with in the thermoplastic material.

ITEM	QUAN.	UNIT	UNIT PRICE	EXTENSION
Mobilization	1	L.S.	$ 5,000.00	$ 3,500.00
Crack Sealing	0.5	TON	$ 10,000.00	$ 5,000.00
			CONSTRUCTION TOTAL	$ 8,500.00
Construction Administration				$ 3,000.00
			TOTAL	$ 11,500.00

Sealing and Repairing the Thermoplastic Markings

This estimate has been calculated based on an estimate of observed and potential cracking that would require repair or sealing on the thermoplastic material. An approximate linear footage was calculated based on observed and anticipated conditions. The estimate assumes that cracks with a width that are equal to or less than ¼" will be sealed with a sealant that will bond well with the thermoplastic material and will not degrade due to weather. The cracks that are found to be equal to, or wider than ¼" in width at their widest point, will require that the thermoplastic around the crack be removed and patched according to the manufacturers recommendations.

ITEM	QUAN.	UNIT	UNIT PRICE	EXTENSION
Mobilization	1	LS	$ 5,000.00	$ 5,000.00
Thermoplastic Crack Sealing	410	LF	$ 5.00	$ 2,050.00
Thermoplastic Crack Repair	230	LF	$ 50.00	$ 11,500.00
			CONSTRUCTION TOTAL	$ 18,550.00
Construction Administration				$ 3,000.00
			TOTAL	$ 21,550.00

Pavement Removal and Replacement

This cost assumes that the pavement in the areas that have thermoplastics would be milled out to a depth of 2" and replaced with new P-401 asphalt pavement. The surface painted hold signs and the hold positions markings would be reapplied with paint. The thermoplastics would be eliminated and as a result would not be acceptable for payment. This estimate also includes the cost of the construction administration and QA testing that would be required.

ITEM	QUAN.	UNIT	UNIT PRICE	EXTENSION
Mobilization	1	L.S.	$ 15,000.00	$ 15,000.00
Cold Milling (2 Inches Thick)	2650	S.Y.	$ 6.00	$ 15,900.00
Bituminous Surface Course (75 Blow)	315	Ton	$ 125.00	$ 39,375.00
Bituminous Material (PG 64-28)	22	Ton	$ 600.00	$ 13,230.00
Tack Coat	400	Gal	$ 4.00	$ 1,600.00
Temporary Markings	9,961	S.F.	$ 1.25	$ 12,451.25
Permanent Pavement Markings	9,961	S.F.	$ 1.75	$ 17,431.75
			CONSTRUCTION TOTAL	$114,988.00
Construction Administration				$ 20,000.00
Testing ($4,000/lot x 7 lots)				$ 28,000.00
			TOTAL	$162,988.00

Pavement Surface Evaluation and Rating

PASER Manual

Asphalt Airfield Pavements







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Airfield Pavement Inventory	*inside back cover*

This manual is intended to assist airfield managers in understanding and rating the surface condition of asphalt pavement. It describes types and causes of defects and provides a simple system to visually rate pavement condition.

Produced for the Federal Aviation Administration by Engineering Professional Development, College of Engineering, University of Wisconsin-Madison.

Pavement Surface Evaluation and Rating

PASER Manual

Asphalt Airfield Pavements

Donald Walker, P.E., University of Wisconsin–Madison, *author*
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Susan Kummer, Artifax, *designer*



PASER — Pavement Surface Evaluation and Rating

Asphalt Airfield Pavements

An airport manager's goal is to use available funds to provide a safe and economical pavement surface—no simple task. It requires balancing priorities and making difficult decisions in order to manage pavements. General aviation airfield pavements are often managed informally, based on the staff's judgment and experience. While this process is both important and functional, using a slightly more formalized technique can make it easier to manage pavements effectively.

Experience has shown that there are three especially useful steps in managing pavements:

1) Inventory all pavements.
2) Periodically evaluate the condition of all pavements.
3) Use the condition evaluations to set priorities for projects and evaluate alternative treatments.

A comprehensive pavement management system involves collecting data and assessing several pavement characteristics: roughness, surface distress (condition), surface skid characteristics, drainage, and structure (pavement strength and deflection). Planners can combine this condition data with economic analysis, to develop short-range and long-range plans for a variety of budget levels. However, general aviation agencies may lack the resources for such a full-scale system.

Since surface condition is the most vital element in any pavement management system, managers may use the simplified rating system presented in this manual on asphalt airfield pavements to evaluate their asphalt pavements. A PASER manual for concrete airfield pavements is also available (see references, page 24).

Evaluating pavement condition

PASER uses visual inspection to evaluate pavement surface conditions. The key to a useful evaluation is identifying different types of pavement distress and linking them to a cause. Understanding the cause for current conditions is important in selecting an appropriate maintenance or rehabilitation technique.

There are four major categories of common asphalt pavement surface distress:

Surface defects
Raveling, flushing, polishing.

Surface deformation
Rutting, distortion — rippling and shoving, settling, frost heave.

Cracks
Thermal, reflection, slippage, joint/edge, block, and alligator cracks.

Patches and potholes

Deterioration has two general causes: environmental due to weathering and aging, and structural caused by repeated traffic loadings.

Obviously, most pavement deterioration results from both environmental and structural causes. However, it is important to try to distinguish between the two in order to select the most effective rehabilitation techniques.

The rate at which pavement deteriorates depends on its environment, traffic loading conditions, original construction quality, and interim maintenance procedures. Poor quality materials or poor construction procedures can significantly reduce the life of a pavement. As a result, two pavements constructed at the same time may have significantly different lives, or certain portions of a pavement may deteriorate more rapidly than others. On the other hand, timely and effective maintenance can extend a pavement's life. Crack sealing and surface treatments (such as slurry seal) can reduce the effect of moisture in aging of asphalt pavement.

With all of these variables, it is easy to see why pavements deteriorate at various rates and why we find them in various stages of disrepair. Recognizing defects and understanding their causes helps us rate pavement condition and select cost-effective repairs. The pavement defects shown on the following pages provide a background for this process.

Periodic inspection is necessary to provide current and useful evaluation data. It is recommended that PASER ratings be updated every year.

SURFACE DEFECTS

Raveling

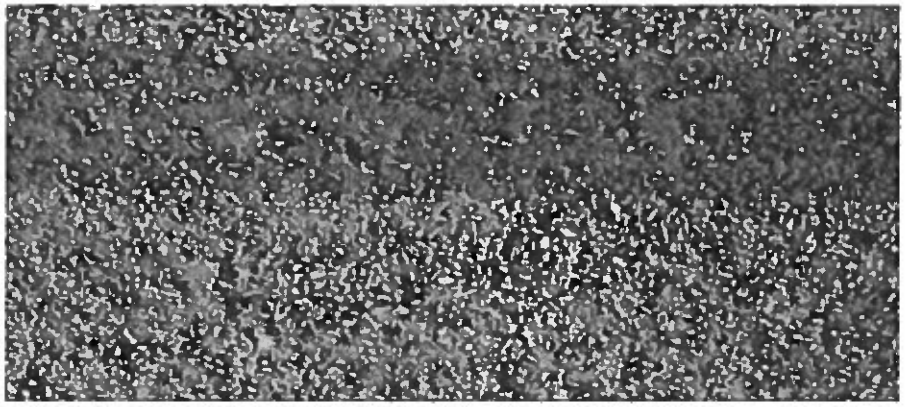
Raveling is progressive loss of pavement material from the surface downward, caused by: stripping of the bituminous film from the aggregate, asphalt hardening due to aging, poor compaction especially in cold weather construction, or insufficient asphalt content. Slight to moderate raveling has loss of fines. Severe raveling has loss of coarse aggregate. Debris from raveling may damage aircraft. Protect pavement surfaces from the environment with a surface treatment or an overlay if additional strength is required.

Polishing

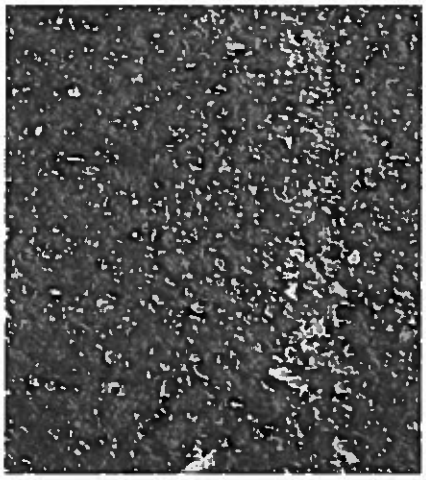
Polishing is a smooth slippery surface caused by traffic wearing off sharp edges of aggregates. Pavement grooves may also be worn away. Repair with surface treatment or thin bituminous overlay using skid-resistant aggregate.

Flushing

Flushing is excess asphalt on the surface caused by a poor initial asphalt mix design or by paving or sealcoating over a flushed surface. Repair by overlaying with properly designed asphalt mix or sealcoat.

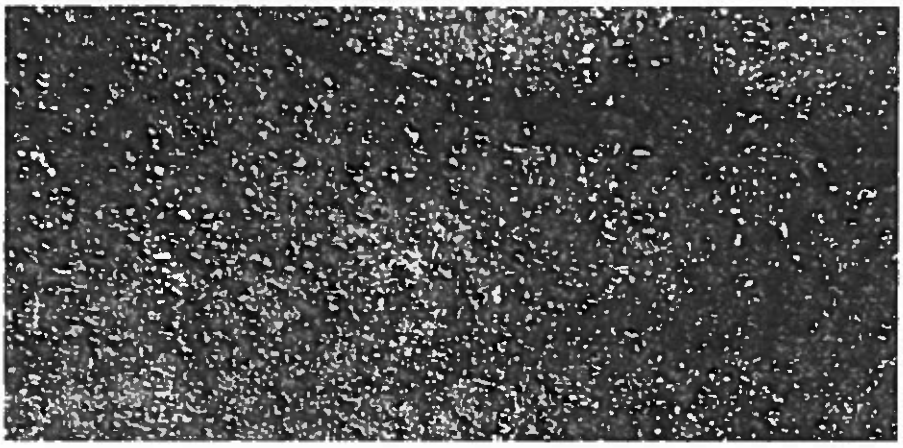


▲
Slight raveling. Small aggregate particles have worn away exposing tops of large aggregate.

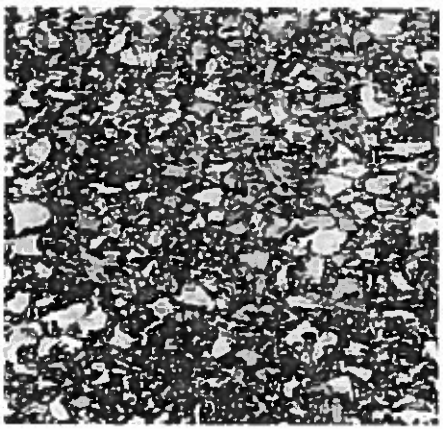


◄
Moderate to severe raveling. Erosion further exposes large aggregate.

Severe raveling and loss of surface material.
▼



Polished, worn aggregate needs repair.
▼





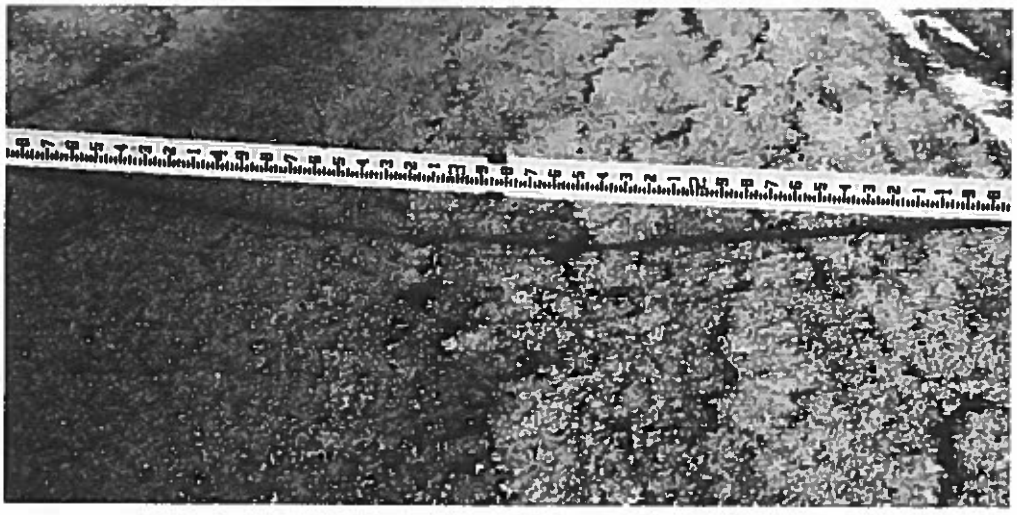
◄
Flushing. Dark patches show where asphalt has worked to surface.





▲ **Even slight rutting is evident after a rain.**

◄ **Severe rutting over 2" caused by poor mix design.**



◄ **Severe rutting caused by poor base or subgrade.**

SURFACE DEFORMATION

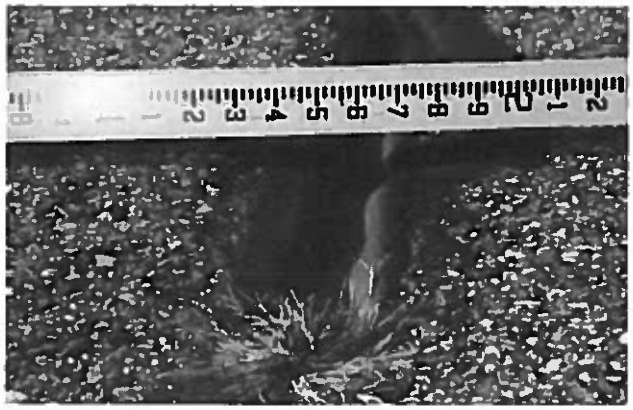
Rutting

Rutting is displacement of material, creating channels in wheelpaths. It is caused by traffic compaction or displacement of unstable material. Severe rutting (over 2") may be caused by base or subgrade consolidation. Repair minor rutting with microsurfacing or overlays. Severe rutting requires milling the old surface or reconstructing the pavement before resurfacing. Base or subgrade improvement may be necessary if rutting is related to poor base or subgrade conditions.

Distortion

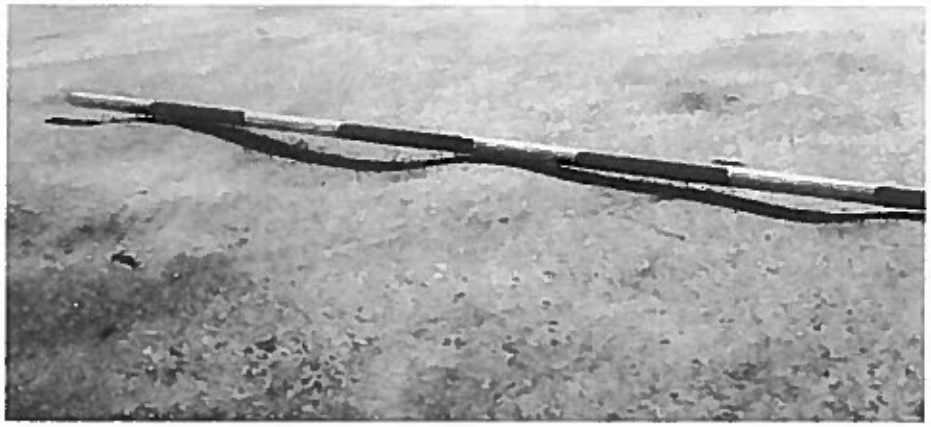
Shoving or rippling is the displacement of surfacing material. It can develop when the asphalt mixture is unstable because of poor quality aggregate or improper mix design. Repair by milling smooth and overlaying with stable asphalt mix.

Other pavement distortions may be caused by settling, frost heave, etc. Patching may provide temporary repair. Permanent correction involves removal of unsuitable subgrade material and reconstruction.



◄ **Minor settlement over sealed crack.**

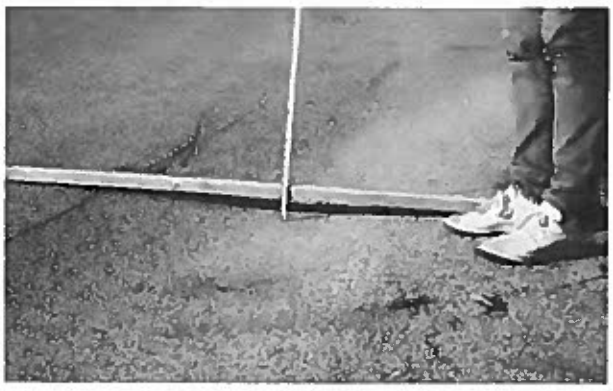
Heavy traffic has shoved pavement into washboard ripples and bumps. ▼



Significant settlement (over 2") and cracking adjacent to sealed crack. ▼







▲ **Severe settling from utility trench.**



▲ **Frost heave damage from spring break-up.**

◄ **Severe settlement of patch.**

CRACKS

Thermal cracks

Thermal cracks are often regularly spaced. The cause is movement due to temperature changes and hardening of the asphalt with aging.

Thermal cracks will initially be widely spaced (several hundred feet apart). Additional cracking will occur with aging until they are closely spaced (within several feet). These usually begin as hairline or very narrow cracks; with aging they widen. If not properly sealed and maintained, secondary or multiple cracks develop parallel to the initial crack. The crack edges can further deteriorate by raveling and eroding the adjacent pavement.

Help prevent water intrusion and damage by sealing cracks as soon as they appear. Routing and cleaning the crack will improve the performance of crack sealant.

Differential thermal stress can also cause cracking. Pavement marking paint and sealcoats using materials with significantly different thermal



▲ Widely spaced, well-sealed cracks.



▲ Sealed cracks, some closely spaced.

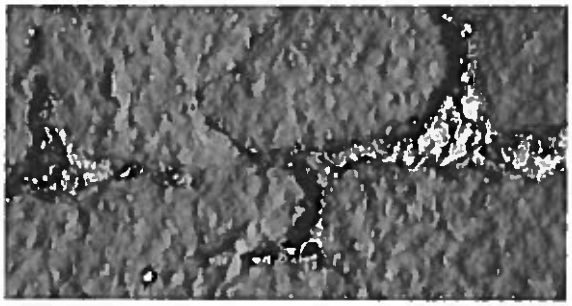
◄ Failed sealant.



Pavement marking may cause thermal stress and lead to surface cracking. ▼



Severe thermal cracking in coal tar sealant. ▼





▲ Tight cracks less than 1/4" in width.



▲ Open crack – ½" or more in width.



▲ Water enters unsealed cracks softening pavement and causing secondary cracks.



▲ Pavement ravels and erodes along open cracks causing deterioration.

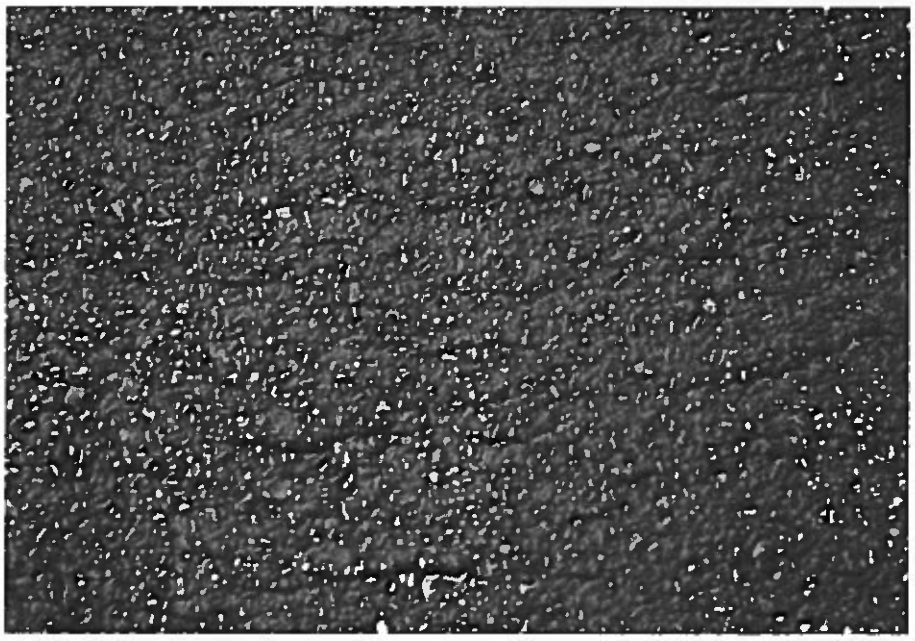
properties can create surface cracking.

Reflection cracks

Cracks in overlays reflect the crack pattern in the pavement underneath. They are caused by movement in the underlying pavement due to temperature change. This movement creates very large stress in the overlay. Therefore, they are difficult to prevent and correct.



▶ **Cracks reflected through bituminous overlay.**



▶ **Hairline cracks reflected through sealcoat.**

Slippage cracks

Crescent or rounded cracks caused by slippage between an overlay and an underlying pavement. Slippage is most likely to occur at locations where traffic is stopping and starting. Repair by removing the top surface and resurfacing using a tack coat.



▲ **Loss of bond between pavement layers allows traffic to break loose pieces of surface.**



Paving joint and edge cracks

Paving joint cracks are caused by inadequate bonding and poor compaction of the joint during construction. They may also be caused by reflection of poor joints in the underlying pavement. Cracks within one foot of the edge are caused by insufficient shoulder support, poor drainage, or frost action. Cracks usually start as hairline or very narrow, widening and eroding with age. Without crack filling, they can ravel, develop multiple cracks, and become wide enough to require patching.

Sealing cracks will help reduce moisture penetration and prevent further subgrade weakening.



▲ **Paving joints. Slight crack on joint near center. Open joint on right side.**

◄ **Partially open ¼" paving joint.**



◄ **First stage of wheelpath cracking caused by heavy traffic loads.**

► **Severe cracking and edge distress.**





◄ **Edge cracking in asphalt along concrete slab.**

Block cracks

Block cracking is interconnected cracks forming large blocks. Cracks usually intersect at nearly right angles. Blocks may range from one foot to approximately 10' or more across. The closer spacing indicates more advanced aging caused by shrinking and hardening of the asphalt over time. Apply surface treatments during early stages to reduce weathering of the asphalt caused by exposure to the sun, moisture and freezing. Overlay or reconstruction is required in the advanced stages.



▶ **Right angle cracking forms blocks.**



▶ **Large blocks with open cracks filled with grass.**



▶ **Small blocks with open cracks.**



Alligator cracks

Interconnected cracks forming small pieces ranging in size from about 1" to 6". This is caused by failure of the entire pavement due to traffic loading (fatigue) and usually due to inadequate base or subgrade support. Repair by excavating and replacing failed subgrade base and surface. Large areas require reconstruction. Improvements in drainage may often be required.

◄ **Alligator crack pattern. Tight cracks and one patch.**



◄ **Alligator cracking near pavement edge.**



◄ **Alligator cracking and pothole.**

PATCHES AND POTHOLES

Patches

Original surface repaired with new asphalt patch material. Indicates a pavement defect or utility excavation which has been repaired. Patches with cracking, settlement or distortions indicate underlying causes remain. Repair or reconstruction are required when extensive patching shows distress.



▲ **Typical repair of utility excavation. Patch in good condition.**



► **Patched area in poor condition.**

Overlay repair with edge raveling and cracks. ▼





Potholes

Holes and loss of pavement material are caused by traffic loading, fatigue and inadequate strength. Often combined with poor drainage, this can create dangerous pavement debris. Repair by excavating or rebuilding localized potholes. Reconstruction required for extensive defects.



▲ **Shallow pothole.**

◄ **Large pothole and dangerous loose debris.**

Complete pavement failure. ▼



Rating pavement surface condition

With an understanding of surface distress, you can evaluate and rate asphalt pavement surfaces. The rating scale ranges from **5–excellent** condition to **1–failed**. Most pavements will deteriorate through the phases listed in the rating scale. The time it takes to go from excellent condition (5) to complete failure (1) depends largely on the quality of original construction, age, and the amount of heavy traffic loading.

Once significant deterioration begins, it is common to see pavement decline rapidly. This is usually due to a combination of loading and the effects of additional moisture. As a pavement ages and additional cracking develops, more moisture can enter the pavement and accelerate the rate of deterioration.

Look at the photographs which follow and become familiar with the descriptions of the individual rating categories. To evaluate an individual pavement segment, first determine its general condition. Is it relatively new, toward the top end of the scale? In very poor condition and at the bottom of the scale? Or somewhere in between? Next, think generally about the appropriate maintenance method. Use the outlined rating categories.

Finally, review the individual pavement distress and select the appropriate surface rating. A given pavement will likely ***not*** have all of the types of distress listed for any particular rating. It may have only one or two types.

In addition to indicating the surface condition of a pavement, a given rating also includes a recommendation for needed maintenance or repair. This feature of the rating system facilitates its use and enhances its value as a tool in ongoing airfield pavement maintenance.

Rating 5 – Excellent
No maintenance required

Rating 4 – Good
Minor routine maintenance, crack sealing

Rating 3 – Fair
Preservative treatments, crack sealing and surface treatment

Rating 2 – Poor
Structural improvement and leveling (patching then overlay)

Rating 1 – Failed
Reconstruction

Rating system

Surface rating	*Visible distress**	*General condition/ treatment measures*
5 Excellent	None, or initial thermal cracks, all narrow (less than ⅛")	New pavement less than 5 years old. No maintenance or isolated crack sealing required.
4 Good	Additional thermal cracking. Cracks generally spaced more than 50' apart. Less than 10% of cracks and joints need sealing. Minimal or slight raveling. No distortion. Patches in good condition.	Recent sealcoat or pavement over 5 years old. Seal open cracks or joints and replace sealant where needed.
3 Fair	Moderate raveling. Thermal cracks and joints generally spaced less than 50' apart. Crack sealing or repair of sealant needed on 10%-25% of cracks or joints. Edge cracks along 10% or less of pavement edges. Block crack pattern with cracks 6'-10' apart. Isolated alligator cracking and poor patches. Minor distortion or crack settlement less than 1".	Seal open cracks and joints. Replace failed sealant. Apply new surface treatment or thin overlay. Minor patching and joint repair.
2 Poor	Frequent thermal cracks. Wide cracks and joints with raveling in cracks. Deterioration along more than 25% of cracks. Edge cracks on up to 25% of pavement edges. Block cracks spaced 5' apart or less. Alligator cracking or poor patches cover up to 20% of surface area. Distortion or settlement 1"-2".	Needs significant crack sealing plus patching and repair on up to 25% of pavement surface. Overlay entire area with structural overlay.
1 Failed	Widespread, severe cracking with raveling and deterioration. Alligator cracking and potholes over 20% of the area. Distortion over 2".	Condition may be limiting service. Needs reconstruction.

** A given pavement segment may only have one or two types of distess rather than all of the types listed for a particular rating.*



RATING 5

EXCELLENT — No maintenance required or isolated crack sealing.

New pavement less than 5 years old. No visible distress or initial thermal cracks, all less than 1/8".

◄ **New pavement.**

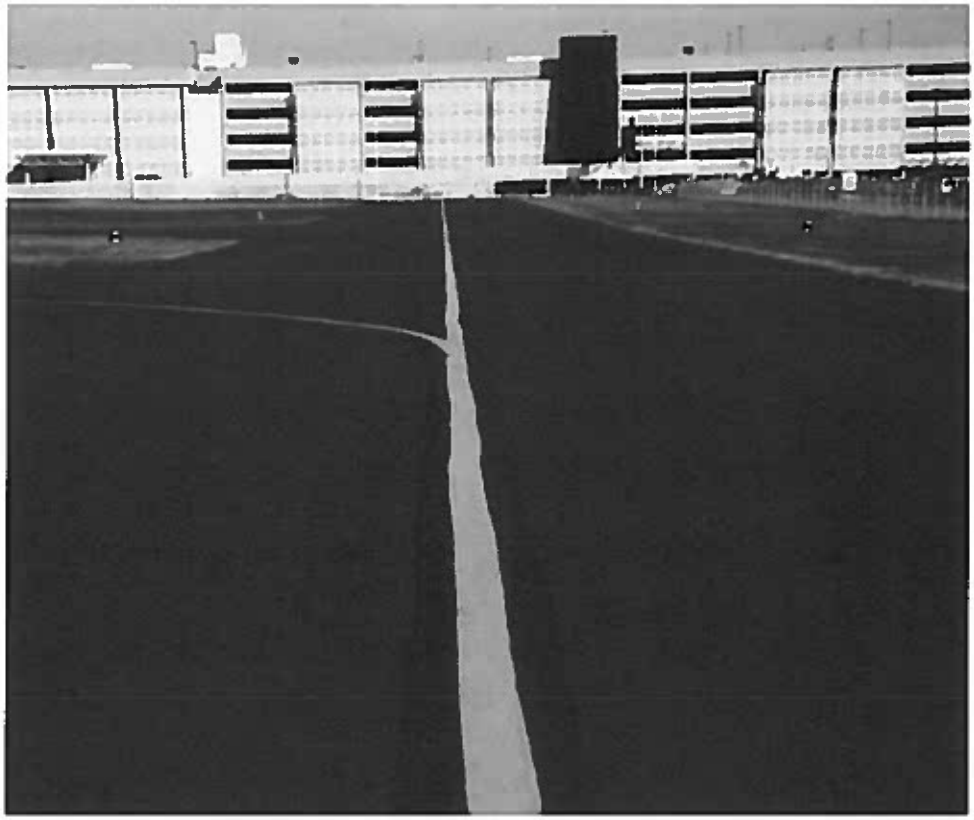
Recent overlay. Sealed joint. ▼



RATING 4

GOOD —
Seal open cracks or joints.

Recent sealcoat or pavement over 5 years old. Additional thermal cracking. Cracks spaced 10'-20' apart. Open cracks and joints need sealing on less than 10% of cracks. No distortion and patches in good condition.



Recent sealcoat. ▶

Cracks sealed. No distortion. Slight raveling. ▼



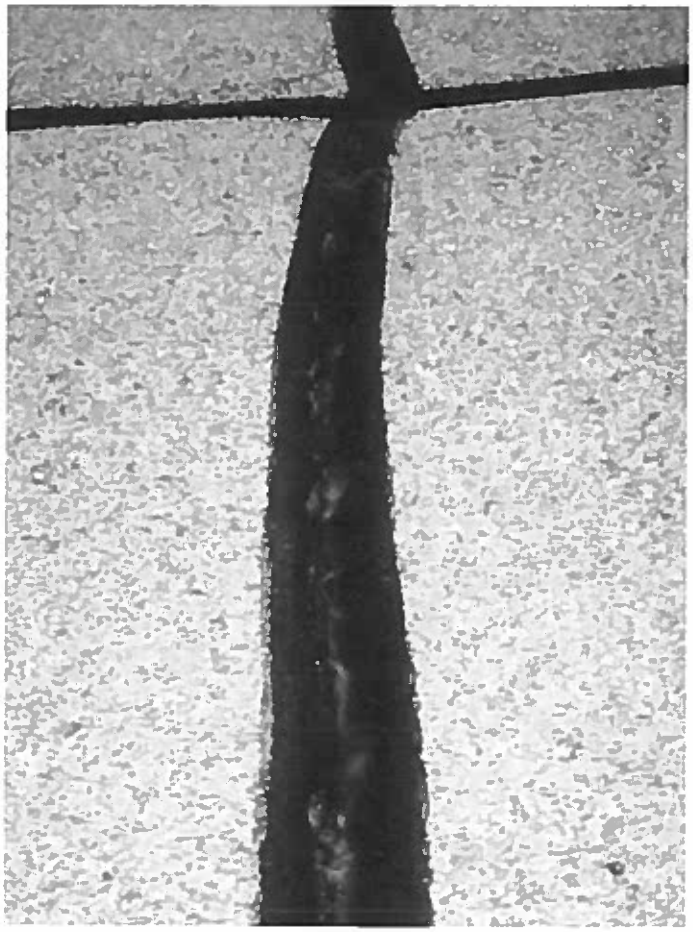
Pavement more than 5 years old. No patches or distortion. Schedule routing and sealing for isolated open joints. ▶





◄ Cracks widely spaced and sealed.

Joints would benefit from sealing. ▼



▲ Old sealant is leaking. Needs replacement at isolated locations.



RATING 3

FAIR —
Seal open cracks and joints. Apply new surface treatment or thin overlay. Minor patching and joint repair.

Moderate raveling. Thermal cracks and joints, generally spaced less than 50' apart. Crack sealing or repair of sealant needed on 10%-25% of cracks or joints. Edge cracks along 10% or less of pavement edges. Block crack pattern with block cracks 6'-10' apart. Isolated alligator cracking and poor patches. Minor distortion or crack settlement less than 1".



▲ **Thermal cracks less than 10' apart. Slight raveling.**



► **Several patches in good condition.**

Worn sealcoat needs new surface treatment. ▼

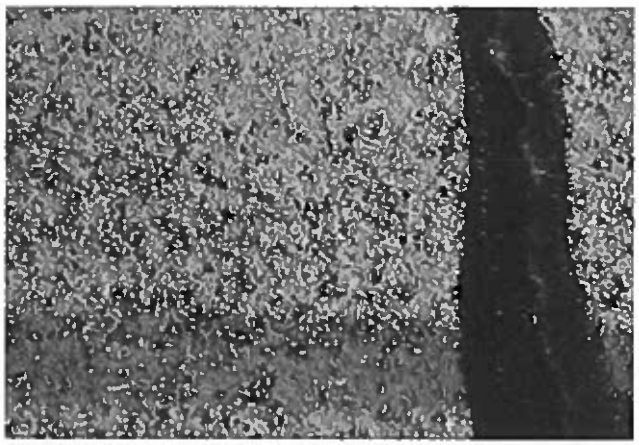
Open cracks need sealing. ▼







◄ Moderate raveling. Joint needs sealing.



◄ Moderate raveling. Needs surface treatment soon.



◄ Pavement settlement at crack less than 1" deep.





◄ Edge cracking at several locations.

◄ Joint sealant needs replacement at several locations. Follow with new surface treatment on apron.

RATING 2

POOR —
Needs significant crack sealing plus patching and repair on up to 25% of pavement surface. Use structural overlay over entire area.

Frequent thermal cracks. Wide cracks and joints with raveling in cracks. Deterioration along more than 25% of cracks. Edge cracks on up to 25% of pavement edges. Block cracks spaced 5' apart or less. Alligator cracking or poor patches cover up to 20% of surface area. Distortion or settlement 1"-2".



▲ Wide cracks with no sealant.



► Severe raveling.

► Multiple cracks open and deteriorated



Numerous cracks with settlement over 1".

►►





▲ Block cracking with cracks less than 5' apart.

► Patch in poor condition.

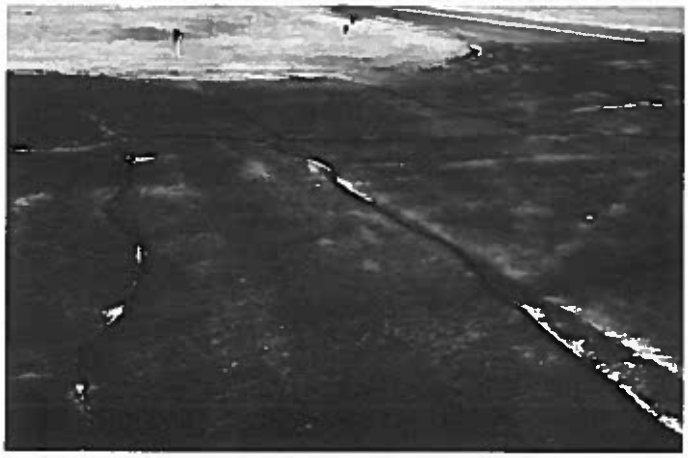




◄ Needs overlay.



◄ Edge cracking on up to 25% of the pavement.



◄ More than 25% of crack sealant needs replacement. Minor settlement over cracking.

▼ Sealant repair needed on more than 25% of cracks.

▼ Repair broken pavement and apply overlay.





RATING 1

FAILED —
Condition may be limiting service. Needs reconstruction.

Widespread, severe cracking with raveling and deterioration. Alligator cracking and potholes over 20% of the area. Distortion over 2"



Over 25% alligator cracking.
▼





▲
Extensive alligator cracking. Poor patches.

◄
Severe cracking and deterioration.



▲
Failed patch. Settlement over 2".



►
Extensive failed pavement and debris.

Practical advice on rating airfield pavements

Inventory and field inspection

Most airport owners routinely observe pavement conditions as a part of their normal work. However, an actual inspection means looking at the entire system as a whole and preparing a written summary of conditions. This inspection has many benefits over casual observations. It can be helpful to compare pavement features as a whole system so ratings and maintenance decisions can be more consistent.

An inspection also encourages a review of specific conditions important in pavement maintenance, such as drainage, adequate strength, and safety.

A simple written inventory is useful in making decisions where other people are involved. You do not have to trust your memory, and you can usually answer questions in more detail. Having a written record and objective information also improves your credibility with the funding agencies.

Finally, a written inventory is very useful in documenting changing pavement conditions. Without records over several years, it is difficult to know if conditions are improving, holding their own, or declining.

A sample inventory form is shown on the inside back cover. It is very helpful to collect background information on each feature. Pavement thickness, age, and major maintenance are examples of helpful information.

Annual budgets and long range planning are best done when based on actual needs as documented with a written inventory.

Pavement features

Inventory and pavement condition data are normally organized by dividing the pavements into segments or features. A plan or aerial photo of the entire airfield is most helpful in identifying these individual features. Runways, taxiways and aprons should be considered as separate categories. Within each category, the pavement should be separated into features with similar construction. For example, pavements with different thickness, age, or type of construction should be rated separately.

A runway may be all one feature if conditions are similar. However, if parts of the runway have significantly different construction details or condition, then separate features will make the rating more logical and useful.

Each taxiway, can be considered a separate feature. You may combine several sections of taxiway if conditions are similar.

Apron areas can be separated into features according to the areas they serve. For example, aprons serving a terminal, hangers, tie-down area, or fueling area would be separate features. Areas in different conditions may also be separated into features.

Averaging and comparing sections

No pavement feature is entirely consistent. Also surfaces in one section may not have all of the types of distress listed for any particular rating. They may have only one or two types.

The objective is to rate the condition that represents the majority of the pavement feature. Small or isolated conditions should not influence the rating. It is useful to note these special conditions on the inventory form so this information can be used in planning specific improvement projects. For example, some spot repairs may be required.

Occasionally surface conditions vary significantly within a feature. For example, short sections of good condition may be followed by sections of poor surface conditions. In these cases, it is best to rate the feature according to the worst conditions and note the variation on the form.

The overall purpose of condition rating is to be able to compare each feature relative to all the other features in your airport pavement system. On completion you should be able to look at any two pavement features and find that the better surface has a higher rating.

Assessing drainage conditions

Moisture and poor pavement drainage are significant factors in pavement deterioration. Some assessment of drainage conditions during pavement rating is highly recommended. While you should review drainage in detail at the project level, at this stage simply include an overview drainage evaluation at the same time as you evaluate surface condition.

Consider both pavement surface drainage and lateral drainage (ditches or storm sewers). Pavement should be able to quickly shed water off the surface. Ditches should be large and deep enough to drain the pavement and remove the surface water efficiently into adjacent waterways.

Look at the crown and check for low surface areas that permit ponding. Runways and taxiways should have approximately a 1.5% cross slope or crown across the pavement. Apron areas require positive drainage and often include storm drainage systems. Maintenance of the entire drainage system is critical. Ditches, subsurface drains and outlets should be inspected and cleaned regularly.

A pavement's ability to carry heavy traffic loads depends on both the pavement materials (asphalt surfacing and granular base) and the strength of the underlying soils. Most soils lose strength when they are very wet. Therefore, it is important to provide drainage to the top layer of the subgrade supporting the pavement structure.

Planning annual maintenance and repair budgets

We have found that relating a normal maintenance or rehabilitation procedure to the surface rating scheme helps managers use the rating system. However, an individual surface rating should not automatically dictate the final maintenance or rehabilitation technique.

Consider future traffic projections, original construction, and pavement strength since these may dictate a more comprehensive rehabilitation than the rating suggests.

Summary

Using funds most efficiently requires good planning and accurate identification of appropriate rehabilitation projects. Assessing pavement conditions is an essential first step in this process. This asphalt pavement surface condition rating procedure has proven effective in improving decision making and using funds more efficiently. It can be used directly by airport staff and consultants. It may be combined with additional testing and data collection in a more comprehensive pavement management system.

References

Concrete Aviation Airfields PASER Manual, 2003, Engineering Professional Development, College of Engineering, University of Wisconsin-Madison.

Guidelines and Procedures for Maintenance of Airport Pavements, 7/14/03, Federal Aviation Administration, Advisory Circular AC:150/5380-6A.

AIRFIELD PAVEMENT INVENTORY

Airfield _____ **Condition survey date** _____

Done by _____

Facility (runway, taxiway, apron) _____

Feature description _____

Feature location _____

Feature area _____

Construction date _____

Pavement type: ☐ **Asphalt** ☐ **Concrete** **Layer thicknesses:** _____ _____ _____

Maintenance history _____

_____

_____

PASER Rating **(5 = Excellent, 4 = Good, 3 = Fair, 2 = Poor, 1 = Failed)** ☐

Comments on pavement and drainage conditions _____

_____

_____

_____

_____

Recommended maintenance _____

_____

_____

_____

_____

Recommended rehabilitation _____

_____

_____

_____

PASER

Asphalt Airfield Pavements

January 26, 2017

Elam Construction
556 Struthers Ave
Grand Junction, CO 81501
(970) 242-5370

Re: Grand Junction Regional Airport, Rehabilitate Taxiways A1-A7

Mr. Aggen:

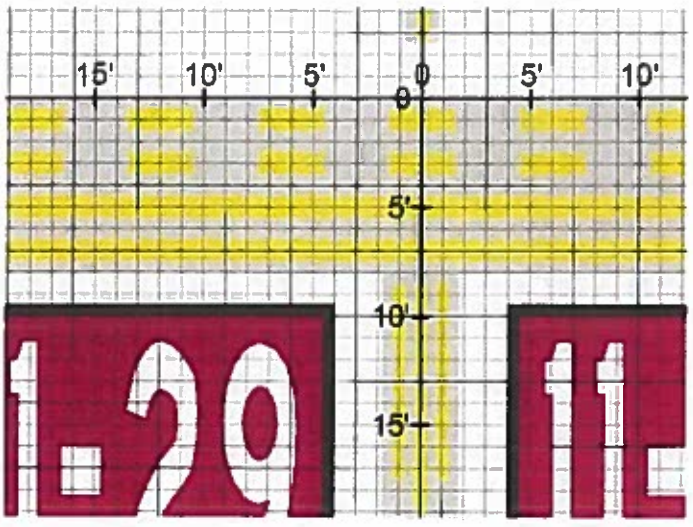
In addition to the previously signed letter from Armstrong Consultants, Inc. dated January 19, 2017, this letter is an agreement to the methods in which pay will be deducted from the thermoplastic markings payment and the bituminous surface course payment. It is understood that the current state of the project in and around the vicinity of the thermoplastic markings is unacceptable for full payment, even if the actions outlined in the previous letter are executed by Elam Construction as agreed to. As of today, no additional acceptance or payment is authorized. We anticipate that, in the coming months, executing the work outlined in the January 19, 2017 letter combined with the information herein will allow a level of acceptance and closure on the project.

The thermoplastics and the asphalt pavement will be evaluated independently and payment deductions will be calculated separately. This implies that cracks that affect both the pavement and the thermoplastic material will result in deductions for both items. The deduction will be discounted from the final as-built price of the item as was previously agreed to at the time of construction completion.

Ultimate Pay Deduction Calculation Methods

The thermoplastic markings and asphalt pavement will be evaluated by applying a 1' x1' grid over the surface of the markings and the pavement. The grid will be centered to the runway side edge of the thermoplastic marking and the centerline of the taxiway. Each square foot containing a visible crack will be deducted from the total quantity and discounted from the final payment. The grid will continue beyond the edge of the thermoplastics and be used to evaluate the pavement. An example diagram of the typical grid layout for each taxiway is show bellow:

Typical Grid Layout



A. Payment deduction due to the cracking of the thermoplastic material will be calculated based on the quantity (area) of thermoplastic material affected by cracking. The material will be evaluated by applying a 1'x1' grid over the entire surface of the thermoplastic material. Each 1'x1' area containing a crack, or multiple cracks, will be discounted from final payment at the unit price that was bid for the thermoplastic material. The resulting pay deduction based on the existing condition as of the 1/12/17 inspection has been calculated below.

A. Calculation of Deductions for Thermoplastics Markings		
Area affected by cracking	348	SF with cracks
Bid price per square foot	$26.50	per SF
Total price of material installed if 100% payment	$263,966.50	
Total deduction from payment (348 SF x $26.50/SF) for Section A	**$9,222.00**	

Note: Calculations based on existing conditions as of 1/12/17 inspection by Armstrong.

B. Payment deduction due to the cracking of the pavement surface will be calculated based on the quantity of pavement affected by cracking. The material will be evaluated assuming a 1'x1' grid over the entire surface of the asphalt pavement. Each 1'x1' area containing a crack will be discounted from final payment at the unit price as calculated. The unit price will be calculated in relation to the surface area, per square foot. The total cost of the Bituminous Surface Course and the Bituminous Material ($489,062.53 + $130,123.31= $619,185.84) is divided by the overall surface area using the total area milled (29,845 SY x 9 SF/SY = 268,605 SF) to determine the unit price per square foot of pavement ($619,185.84/268,605 SF= $2.31/SF). The resulting pay deduction based on the existing condition as of the 1/17/17 inspection has been calculated below.

B. Calculation of Deductions for Asphalt Pavement		
Pavement area affected by cracking	2,185	SF with cracks
Bid price per square foot (total cost / total area)	$2.31	per SF
Total price of material installed if 100% payment	$619,185.84	
Total deduction from payment (2,185 SF x $2.31/SF) for Section B	**$5,047.35**	

Note: Calculations based on existing conditions as of 1/12/17 inspection by Armstrong.

C. Subsequent to the acceptance of crack repair and the deductions outlined in Sections A and B above, the payment for the overall footprint of the area affected by the subject cracking will be reduced relative to the expected reduction in longevity of that pavement surface resulting from the cracking. In addition to degraded surface bonds, premature cracking allows increased moisture intrusion into subsurface pavement structure layers, thus reducing the usable lifespan of that pavement. Based on our experience it is reasonable to assume the pavement life would be reduced approximately 25% due to the cracking that has occurred, and that we recommend applying a 25% pay reduction to the pavement in this area.

The payment deduction due to anticipated reduced longevity resulting from the cracking will be calculated based on the area of pavement effected by cracking. This area shall be determined by calculating the quantity (gross Section C area) of pavement within each area of cracking in and around the thermoplastic markings on each exit taxiway, including a three-foot buffer. The area calculated in Section B will then be subtracted from gross Section C area, as to not duplicate a reduction in pay for the same area, resulting in the net Section C area. The pay reduction will be calculated by applying a 25% pay reduction to the asphalt unit price (as calculated in Section B) to the net Section C area. The resulting pay deduction based on the existing condition as of the 1/17/17 inspection has been calculated below.

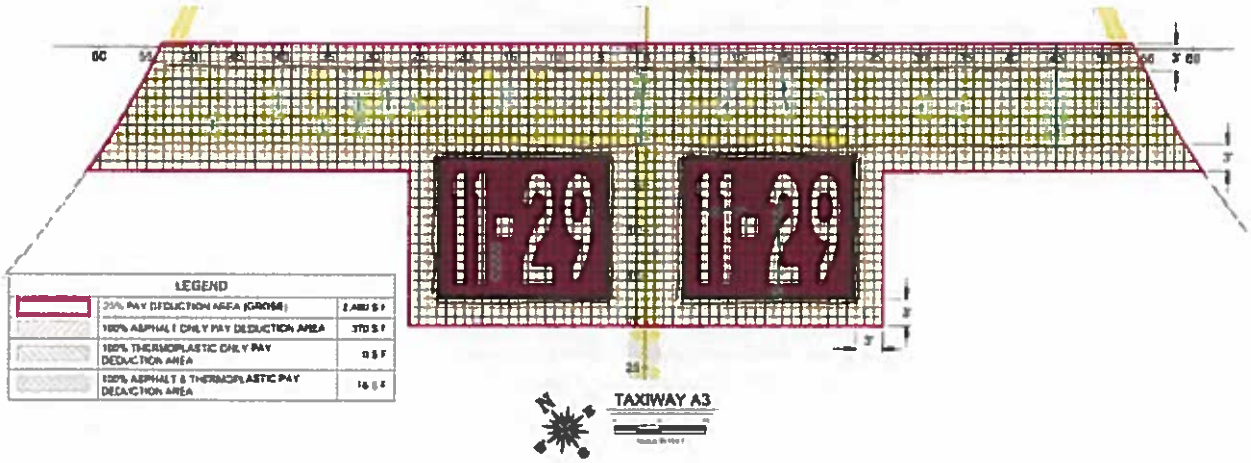
C. Calculation of Pay Reduction for Area of Asphalt Pavement with Reduced Life Expectancy		
Gross Section C pavement area with 3ft buffer around thermoplastic markings	16,634	SF
Section B area	2,185	SF
Net Section C area	14,449	SF
Bid price per square foot (total cost / total area)	$2.31	per SF
Price of material at 100% pay of net Section C area	$33,377.19	
Percent pay reduction due to reduced life expectancy	25%	
Total deduction from payment for Section C	**$8,344.30**	

Note: Calculations based on existing conditions as of 1/12/17 inspection by Armstrong.

A final inspection of the area will be made in March, 2017 and areas A, B and C adjusted in accordance with any increase in cracked areas and final pay amounts adjusted accordingly.

Further, this agreed upon pay reduction does not guarantee the longevity of the pavements in this area. Should the pavement exceed 75% of its expected useful life, a refund is not due the contractor, and should the pavement not reach 75% of its expected life, no additional payment is due from the contractor. Notwithstanding Sections D and E, both parties agree that this methodology and pay deduction shall be the final determination of the final pay amount.

An example diagram of how these areas and quantities will be tracked and recorded is shown below and the conditions as currently recorded as of 1/12/17 are included the attached exhibit.



D. Pavement Removal Course of Action Evaluation

Reference the January 19th, 2017 letter, specifically the information regarding conditions that shall warrant the pavement removal and replacement course of action. In addition to the loose, broken, shoving, or raveling conditions, extensive cracking that should yet develop, particularly joint separation, could result in requiring pavement removal action.

E. Incidental costs

It is further understood that any additional costs for any of this remedial work, including but not limited to testing or inspection, will be of no cost to the Airport. It is also understood that the assessment of liquidated damages will resume the day work commences on the agreed upon method of remediation until all work has been completed and accepted.

The information and method of payment deduction outlined above is hereby acknowledged and agreed to by:

Armstrong Consultants

(Signature)	1/30/17 (Date)
David J. Hartmann (Printed Name)	V.P. (Title)

JANA DORLAC
Notary Public
State of Colorado
Notary ID 19984024470
My Commission Expires Jun 22, 2018

Elam Construction:

(Signature)	1/30/17 (Date)
JOHN AGGEN (Printed Name)	1/30/17 (Title)

JANA DORLAC
Notary Public
State of Colorado
Notary ID 19984024470
My Commission Expires Jun 22, 2018

Grand Junction Regional Airport:

(Signature)	(Date)
(Printed Name)	(Title)

Grand Junction Regional Airport Authority

Agenda Item Summary

TOPIC:	AIP 54 Change Order #1-IHC
PURPOSE:	Information ☐ Guidance ☐ Decision ☒
RECOMMENDATION:	Staff recommends the Board approve AIP: 3-000888-0027-054-2016 Change Order #1 to Interstate Highway Construction, Inc. (IHC) for no cost.
LAST ACTION:	The contract with IHC for the reconstruction of the Terminal Air Carrier Apron – Phase I was awarded at the regular August Board Meeting
DISCUSSION:	In order to modify the phasing of the project to minimize impact to Commercial Operations during construction: • IHC will require 40 additional days moving the contract calendar day requirement from 110 days to 150 days • IHC has agreed to change the haul route to minimize impacts to operations • IHC has committed to providing additional screening fence to buffer construction operations from aircraft loading. • IHC has committed that these changes will not change the project cost • The project footprint has been decreased by 514 square yards. • The change order modifies the milled concrete section which was going to be an asphalt overlay with a methacrylate
FISCAL IMPACT:	No fiscal impact
ATTACHMENTS:	1. Change Order Number One 2. Project Cost Summary
STAFF CONTACT:	Eric Trinklein etrinklein@gjairport.com 970-248-8597

ARMSTRONG

February 10, 2017

Grand Junction Regional Airport (GJRA)
800 Eagle Drive
Grand Junction, CO 81506
Attn: Eric Trinklein

Re: East Apron Reconstruction Change Order #1 with Interstate Highway Construction (IHC)

Mr. Trinklein:

In accordance with Article 34 of the construction contract agreement between IHC and GJRA, change order #1 is being initiated. The intent of this change is generally to change the design and phasing of construction activity to accommodate aircraft and airport operations differently than what was bid in August 2016. Please reference the timeline at the end of this letter listing the evolution of the latest phasing plan and significant dates.

Generally, the changes to the construction contract amount to:

1. Additional isolated construction phases
2. Smaller overall reconstructed apron footprint
3. Longer overall construction calendar time
4. Additional fence construction
5. Haul route and staging area relocation
6. Revised final marking plan

Regarding the process for developing change order details, please reference the following sections in the project contract:

1. Agreement Article 34
2. General Provision 40-02
3. Special Provision #6

Those areas of the contract deal specifically with this change order process but should not be considered the only areas of the contract concerned. By following this procurement process, all particulars throughout the construction agreement remain in-place and in-force.

IHC has provided costs for these changes. After several conversations and clarifications, IHC has come back to the awarded dollar amount resulting in a situation where it will be a change order with zero change to IHC's total contract amount. Prices IHC submitted for the new pay items appear reasonable based on similar projects and work. Price for the one existing pay item that changed, "Item GP-105 Mobilization" appears reasonable based on our understanding of the project, but we are still gathering itemization to document that particular pay item. At this time we see no red flags or unbalancing in any

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www.armstrongconsultants.com

of IHC prices, but a documented cost analysis is not only good contract administration practice, it will be required to close out the project per the FAA's AIP Handbook. In Armstrong's opinion, this situation falls under the guidance given in that handbook's "Table 5-15 Sponsor and ADO Requirements for Contract Changes."

Please keep in mind construction has not yet begun. We do not anticipate further change orders during construction, but they occasionally happen. Also, final constructed quantities typically change slightly from what was originally awarded. We do anticipate a final change order after construction completion that resolves and documents those as-constructed quantities. This is standard industry practice.

Construction costs are one of three costs typically covered by the total project budget available based on the project grant amount. The other two costs are sponsor administration and engineering fees. As mentioned under separate cover, we do anticipate additional costs there due to the work effort tied to changing the phasing plan, negotiating this change order, revising the design and construction plans, and the additional construction duration.

Please see the timeline below for further background information. The draft change order is attached.

Grand Junction Regional Airport East Commercial Apron Reconstruction
August 3, 2016- Bid Opening September 1, 2016- Notice of Award to IHC signed September 27, 2016- Construction Contract signed November 11, 2016- Site visit to apron with IHC and Mountain Valley Construction November 21, 2016- Construction Schedule 1 received from IHC November 29, 2016- Monthly meeting with GJT Staff (phasing change requested by Airport) November 30, 2016- Revised concept phasing sketch emailed to airport December 6, 2016- Rough draft concept sketch of phasing changes sent to IHC December 13, 2016- Computer drafted revised phasing plan sent to IHC December 20, 2016- Phasing Plan emailed to Airport December 21, 2016- Meeting at GJT with Airlines



December 29, 2016- Armstrong meeting with IHC in Denver

December 29, 2016- Construction Schedule 2 received from IHC at meeting (177 days)

January 4, 2017- Monthly meeting with GJT Staff at ACI office

January 12, 2017- Phasing plan concept changes with options sent to IHC

January 16, 2017- Construction Schedule 3 received from IHC (155 days)

January 25, 2017- Current Phasing Plan sent to IHC

February 1, 2017- Meeting with IHC and Airport at ACI Office

February 6, 2017- Construction cost revisions received from IHC for change order

February 9, 2017- Revised Schedule 4 received from IHC (150 days)

February 10, 2017- Draft Change Order 1 sent to Airport

Sincerely,

ARMSTRONG CONSULTANTS, INC

David J. Hartmann, PE
Vice President

Encl: Change Order #1 Draft
Construction Schedule

CONTRACT CHANGE ORDER NO. 1

AIRPORT: Grand Junction Regional Airport **DATE:** 2/10/17

LOCATION: Grand Junction, Colorado **A.I.P. PROJECT NO.** 3-08-0027-054-2016
East Commercial Apron Reconstruction

CONTRACTOR: Interstate Highway Construction, Inc.

You are requested to perform the following described Work upon receipt of an approved copy of this document or as directed by the Engineer:

See attached phasing plan dated January 25th, 2017

ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE	REVISED QUAN.	QUAN. CHANGE	COST CHANGE	REVISED TOTAL COST
1	Mobilization	L.S.	$295,250.00	1	0	$300,012.00	$595,262.00
2	Remove Concrete Pavement (Full Depth)	S.Y.	$37.00	7,862	(373)	($13,801.00)	$290,894.00
3	Remove Asphalt Pavement (Full Depth)	S.Y.	$9.50	2,745	(820)	($7,790.00)	$26,077.50
4	Partial Depth Concrete Removal	S.Y.	$53.00	0	(465)	($24,645.00)	$0.00
5	Partial Depth Asphalt Removal	S.Y.	$10.00	0	(675)	($6,750.00)	$0.00
6	Partial Depth Asphalt Removal (Butt Joints)	S.Y.	$10.00	0	(820)	($8,200.00)	$0.00
7	Overexcavation	S.Y.	$25.50	9,706	(514)	($13,107.00)	$247,503.00
8	Fill Material (Pit Run) (24 Inches)	S.Y.	$34.50	10,201	(514)	($17,733.00)	$351,934.50
9	Subgrade Preparation	S.Y.	$5.50	10,201	(514)	($2,827.00)	$56,105.50
10	Subbase Course (4 Inches Thick)	S.Y.	$8.50	10,201	(514)	($4,369.00)	$86,708.50
12	Lean Concrete Base Course (6 Inches Thick)	S.Y.	$43.00	10,201	(514)	($22,102.00)	$438,643.00
13	Bond Breaker Fabric	S.Y.	$3.50	10,201	(514)	($1,799.00)	$35,703.50
14	Stabilization Fabric	S.Y.	$2.50	10,201	(514)	($1,285.00)	$25,502.50
15	Bituminous Surface Course (75 Blow)	Ton	$316.00	140	(180)	($56,880.00)	$44,240.00
16	Bituminous Material (PG 64-28)	Ton	$316.00	13	(12)	($3,792.00)	$4,108.00
17	Portland Cement Concrete Pavement (16 Inches Thick)	S.Y.	$158.00	1047,201	(514)	($81,212.00)	$1,611,758.00
18	Bituminous Tack Coat	GAL.	$14.50	135	(100)	($1,450.00)	$1,957.50
22	Install 18 Inches RCP Class V Pipe	L.F.	$75.00	207	(100)	($7,500.00)	$15,525.00
25	Install 12 Inch Cast In Place Trench Drain	L.F.	$450.00	457	(130)	($58,500.00)	($205,650.00)
29	Install Storm Inlet	EA.	$14,830.00	3	(1)	($14,830.00)	($44,490.00)
ADDITIONAL CONSTRUCTION PAY ITEMS							
	Methacrylate Seal Concrete	SY	$6.50	460	0	$2,990.00	$2,990.00
	Remove Chainlink Fence	LS	$1,125.00	1	0	$1,125.00	$1,125.00
	Temporary Construction Fence	LS	$1,750.00	1	0	$1,750.00	$1,750.00
	Temporary Construction Fence w/screen	LS	$35,500.00	1	0	$35,500.00	$35,500.00
	Install Chainlink Fence w/Barbed Wire	LS	$7,195.00	1	0	$7,195.00	$7,195.00

This Change Order Total	$0.00
Previous Change Order(s) Total	$0.00
Original Contract Price	$4,278,834.50
Revised Contract Total	$4,278,834.50

The time provided for completion in the Contract is increased by 40 calendar days. This document shall become an Amendment to the Contract and all provisions of the Contract will apply. Changes are shown in the Quantities Tabulation above.

Recommended by:	_____ Engineer	_____ Date
Approved by:	_____ Owner	_____ Date
Accepted by:	_____ Contractor	_____ Date
Concurred by:	_____ State Aeronautics	_____ Date
Approved by:	_____ Federal Aviation Administration	_____ Date

NOTE: Change Orders and Supplemental Agreements require FAA approval prior to construction. Otherwise, no Federal participation can be granted. State Aeronautics concurrence is required when State participation is anticipated.

A.I.P. PROJECT NO. 3-08-0027-054-2016 **CHANGE ORDER NO.** 1

AIRPORT: Grand Junction Regional Airport **LOCATION:** Grand Junction, Colorado

JUSTIFICATION FOR CHANGE

1. Brief description of the proposed Contract change(s) and location(s).

At the request of the Owner, the phasing plan was revised to differently accommodate the commercial airlines that will be affected by project. The change in phasing resulted in additional construction phases that, in turn, required more construction time to complete the project. The project footprint was reduced. Generally, the changes to the construction contract amount to:

1. Additional isolated phases
2. Smaller overall reconstructed apron footprint
3. Longer overall construction calendar time
4. Fence construction
5. Haul route and staging area relocation

2. Reason(s) for the change(s). (Continue on reverse if necessary.)

At the request of the Owner, the phasing plan was revised from the construction phasing plan that was bid in order to differently accommodate the commercial airline operations. The Owner requires that the apron be able to accommodate three regional passenger jet aircraft at any given time during construction and that at least two gates are open for boarding. This requires construction sequencing into smaller phases. Because of the additional phasing, the Contractor requested more time to complete the project and additional compensation for the additional time and sequencing.

In order to stay within the construction budget, cost saving measures were agreed upon by the Contractor, Engineer, and the Owner. These cost saving measures include a slight reduction in the project footprint, the elimination of the asphalt butt joint, the replacement of an asphalt mill and overlay with a methacrylate concrete seal, and a reduction in the trench drain length. There were additions to the project including perimeter fencing, temporary fencing, and additional overhead due to the additional time and changes in quantities.

3. Justifications for Unit Prices or Total Cost.

The total construction cost will remain the same. The unit costs remain the same as bid with the exception of Mobilization. Some quantities were reduced or eliminated from the project altogether. The Mobilization cost increased to allow for the increase in project time (110 to 150 days), changes in the project quantities, and an increase in phasing logistics.

4. The Sponsor's share of this cost is available from:
No additional cost will be required.

5. If this is Supplemental Agreement involving more than $2,000, is the Cost Estimate based on the latest wage rate decision? Yes ___ No ___ Not Applicable _X__

6. Has Consent of Surety been obtained? Yes ___ No ___ Not Applicable _X_
7. Will this change affect the insurance coverage? Yes ___ No _X_

8. If yes, will the policies be extended? Yes ___ No ___

9. Has this Change Order been discussed with FAA officials?

Yes _X_ No ___ When Feb 2017 With Whom Den ADO Miller

Comment _____

Submit four executed copies to the FAA.

Grand Junction Regional Airport

Grand Junction, Colorado

CONSTRUCTION SAFETY & PHASING PLAN

A.I.P. No. 3-08-0027-054-2016
A.C.I. PROJECT No. 166350

PREPARED BY:
ARMSTRONG CONSULTANTS, INC.
REVISED JANUARY 2017



VICINITY MAP

DRAFT

REVIEWED BY AND PREPARED UNDER MY DIRECT SUPERVISION

DESIGNED BY: _____ DATE _____

REGISTERED PROFESSIONAL ENGINEER _____ DATE _____

SCHEDULE I



KEY MAP

SCHEDULE I
TERMINAL AIR CARRIER
APRON RECONSTRUCTION

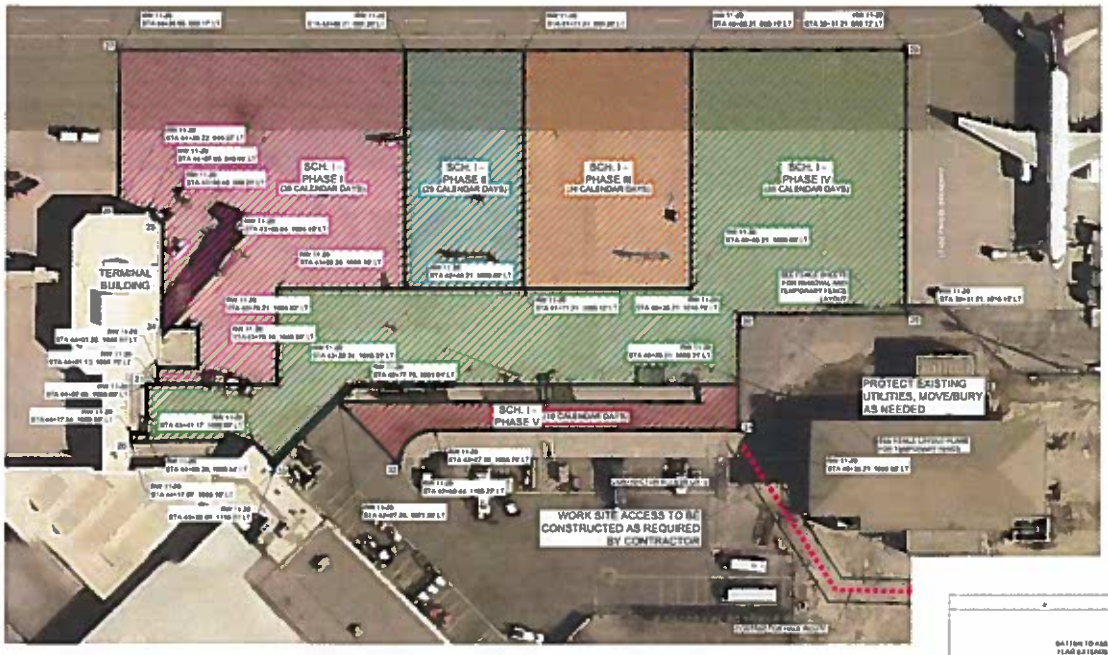
INDEX TO SHEETS

COVER SHEET	1.1
SAFETY AND PHASING OVERVIEW	1.2
SAFETY AND PHASING INSET, NOTES AND DETAILS	1.3
SCHEDULE I: PHASE I PLAN	2.1
SCHEDULE I: PHASE II PLAN	2.2
SCHEDULE I: PHASE III PLAN	2.3
SCHEDULE I: PHASE IV PLAN	2.4
SCHEDULE I: PHASE V PLAN	2.5
TEMPORARY MARKING LAYOUT	3.1 - 3.5
FENCE LAYOUT & DETAILS	4.1 - 4.3

SHEET 1.1

ARMSTRONG

SCH. I - PHASE II
SCH. I - PHASE III
SCH. I - PHASE I
SCH. I - PHASE IV
SCH. I - PHASE V
CONTRACTOR EQUIPMENT STAGING AREA
CONTRACTOR STAGING AREA \ STOCK PILE LOCATION
SCHEDULE I STAGING AREA
LEGEND
NOTE: CONTRACTOR SHALL SECURE GATES AT ALL TIMES.
SAFETY AND PHASING OVERVIEW
SCALE IN FEET
ARMSTRONG
GRAND JUNCTION REGIONAL AIRPORT
GRAND JUNCTION, COLORADO
2016 IMPROVEMENTS
A.I.P. No. 3-08-0027-054
SAFETY AND PHASING OVERVIEW
1.2



LEGEND

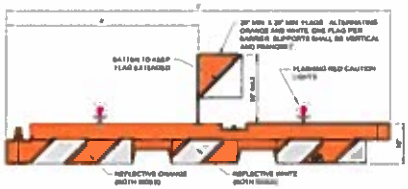
- SCHEDULE I PHASE I
- SCHEDULE I PHASE II
- SCHEDULE I PHASE III
- SCHEDULE I PHASE IV
- SCHEDULE I PHASE V

SCHEDULE I SAFETY AREA

POINT #	ELEVATION	LATITUDE	LONGITUDE
20	4834.4	1[illegible]°39'30.30"	W 108°31'39.39"
21	4833.6	N 39°39'29.82"	W 108°31'39.49"
24	4833.7	N 39°39'27.69"	W 108°31'39.59"
25	4834.3	N 39°39'27.80"	W 108°31'39.09"
26	4834.6	N 39°39'27.92"	W 108°31'38.29"
27	4835.4	N 39°39'28.02"	W 108°31'37.84"
28	4835.3	N 39°39'28.69"	W 108°31'38.49"
29	4835.6	N 39°39'29.44"	W 108°31'38.60"
30	4836.0	N 39°39'29.69"	W 108°31'31.70"
31	4836.0	N 39°39'29.41"	W 108°31'32.20"
32	4821.0	N 39°39'28.32"	W 108°31'36.69"
33	4833.0	N 39°39'28.59"	W 108°31'35.41"

1 / 1.3 SAFETY AND PHASING INSET

SCALE IN FEET



2 / 1.3 LOW PROFILE SAFETY BARRIER

NOT TO SCALE

NOTES

1. BARRIER SHALL BE SHERMAN INDUSTRIES, 10' x 24" LOW PROFILE AIRPORT BARRIER, AS SHOWN, OR APPROVED EQUAL.
2. THE ENTIRE AREA OF ORANGE AND WHITE STRIPES SHALL BE REFLECTORIZED WITH SMOOTH SURFACE TYPE REFLECTIVE SHEETING
3. LIGHTS MUST BE MOUNTED ON BARRIERS AND SPACED AT NO MORE THAN 10 FT
4. THE BARRIERS SHALL BE WEIGHTED AGAINST PROPWASH AND CAPABLE OF WITHSTANDING UP TO 60 KT (69 MPH) WIND FORCES.
5. FLASHING RED CAUTION LIGHTS SHALL BE BATTERY OPERATED AND SHALL MAINTAIN EACH INTENSITY SO AS TO BE VISIBLE IF DARKNESS FROM DISTANCES OF AT LEAST 300 FEET DURING DARKNESS
6. THE CONTRACTOR SHALL CHECK ALL BARRIERS AND LIGHTS EACH DAY BEFORE LEAVING THE AIRPORT TO ENSURE LIGHTS ARE WORKING PROPERLY AND MAY NOTIFY ANY AIRPORT AUTHORITIES AND AIRPORT USERS IN PRIOR WORKING ORDER

AIRPORT OPERATIONAL NOTES

1. CONSTRUCTION BARRIERS SHALL BE INSTALLED FOR PHASING PLANS AND AS REQUIRED BY AC 150/5370-2 OR AS DIRECTED BY THE ENGINEER. BARRICADES SHALL BE PLACED ACROSS OR SAFETY AREAS AT A MINIMUM SPACING OF 10 FEET OR AS DIRECTED BY THE ENGINEER.
2. ALL SAFETY AREAS AND OBJECT FREE AREAS FOR ACTIVE AIRPORT PAVEMENTS ARE OFF LIMITS TO ANY CONSTRUCTION VEHICLE PRIOR APPROVAL FROM THE ENGINEER/AIRPORT.
3. WHEN TOWER IS OPEN OR AS DIRECTED BY THE AIRPORT, MONITOR GROUND CONTROL AT 121.7MHZ WHEN TOWER IS CLOSED, WHEN IN TO OR A NO MONITOR IS NONE
4. CONTRACTOR TO MAINTAIN ANY ACCESS TO RUNWAY AND THE APRON AT ALL TIMES
5. CONTRACTOR SHALL GIVE RIGHT OF WAY TO ALL AIRCRAFT AND ANY VEHICLES AT ALL TIMES
6. CONTRACTOR SHALL KEEP ALL CONSTRUCTION TRAFFIC LIMITED TO THE APPROVED HAUL ROUTES AS SHOWN ON THE PLANS OR AS APPROVED BY THE ENGINEER. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING ROADWAYS, TAXIWAYS, AIRCRAFT RAMP SURFACES OR AREAS ADJACENT TO CONSTRUCTION ACTIVITIES OR HAUL ROUTES AND WILL REPAIR ANY DAMAGE TO THE SATISFACTION OF THE ENGINEER, AT NO COST TO THE SPONSOR. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ASSESS THE CAPABILITY OF THE HAUL ROUTE TO HOLD UP WITHOUT DAMAGE, TO CONSTRUCTION OPERATIONS. IF THE CONTRACTOR BELIEVES THE HAUL ROUTES SHOWN ON THESE PLANS ARE UNREASONABLE, CONTRACTOR SHALL PROPOSE AN ALTERNATE ROUTE FOR APPROVAL BY THE ENGINEER PRIOR TO THE START OF CONSTRUCTION.
7. BARRICADES SHALL BE ANCHORED AT ALL TIMES. CONTRACTOR SHALL KEEP ALL PAVEMENT SURFACES USED FOR CONSTRUCTION OPERATIONS FREE AT ALL TIMES. CONTRACTOR SHALL USE FLAGMEN AND BARRICADES AT EACH ACTIVE PAVEMENT CROSSING. ACTIVE AIRCRAFT PAVEMENT ARE AS SHOWN ON CONTRACT DRAWINGS FOR PRE AND DURING CONSTRUCTION.
8. ALL CONSTRUCTION AREA, GATE FOR ACTIVE AIRPORT PAVEMENTS SHALL BE KEPT FREE OF HAZARDS OR DEBRIS ON MATERIAL STOCKPILES.
9. ALL STOCKPILES OR EQUIPMENT ADJACENT TO OBJECT FREE AREAS SHALL BE MARKED AND LIGHTED PER AC 150/5370-2
10. SHOULD THE CONTRACTOR CHOOSE TO LEAVE THE PROJECT'S ACCESS GATE OPEN FOR CONSTRUCTION OPERATIONS, HE SHALL PROVIDE GATE GUARDS AT ANY TIME THE GATE IS LEFT IN THE OPEN POSITION PRIOR APPROVAL FROM THE ENGINEER IS REQUIRED FOR LEAVING THE GATE OPEN.
11. IF CONTRACTOR ELECTS TO DIRECT AN ON SITE BATCH PLANT, CONTRACTOR SHALL COMPLETE ALL BATCH PLANT PERMIT REQUIREMENTS PRIOR TO INSTALLATION OF CONCRETE BATCH PLANT. INCLUDING BUT NOT LIMITED TO FAA AW FORM 7460-1. LOCATION MUST BE VERIFIED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR FINAL APPROVAL.
12. FOR ALL NIGHT WORK, CONTRACTOR SHALL PROVIDE SUFFICIENT LIGHTING TO ADEQUATELY ILLUMINATE THE PHASES AND HAUL ROUTES WITH THE APPROVAL OF THE ENGINEER.
13. CONTRACTOR SHALL PARK ALL VEHICLES AND EQUIPMENT WITHIN THE BARRICADES AT ALL TIMES

ARMSTRONG CONSULTANTS

GRAND JUNCTION REGIONAL AIRPORT
GRAND JUNCTION, COLORADO

2016 IMPROVEMENTS
AIP No. 3-08-0027-054

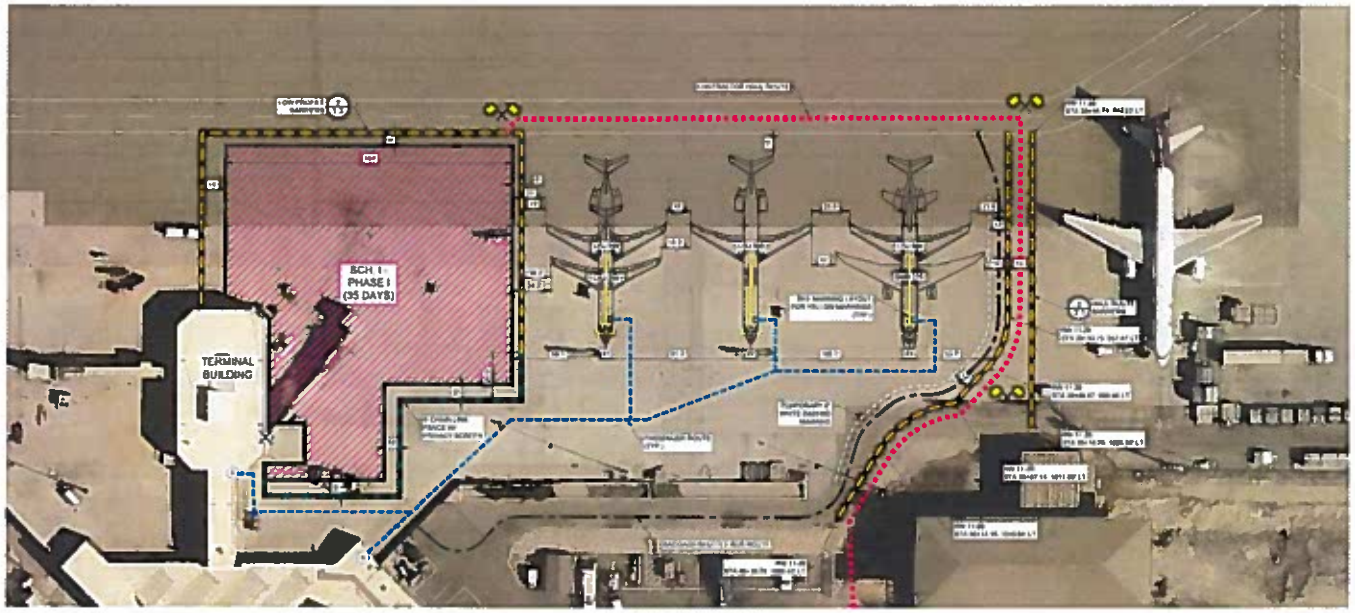
No.	Revision	Date	By

Project No. 16-350
Date 5-24-17
Proj Name 16035016D.dgn

Drawn [illegible]
Checked [illegible]
Approved Date

SAFETY AND PHASING INSET, NOTES AND DETAILS

Sheet 1.3



NOTE: CONTRACTOR SHALL MAINTAIN SAFE ACCESS FOR AIRPORT USERS FROM OPEN GATE 2 TO ARFF AND GATE 1 AND 5

1/21 SCHEDULE I: PHASE I (35 CALENDAR DAYS)

SCALE IN FEET

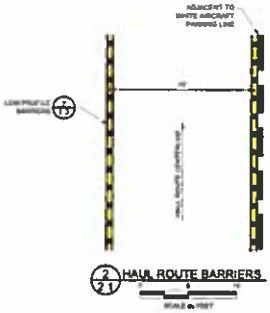
SCHEDULE I: PHASE I NOTES

GATE 4 CLOSED
GATE 3 OPEN FOR GROUND LOADING
GATE 6 OPEN FOR GROUND LOADING

LEGEND

- SCHEDULE I PHASE I
- SCHEDULE I PHASE II
- SCHEDULE I PHASE III
- SCHEDULE I PHASE IV
- SCHEDULE I PHASE V
- CONTRACTOR STAGING AREA
- PASSENGER ROUTE
- BAGGAGE/AIRLINE BUS ROUTE
- 6' CHAIN LINK FENCE W/ PRIVACY SCREEN
- CONTRACTOR HAUL ROUTE
- FLAGMAN / GATE GUARD
- DETAIL # SHEET #
- RSPA - RUNWAY OBJECT FREE AREA
- ROFZ - RUNWAY OBSTACLE FREE ZONE
- RSA - RUNWAY SAFETY AREA
- POFA - RUNWAY OBJECT FREE AREA
- TSA - TAXIWAY SAFETY AREA

LATITUDE AND LONGITUDES DELINEATION OF THE CONSTRUCTION AREA AND CONTRACTOR STAGING AREA LIMITS



2/21 HAUL ROUTE BARRIERS

SCALE IN FEET

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GRAND JUNCTION REGIONAL AIRPORT
GRAND JUNCTION, COLORADO
2016 IMPROVEMENTS
A.I.P. No. 3-08-0027-054

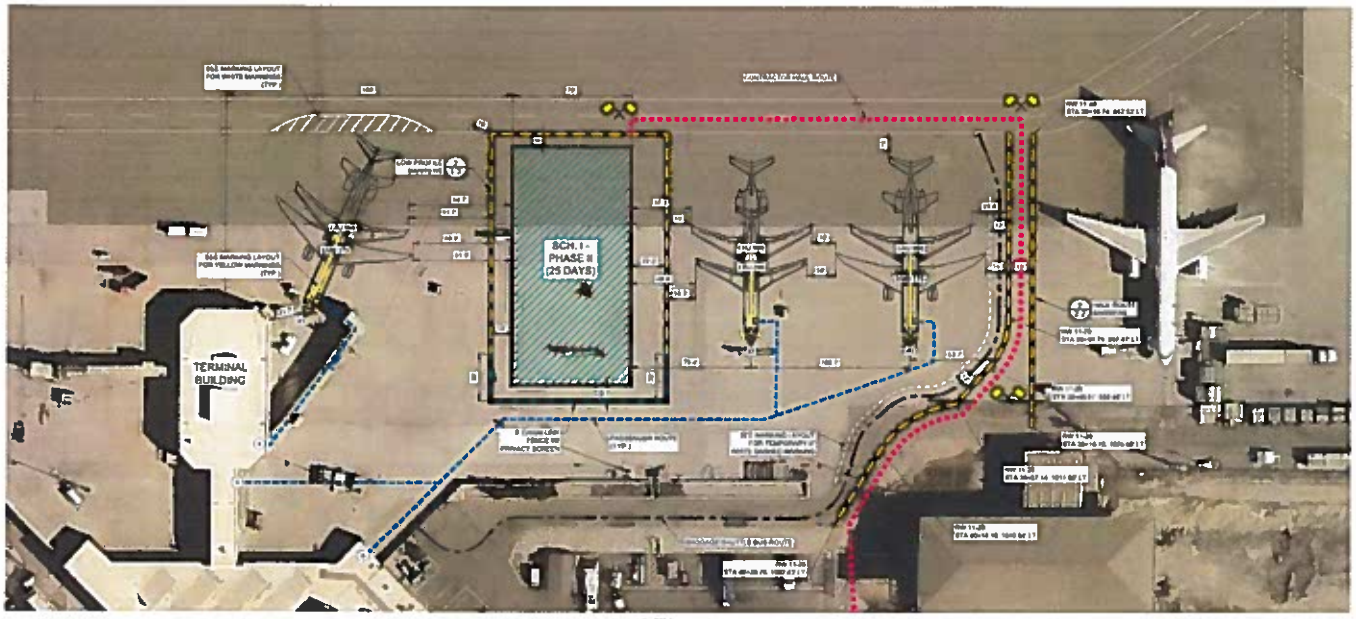
No.	Description	Date

Project No. 160359
Date 01/20/17
File Name 160359SHEETS

Drawn MD
Checked TPM
Approved DJM

SCHEDULE I: PHASE I PLAN

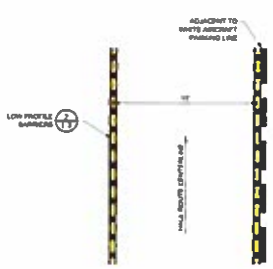
Sheet 2.1



NOTE: CONTRACTOR SHALL MAINTAIN SAFE ACCESS FOR AIRPORT USERS FROM OPEN GATES TO AIRPLANES AT ALL TIMES

1 SCHEDULE I: PHASE II (25 CALENDAR DAYS)

SCALE IN FEET



2 HAUL ROUTE BARRIERS

SCALE IN FEET

SCHEDULE I: PHASE II NOTES

GATE 4 OPEN WITH JET BRIDGE

GATE 5 OPEN FOR GROUND LOADING

GATE 6 OPEN FOR GROUND LOADING

LEGEND

SCHEDULE I PHASE I

SCHEDULE I PHASE II

SCHEDULE I PHASE III

SCHEDULE I PHASE IV

SCHEDULE I PHASE V

CONTRACTOR STAGING AREA

PASSENGER ROUTE

BAGGAGE/SHUTTLE BUS ROUTE

LOW PROFILE BARRIER

8' CHAIN LINK FENCE W/ PRIVACY SCREEN

CONTRACTOR HAUL ROUTE

PI ADMIN / GATE GUARD

DETAIL #

SHEET #

ROFA - RUNWAY OBJECT FREE AREA

ROFZ - RUNWAY OBSTACLE FREE ZONE

RSA - RUNWAY SAFETY AREA

TOFA - TAXIWAY OBJECT FREE AREA

TSA - TAXIWAY SAFETY AREA

LATITUDE AND LONGITUDES SATELLITE DEGREATION OF THE CONSTRUCTION AREA AND CONTRACTOR STAGING AREA LIMITS

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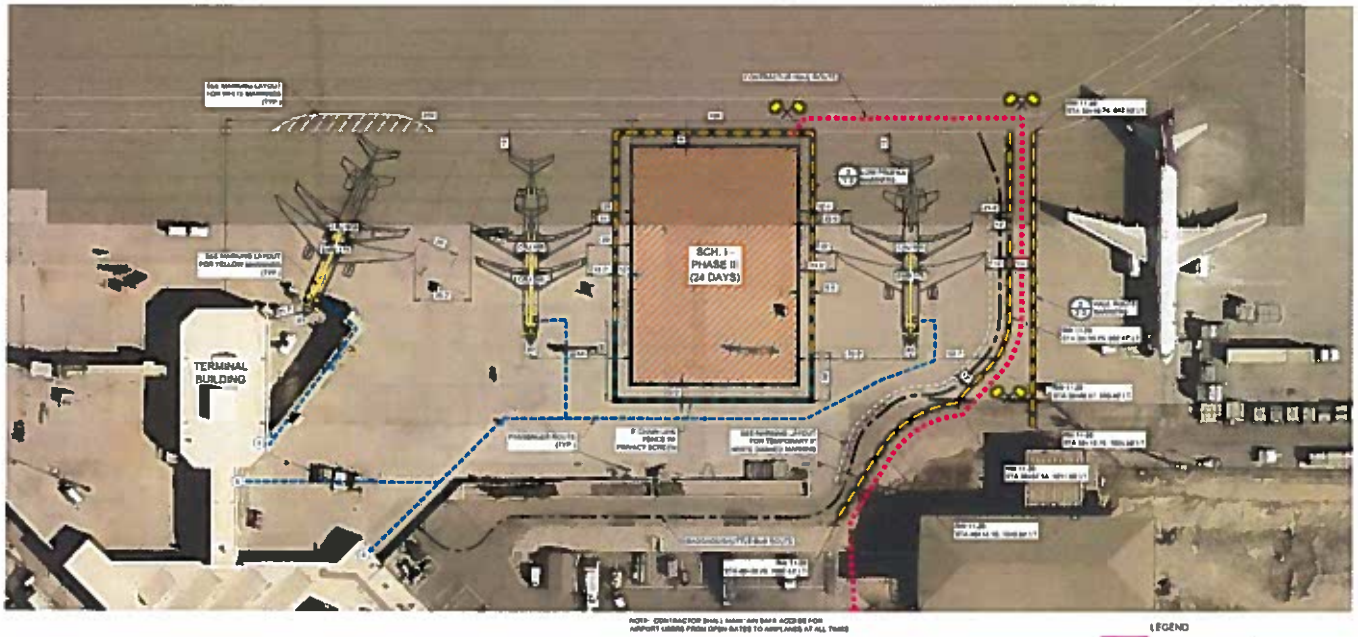
GRAND JUNCTION REGIONAL AIRPORT
GRAND JUNCTION, COLORADO

2016 IMPROVEMENTS
A.I.P. No. 3-08-0027-054

SCHEDULE I: PHASE II PLAN

Sheet 2.2



SCHEDULE I - PHASE III (24 CALENDAR DAYS)

SCHEDULE I: PHASE III NOTES

LEGEND

HAUL ROUTE BARRIERS

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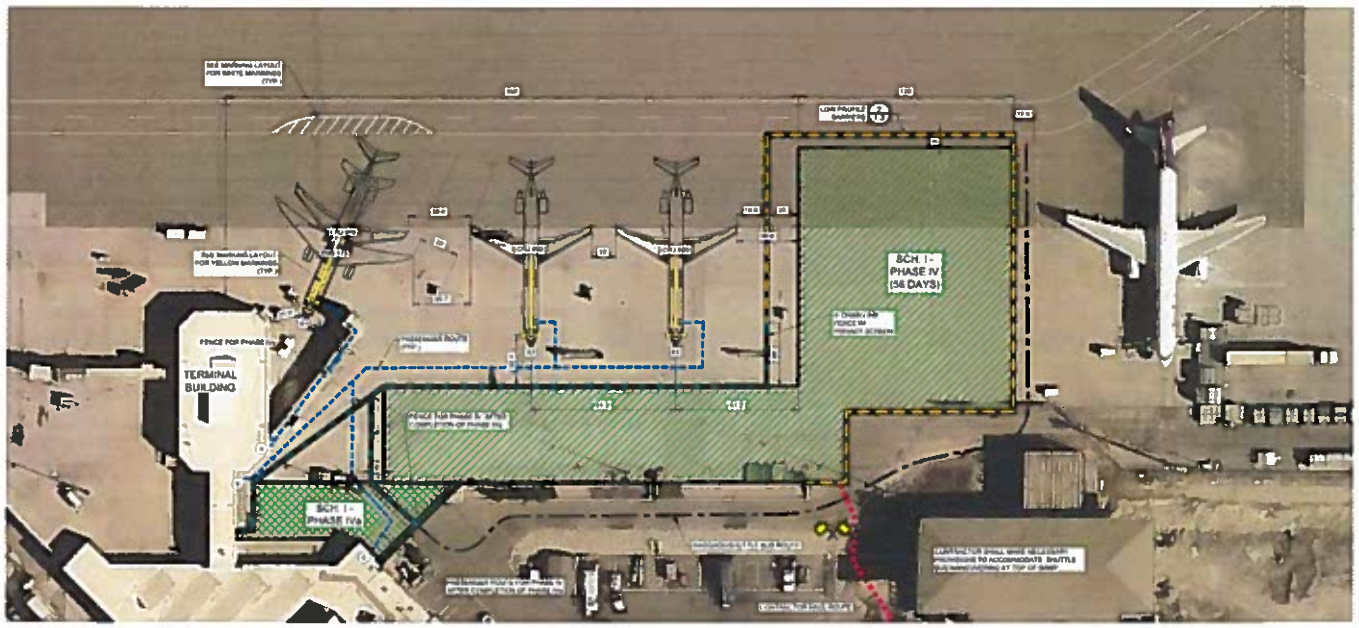
GRAND JUNCTION REGIONAL AIRPORT
GRAND JUNCTION, COLORADO
2016 IMPROVEMENTS
A.I.P. No. 3-08-0027-054

SCHEDULE I: PHASE III PLAN

Sheet 2.3



NOTE: CONTRACTOR SHALL MAINTAIN SAFE ACCESS FOR AIRPORT USERS FROM OPEN GATES TO AIRPLANE AT ALL TIMES

N W E S

1 / 2.4 SCHEDULE I: PHASE IV (56 CALENDAR DAYS)

0 50 100

SCALE IN FEET

SCHEDULE I: PHASE IV NOTES

GATE 4 OPEN WITH JET BRIDGE

GATE 6 OPEN FOR BIRDING LOADING

GATE 8 CLOSED FOR PHASE IVa OPEN THEREAFTER

NOTE
PHASE IVa SHALL BE CLOSED FOR A MAXIMUM OF 10 CONSECUTIVE CALENDAR DAYS AND SHALL TAKE PLACE DURING THE FIRST 10 DAYS OF PHASE IV

LEGEND

- SCHEDULE I: PHASE I
- SCHEDULE I: PHASE II
- SCHEDULE I: PHASE III
- SCHEDULE I: PHASE IV
- SCHEDULE I: PHASE V
- CONTRACTOR STAGING AREA
- PASSENGER ROUTE
- SHUTTLE BUS ROUTE
- LOW PROFILE BARRIER
- 6' CHAIN LINK FENCE W/ PRIVACY SCREEN
- CONTRACTOR HAUL ROUTE
- FLAGMAN / GATE GUARD
- DETAIL #
- SHEET #
- ROFA = RUNWAY OBJECT FREE AREA
- ROFZ = RUNWAY OBSTACLE FREE ZONE
- RSA = RUNWAY SAFETY AREA
- TOFA = TAXIWAY OBJECT FREE AREA
- TSA = TAXIWAY SAFETY AREA

LATITUDE AND LONGITUDE COORDINATES OF THE CONSTRUCTION AREA AND CONTRACTOR STAGING AREA LIMITS

ARMSTRONG CONSTRUCTION

GRAND JUNCTION REGIONAL AIRPORT
GRAND JUNCTION, COLORADO
2016 IMPROVEMENTS
AIP No. 3-08-0027-054

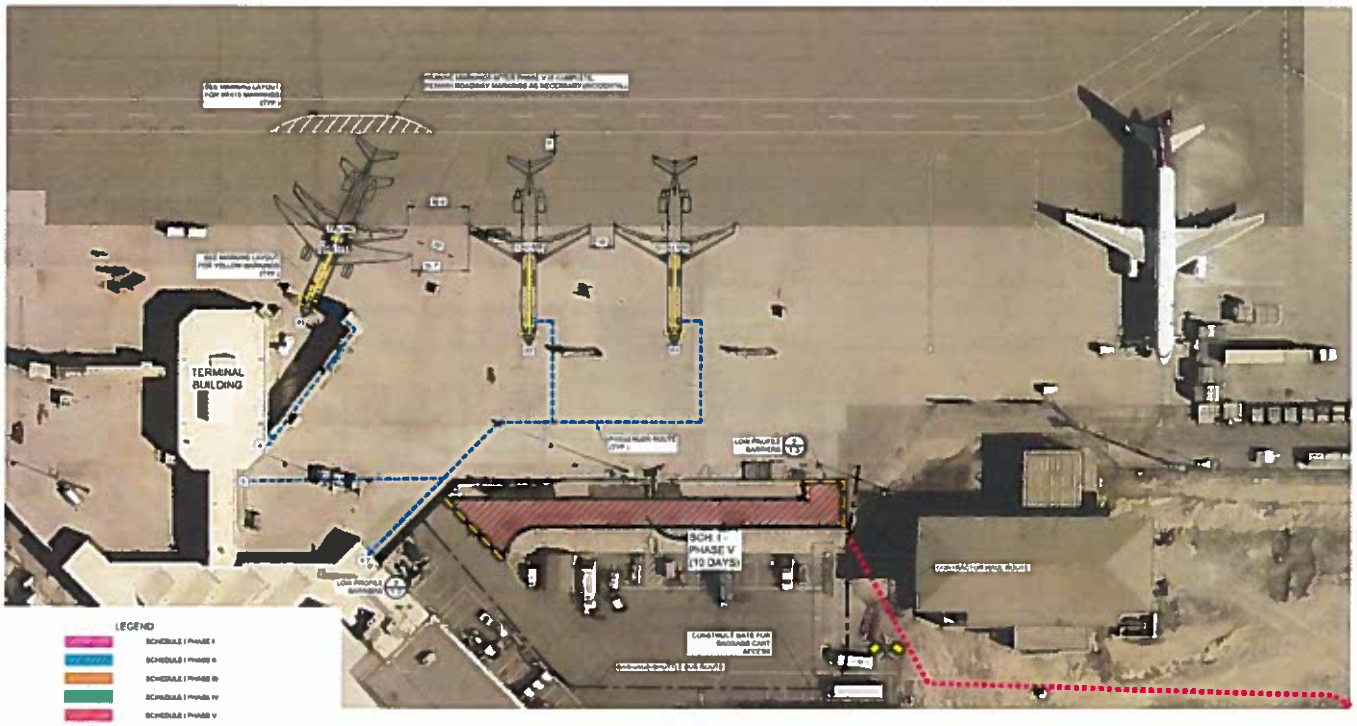
No	Description	Date

Project No 16033
Date 01/2017
File Name 16033PH4-S

Drawn LHB
Checked TPR
Approved DJH

SCHEDULE I: PHASE IV PLAN

Sheet 2.4



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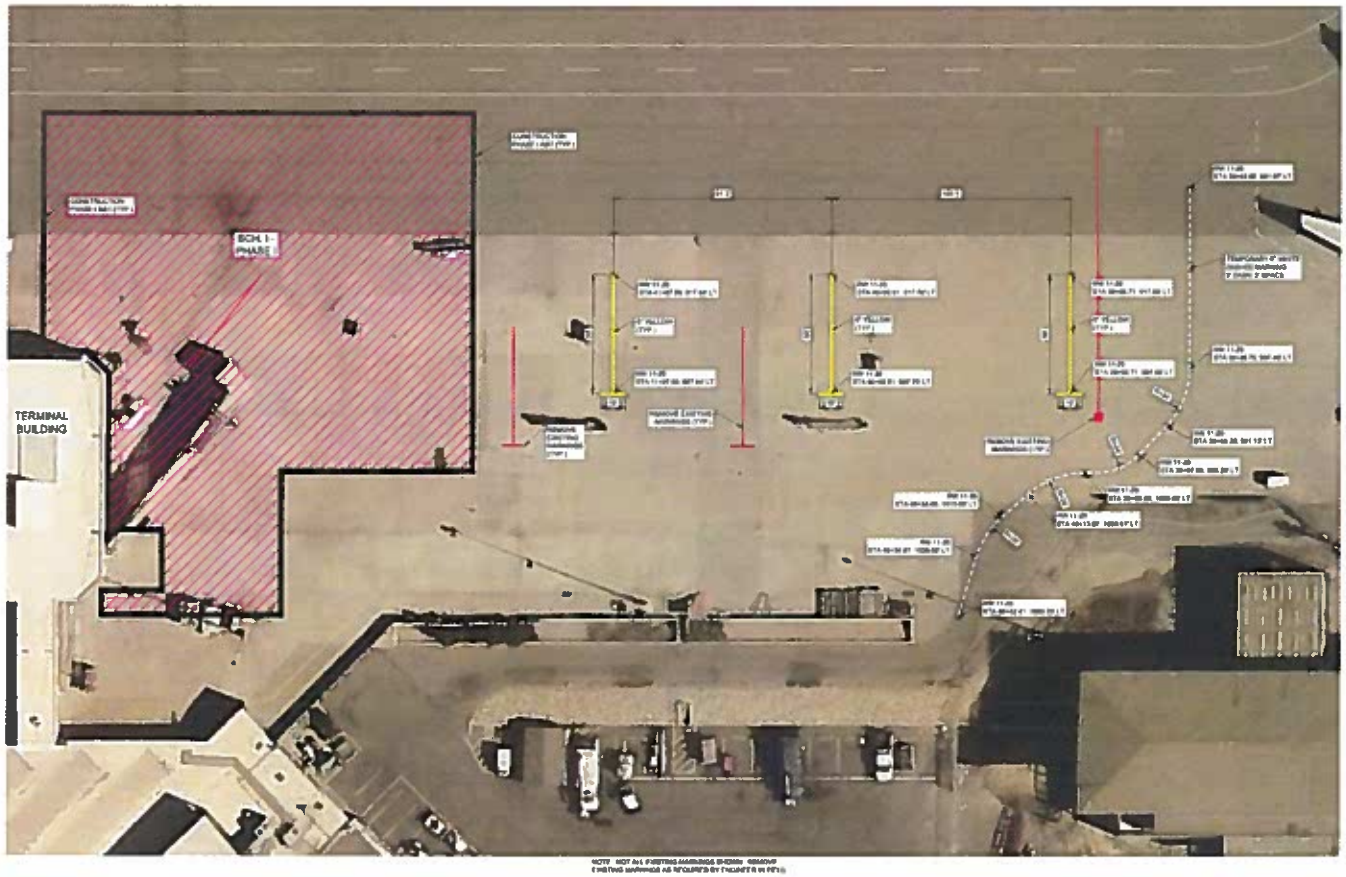
GRAND JUNCTION, COLORADO

2016 IMPROVEMENTS
A.I.P. No. 3-08-0027-054

SCHEDULE I: PHASE V PLAN

Sheet 2.5



SCHEDULE I: PHASE I - TEMPORARY MARKING LAYOUT

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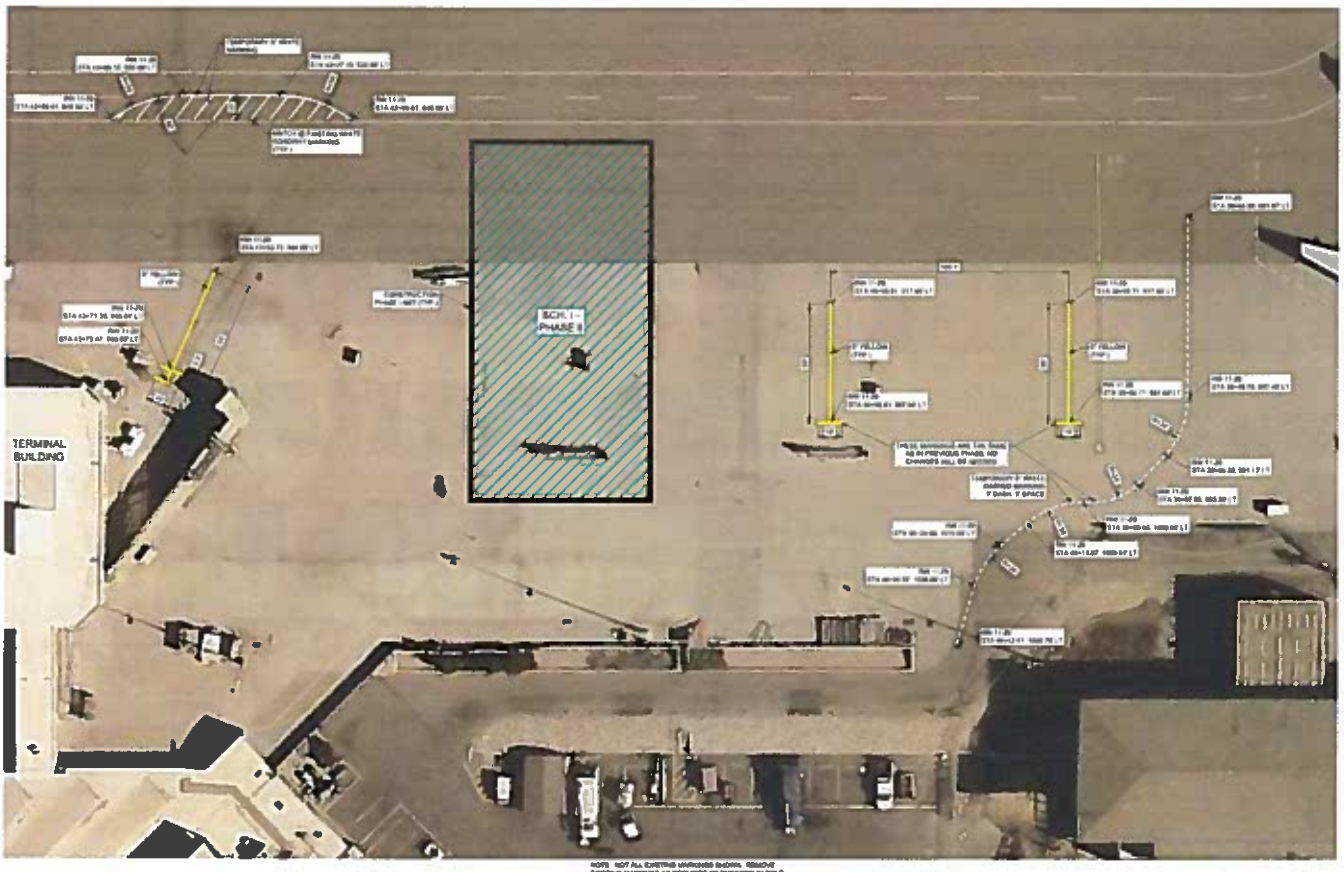
GRAND JUNCTION, COLORADO

2016 IMPROVEMENTS
A.I.P. No. 3-08-0027-054

TEMPORARY MARKING LAYOUT

3.1



NOTE: NOT ALL EXISTING MARKINGS SHOWN. REMOVE EXISTING MARKINGS AS REQUIRED BY ENGINEER IN FIELD

1 SCHEDULE I: PHASE II - TEMPORARY MARKING LAYOUT
3.2
0 20 40
SCALE IN FEET

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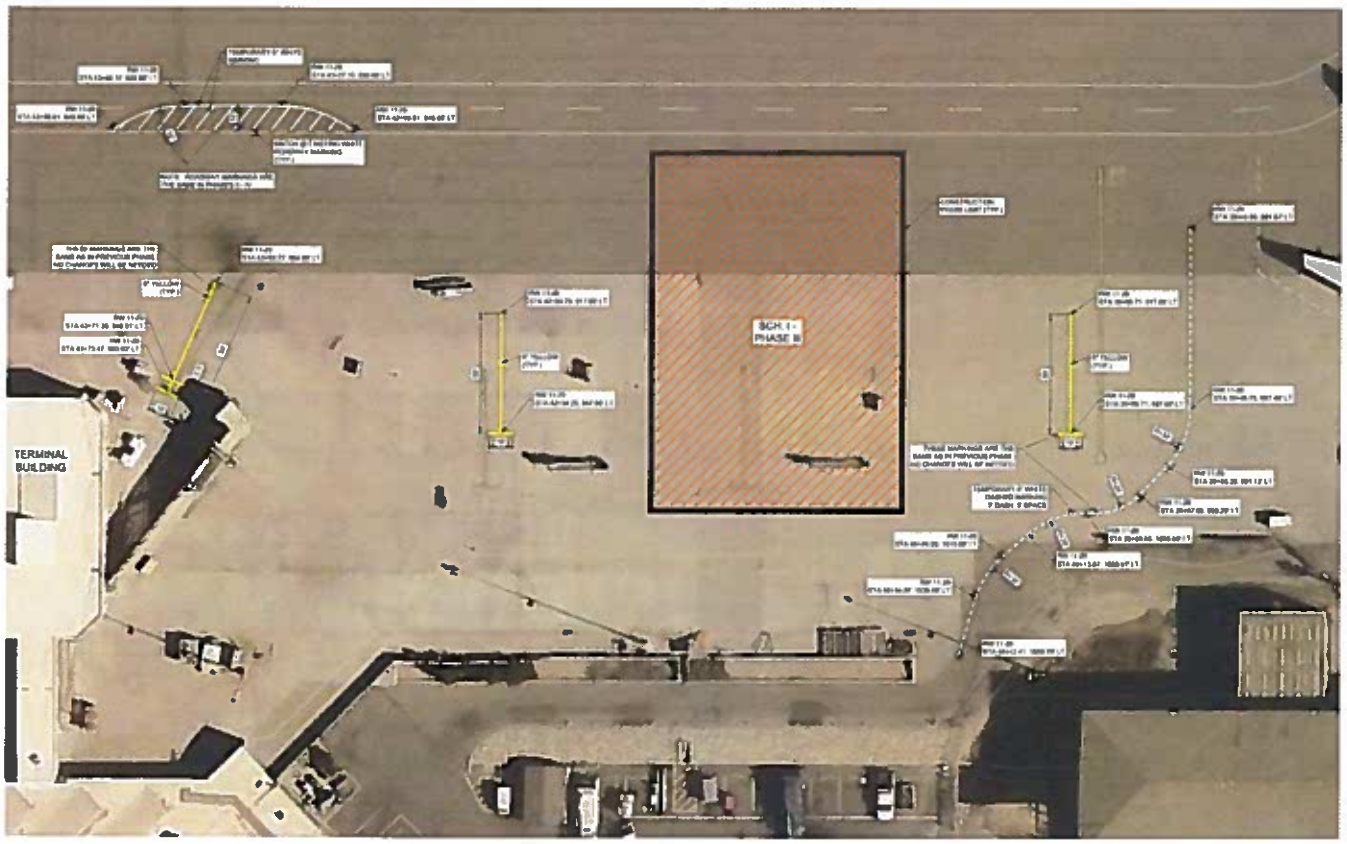
GRAND JUNCTION, COLORADO
2016 IMPROVEMENTS
AIP No. 3-08-0027-054

TEMPORARY MARKING LAYOUT

Sheet 3.2



NOTE: NOT ALL EXISTING MARKINGS SHOWN. REMOVE EXISTING MARKINGS AS REQUIRED BY ENGINEER IN FIELD

1 / 3.3 SCHEDULE I: PHASE III - TEMPORARY MARKING LAYOUT

SCALE IN FEET

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GRAND JUNCTION, COLORADO

2016 IMPROVEMENTS
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TEMPORARY MARKING LAYOUT

Sheet 3.3

NOTE: NOT ALL EXISTING MARKINGS SHOWN. REMOVE EXISTING MARKINGS AS REQUIRED BY ENGINEER OR FIELD

1 / 3.4 SCHEDULE I PHASE IV - TEMPORARY MARKING LAYOUT

SCALE IN FEET

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GRAND JUNCTION, COLORADO

2016 IMPROVEMENTS
AIP No. 3-08-0027-054

TEMPORARY MARKING LAYOUT

3.4



NOTE: NOT ALL EXISTING MARKINGS SHOWN. REMOVE EXISTING MARKINGS AS REQUIRED BY CHECKED IN FIELD

SCHEDULE I: PHASES V - TEMPORARY MARKING LAYOUT

SCALE IN FEET

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GRAND JUNCTION, COLORADO

2016 IMPROVEMENTS
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TEMPORARY MARKING LAYOUT

Sheet 3.5



1 EXISTING FENCE LAYOUT
4.1
SCALE IN FEET

LEGEND

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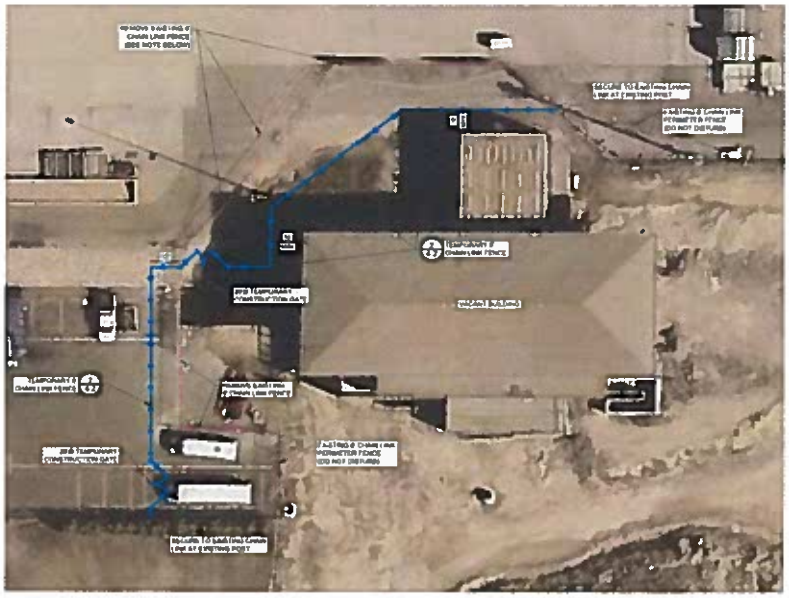
GRAND JUNCTION, COLORADO
2016 IMPROVEMENTS
AIP No. 3-08-0027-054

EXISTING FENCE LAYOUT

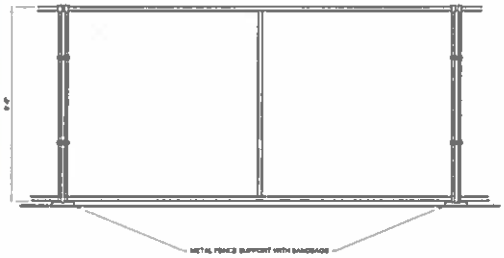
4.1



1 / 4.2 TEMPORARY FENCE LAYOUT

SCALE IN FEET

NOTE
CONTRACTOR SHALL SURVEY AND RECORD LOCATION OF THE EXISTING FENCE PRIOR TO REMOVAL IN ORDER TO INSTALL REPLACEMENT FENCE IN SAME LOCATION



2 / 4.2 TEMPORARY 6' CHAIN LINK FENCE
NOT TO SCALE

TEMPORARY FENCE MATERIALS SHALL BE APPROVED BY ENGINEER PRIOR TO USE

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GRAND JUNCTION, COLORADO

2016 IMPROVEMENTS
A.I.P. No. 3-08-0027-054

No.	Revision	Date	By

Project No. [illegible]
Date [illegible]
File Name [illegible]

Drawn [illegible]
Checked [illegible]
Approved [illegible]

TEMPORARY FENCE LAYOUT & DETAILS

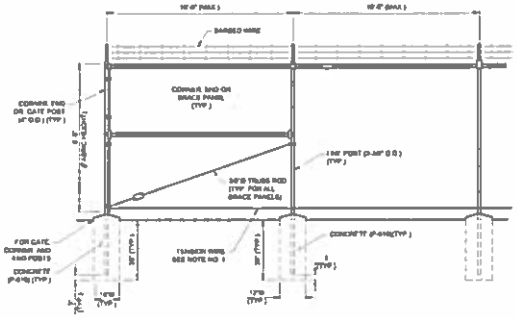
Sheet 4.2



1 FINAL FENCE LAYOUT
4.3

SCALE IN FEET

NOTE
FENCE SHALL BE INSTALLED IN EXISTING LOCATION AS SURVEYED AND RECORDED BY CONTRACTOR PRIOR TO REMOVAL



2 6' CHAIN LINK FENCE
4.3 NOT TO SCALE

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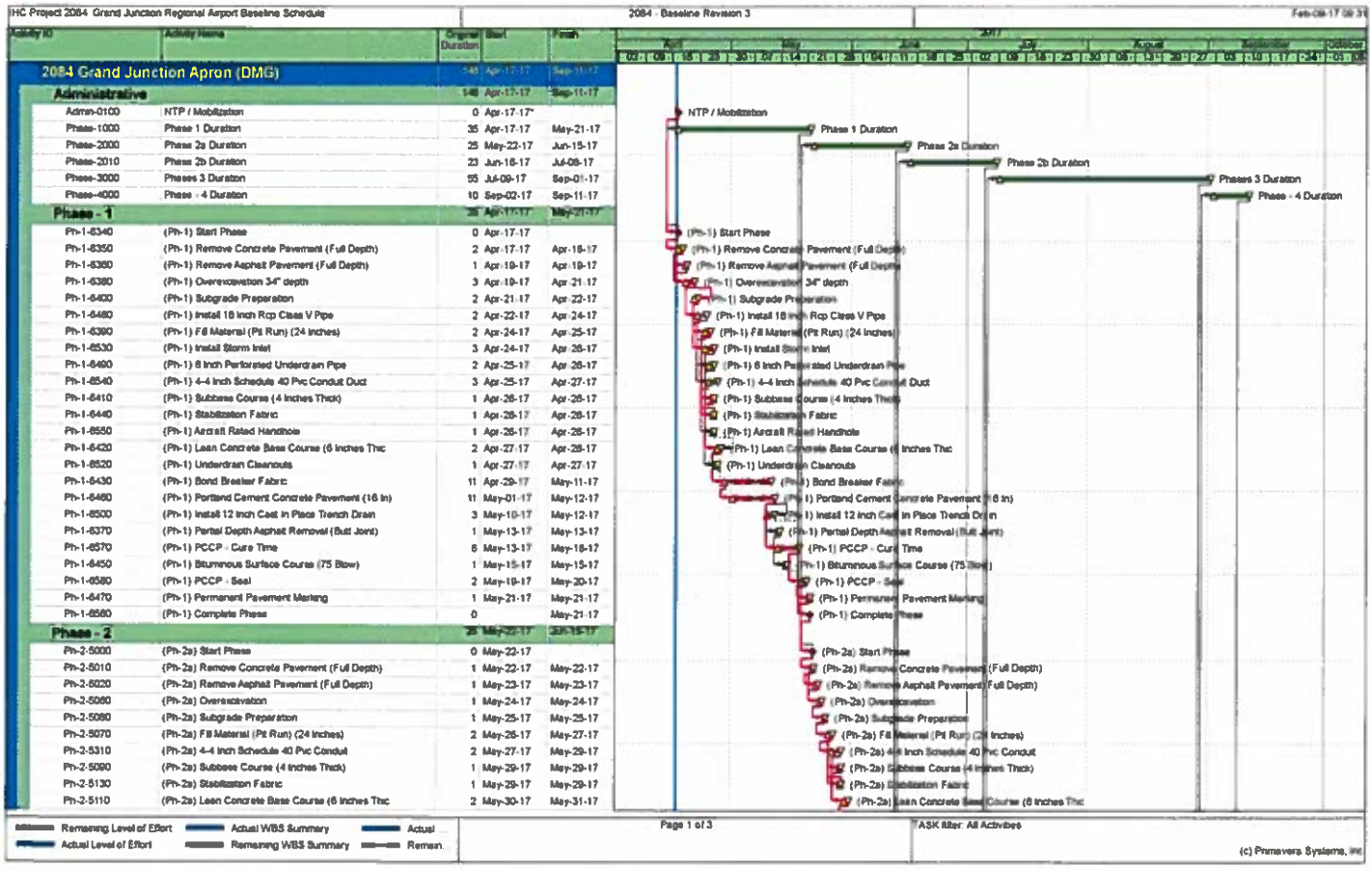
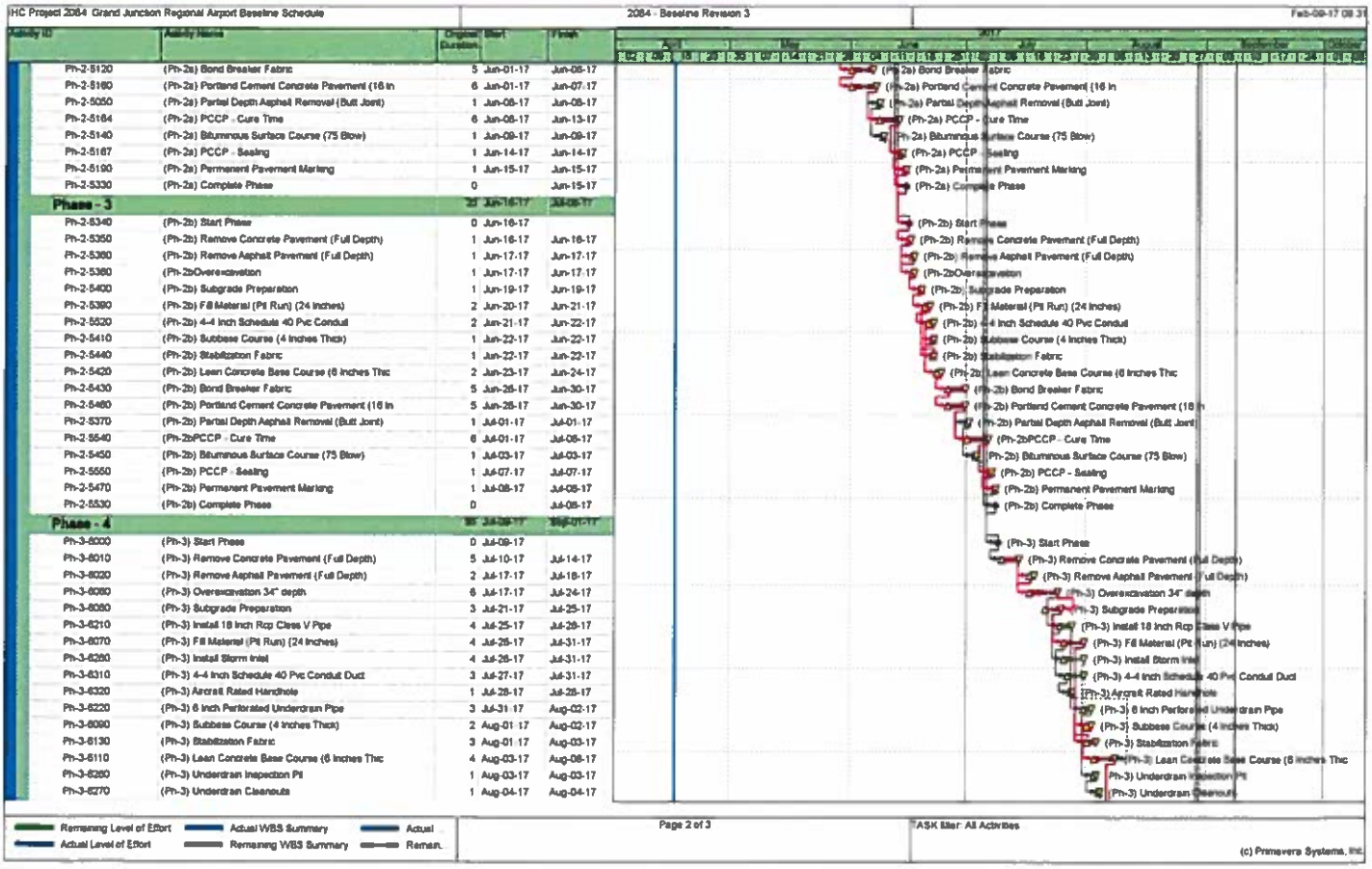
GRAND JUNCTION REGIONAL AIRPORT
GRAND JUNCTION, COLORADO

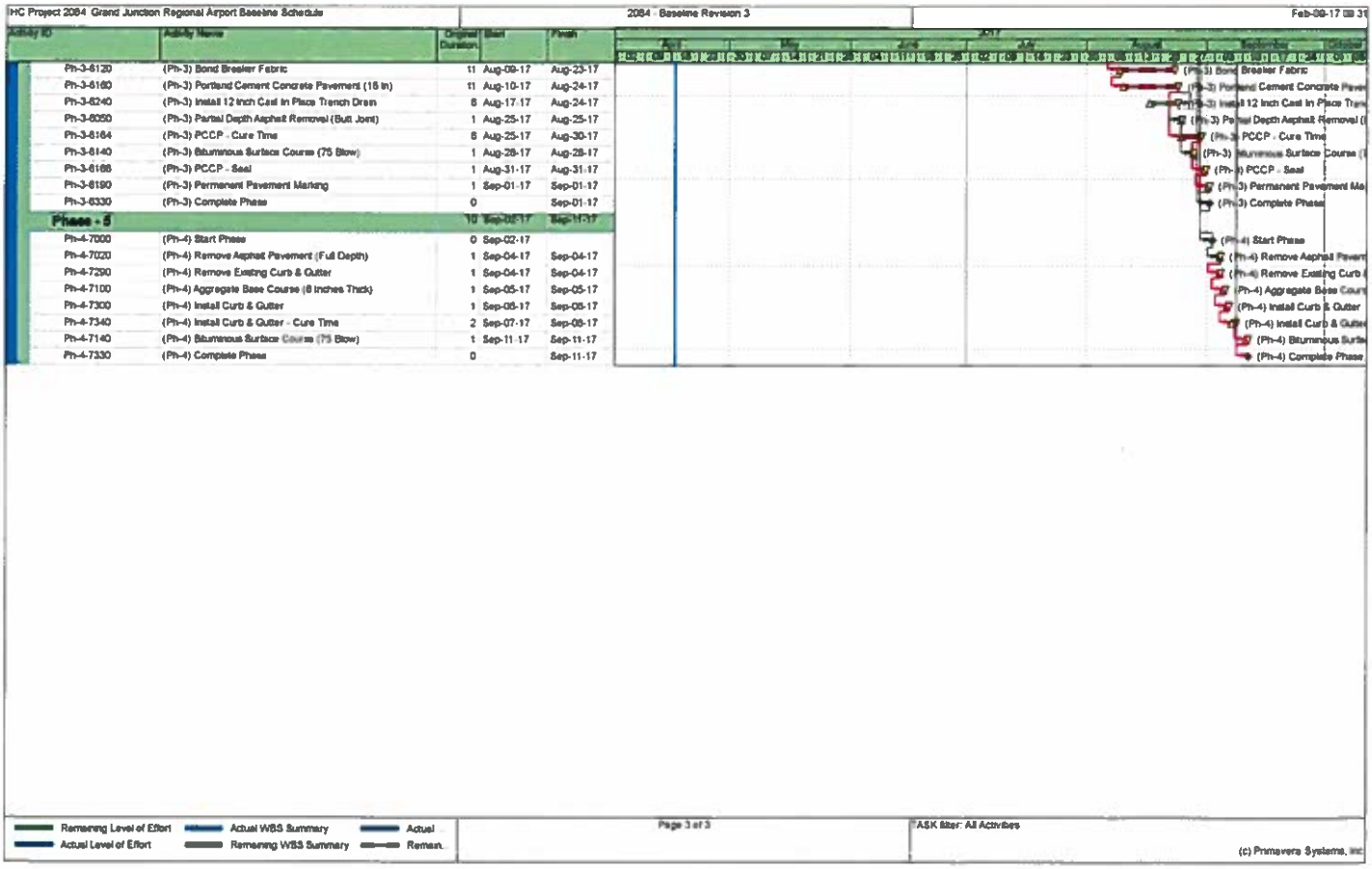
2016 IMPROVEMENTS
A.I.P. No. 3-08-0027-054

FINAL FENCE LAYOUT & DETAILS

Sheet 4.3


HC Project 2084 Grand Junction Regional Airport Baseline Schedule
2084 - Baseline Revision 3
Activity ID
Activity Name
Original Duration
Start
Finish
2084 Grand Junction Apron (DMG) 148 Apr-17-17 Sep-11-17
Administrative 148 Apr-17-17 Sep-11-17
Admin-0100 NTP / Mobilization 0 Apr-17-17*
Phase-1000 Phase 1 Duration 35 Apr-17-17 May-21-17
Phase-2000 Phase 2a Duration 25 May-22-17 Jun-15-17
Phase-2010 Phase 2b Duration 23 Jun-16-17 Jul-09-17
Phase-3000 Phases 3 Duration 55 Jul-09-17 Sep-01-17
Phase-4000 Phase - 4 Duration 10 Sep-02-17 Sep-11-17
Phase - 1 35 Apr-17-17 May-21-17
Ph-1-6340 (Ph-1) Start Phase 0 Apr-17-17
Ph-1-6350 (Ph-1) Remove Concrete Pavement (Full Depth) 2 Apr-17-17 Apr-18-17
Ph-1-6360 (Ph-1) Remove Asphalt Pavement (Full Depth) 1 Apr-18-17 Apr-19-17
Ph-1-6380 (Ph-1) Overexcavation 34" depth 3 Apr-19-17 Apr-21-17
Ph-1-6400 (Ph-1) Subgrade Preparation 2 Apr-21-17 Apr-22-17
Ph-1-6460 (Ph-1) Install 18 Inch Rcp Class V Pipe 2 Apr-22-17 Apr-24-17
Ph-1-6390 (Ph-1) Fill Material (Pit Run) (24 inches) 2 Apr-24-17 Apr-25-17
Ph-1-6530 (Ph-1) Install Storm Inlet 3 Apr-24-17 Apr-26-17
Ph-1-6490 (Ph-1) 6 Inch Perforated Underdrain Pipe 2 Apr-25-17 Apr-26-17
Ph-1-6540 (Ph-1) 4-4 Inch Schedule 40 Pvc Conduit Duct 3 Apr-25-17 Apr-27-17
Ph-1-6410 (Ph-1) Subbase Course (4 Inches Thick) 1 Apr-26-17 Apr-26-17
Ph-1-6440 (Ph-1) Stabilization Fabric 1 Apr-26-17 Apr-26-17
Ph-1-6550 (Ph-1) Aircraft Rated Handhole 1 Apr-26-17 Apr-26-17
Ph-1-6420 (Ph-1) Lean Concrete Base Course (6 Inches Thc 2 Apr-27-17 Apr-28-17
Ph-1-6520 (Ph-1) Underdrain Cleanouts 1 Apr-27-17 Apr-27-17
Ph-1-6430 (Ph-1) Bond Breaker Fabric 11 Apr-29-17 May-11-17
Ph-1-6480 (Ph-1) Portland Cement Concrete Pavement (16 In) 11 May-01-17 May-12-17
Ph-1-6500 (Ph-1) Install 12 Inch Cast In Place Trench Drain 3 May-10-17 May-12-17
Ph-1-6370 (Ph-1) Partial Depth Asphalt Removal (Butt Joint) 1 May-13-17 May-13-17
Ph-1-6570 (Ph-1) PCCP - Cure Time 5 May-13-17 May-18-17
Ph-1-6450 (Ph-1) Bituminous Surface Course (75 Blow) 1 May-15-17 May-15-17
Ph-1-6580 (Ph-1) PCCP - Seal 2 May-19-17 May-20-17
Ph-1-6470 (Ph-1) Permanent Pavement Marking 1 May-21-17 May-21-17
Ph-1-6560 (Ph-1) Complete Phase 0 May-21-17
Phase - 2 25 May-22-17 Jun-15-17
Ph-2-5000 (Ph-2a) Start Phase 0 May-22-17
Ph-2-5010 (Ph-2a) Remove Concrete Pavement (Full Depth) 1 May-22-17 May-22-17
Ph-2-5020 (Ph-2a) Remove Asphalt Pavement (Full Depth) 1 May-23-17 May-23-17
Ph-2-5060 (Ph-2a) Overexcavation 1 May-24-17 May-24-17
Ph-2-5080 (Ph-2a) Subgrade Preparation 1 May-25-17 May-25-17
Ph-2-5070 (Ph-2a) Fill Material (Pit Run) (24 Inches) 2 May-26-17 May-27-17
Ph-2-5310 (Ph-2a) 4-4 Inch Schedule 40 Pvc Conduit 2 May-27-17 May-29-17
Ph-2-5090 (Ph-2a) Subbase Course (4 Inches Thick) 1 May-29-17 May-29-17
Ph-2-5130 (Ph-2a) Stabilization Fabric 1 May-29-17 May-29-17
Ph-2-5110 (Ph-2a) Lean Concrete Base Course (6 Inches Thc 2 May-30-17 May-31-17
2017
April
May
June
July
August
September
October
NTP / Mobilization
Phase 1 Duration
Phase 2a Duration
Phase 2b Duration
Phases 3 Duration
Phase - 4 Duration
(Ph-1) Start Phase
(Ph-1) Remove Concrete Pavement (Full Depth)
(Ph-1) Remove Asphalt Pavement (Full Depth)
(Ph-1) Overexcavation 34" depth
(Ph-1) Subgrade Preparation
(Ph-1) Install 18 Inch Rcp Class V Pipe
(Ph-1) Fill Material (Pit Run) (24 Inches)
(Ph-1) Install Storm Inlet
(Ph-1) 6 Inch Perforated Underdrain Pipe
(Ph-1) 4-4 Inch Schedule 40 Pvc Conduit Duct
(Ph-1) Subbase Course (4 Inches Thick)
(Ph-1) Stabilization Fabric
(Ph-1) Aircraft Rated Handhole
(Ph-1) Lean Concrete Base Course (6 Inches Thc
(Ph-1) Underdrain Cleanouts
(Ph-1) Bond Breaker Fabric
(Ph-1) Portland Cement Concrete Pavement (16 In)
(Ph-1) Install 12 Inch Cast In Place Trench Drain
(Ph-1) Partial Depth Asphalt Removal (Butt Joint)
(Ph-1) PCCP - Cure Time
(Ph-1) Bituminous Surface Course (75 Blow)
(Ph-1) PCCP - Seal
(Ph-1) Permanent Pavement Marking
(Ph-1) Complete Phase
(Ph-2a) Start Phase
(Ph-2a) Remove Concrete Pavement (Full Depth)
(Ph-2a) Remove Asphalt Pavement (Full Depth)
(Ph-2a) Overexcavation
(Ph-2a) Subgrade Preparation
(Ph-2a) Fill Material (Pit Run) (24 Inches)
(Ph-2a) 4-4 Inch Schedule 40 Pvc Conduit
(Ph-2a) Subbase Course (4 Inches Thick)
(Ph-2a) Stabilization Fabric
(Ph-2a) Lean Concrete Base Course (6 Inches Thc
Remaining Level of Effort
Actual Level of Effort
Actual WBS Summary
Remaining WBS Summary
Actual
Remain.
Page 1 of 3
TASK filter: All Activities
(c) Primavera Systems, Inc.


HC Project 2064 Grand Junction Regional Airport Baseline Schedule
2064 - Baseline Revision 3
Feb-09-17 08:31
Activity ID
Activity Name
Original Duration
Start
Finish
Ph-2-5120 (Ph-2a) Bond Breaker Fabric 5 Jun-01-17 Jun-08-17
Ph-2-5160 (Ph-2a) Portland Cement Concrete Pavement (16 In 6 Jun-01-17 Jun-07-17
Ph-2-5050 (Ph-2a) Partial Depth Asphalt Removal (Butt Joint) 1 Jun-08-17 Jun-08-17
Ph-2-5164 (Ph-2a) PCCP - Cure Time 6 Jun-08-17 Jun-13-17
Ph-2-5140 (Ph-2a) Bituminous Surface Course (75 Blow) 1 Jun-09-17 Jun-09-17
Ph-2-5167 (Ph-2a) PCCP - Sealing 1 Jun-14-17 Jun-14-17
Ph-2-5190 (Ph-2a) Permanent Pavement Marking 1 Jun-15-17 Jun-15-17
Ph-2-5330 (Ph-2a) Complete Phase 0 Jun-15-17
Phase - 3 23 Jun-16-17 Jul-08-17
Ph-2-5340 (Ph-2b) Start Phase 0 Jun-16-17
Ph-2-5350 (Ph-2b) Remove Concrete Pavement (Full Depth) 1 Jun-16-17 Jun-16-17
Ph-2-5360 (Ph-2b) Remove Asphalt Pavement (Full Depth) 1 Jun-17-17 Jun-17-17
Ph-2-5380 (Ph-2bOverexcavation 1 Jun-17-17 Jun-17-17
Ph-2-5400 (Ph-2b) Subgrade Preparation 1 Jun-19-17 Jun-19-17
Ph-2-5390 (Ph-2b) Fill Material (Pit Run) (24 Inches) 2 Jun-20-17 Jun-21-17
Ph-2-5520 (Ph-2b) 4-4 Inch Schedule 40 Pvc Conduit 2 Jun-21-17 Jun-22-17
Ph-2-5410 (Ph-2b) Subbase Course (4 Inches Thick) 1 Jun-22-17 Jun-22-17
Ph-2-5440 (Ph-2b) Stabilization Fabric 1 Jun-22-17 Jun-22-17
Ph-2-5420 (Ph-2b) Lean Concrete Base Course (6 Inches Thic 2 Jun-23-17 Jun-24-17
Ph-2-5430 (Ph-2b) Bond Breaker Fabric 5 Jun-26-17 Jun-30-17
Ph-2-5460 (Ph-2b) Portland Cement Concrete Pavement (16 In 5 Jun-26-17 Jun-30-17
Ph-2-5370 (Ph-2b) Partial Depth Asphalt Removal (Butt Joint) 1 Jul-01-17 Jul-01-17
Ph-2-5540 (Ph-2bPCCP - Cure Time 6 Jul-01-17 Jul-06-17
Ph-2-5450 (Ph-2b) Bituminous Surface Course (75 Blow) 1 Jul-03-17 Jul-03-17
Ph-2-5550 (Ph-2b) PCCP - Sealing 1 Jul-07-17 Jul-07-17
Ph-2-5470 (Ph-2b) Permanent Pavement Marking 1 Jul-08-17 Jul-08-17
Ph-2-5530 (Ph-2b) Complete Phase 0 Jul-08-17
Phase - 4 35 Jul-09-17 Aug-07-17
Ph-3-6000 (Ph-3) Start Phase 0 Jul-09-17
Ph-3-6010 (Ph-3) Remove Concrete Pavement (Full Depth) 5 Jul-10-17 Jul-14-17
Ph-3-6020 (Ph-3) Remove Asphalt Pavement (Full Depth) 2 Jul-17-17 Jul-18-17
Ph-3-6060 (Ph-3) Overexcavation 34" depth 6 Jul-17-17 Jul-24-17
Ph-3-6050 (Ph-3) Subgrade Preparation 3 Jul-21-17 Jul-25-17
Ph-3-6210 (Ph-3) Install 18 Inch Rcp Class V Pipe 4 Jul-25-17 Jul-28-17
Ph-3-6070 (Ph-3) Fill Material (Pit Run) (24 Inches) 4 Jul-25-17 Jul-31-17
Ph-3-6260 (Ph-3) Install Storm Inlet 4 Jul-26-17 Jul-31-17
Ph-3-6310 (Ph-3) 4-4 Inch Schedule 40 Pvc Conduit Duct 3 Jul-27-17 Jul-31-17
Ph-3-6320 (Ph-3) Aircraft Rated Handhole 1 Jul-28-17 Jul-28-17
Ph-3-6220 (Ph-3) 6 Inch Perforated Underdrain Pipe 3 Jul-31-17 Aug-02-17
Ph-3-6090 (Ph-3) Subbase Course (4 Inches Thick) 2 Aug-01-17 Aug-02-17
Ph-3-6130 (Ph-3) Stabilization Fabric 3 Aug-01-17 Aug-03-17
Ph-3-6110 (Ph-3) Lean Concrete Base Course (6 Inches Thic 4 Aug-03-17 Aug-08-17
Ph-3-6280 (Ph-3) Underdrain Inspection Pit 1 Aug-03-17 Aug-03-17
Ph-3-6270 (Ph-3) Underdrain Cleanouts 1 Aug-04-17 Aug-04-17
April
May
June
2017
July
August
September
October
(Ph-2a) Bond Breaker Fabric
(Ph-2a) Portland Cement Concrete Pavement (16 In
(Ph-2a) Partial Depth Asphalt Removal (Butt Joint)
(Ph-2a) PCCP - Cure Time
(Ph-2a) Bituminous Surface Course (75 Blow)
(Ph-2a) PCCP - Sealing
(Ph-2a) Permanent Pavement Marking
(Ph-2a) Complete Phase
(Ph-2b) Start Phase
(Ph-2b) Remove Concrete Pavement (Full Depth)
(Ph-2b) Remove Asphalt Pavement (Full Depth)
(Ph-2bOverexcavation
(Ph-2b) Subgrade Preparation
(Ph-2b) Fill Material (Pit Run) (24 Inches)
(Ph-2b) 4-4 Inch Schedule 40 Pvc Conduit
(Ph-2b) Subbase Course (4 Inches Thick)
(Ph-2b) Stabilization Fabric
(Ph-2b) Lean Concrete Base Course (6 Inches Thic
(Ph-2b) Bond Breaker Fabric
(Ph-2b) Portland Cement Concrete Pavement (16 In
(Ph-2b) Partial Depth Asphalt Removal (Butt Joint)
(Ph-2bPCCP - Cure Time
(Ph-2b) Bituminous Surface Course (75 Blow)
(Ph-2b) PCCP - Sealing
(Ph-2b) Permanent Pavement Marking
(Ph-2b) Complete Phase
(Ph-3) Start Phase
(Ph-3) Remove Concrete Pavement (Full Depth)
(Ph-3) Remove Asphalt Pavement (Full Depth)
(Ph-3) Overexcavation 34" depth
(Ph-3) Subgrade Preparation
(Ph-3) Install 18 Inch Rcp Class V Pipe
(Ph-3) Fill Material (Pit Run) (24 Inches)
(Ph-3) Install Storm Inlet
(Ph-3) 4-4 Inch Schedule 40 Pvc Conduit Duct
(Ph-3) Aircraft Rated Handhole
(Ph-3) 6 Inch Perforated Underdrain Pipe
(Ph-3) Subbase Course (4 Inches Thick)
(Ph-3) Stabilization Fabric
(Ph-3) Lean Concrete Base Course (6 Inches Thic
(Ph-3) Underdrain Inspection Pit
(Ph-3) Underdrain Cleanouts
Remaining Level of Effort
Actual Level of Effort
Actual WBS Summary
Remaining WBS Summary
Actual
Remain.
Page 2 of 3
TASK filter: All Activities
(c) Primavera Systems, Inc.


HC Project 2084 Grand Junction Regional Airport Baseline Schedule
2084 - Baseline Revision 3
Feb-09-17
Activity ID
Activity Name
Original Duration
Start
Finish
Ph-3-8120 (Ph-3) Bond Breaker Fabric 11 Aug-09-17 Aug-23-17
Ph-3-8160 (Ph-3) Portland Cement Concrete Pavement (16 in) 11 Aug-10-17 Aug-24-17
Ph-3-8240 (Ph-3) Install 12 Inch Cast In Place Trench Drain 8 Aug-17-17 Aug-24-17
Ph-3-8050 (Ph-3) Partial Depth Asphalt Removal (Butt Joint) 1 Aug-25-17 Aug-25-17
Ph-3-8164 (Ph-3) PCCP - Cure Time 6 Aug-25-17 Aug-30-17
Ph-3-8140 (Ph-3) Bituminous Surface Course (75 Blow) 1 Aug-28-17 Aug-28-17
Ph-3-8166 (Ph-3) PCCP - Seal 1 Aug-31-17 Aug-31-17
Ph-3-8190 (Ph-3) Permanent Pavement Marking 1 Sep-01-17 Sep-01-17
Ph-3-8330 (Ph-3) Complete Phase 0 Sep-01-17
Phase - 5 10 Sep-02-17 Sep-11-17
Ph-4-7000 (Ph-4) Start Phase 0 Sep-02-17
Ph-4-7020 (Ph-4) Remove Asphalt Pavement (Full Depth) 1 Sep-04-17 Sep-04-17
Ph-4-7290 (Ph-4) Remove Existing Curb & Gutter 1 Sep-04-17 Sep-04-17
Ph-4-7100 (Ph-4) Aggregate Base Course (8 Inches Thick) 1 Sep-05-17 Sep-05-17
Ph-4-7300 (Ph-4) Install Curb & Gutter 1 Sep-06-17 Sep-06-17
Ph-4-7340 (Ph-4) Install Curb & Gutter - Cure Time 2 Sep-07-17 Sep-08-17
Ph-4-7140 (Ph-4) Bituminous Surface Course (75 Blow) 1 Sep-11-17 Sep-11-17
Ph-4-7330 (Ph-4) Complete Phase 0 Sep-11-17
Apr
May
Jun
Jul
August
September
2017
(Ph-3) Bond Breaker Fabric
(Ph-3) Portland Cement Concrete Pave
(Ph-3) Install 12 Inch Cast In Place Tren
(Ph-3) Partial Depth Asphalt Removal (
(Ph-3) PCCP - Cure Time
(Ph-3) Bituminous Surface Course (
(Ph-3) PCCP - Seal
(Ph-3) Permanent Pavement Ma
(Ph-3) Complete Phase
(Ph-4) Start Phase
(Ph-4) Remove Asphalt Pavem
(Ph-4) Remove Existing Curb
(Ph-4) Aggregate Base Cour
(Ph-4) Install Curb & Gutter
(Ph-4) Install Curb & Gutte
(Ph-4) Bituminous Surfa
(Ph-4) Complete Phase
Remaining Level of Effort
Actual Level of Effort
Actual WBS Summary
Remaining WBS Summary
Actual
Remain.
Page 3 of 3
TASK filter: All Activities
(c) Primavera Systems, Inc

Grand Junction Regional Airport Authority

Agenda Item Summary

TOPIC:	Runway Consultant Services Selection
PURPOSE:	Information ☒ Guidance ☐ Decision ☒
RECOMMENDATION:	Board direction and/or selection for retention of airport consulting team for the Runway 11/29 Replacement Project
LAST ACTION:	N/A
DISCUSSION:	The relocation of Runway 11/29 will be a 7-12 year, $80-125 million project. On February 15, 2017 airport staff posted a Request for Qualifications (RFQ) for professional airport engineering services in an effort to provide valid options to the Board for consideration to select a consulting team for the project. There were three submittals received as a result of the RFQ. Staff then conducted a review of the submittals based on the criteria provided in the RFQ.
FISCAL IMPACT:	N/A
ATTACHMENTS:	Responses to RFQ
STAFF CONTACT:	Eric Trinklein etrinklein@gjairport.com Office: 970-248-8597



GARVER

GRAND JUNCTION REGIONAL AIRPORT

RUNWAY 11-29 REPLACEMENT PROJECT

Statement of Qualifications for Professional Airport Engineering Services

March 15, 2017

14160 N. Dallas Parkway, Suite 850
Dallas, TX 75240
Phone: 214-451-2950
Fax: 972-377-8380
GarverUSA.com

March 15, 2017

Grand Junction Regional Airport
ATTN: Mr. Kip Turner, Executive Director
2828 Walker Field Drive
Grand Junction, Colorado 81506

RE: Statement of Qualifications for Professional Airport Engineering Services
Runway 11/29 Replacement Project Grand Junction Regional Airport

Dear Mr. Turner,

I am personally excited for the opportunity to be your project manager for the Runway 11/29 Replacement project. We have assembled a team of aviation experts and local firms to focus on your project. Our Statement of Qualifications will detail how the Garver Team's aviation expertise, level of service, and performance record are unmatched by our competition.

Aviation Expertise: Garver's Aviation Team is comprised of 62 aviation-specific staff including both civil and electrical engineers — more than most national consulting firms. We pride ourselves on our airport design capabilities and our aviation focus. We regularly attend state aeronautics meetings and FAA conferences, as well as present at aviation-specialized events. At Garver, we take our knowledge of the aviation industry and use it to leverage FAA relationships to keep projects moving and help airports like Grand Junction Regional maximize state and federal discretionary grant funding. You can trust that Garver will use our comprehensive aviation expertise to be proactive in setting up the Runway 11/29 Replacement project for success.

Level of Service: Garver prides itself on customer service, integrity and quality relationships. Serving regional air carrier airports with our small firm personal service and large firm resources separates Garver from other airport consultants. With three daily direct flights from our Dallas office to Grand Junction Regional Airport, we can be face-to-face the same day when fast action is required. We look forward to bringing you the same extraordinary level of service we have provided similar air carrier airports. We encourage you to call our references to hear first-hand about Garver's unwavering commitment to our clients and their projects.

Performance Record: Garver has an excellent reputation for meeting project budgets and schedules at air carrier airports. We perform constructability reviews with our construction staff, consistently monitor project budgets and schedules, and accurately anticipate potential obstacles. For example, at Abilene Regional Airport we completed design of the Runway 17R-35L Reconstruction project on a compressed schedule that positioned the airport to receive an $18 million FAA discretionary grant to construct the improvements in a single construction contract.

Despite the accelerated design schedule, the thoroughness of our plans and specifications resulted in construction being completed without any change orders and $464,950 under budget.

Let Garver provide you with the quality and responsive service you deserve. We are excited about the opportunity to partner with the Grand Junction Regional Airport Authority and your staff in growing your airport. Feel free to contact me at 214-451-2950 or by email at FOMcillwain@GarverUSA.com if you have any questions. Thank you for your consideration.

Sincerely,
GARVER



Frank McIllwain, PE
Project Manager



Table of Contents

1 REQUIRED FORMS

2 AFFIRMATIVE ACTION PLAN *Page A*

3 EXECUTIVE SUMMARY *Page B*

4 QUALIFICATIONS & EXPERIENCE *Page 1*

5 RESOURCES *Page 19*

6 APPENDIX: RESUMES *Page 30*

GARVER

1 REQUIRED FORMS



GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

SIGNATURE PAGE
RFQ FORM #1

"✓"Check box that indicates business structure of Respondent

Individual or Proprietorship
Partnership or Joint Venture
Corporation
✓ Limited Liability Corporation

The undersigned certifies that (s)he is Vice President (title) of the Respondent entity named below; that (s)he is designated to sign this Proposal Form (if a Corporation then by resolution with Certified Copy of resolution attached) for and on behalf of the entity named below, and that (s)he is authorized to execute same for and on behalf of and bind said entity to the terms and conditions provided for in the Proposal as required by this RFQ, and has the requisite authority to execute an Agreement on behalf of Respondent, if awarded

Respondent Organization Name: Garver

By: _____

Printed Name: Frank McIllwain, PE

Title: Vice President

If Respondent is a Joint Venture, an authorized signature from a representative of each party is required.

By: _____

Printed Name: _____

Title: _____

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

SUBMITTAL CHECKLIST
RFQ FORM #2

Use this checklist to ensure all required document have been included in the SOQ and that they are properly ordered.

	Document	Initial to Indicate Document is Included
1.	Submittal Cover/Signature Page (RFQ Form #1)	FM
2.	Submittal Checklist (RFQ Form #2)	FM
3.	Litigation Disclosure (RFQ Form #3)	FM
4.	Conflict of Interest (RFQ Form #4)	FM
5.	Affirmative Action Plan (If Required)	FM
6.	Executive Summary	FM
7.	Statement of Qualifications	FM

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

LITIGATION DISCLOSURE
RFQ FORM #3

Respond to each of the questions below by checking the appropriate box. Failure to fully and truthfully disclose the information required by this Litigation Disclosure form may result in the disqualification of your response from consideration or termination of the contract, if awarded.

Have you or any member of your Firm or Team to be assigned to this engagement ever been indicted or convicted of a felony or misdemeanor greater than a Class C in the last five (5) years?

YES ☐
NO ☑

Have you or and member of your Firm, your Firm, or Team to be assigned to this engagement been terminated (for cause of otherwise) from any work being performed for the Grand Junction Regional Airport, Walker Field Airport Authority, or any other Federal, State, or Local Government, Airport, or Private Entity?

YES ☐
NO ☑

Have you or and member of your Firm or Team to be assigned to this engagement been involved in and claim or litigation with the Grand Junction Regional Airport, Walker Field Airport Authority, or any other Federal, State, or Local Government, Airport, or Private Entity?

YES ☐
NO ☑

If you have answered "Yes" to any of the above questions, please indicate the name(s) of the person(s), the nature, and the status and/or outcome of the information, indictment, conviction, termination, claim or litigation, as applicable. Any such information should be provided on a separate page, attached to this form and submitted with your response.

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

CONFLICT OF INTEREST (COI) DISCLOSURE FORM
RFQ FORM #4

This COI Disclosure Form must be completed by the Firm and each of its Subcontractors.
This COI Disclosure Form must be signed by a principal of the Firm to certify that it is correct.
A Firm's certification that its disclosure form is correct includes the disclosure by its Associates and Subcontractors.
My signature certifies that as disclosed on or attached to the present form:
The Firm's disclosures are complete, accurate, and not misleading.
The Firm has received COI Disclosure Form(s) from all Subcontractors (if any) and the present form has attached any COI Disclosure Form(s) thereof.

I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	Garver, LLC
Address:	14160 N. Dallas Parkway, Suite 850, Dallas, TX 75240
Signature:	
Name (type/print):	Frank McIllwain
Title:	Vice President
Date:	March 13, 2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
furnish all relevant facts that are necessary to make the response complete, accurate, and not misleading; and identify any actions that must be taken to avoid, neutralize, or mitigate such conflict of interest (e.g. communications barriers, restraint or restriction upon future contracting activities, or other precaution)

1. Is any Associate of the Firm a former employee of the Airport within the last five years or a family member of a current employee of the Airport?
☐ YES ☑ NO

2. Does the Firm or any Associate of the Firm have a conflict of interest with regard to any known member of the Airport procurement evaluation or selection team?
☐ YES ☑ NO

3. Does the Firm, or any Associate of the Firm, have any past, present or currently planned interests that are an Actual or Potential Conflict of Interest, with respect to performing the work for the Airport.
☐ YES ☑ NO

4. Have Subcontractors furnished COI Disclosure Forms separate from the present form? (If yes, attach Subcontractor disclosures).
☑ YES ☐ NO

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

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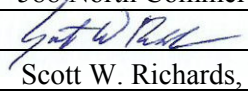
I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	Yeh and Associates
Address:	588 North Commercial Drive, Grand Junction, CO 81505
Signature:	
Name (type/print):	Scott W. Richards, PE, PG
Title:	Colorado Northwest Region Manager
Date:	March 2, 2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
furnish all relevant facts that are necessary to make the response complete, accurate, and not misleading; and identify any actions that must be taken to avoid, neutralize, or mitigate such conflict of interest (e.g. communications barriers, restraint or restriction upon future contracting activities, or other precaution)

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☐ YES ☒ NO

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REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

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I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	Sunland Group, Inc.
Address:	110 16th Street, Suite 1400, Denver, CO 80202
Signature:	R Carla Thompson
Name (type/print):	R. Carla Thompson
Title:	President
Date:	2-27-2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
furnish all relevant facts that are necessary to make the response complete, accurate, and not misleading; and identify any actions that must be taken to avoid, neutralize, or mitigate such conflict of interest (e.g. communications barriers, restraint or restriction upon future contracting activities, or other precaution)

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☒ YES ☐ NO

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

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I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	Schmueser, Gordon, Meyer, Inc. DBA SGM
Address:	118 W. 6th St., Suite 200 Glenwood Springs, CO 81601
Signature:	
Name (type/print):	John Boulden, PE
Title:	Project Manager / Principal-in-Charge / Principal
Date:	2.28.2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
furnish all relevant facts that are necessary to make the response complete, accurate, and not misleading; and identify any actions that must be taken to avoid, neutralize, or mitigate such conflict of interest (e.g. communications barriers, restraint or restriction upon future contracting activities, or other precaution)

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GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
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RUNWAY 11/29 REPLACEMENT PROJECT

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RFQ FORM #4

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I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	Woolpert, Inc.
Address:	116 Inverness Drive East, Suite 105, Englewood, CO 80112
Signature:	
Name (type/print):	Christopher Raml, PLS
Title:	Senior Associate, Survey Group Manager
Date:	March 2, 2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
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☒ YES ☐ NO

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
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RUNWAY 11/29 REPLACEMENT PROJECT

CONFLICT OF INTEREST (COI) DISCLOSURE FORM
RFQ FORM #4

This COI Disclosure Form must be completed by the Firm and each of its Subcontractors.
This COI Disclosure Form must be signed by a principal of the Firm to certify that it is correct.
A Firm's certification that its disclosure form is correct includes the disclosure by its Associates and Subcontractors.
My signature certifies that as disclosed on or attached to the present form:
The Firm's disclosures are complete, accurate, and not misleading.
The Firm has received COI Disclosure Form(s) from all Subcontractors (if any) and the present form has attached any COI Disclosure Form(s) thereof.

I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	WHPacific
Address:	9755 SW Barnes Rd., Suite 300, Portland, Oregon 97225
Signature:	Dave Nafie, AICP
Name (type/print):	
Title:	Director of Aviation Services
Date:	3/2/2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
furnish all relevant facts that are necessary to make the response complete, accurate, and not misleading; and identify any actions that must be taken to avoid, neutralize, or mitigate such conflict of interest (e.g. communications barriers, restraint or restriction upon future contracting activities, or other precaution)

1. Is any Associate of the Firm a former employee of the Airport within the last five years or a family member of a current employee of the Airport?
☐ YES ☒ NO

2. Does the Firm or any Associate of the Firm have a conflict of interest with regard to any known member of the Airport procurement evaluation or selection team?
☐ YES ☒ NO

3. Does the Firm, or any Associate of the Firm, have any past, present or currently planned interests that are an Actual or Potential Conflict of Interest, with respect to performing the work for the Airport.
☐ YES ☒ NO

4. Have Subcontractors furnished COI Disclosure Forms separate from the present form? (If yes, attach Subcontractor disclosures).
☒ YES ☐ NO

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

CONFLICT OF INTEREST (COI) DISCLOSURE FORM
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I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm: HBL Compliance Solutions Inc
Address: 2385 F ½ Road Grand Junction Colorado 81505
Signature: [signature]
Name (type/print): Herman Lucero
Title: President
Date: February 27, 2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
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I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	RIVER CITY CONSULTANTS, INC.
Address:	744 HORIZON COURT SUITE 110
Signature:	K Scott Thompson
Name (type/print):	K. Scott Thompson
Title:	PRESIDENT
Date:	MARCH 1, 2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
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I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	Terracon Consultants, Inc.
Address:	10625 W. I-70 Frontage Rd. N, Suite 3
Signature:	
Name (type/print):	Mathew Fielding, P.E.
Title:	Regional Manager
Date:	3/8/2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
furnish all relevant facts that are necessary to make the response complete, accurate, and not misleading; and identify any actions that must be taken to avoid, neutralize, or mitigate such conflict of interest (e.g. communications barriers, restraint or restriction upon future contracting activities, or other precaution)

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2 AFFIRMATIVE ACTION PLAN





Affirmative Action Plan

Garver is an Affirmative Action/Equal Employment Opportunity employer. Garver provides Equal Employment Opportunities for all persons regardless of race, religion, gender, age, handicap or national origin. Garver maintains an Affirmative Action Plan that is periodically updated. Tatiana Herrington, director of human resources, is the designated Affirmative Action Officer. It is her responsibility to maintain our Affirmative Action Plan and ensure compliance to the best of Garver's ability. This plan is available for inspection upon request.

3 EXECUTIVE SUMMARY



Executive Summary

The FAA Advisory Circular for engineering selections identifies 12 selection criteria for which consultants are evaluated during the selection process. We've included detailed information throughout our Statement of Qualifications (SOQ) that addresses each of these criterion. We've also included a list of the criteria below, along with a brief statement of how Garver excels in each.



Capability to perform all or most aspects of the project and recent experience in airport projects comparable to the proposed task.

As detailed in the Qualifications & Experience section of this SOQ, the Garver Team has completed multiple projects at similar air carrier airports with similar scopes to your upcoming projects. **In all, Garver has completed over $1,000,000,000 of airport improvement projects in the last 10 years.**



Key personnel's professional qualifications and experience and availability for the proposed project; their reputation and professional integrity and competence; and their knowledge of FAA regulations, policies, and procedures.

Your project manager, Frank McIllwain, PE, is an expert in the industry and has an excellent reputation. Frank is an instrument-rated pilot and was honored as one of *Airport Business Magazine*'s Top 40 under 40. **Frank and his team have also developed standards that the FAA publishes for construction safety plans and grant reimbursements.** Your deputy project manager and construction manager, Colin Bible, PE, has a reputation for delivering award-winning construction projects, including the Abilene Regional Airport Runway 17L-35R awarded the 2015 Quality of Asphalt Paving Award for Large Airports.



Capability to meet schedules or deadlines.

Over the **past three years**, the Garver Team has met every schedule and deadline on airport projects, even when schedules were accelerated to capture additional FAA funding. **That's a perfect record on more than 100 projects.**



Quality of projects previously undertaken and capability to complete projects without having major cost escalations or overruns.

The Garver Team works with airports so that you get the most out of your grant dollars. We regularly bid alternatives in order to have flexibility during grant procurement. We also regularly change order work into construction contracts to make sure we utilize all available grant funds in construction. **After incurring under-runs at a recent project at Northwest Arkansas Regional, we changed ordered work into the project to utilize all but 19 cents in the state grant.**



Qualifications and experience of subconsultants regularly engaged by the consultant under consideration.

The Garver Team consists of subconsultants that combine **local presence, Grand Junction Airport experience, Western Slope familiarity, and national expertise**. Our local partners, River City Consultants, SGM, HRL Compliance Solutions, Yeh and Associates have valuable experience and are assigned significant roles on this project. Additionally, our partners at WHPacific, Woolpert, Terracon, and Sunland bring national expertise to your project.



Capability of a branch office that will do the work to perform independently of the home office, or conversely, its capability to obtain necessary support from the home office.

All work for Grand Junction Regional Airport, concept through completion, will be led by Frank McIllwain, PE, and completed by Frank's local team, Garver's Aviation Design Center, and our local subconsultants. Garver's Runway 11/29 Replacement project team of **12 engineers**, including **four who specialize in airfield electrical and navigational aids**, provide ample capacity to complete your project and regularly work together on airport improvement projects.



Ability to furnish qualified inspectors for construction inspection.

Garver's construction manager, Colin Bible, PE, will be **on-site full time** during construction along with senior construction observer Petey Chambless and other Garver construction personnel as needed during each stage of construction. In all, Garver's Grand Junction construction staff has **more than 135 years of construction experience**.



Understanding of the project's potential challenges and the Sponsor's special concerns.

As discussed in our project approach in the Resources section, we have thoroughly reviewed the Environmental Assessment and understand the challenges of the runway replacement project. Our experience with **seven greenfield airfields** means the Garver Team understands how to manage multi-agency coordination and the importance of maintaining project controls for **schedule and budget management**. Our detailed project approach proves our understanding of the **project drivers** and identifies conflicts in the EA regarding the proposed new runway offset and construction phasing that voids approach procedures that are needed to maintain full service of the existing runway. These issues need to be **resolved early in design with extensive stakeholder coordination**.



Degree of interest shown in undertaking the project and their familiarity with and proximity to the geographic location of the project.

As shown by the **level of detail throughout this SOQ**, Garver is very interested in working for Grand Junction Regional Airport. In addition, our local subconsultants were hand-picked for their **expertise and local knowledge**. Our project manager's ability to be at your airport on the same day if an issue might arise will allow us to provide the **responsive service** you deserve.



Capability to incorporate and blend aesthetic and architectural concepts with the project design while accomplishing the basic requirements that transportation facilities be functional, safe, and efficient.

Garver's in-house architects have experience **balancing aesthetics and functionality** on aviation projects. Design of signage for the general use parking area for recreational users of the BLM land is one example of an opportunity to incorporate **low-cost aesthetic features** into the project.



In meeting the Disadvantaged Business Enterprise (DBE) contract goal, evidence documenting that the consultant met the DBE goal, or by documenting that it made adequate good faith efforts to meet the DBE goal.

The Garver Team includes **three DBE firms**: Yeh and Associates for geotechnical and materials testing services, HRL for stormwater pollution prevention (SWPPP), and Sunland for cost management and value engineering. We estimate that **approximately 10 percent** of the total engineering costs for this selection will be contracted with DBE firms.

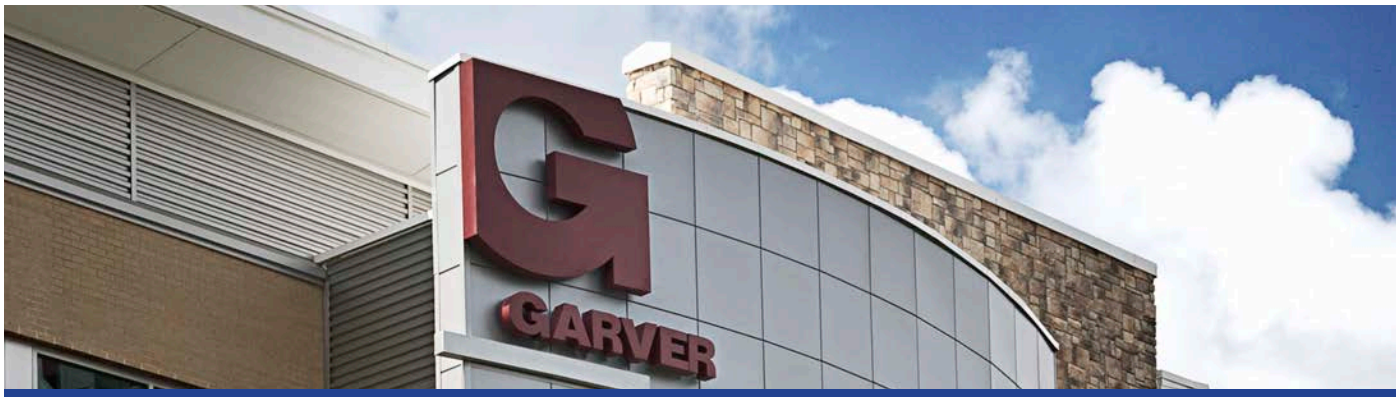


Capability to conduct a Value Engineering (VE) study for projects that are particularly complex or have unique features.

The Garver Team includes Sunland for value engineering. Sunland brings the expertise of **two certified Value Specialists** with practical experience working on **large scale design and construction projects**, including projects at Denver International Airport.

4 QUALIFICATIONS AND EXPERIENCE





Qualifications & Experience

The Garver Team

Firm Background

In 1919, Neal Garver began an engineering practice founded on building honorable relationships with clients through the promise of consistently delivering quality designs. Many things have changed in nearly a century of our company's history, but one thing has not changed at Garver — our focus on quality. Garver has grown in to a multi-disciplined engineering, architectural, planning, and environmental services firm with more than 400 engineers, architects, planners, technicians, and administrative support personnel on staff.

Aviation Capabilities

As Garver has grown, we have dedicated a large portion of our operations and facilities to support our aviation team, which includes over 60 personnel located in 14 of our 21 regional Garver offices. Our growth has been recognized by *Engineering-News Record*, which ranked Garver in the Top 25 aviation consultants in the nation.

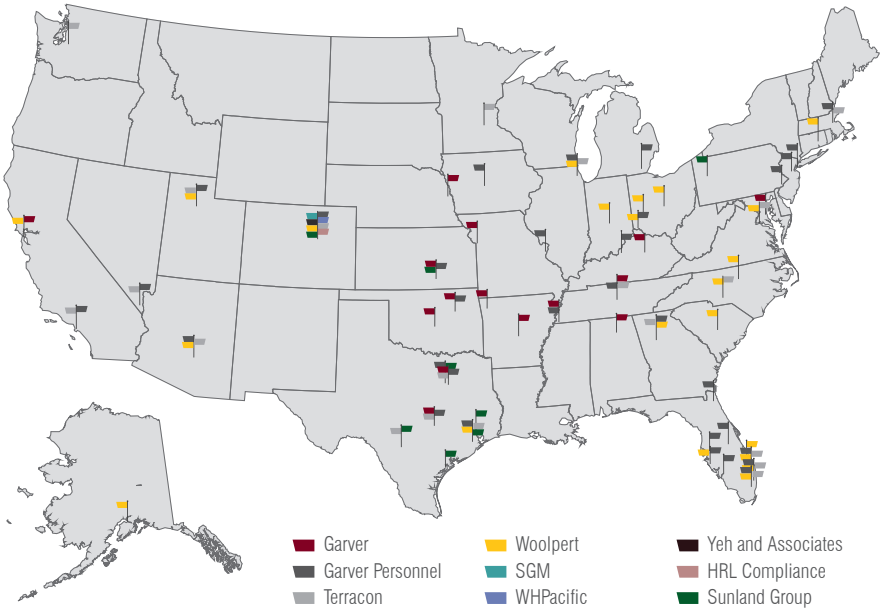
45 CIVIL ENGINEERS | **11** ELECTRICAL ENGINEERS | **$1** BILLION in constructed projects in the past 10 years

AIRSIDE CIVIL

Garver's Aviation Team consists of 45 Civil Engineers focused on developing airfield pavement geometries that meet FAA standards and minimizing the amount of pavement airport sponsors are required to maintain. We are also experienced with developing pavement solutions that ease construction, support the forecasted aircraft fleet mix, and reduce overall construction and maintenance costs.

AIRSIDE ELECTRICAL

Garver's Aviation Team consists of 11 Electrical Engineers focused solely on designing solutions for airfield lighting, signage and navigational aids. These professionals are respected industry experts who incorporate the latest technology to reduce energy consumption for our clients while improving safety.



Garver Team Members have experience at

55 OF **132**

DOMESTIC HUB

AIRPORTS

CONSTRUCTION SEQUENCING

Garver has a detailed understanding of the FAA requirements for maintaining safety on airfields during construction. We balance this **focus on safety** with an understanding of **maintaining aircraft operations** and accessibility throughout construction.

SAFETY MANAGEMENT SYSTEMS (SMS)

With Tim O'Krongley, A.A.E., IAP, an **industry leader** in the development of Safety Management Systems (SMS), Garver has the experience and capability to incorporate SMS procedures on your airfield improvement project and continue to support Grand Junction Regional Airport through the SMS transition process.

PROJECT CONTROLS

Garver has a dedicated team focused solely on developing tools to support airport sponsors and design teams with an emphasis on **maintaining program schedules and budgets**. During the design phase, project controls will integrate design schedules for the array of design activities and specialties to keep the design on schedule and correctly integrated. During construction administration, the Garver Team will provide oversight and management of contractor's execution by overseeing the contractors' scope, schedule, and budget reporting.

CONSTRUCTION MANAGEMENT

Garver has 43 full-time construction observers with over 300 airport projects completed in the past 15 years. Garver understands that construction managers and observers achieve success when they form trustworthy relationships with the owner.

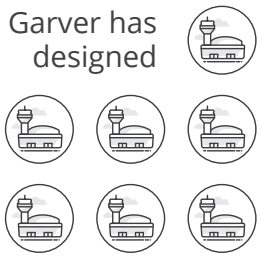
Air Carrier Experience

Air carrier airports are the **backbones of their communities and local economies**, and Garver understands your Airport's importance to future clients associated with area industries. The Garver Team provides the Grand Junction Regional Airport with abundant experience serving hub airports across the United States, **as evidenced in the map above**. Our experience at these airports includes numerous projects that not only improved airfield pavement conditions and lighting systems, but incorporated complex construction sequencing strategies to maintain aircraft operations.

Greenfield Airport Experience

Garver's recent experience includes providing design and engineering services for seven new airports. Our aviation teams take new airports through the maze of requirements, from the feasibility study all the way through implementation, planning, design, construction management, and commissioning. In addition to our capabilities, Garver's project teams offer aviator wisdom—engineers with active pilots' licenses. Garver's pilots have spent more than 16,000 hours in the cockpit and understand how airports should operate. Even before we begin design, we're already thinking through pilot and layout efficiencies. We're picturing how aircraft will land, taxi, and take off. There are many moving parts to coordinate, and our experience as pilots helps us design airports that function well.

Few firms can match Garver's experience transforming an undeveloped site into an operating airfield. New greenfield runways are a fresh canvas to create a custom airfield and a unique economic opportunity for the Airport and local community. Garver is the perfect firm for new runway development because we have the full range of needed experience and services.



Subconsultants

Firm	Role in the Project	DBE	Local
SGM	Utility Relocation, 27 1/4 Road Relocation		☑
WHPacific	Environmental, AGIS, Grant Administration		
River City Consultants	Landside Drainage, Surveys, and BLM ROW Grants		☑
Yeh and Associates	Geotechnical Engineering	☑	☑
Terracon	Geotechnical Engineering Quality Control		
Woolpert	Aerial Data		
HRL Compliance	SWPPP	☑	☑
Sunland Group	Cost Management/Value Engineering	☑	

History of DBE Participation

We strongly encourage and support the involvement of minority and female businesses and individuals on our project teams. We routinely meet our DBE subcontracting goals on our federal contracts. Garver maintains relationships and teams with many qualified and competent DBE consultants to achieve our DBE subcontracting goals. We assist our airport clients by preparing FAA-required DBE plans for federally funded projects. The FAA requires the airport sponsor prepare and maintain a DBE program and to establish DBE goals annually when AIP funds in excess of $250,000 are anticipated. Garver routinely prepares these DBE programs for our clients and can update and submit

your DBE goals as needed. We include language in our bid documents for Airport Improvement Program projects that requires contractors bidding on the project to submit their DBE participation or prove good faith efforts to contract with DBE subcontractors at the established goal with their bid. **Garver works closely with our clients to verify that this intricacy of expending federal funds is properly handled.**

Knowledge of FAA

Knowledge of FAA Standards

The Garver Team is well-versed in FAA regulations, policies, and procedures. Our projects incorporate the latest information available from the FAA, other airports, airport users, airport vendors, and suppliers. **Garver holds regularly scheduled in-house training seminars for our staff.** These presentations include information from outside speakers, information learned from other seminars, and our experience with FAA policies and procedures. This continuous education is part of the reason that our company was honored with the National Society of Professional Engineers' award for professional development.

The Garver Team has thorough knowledge of the FAA Advisory Circulars for planning, design, and construction of airports. **Garver Aviation professionals have taught seminars on Advisory Circulars (AC) at FAA Partnership Conferences.** We make it a top priority to seek upcoming AC changes and inform our staff, and our clients, about those changes.

More importantly, Garver takes a leading role in developing ACs and we recently guided the new AC language regarding taxiway fillet lighting designs. Garver noted that AC 150/5300-13A Airport Design included changes in taxiway fillet design and notified the FAA that similar changes were required for AC 150/5340-30G Design and Installation Details for Airport Visual Aids to incorporate taxiway lighting layouts in accordance with the new fillet design criteria. In discussions with the FAA, we were informed that **we were the first consulting engineering company to bring this to the FAA's attention**. After notification, the FAA hosted a presentation on Taxiway Fillet Design to the Airport Regions, and Garver's taxiway lighting layout schematics were used in the presentation.

The FAA's Civil Engineering Team has since assembled an Engineering Brief 92 for taxiway light spacing guidance at new taxiway fillets. We are currently collaborating with the FAA's Civil Engineering and Electrical Engineering teams to reach consensus and continuity between AC 150/5300-13A, AC 150/5340-30G, and EB92 to incorporate the changes to increase safety on airfields.

FAA Discretionary Funding

Garver will aggressively help you get the funding you need to accomplish your improvement goals. The key to Garver's outstanding record in funding assistance is planning: approach the FAA or state aeronautical board with a well-prepared, comprehensive project plan, and the battle is largely won.

Garver has prepared airport project plans and sucessfully presented them to funding agencies. We also routinely sequence and budget projects to fit available funding, such as multi-year phasing and bid schedules set for consecutive construction seasons. We personally attend meetings to present project plans to funding agencies, support our clients, and respond immediately to any questions that may come up.

$18 million FAA Discretionary Grant

Garver recently assisted the Abilene Regional Airport with detailed justification and grant application.

Project Management

Project Controls

Garver's staff includes skilled scheduling professionals who provide **cost-effective scheduling and cost control expertise utilizing Critical Path Method (CPM) scheduling**. During the design phase, project controls will integrate design schedules for the array of design activities and specialties to keep the design on schedule. Garver will schedule deliverables as milestones with sequenced logic ties to manage the interdependencies in design. The schedules will be resource loaded to provide progress reports and analysis to support a fluent design process. We will establish metrics to measure design progress so the project can then be monitored and controlled through reporting. Risk analysis is an optional service that defines and identifies mitigation for significant risks, which could prevent construction cost overruns.



SHAREPOINT SITE DEVELOPED FOR MANAGING PROJECTS WITH CLIENT COLLABORATION.

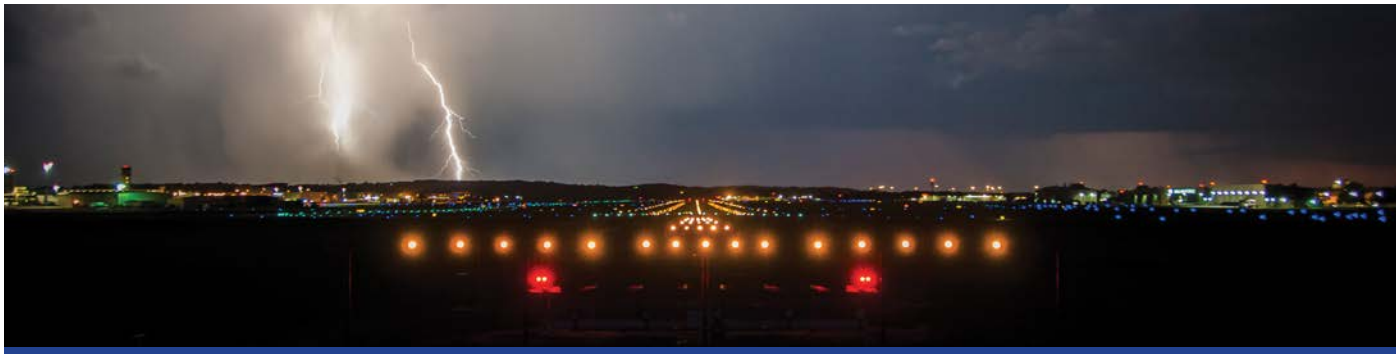
During construction administration, we will provide oversight and management of contractors' execution by overseeing contractors' scope, schedule, and budget reporting. A baseline schedule will be established based on durations, activity sequencing, and contract details. Contractor execution will be measured against the baseline to produce Earned Value reports. Consistent oversight of contractors' work progress and invoices makes sure the contractor is performing work according to the contract. Through Garver's tracking of contractors' progress, the unexpected claims are minimized and Grand Junction Regional Airport is empowered with evidence in the event of a claim.

In accordance with the FAA Northwest Mountain Region AIP Sponsor Guide, Garver will also identify potential Modifications to AIP Construction Standards that will need to be reviewed and approved by the FAA during the final design phase. Identifying these potential modifications during design brings up discussions of non-standard specifications that reduce project costs or expedite construction and can avoid delays in the schedule while waiting for FAA approval.

Project Management Tools

At Garver we utilize proven technology and resources to improve the quality of our projects and collaboration among our project team and clients. For example, we currently use Newforma to optimize the process by which project information is captured, shared and managed. This project management software facilitates the transfer of files without the limitations of email or FTP to securely send file transfers and track when files were received.

We also have the capabilities to create a SharePoint site specifically for your projects. This site can be used for sharing documents, meeting information, status updates, and design and construction information with client and contractors. Access groups can be set up to secure the site, which is particularly important when dealing with sensitive security information within airport projects.



RUNWAY 22R APPROACH LIGHTING AT CLINTON NATIONAL AIRPORT

FAA Facilities

Pilot's Perspective

Garver's Aviation Team offers yet another tremendous advantage: airport engineers who know the national airport/airspace system from a unique perspective as pilots. We know engineering; we understand airport construction; and we know how aircraft use airports. That pays dividends in numerous ways:

- Start-to-finish knowledge of pilot and aircraft requirements during project planning and design
- Minimized revenue loss due to runway or taxiway shutdowns
- Accommodation of airport clients' needs and concerns during design and construction
- Smooth operation of your airport during construction
- Maximized safety of the completed project

We not only plan, design, and oversee the construction of airport facilities, we also personally use them, bringing this airside familiarity to every design decision we make. Garver's pilots have spent nearly 16,000 hours in the cockpit and understand how airports should operate. Garver has airport planning insight our land-bound competitors simply cannot match.

NAVAID Experience

Garver's experience with approach lighting systems includes Omni Directional Approach Lights (ODALs), Medium Intensity Approach Lighting Systems in MALS, MALSF (with flasher), and MALSR (with runway alignment indicator lights) on frangible low-impact structures, including in-pavement segments. We have performed design work for many FAA-owned and maintained system installations, including localizers, glideslopes, and Distance Measuring Equipment (DME) installations with equipment shelters serving Instrument Landing Systems (ILS).

Garver regularly provides services for navigational aids, including ILS, Approach Lighting System (ALS), Runway End Identifier Light (REIL), and Precision Approach Path Indicator (PAPI) installations. We handle the electrical and groundwork installation details and perform any required line-of-sight, obstruction clearance, and glide path angle calculations required by the FAA Advisory Circular 150/5340-30 for PAPI installations to provide safe operation of the new NAVAIDs.

Furthermore, this NAVAIDs design work includes the siting and installation of new segmented circles, airport rotating beacons with monopole towers, primary and supplemental windcones, and LED obstruction lighting.

Experience with FAA Facility Relocation, Including MOA and Review Process

Garver has experience with relocating FAA facilities, including MALSRs, glideslope equipment, localizer equipment, and AWOS. Eric Farmer, PE, electrical design lead on this project, led each of the projects below that involved FAA facility relocations and Memorandum of Agreement (MOA) coordination and review.

CLINTON NATIONAL AIRPORT RUNWAY 4R-22L CENTERLINE LIGHTING

In addition to replacing lighting and pavement markings on Runway 4R-22L and associated taxiways, this project involved relocating the MALSR electrical panel and the associated electrical work. **Garver provided coordination with the FAA for a MOA concerning the MALSR panel relocation and new light bar circuiting work**, coordination with the ALCMS manufacturer per AIP Handbook requirements, and coordination of the FAA required flight check.

CONWAY MUNICIPAL AIRPORT REMOTE TRANSMITTER/RECEIVER RELOCATION

Garver provided design, bidding, and construction support services to install a **new 40-foot Remote Transmitter/Receiver (RTR) tower** and new equipment shelter building at the new airport location. The new system enhanced the communications between the users and the FAA, thus increasing safety and reliability of the National Airspace System (NAS). The new facility was designed to meet all current FAA regulations, orders, requirements, standards and specifications.

CLINTON NATIONAL AIRPORT RUNWAY 22L GLIDESLOPE RELOCATION

After extending Runway 4R-22L by 1,050 feet, the Airport relocated the Runway 22L Instrument Landing System (ILS) glideslope from the runway's east side to the west side and changed the facility to a capture-effect type requiring an extension of the existing antenna tower. **Garver reviewed the preliminary FAA design documents, coordinated modifications based on existing field conditions, and met with local FAA staff to review existing conditions and coordinate a complete set of design drawings.** Phase 1 involved relocating the glideslope shelter and equipment, relocating the existing antenna tower (including the addition of a tower section), installing new power and control/signal cable utilities, and performing all other FAA facility installation requirements prior to the FAA performing the final flight check inspections.



CLINTON NATIONAL AIRPORT RUNWAY 4R-22L CENTERLINE LIGHTING PROJECT

Phase 2 involved relocating the Precision Approach Path Indicator (PAPI) system, including light bars, control rack, and appurtenance, prior to the FAA performing its final flight check inspection. Garver also **performed construction observation and administration duties to make sure the project was completed on the fast-track schedule to meet the deadlines required for the FAA flight check inspections.**

Quality of Projects

As a client-oriented firm, Garver focuses its time and energy on delivering creative solutions and cost-effective services. We have a record of providing responsible cost control, quality planning and design, and responsive management.

Control of Costs

Garver consistently meets budgets within the amount contracted and works diligently to minimize cost increases. Garver also offers value consulting services at any specified level of completion to maximize a cost-effective solution. Over the past five years, cost estimates on Garver aviation projects have been within 6% of the final contract amount.

> ***Garver maintains three year average variance of only 1-2 percent on construction cost between bidding and construction.***

Ability to Meet Schedules and Deadlines

At Garver, we approach each project with a plan for successful delivery developed through extensive experience. Our primary goal is to execute the project work scope so that your goals and objectives are met and the project is completed on schedule and within budget. Our record of successfully completing projects on time is due to realistic project scheduling and our ability to mitigate obstacles. We believe our consistent ability to meet strict deadlines is due to the number of fully trained and experienced professionals and support personnel available. We diligently develop project scopes that minimize the risk of project amendments and continually look at a project's big picture. As the project moves forward, we continually track the progress of work, adjust resources, and meet tasks and project milestones.

RECENT HONORS & AWARDS

Engineering News-Record
- Top 25 Airport Design Firm
- Ranked in Top 500 Design Firms

2016 Engineering Excellence Award in Building & Technology Systems
- ACEC Arkansas: Clinton National Airport BHS Generator System, Little Rock, AR

2015 Quality of Asphalt Paving Award for Large Airports
- Abilene Regional Airport Runway 17L-35R, Abilene, TX

2015 General Aviation Project of the Year
- Southeast Chapter of AAAE: New Conway Airport at Cantrell Field, Conway, AR

2015 Airfield Pavement Award
- Kansas Asphalt Pavement Association: Strother Field Runway 17-35 Rehabilitation, Cowley County, KS

2014 Engineering Excellence Honor Award in Transportation
- ACEC Tennessee: Nashville International Airport Taxiway Kilo Reconstruction, Nashville, TN

> ***Over the past three years, Garver has met the design schedule on 100% of our projects—that's a perfect record on more than 100 projects.***

Comparable Projects

The projects in this section were chosen because they exemplify the following criteria:

Innovation and Responsiveness

At Garver, we pride ourselves on serving our clients well and responding to questions and issues quickly. Our staff includes experienced professionals needed to accomplish your project goals — plus the support personnel available to help your projects run smoothly. In short, our large staff, regional coverage, and depth of expertise and experience in a broad range of disciplines give us ample capacity to satisfy your requirements. In addition, our partnered firms are experts in their fields, and together, we can successfully complete Grand Junction Regional Airport's Runway 11/29 Replacement project.

Knowledge and Understanding of the Latest Trends and Systems Used by Other Airports

The advantage of having an aviation-specific staff of more than 60 personnel is that our engineers and planners are able to stay on top of the latest trends, technology, and in the industry. Our aviation focus allows us to attend all state aeronautics meetings and FAA conferences, as well as present at aviation-specialized events. At Garver, we take our knowledge of the aviation industry and use it to leverage FAA relationships to keep projects moving, find state or federal grant funds for capital improvements, and help airports like Grand Junction Regional Airport make their airport improvements happen. Our reputation and capabilities are evidenced by our current ranking at No. 174 of *Engineering News-Records'* Top 500 Design Firms, as well as our inclusion in ENR's Top 25 Aviation Firms Nationwide.





Analytic and Diagnostic Capability

Every project requires the appropriate analytical and diagnostic approach in order to solve the problem. Problem solving is puzzle solving. At the beginning of a project, the Garver Team analyzes and reviews every project aspect (puzzle pieces) to determine what the key pieces are and how they fit together. In this way, each design fits the project at hand and results in a quality construction project.

We research options and alternatives in our design to form an objective analysis. Our analysis utilizes past insight, understands future requirements, and prescribes possible outcomes. Using our experience and working directly with the client, FAA, and other stakeholders, our structured approach enables the Garver Team to identify problems and select the effective solution for each problem component.

> "We have been impressed with Garver's knowledge and innovative approach on our airfield pavement project. They have given us new insight with testing methods on asphalt pavement that we haven't used before to give us a much clearer picture of the type and extent of pavement reconstruction we need to plan for. Their solutions to our pavement issues and explanations of those solutions have been thorough and well-done. I have full confidence in Garver's ability to deliver great projects for us."
>
> *— Don Green, Director of Aviation, City of Abilene*

Diagnostic analytics include examining data or other information content using techniques such as data discovery and data mining. The Garver Team researches and employs the specific instruments and tools needed in order to gather the data required to answer questions and work to solve your problems. For example, this includes using various types of falling-weight deflectometers or boring data for pavement design, and using underground locators, tracers, thermal imagers, light meters, and personal protective equipment for electrical design. We also utilize modeling software such as FAARFIELD (pavement design), AeroTURN (aircraft turning/movements), Easypower (power/arc flash), and others to predict outcomes and solutions for present and future issues.

In addition, data gathering and examining includes knowing where to find the applicable data, whether that is analyzing historical data, obtaining direct data from a power utility, installing instruments to collect data in the field, or by performing test experiments to be able to answer the question, "Why did this happen?"

Quality Assurance

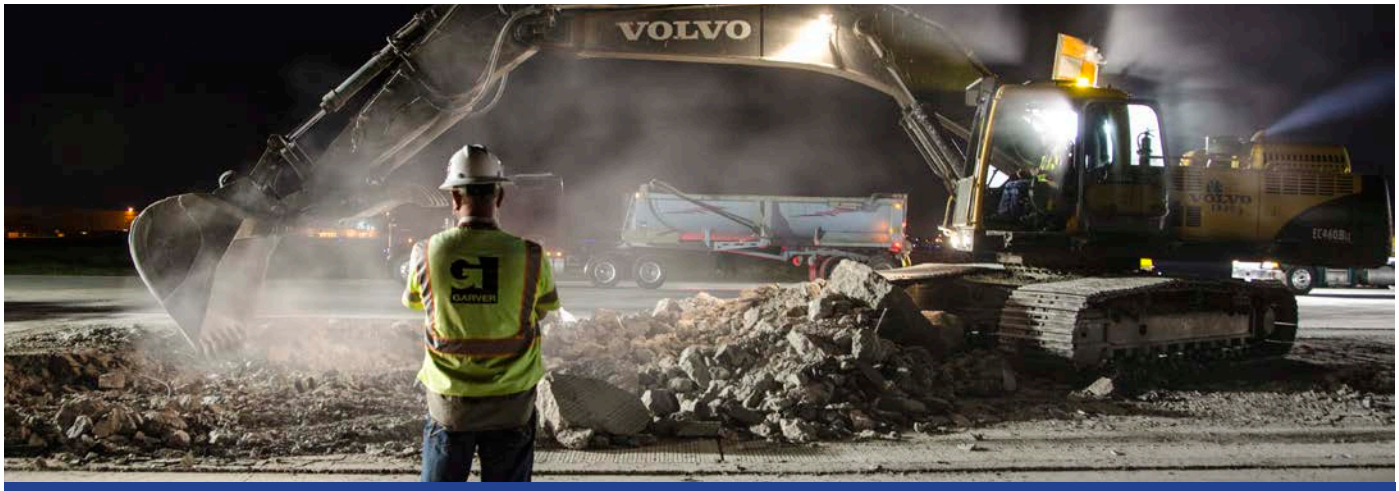
Garver's planners and engineers consider the social, economic, and sustainable impacts to improve the quality of life in your community. We do not shy away from complexity or uniqueness, and we work with integrity throughout the entire project. Every facet of our organization is designed to produce a quality project. This starts with our Quality Control Policy, which guides the development of our formal Quality Control Plan (QCP) for all projects. Garver's Quality Control Plans include checklist that have been developed throughout our 60 years of airport experience. Our QCP will also include FAA checklists for major milestones such as defining design criteria, construction safety and phasing plan approval, modifications to standards approval, sponsor certifications, and grant closeout documentation.

Prior to submittal of each design package, an internal quality control review will be conducted by our internal QA/QC team, led by Mark Williams, PE. Once comments are received from Grand Junction Regional Airport, Project Manager Frank McIllwain, PE and key design staff will attend a design review meeting with the Airport's project management team to review and discuss all comments. Throughout the design process, Garver will use a formal document, the Quality Control Plan, which identifies communication protocols, senior review team members, schedule, design criteria, critical success factors, and project standards. All subconsultants will go through the formal Garver QA/QC Procedure.

Public Involvement

When addressing project needs and staff, Airport authority, and citizen inquiries, rapid response and on-site communication are critical elements. In short, communication is the key to success during the public involvement stage of a project. The public involvement

> "Garver's leadership and assistance in solving problems ranging from relocation of city streets and NAVAIDs to project phasing to capitalizing on funding was critical to the success of projects. In addition, their attention to detail and use of cutting-edge LED technology for taxiway lights clearly demonstrates their culture of continuing to help their clients refine their best practices. This approach is a primary reason Garver was selected to provide our airport engineering services for another three years."
>
> *—Tom Clarke, PE, Director of Properties, Planning & Development, Clinton National Airport*



BY MAINTAINING ACTIVE INVOLVEMENT WITH PROJECTS AFTER DESIGN IS COMPLETE, GARVER IS ABLE TO REDUCE HEADACHES IN THE CONSTRUCTION PHASE.

stage involves three steps: First, the public needs to be educated on the merits of the project. Second — and even more important — is to listen to the public as they provide positive and constructive suggestions that can enhance the effectiveness of the project. The final step is to incorporate good ideas into the final design.

Active Construction Management

By maintaining active involvement with projects after design is complete, Garver is able to reduce headaches in the construction phase. Garver's project manager during design, Frank McIllwain, PE, will remain as project manager during construction. Garver's consistent project management and focus will head off problems before they arrive.

Part of active construction management is providing Audit Packages. These packages combine all appropriate documentation for each pay period. The packages serve as a reference point and easy documentation in case of a federal audit.

The Garver Team knows the best construction administration, observation, and management is delivered by applying proactive professional oversight to a construction project from start to finish accomplishing these four primary goals:

- Controlling time of construction
- Controlling project cost
- Maintaining construction quality in the final product
- Minimize impact on airport operations

Our staff will be there from the start to the end, participating in all construction progress meetings, handling RFIs, change order management, submittal reviews, and full-time site observation.

Dallas Love Field

Project Schedule Performance: On schedule (anticipated March 15, 2018)

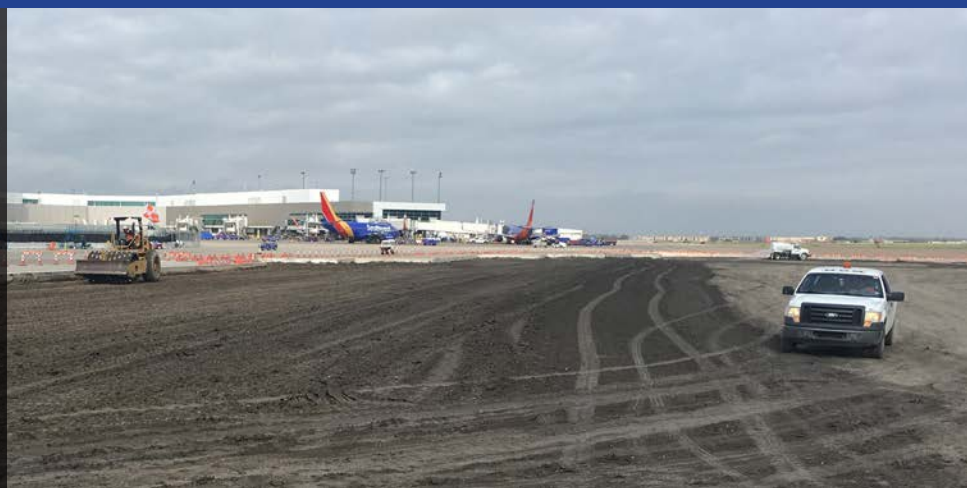
Project Budget Performance:

Estimated Budget: $11,862,000

As-bid: $11,463,200

Final Construction: n/a

M/W/DBE Performance: 37%



Taxiway Bravo Rehabilitation

Garver was selected to serve as general engineering consultant for the Dallas Love Field Airfield Pavement Rehabilitation and Reconstruction Program. Garver was responsible for the design and construction oversight of all airfield pavement improvement projects at one of nation's fastest growing airports for the next three years. The first project was the reconstruction of Taxiway B and the Taxiway B3 connecting taxiway.

One of the challenges of construction phasing was to simultaneously maintain aircraft access to/from the terminal gates, vehicular traffic on the apron service road, and egress around the construction site. This challenge would be most difficult during construction of intersections for Taxiways B, B3, and M. Garver worked with multiple departments within the Aviation Department to develop a conceptual phasing plan to maintain full access to Runway 13R-31L during construction. This solution met taxiway safety area and object free area requirements while allowing all terminal gates to remain in operation.

Reference:

Jenny Nicewander, PE,
Senior Engineer
City of Dallas
214-326-1450
jennifer.nicewander@
dallascityhall.com

Subject Matter Experts:

Frank McIllwain, PE
Colin Bible, PE
Mike Griffin, PE
Mark Williams, PE
Zac Simpson, PE
Eric Farmer, PE

Another phasing challenge was the construction within the Runway 13L-31R safety area and removal of the Y taxiway intersection by realigning Taxiway B3. Past projects at Dallas Love Field had included closures of Runway 13L-31R since it had been considered the secondary runway. Garver developed multiple options to expedite improvements inside the Runway 13L-31R safety area. We hosted contractor workshops during the design phase to gather industry input regarding selection of construction materials and other factors to further minimize construction within the runway safety area. A qualitative and quantitative analysis of each accelerated construction alternative was considered and discussed with the Airport's project management team and the airlines to determine the preferred construction method.

Abilene Regional Airport

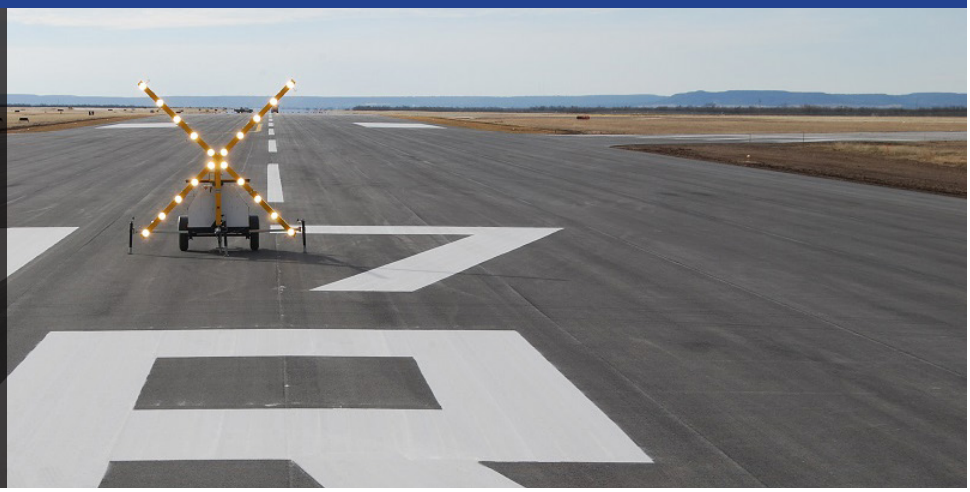
Project Schedule Performance: On schedule (completed January 18, 2017)

Project Budget Performance:

As-bid: $19,046,000.65

Final Construction: $18,581,050.45

M/W/DBE Performance Goal: 2%



Runway 17R-35L Rehabilitation

The existing aircraft fleet mix and annual operations exceeded the structural capacity for Runway 17R-35L at Abilene Regional Airport causing significant surface distresses that were difficult for the Airport staff to maintain. Not convinced that the mill and overlay project recommended by another consultant wouldn be a long-term solution, Garver performed non-destructive testing of the runway to determine the remaining structural life of the runway. Garver's evaluation consisting of heavy weight deflectometer testing and rolling dynamic deflectometer testing determined that insufficient subgrade support was the primary contributing factor to the runway pavement's structural deficiencies.

Reference:

Don Green, AAE,
Director of Aviation
325-676-6061
don.green@abilenetx.com

Subject Matter Experts:

Frank McIllwain, PE
Colin Bible, PE
Eric Farmer, PE
Zac Simpson, PE

Since the cost of the project had almost doubled from the original programmed amount, the FAA planned on constructing the project in two construction years. Garver worked with the Airport to clearly communicate to the FAA the cost impacts, schedule delays, and impacts on the crosswind runway (Runway 4-22). Through the cost-benefit analysis process, the FAA awarded the entire project to be constructed in the first year instead of the previously discussed two-year program. In addition to design, bidding, and construction management services, Garver also coordinated the MOA for the flight check needed for the localizer directly with the Flight Services Division of the FAA. This resulted in a much smaller cost for the Airport as well as allowed the flight check to be coordinated to occur the day before the scheduled opening date.

This nearly $20-million project was completed in January, 2017 without any change orders and completed $464,950 under the bid awarded amount.

Huntsville International Airport

Project Schedule Performance: On schedule (anticipated April 2020)

Project Budget Performance:
As-bid: $48.8 million

Final Construction: $43.3 million (to date)

M/W/DBE Performance:
14%



Group VI Improvements

Garver assisted the Huntsville-Madison County Airport Authority with upgrades to accommodate Group VI aircraft at Huntsville International Airport. Garver's assistance began with an in-depth analysis of the airfield's current geometry and pavement strengths, followed by an iterative process in collaboration with Airport personnel to refine and prioritize project-specific components. The project included strengthening, widening, and adding shoulders to nearly every component of the Airport's pavement system as well as removing and replacing the bulk of the airfield's lighting systems, including the ALSF2/MALSR lighting.

Given the magnitude of the project, Garver worked closely with the Airport to develop a four-year implementation plan that facilitated constructing the improvements while minimizing the project's operational impacts. All four project phases were completed by strategically closing portions of the airfield that allowed the Airport to remain open and fully functional throughout the project.

Reference:

Stan Hogan, Director of Capital Improvements, Huntsville Madison County Airport Authority
256-772-9395
stan@hsvairport.org

Subject Matter Experts:

Frank McIllwain, PE
Ryan Reed, PE
Mike Griffin, PE
Zac Simpson, PE
Adam White, PE
Eric Farmer, PE
Earl Mott, Jr., PE
Petey Chambless

The project was initiated and executed under a highly compressed schedule. Following selection, Garver completed the field geotechnical analysis and topographic survey within several weeks while concurrently completing the project analysis and beginning design. Phase 1 of the project advertised for bids in just under three months and included an alternative to complete Phase 3 of the project. The inclusion of this alternative facilitated the award of the Phase 3, which was designed and under construction prior to completion of Phase 1. Construction of Phases 1, 2, and 3 is complete, and construction is ongoing on Phase 4.

Nashville International Airport

Project Schedule Performance: On schedule (completed October 20,2010)

Project Budget Performance:
As-bid: $24.3 million

Final Construction: $24.5 million

M/W/DBE Performance:
14%



Runway 2L-20R Reconstruction

When a primary runway at Nashville International Airport required full-depth reconstruction, Garver pursued a progressive concrete-recycling method to reuse the pavement and save the client millions of dollars. Garver provided planning, design, bidding, and construction support to rehabilitate the portion of Runway 2L-20R south of crosswind Runway 13-31.

The 35-year-old pavement of Runway 2L-20R was experiencing accelerated deterioration due to an alkali-silica reaction. During the project's preliminary stages, Garver requested a contract amendment to pursue additional runway testing to determine if the pavement was a candidate for a unique process that converts old concrete into usable aggregate. After receiving approval, Garver determined that the Recycled Concrete Aggregate method would achieve the required aggregate strength and durability and also be resistant to the reaction.

Reference:

Traci Holton, PE, Manager of Design, Metropolitan Nashville Airport Authority
615-275-4139
Traci_Holton@nashintl.com

Subject Matter Experts:

Ryan Sisemore, PE
Mike Griffin, PE
Eric Farmer, PE
Bart Gilbreath, PE, LEED AP

The runway was closed, and construction crews demolished the pavement with a guillotine breaker-rubblizer, hauled it to the on-site crushing and screening plant, pugmilled the blend to moisture condition it, and returned the aggregate to the project as a crushed material. Approximately 7,000 feet of 18-inch to 36-inch concrete pavement was recycled, including the steel dowel and reinforcement bars.

With this process, the MNAA did not have to pay for the manpower and equipment to excavate new aggregate, transport it to the airport, and haul away the concrete waste. This dropped the cost of aggregate placement from $26.91 per ton for virgin material to $4.87 per ton for the recycled concrete aggregate, saving an estimated $2 million in aggregate costs alone. This project also included modifications to every taxiway touching the runway, new 35-foot-wide asphalt shoulders, full-length in-pavement centerline lights, touchdown zone lights for the 2L approach, drainage work, stormwater management, airfield signs, erosion and sediment control, and pavement markings.

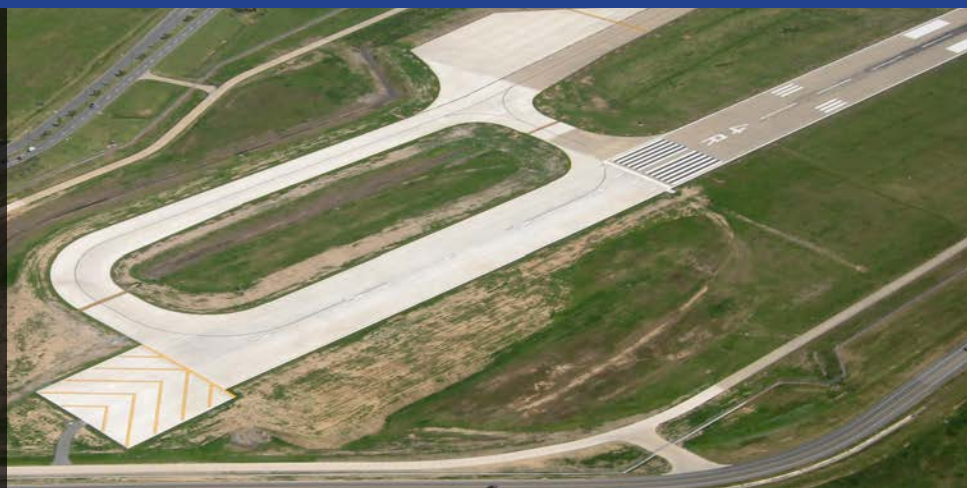
Clinton National Airport

Project Schedule Performance: On time (completed June 29, 2007)

Project Budget Performance:
As-bid: $8,778,997.36

Final Construction: $8,538,879.30

M/W/DBE Performance:
17%



New Runway 4R and Extension

Garver designed and oversaw construction of Runway 4R-22L that was built largely with noise program funding and gave the Airport a parallel air carrier runway. However, a subsequent extension to the opposite Runway 4L-22R resulted in pilots using the non-noise preferred runway more often, and the commission hired Garver to extend Runway 4R. Garver performed all planning, surveys, design, advisory group and public meetings, and construction oversight for the 1,050-foot extension.

Reference:

Tom Clarke, PE, Director of Properties, Planning, and Development, Little Rock Municipal Airport Authority
501-537-1702
tclarke@clintonairport.com

Subject Matter Experts:

Frank McIllwain, PE
Mike Griffin, PE
Adam Roberson, PE
Eric Farmer, P E
Bart Gilbreath, PE, LEED AP
Earl Mott, Jr., PE

- **Extension Length Study:** Garver performed an exhaustive study to determine the extension length. After considering floodways, NAVAID relocations, and allowable runway gradient, the extension length of 1,050 feet was established to bring 4R-22L to the same length as its west-side counterpart, 4L-22R.
- **Runway Gradient:** Garver worked with the FAA to obtain a modification to standards, installing the extension at a 1% positive grade and adapting the MASLR slope to fit the new pavement section.
- **Parallel Taxiway:** An extension of Taxiway R was included to increase the Runway 4R takeoff length to 8,250 feet. The parallel taxiway provides connection between the existing parallel taxiway, new holding apron, and new Runway 4R end.
- **Localizer Relocation:** The localizer to the Runway 22L approach was converted to a 3-degree offset localizer to avoid jet blast and critical area conflicts.
- **Stormwater Drainage Improvements:** Garver designed new detention ponds and culvert extensions to handle the newly restricted drainage areas and paths from the extension project.
- **Arterial and Perimeter Road Relocation:** Roosevelt Road and the Airport perimeter road, both directly adjacent to the extension, were relocated to the south to allow public and emergency vehicle access.

Various Airports

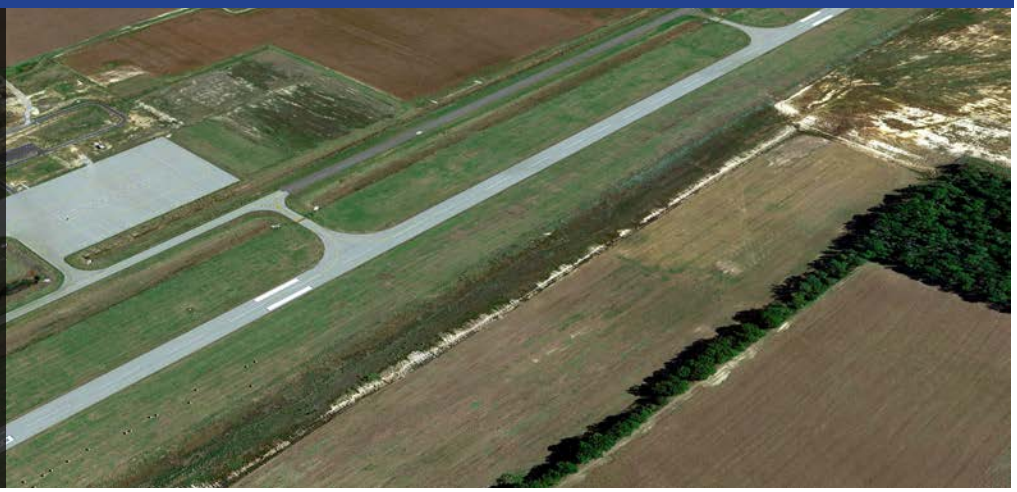
Contact

Josh Zylks, Airport Manager,
Conway Municipal Airport
501-358-6204
Josh.Zylks@cityofconway.org

Contact

John Kerr, Chairperson,
Delta Regional Airport
Authority
870-588-5581
jgk1026@yahoo.com

(Pictured: Delta Regional Airport)



Greenfield Airport Development

Garver's recent experience includes providing design and engineering services for seven new airports across the South, including airports in Arkansas, Texas, and Alabama. Garver takes new airports through the maze of requirements, from the feasibility study all the way through implementation, planning, design, construction management, and commissioning. These are highlights from some of our greenfield airport projects.

Budget Performance:
n/a

Schedule Performance:

n/a

Subject Matter Experts:

Frank McIllwain, PE
Colin Bible, PE
Mike Griffin, PE
Ryan Reed, PE
Ryan Sisemore, PE
Zac Simpson, PE
Eric Farmer, PE
Bart Gilbreath, PE, LEED AP
Earl Mott, Jr., PE
Petey Chambless

Saline County Regional Airport

Garver helped Saline County replace its constrained facility with Arkansas's first new general aviation airport in 10 years. Located on a reclaimed bauxite pit, Saline County Regional Airport and accommodates midsize jets on its 5,000-foot runway.

Centre-Piedmont-Cherokee County Regional Airport

This is Alabama's first federally funded new airport in 15 years. With Garver's assistance, two cities and a county came together to build Centre-Piedmont-Cherokee County Regional Airport. The local governments combined resources and secured FAA funding, purchased more than 300 acres and constructed a 5,500-foot runway that is bringing aviation traffic and economic benefits to the area.

Delta Regional Airport

Teaming with the FAA, Delta Regional Airport Authority (DRAA) undertook an ambitious project of bringing two cities and two counties together to replace two constrained airport facilities with a new regional airport in eastern Arkansas. Garver completed the feasibility study, site selection,



CONWAY MUNICIPAL AIRPORT

Environmental Assessment, and master plan for the new airport. Garver was re-selected for land acquisition services and airfield design.

Nearly one million cubic yards of dirt were moved for airport construction. The current Union Pacific rail crossing was relocated to coincide with the new access road alignment, along with the overhead transmission lines located along Highway 306. Additionally, pavement marking, airfield lighting, and utility services to the terminal area was constructed in conjunction with the paving projects. This initial development cost over $23 million and will allow Delta Regional Airport to serve small general aviation aircraft and large corporate jets.

Conway Municipal Airport

Conway Municipal Airport was squeezed between Interstate 40 and residential areas on all sides. Given the need to accommodate larger aircraft and grow, the City decided to start planning a new airport. Garver provided design and construction support services for a new airport in Conway to replace the previous airport. This facility consists of a 100-foot by 5,000-foot runway, full parallel taxiway, 10,000-square-foot corporate hangar, four 12-bar T-hangars, a 10-bay shade hangar, and a 6,300-square-foot terminal building. Garver's design included several green features to reduce energy consumption and environmental impact, including LED lights, signs, and PAPIs and a LEED-equivalent terminal. This project was selected as the American Association of Airport Executives' 2015 General Aviation Project of the Year Airfield Project.

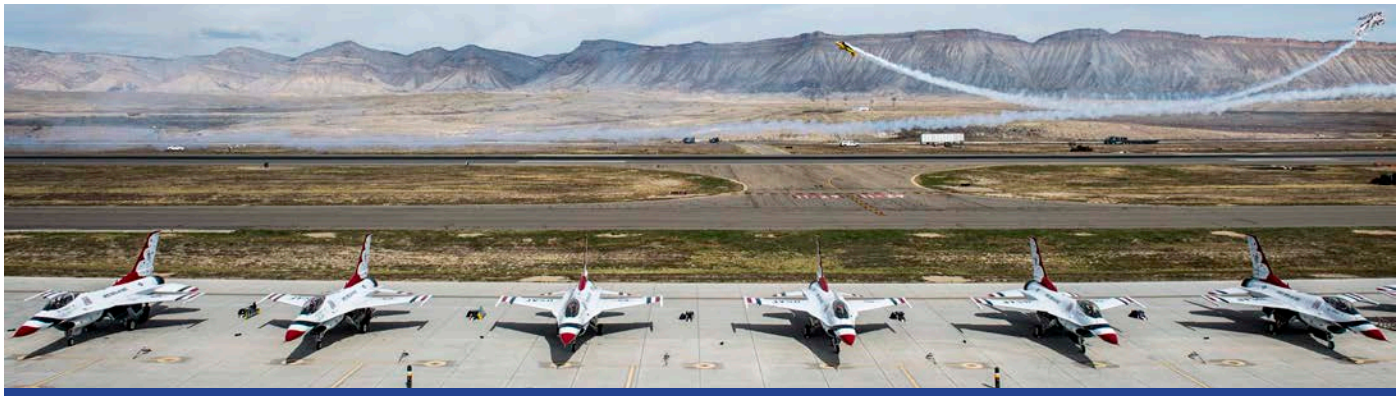
Southwest Alabama Regional Airport

The Alabama Department of Transportation Aeronautics Bureau hired Garver to update the Statewide Airport System Plan. After conducting a feasibility study and site identification study for Clarke, Choctaw and Marengo counties, a plan has developed to create Southwest Alabama Regional Airport and replace two local, constrained airports. The Environmental Assessment, Capital Improvement Program and Airport Layout Plan are now underway.

> "Even before we begin design, we're already thinking through pilot and layout efficiencies. We're picturing how aircraft will land, taxi and take off. There are many moving parts to coordinate, and our experience as pilots helps us design airports that run well."
>
> *— Project Manager Frank McIllwain, PE*

5 RESOURCES





Resources

Our People

As recognized leaders in aviation, our team members practice diligent project oversight to make sure the smallest details are addressed during this projct. Garver develops creative, cost-effective, and sustainable solutions for improving the safety and utilization of your Airport.

Capacity and Capability

With over 400 engineers, planners, architects, surveyors, technicians, and support personnel, Garver has the capacity to accomplish all of your projects on time and within budget. Our company-wide resources are available to solve your specific project needs. The unity between Garver offices allows us to provide workload balancing, freeing our team's key personnel to respond on short notice. At Garver, we pride ourselves on serving our clients well and responding to questions and issues quickly.

Our staff includes experienced professionals needed to accomplish your goals, plus the support personnel available to help your project run smoothly from conceptual design to start-up. In short, our large staff and depth of expertise and experience give us ample capacity to satisfy your project objectives, and our company-wide resources are available to expedite your work and solve your specific project needs.

60 YEARS
of Aviation Experience

62
Dedicated Aviation Professionals

45 *Civil*

11 *Electrical*

6 *Planning*

Project Issues, Scope, and Level of Effort

Project Approach

We understand that a primary goal in the decision to construct a new runway was to address the existing Runway 11/29 deficiencies in a manner that minimizes disruption to the air carrier and air cargo operations. In order to make sure that these goals are achieved, it is critical that the ILS Runway 11 approach and the ASOS stay active throughout the project. While the RNAV (GPS) Y Runway 11 approach has the same minimums that the ILS Runway 11 approach has, many commercial airlines are not equipped with the WAAS GPS equipment needed to utilize the LPV approach. Furthermore, in the event that the ASOS is taken out of service, the RNAV (GPS) Y Runway 11 approach cannot be used and the ILS Runway 11 decision altitude is increased by 200 feet. We understand that it is imperative to design and phase construction to preserve ASOS and ILS signals and accomplish the primary goal: minimize disruption to air carrier and air cargo operations. Garver has accomplished the same goal on many similar projects through consistent coordination with FAA's Tech Ops and NAVAIDs divisions.

A FRESH LOOK

We have thoroughly reviewed the Environmental Assessment and understand the Airport's desire to have a 600-foot separation to allow for the construction of high-speed connector taxiways. The 600-foot separation requirement is required to facilitate this high-speed connector taxiway. In order to meet this separation, the EA recommends a new offset of 637.5 feet from the existing centerline. However, this conflicts with information found in the Runway Alternatives Study found later in the EA which recommends an offset of 650 feet. As shown in Figure 1 below, an offset of 650 feet from centerline is needed to provide the desired 600-foot separation.

In order to address this issue, we recommend two options for consideration. Option 1 is to keep the 637.5-foot offset as suggested in the EA and utilize a traditional perpendicular connector instead. However, this will not provide as much capacity as the high-speed connector would allow. Option 2 is to increase the offset to a distance of 650 feet. This would allow the high-speed connectors to fit as proposed.

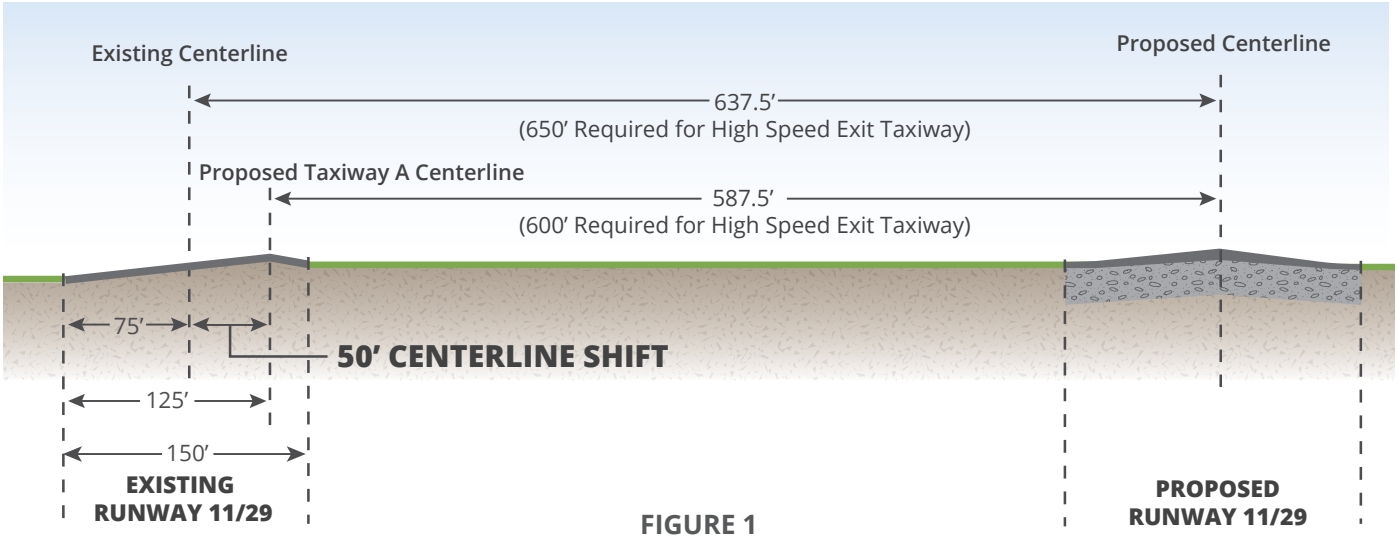


FIGURE 1

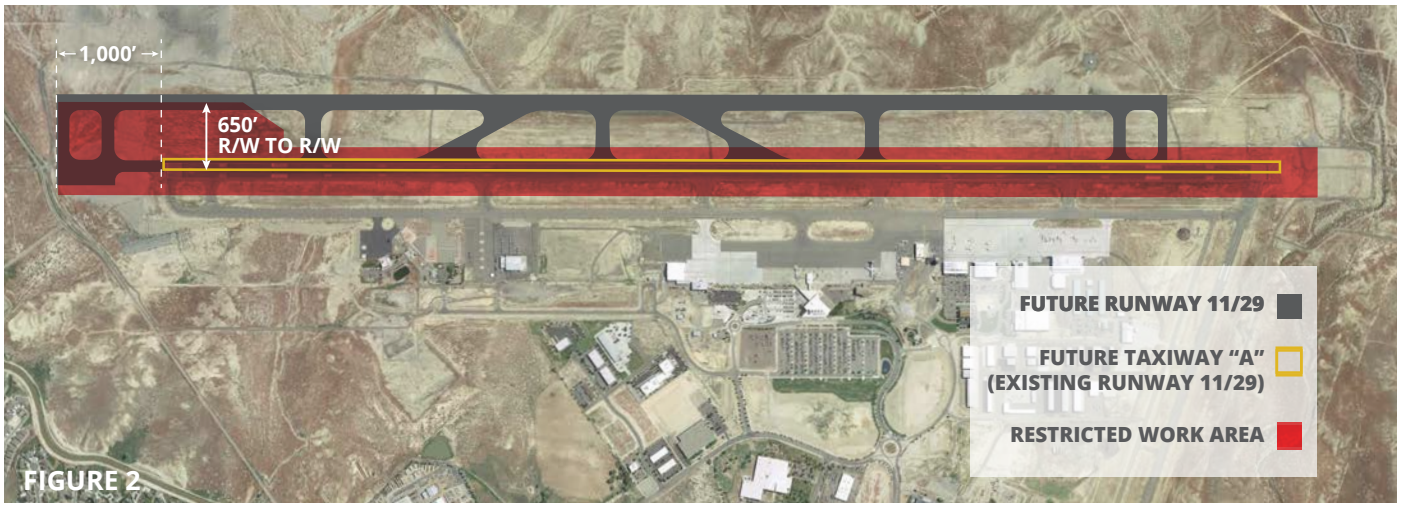


FIGURE 2

PHASING CONSIDERATIONS

As previously discussed, the reason the offset runway was chosen instead of other alternatives is because it could be constructed without runway closures, which would not result in any negative impacts to the airlines or airport businesses/users. The Runway Alternatives Study states that "while some disruptions to operations will still exist during the construction of the connector taxiways near the existing runway, these disruptions should be minimal and can be reduced by working at night."

As shown above in Figure 2, there are several main critical areas that cause work restrictions. These areas include the Runway Safety Area (RSA), the Glide Slope Critical Area, the Localizer Critical Area, and the ASOS critical area. While night work is an option for work within the RSA, night work would change the surface grades and elevation inside the Glide Slope Critical Area, the Localizer Critical Area, or the ASOS critical area. These three areas require a consistent ground plane that would be disturbed by construction and would have an adverse effect on signal reliability.

The existing Glide Slope Antenna is a Capture Effect Array type which has a critical area that extends 600 feet from the existing Runway 11/29 centerline. As shown below in Figure 3, this means that the proposed runway is located within the existing Glideslope Critical Area. The FAA Order 6750.16D

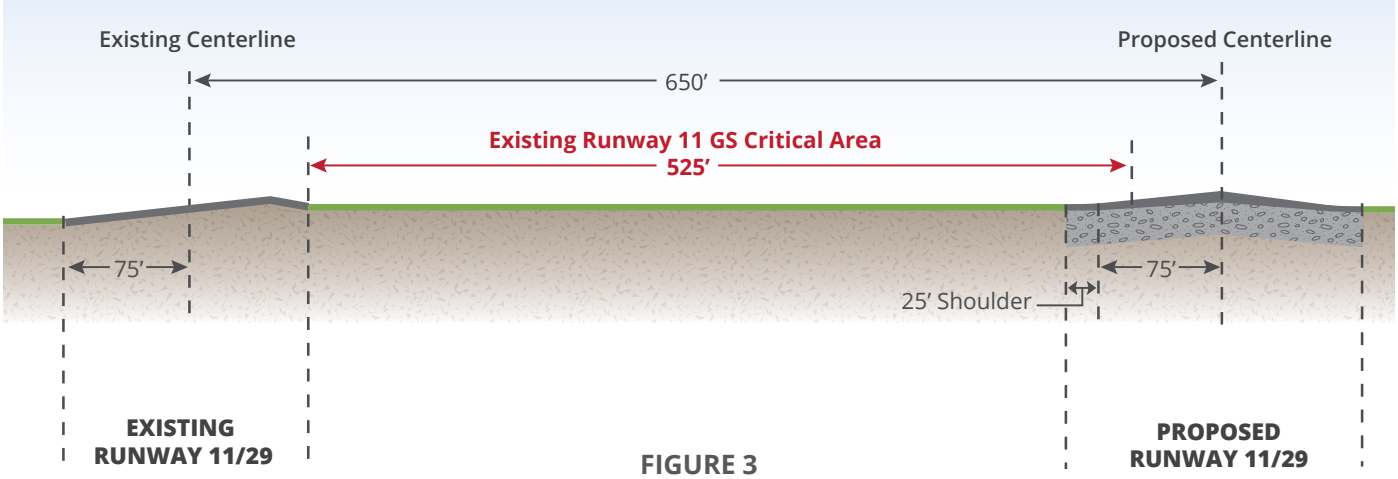


FIGURE 3

states that no activity may take place within the active glideslope critical area. Based on our experience with similar situations, we know there is often a difference between the actual site-specific grading requirements compared to the requirements in the FAA Order.

Through careful coordination with the FAA, we propose to work with the FAA TechOps and NAVAIDs divisions to model construction phasing scenarios to confirm if the width of the Glide Slope Critical Area can be reduced which would allow the Glide Slope to remain in service during the new runway construction.

Garver proposes to phase this project in three major stages of work to allow minimal impacts to these critical areas. Each of these stages consist of multiple years of work, but have specific objectives that balance construction progress and minimal operational impacts.

Stage 1: Road Relocation, Runway Earthwork, Pond Construction, and Perimeter Road Relocation

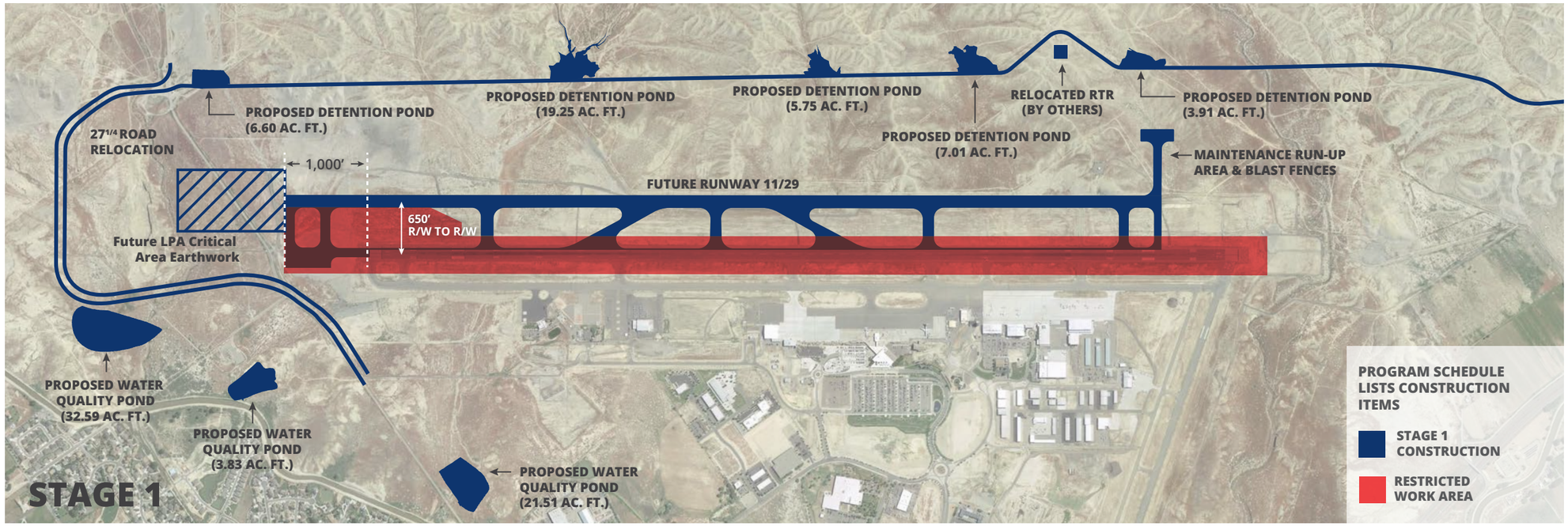
The primary focus of Stage 1 is to provide a clear working area for the construction of the new runway. Stage I includes the relocation of 27 ¼ Road, water quality and detention pond construction, north perimeter road relocation, fence relocation, and earthwork (Part 1) for the new Runway 11/29. By focusing on the work outside of the critical areas, the contractor can work efficiently while allowing the airport to function as normal.

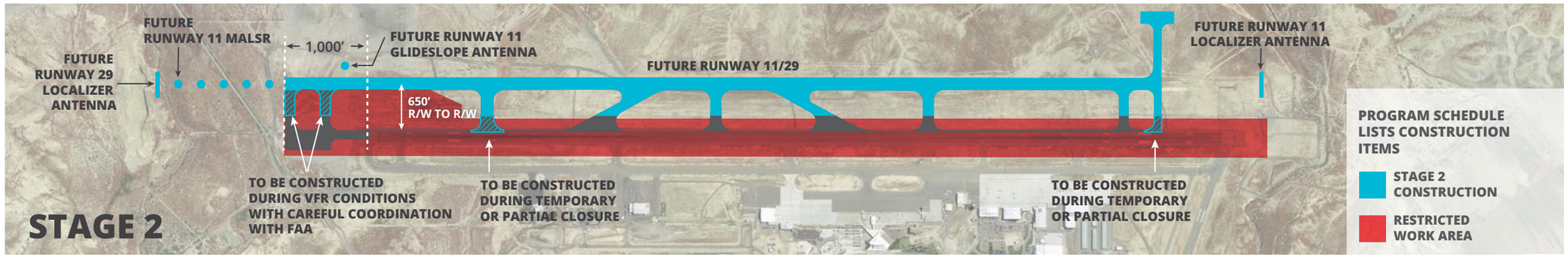
Stage 2: Complete Runway and Minimal Connectors, and Complete NAVAIDS, Grooving, and Marking

The focus of Stage 2 work is completing construction of the new runway so that NAVAIDS can be installed and ready to be turned on in order to switch the primary runway from the existing to the new runway. During this stage, it is extremely important that close coordination is maintained with FAA and the contractor is held to very tight limits to allow the existing Glide Slope, Localizer, and ASOS to remain in service as much as possible. There are three times that work will impact the runway operations as shown in Figure 2. Although it has previously been suggested in the Environmental Assessment that work within the RSA should be performed at night, this work requires the contractor to "cover and cap" their work every night allowing for only a few hours of production which creates a very difficult and expensive work environment. We propose to seek input and buy-in from with the airlines, airport, and FAA to determine the exact runway lengths needed and best weather period to perform rapid construction techniques under a temporary displaced threshold. As shown, the two northernmost connectors are within the Glide Slope Critical Area. These taxiways will require coordination with the FAA NAVAIDs to allow for modeling and approval of the grading plan prior to breaking ground in this area in order to allow the FAA to immediately turn this equipment back on when this work is completed.

Stage 3: Build Remaining Connectors and Taxiway A Conversion

The focus of Stage 3 is to construct the conversion of Taxiway A with minimal impacts. The majority of this work can be constructed during daytime hours with restrictions on where construction equipment can operate. This phase will require close coordination with the airlines, tenants, the FAA, and the airport to clearly define sub-phaes that provide aircraft taxi routes between the new runway and terminal apron as well as contractor access routes. Our primary objective during this phase is to provide a safe construction environment with minimal impacts to airfield operations. As shown in Figure 3, the new Glide Slope Antenna and its critical area will be on the far side of the new runway allowing the remainder of the connector taxiways to be constructed without impacts to runway operations.

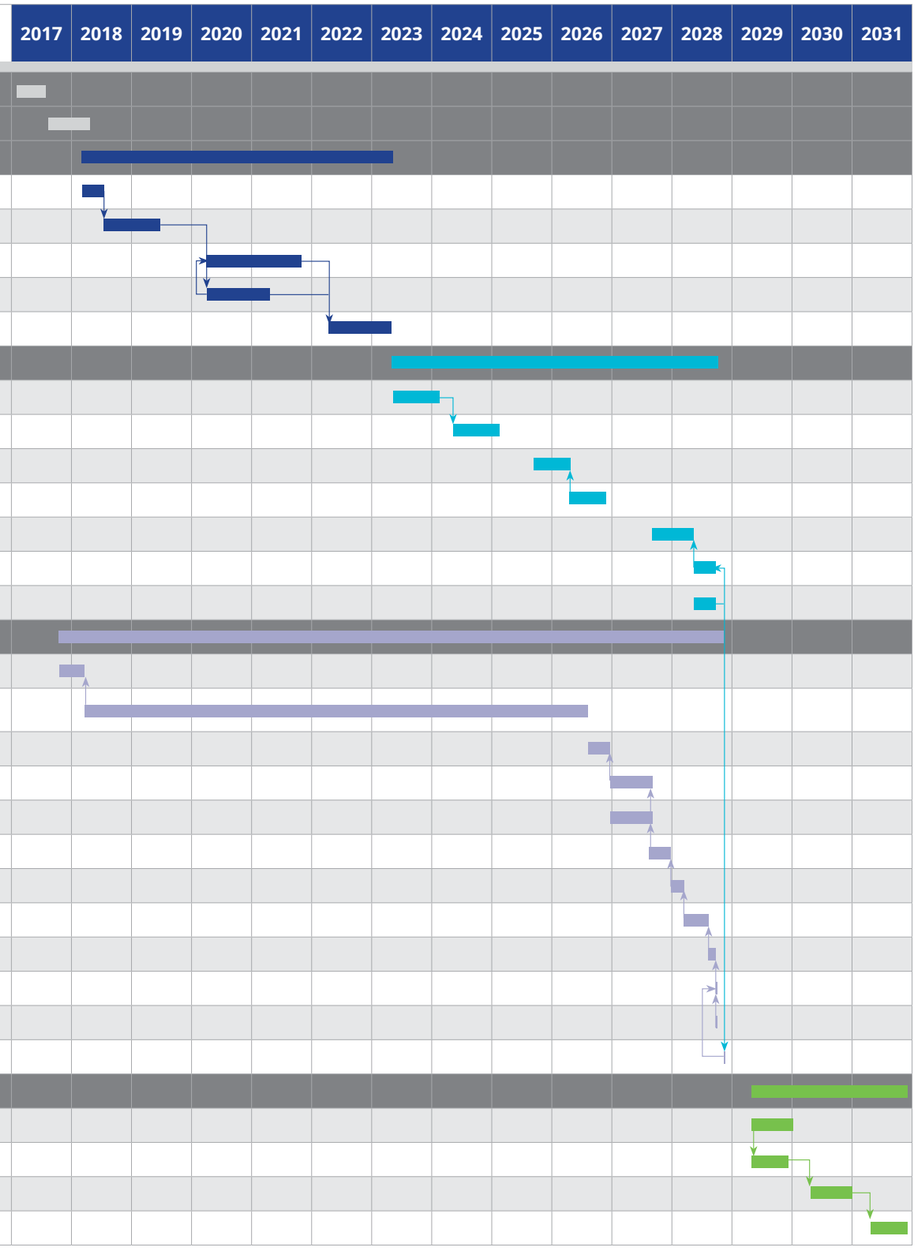

PROPOSED DETENTION POND
(6.60 AC. FT.)
PROPOSED DETENTION POND
(19.25 AC. FT.)
PROPOSED DETENTION POND
(5.75 AC. FT.)
RELOCATED RTR
(BY OTHERS)
PROPOSED DETENTION POND
(3.91 AC. FT.)
27¼ ROAD
RELOCATION
PROPOSED DETENTION POND
(7.01 AC. FT.)
MAINTENANCE RUN-UP
AREA & BLAST FENCES
1,000'
FUTURE RUNWAY 11/29
650'
R/W TO R/W
Future LPA Critical
Area Earthwork
PROPOSED WATER
QUALITY POND
(32.59 AC. FT.)
PROPOSED WATER
QUALITY POND
(3.83 AC. FT.)
PROPOSED WATER
QUALITY POND
(21.51 AC. FT.)
STAGE 1
PROGRAM SCHEDULE
LISTS CONSTRUCTION
ITEMS
STAGE 1
CONSTRUCTION
RESTRICTED
WORK AREA


FUTURE
RUNWAY 11 MALSR
1,000'
FUTURE RUNWAY 11
GLIDESLOPE ANTENNA
FUTURE
RUNWAY 29
LOCALIZER
ANTENNA
FUTURE RUNWAY 11/29
FUTURE RUNWAY 11
LOCALIZER ANTENNA
650'
R/W TO R/W
TO BE CONSTRUCTED
DURING VFR CONDITIONS
WITH CAREFUL COORDINATION
WITH FAA
TO BE CONSTRUCTED
DURING TEMPORARY
OR PARTIAL CLOSURE
TO BE CONSTRUCTED
DURING TEMPORARY
OR PARTIAL CLOSURE
STAGE 2
PROGRAM SCHEDULE
LISTS CONSTRUCTION
ITEMS
STAGE 2
CONSTRUCTION
RESTRICTED
WORK AREA


1,000'
NEW RUNWAY 11/29
650'
R/W TO R/W
EXISTING RUNWAY 11/29 CONVERSION TO TAXIWAY A
STAGE 3
PROGRAM SCHEDULE
LISTS CONSTRUCTION
ITEMS
COMPLETED
STAGE 3
CONSTRUCTION
RESTRICTED
WORK AREA

Grand Junction Regional Airport Runway 11/29 Program Schedule

ID	Task Name	Duration (Days)	Start	Finish
1	**Consultant RFP/RFQ Selection and Contract**	131	2/13/17	6/23/17
6	**Stages 1,2, & 3 - Main Design (Bid Packages Assembled With Each Project)**	265	6/26/17	3/18/18
15	**Stage 1 - Construction (Runway 11/29 Site Preparation)**	1839	3/19/18	6/1/18
16	Project 1 - Bidding/Construction Contract Execution	75	3/19/18	6/1/18
17	Project 1 - Realign 27 1/4 Road and RTR Site Work (By Others)	365	6/2/18	6/1/19
18	Project 2 - Runway 11/29 (Earthwork Phase 1 of 3)	575	4/1/20	10/27/21
19	Project 3 - Runway 11/29 (New Ponds, Perimeter Road & Fence)	365	4/1/20	3/31/21
20	Project 4 - Runway 11/29 (Earthwork Phase 2 of 3)	365	4/1/22	3/31/23
21	**Stage 2 - Construction (Runway 11/29 Pavement)**	1977	4/1/23	8/28/28
22	Project 1 - Runway 11/29 (Drainage, Taxiways Subgrade, Base & Underdrains)	320	4/1/23	2/14/24
23	Project 2 - Runway 11/29 (Runway Subgrade, Base, Underdrain, and Electrical)	320	4/1/24	2/14/25
24	Project 3 - Runway 11/29 (Taxiway Asphalt Pavements (Bottom Lifts)	200	9/13/25	4/1/26
25	Project 4 - Runway 11/29 (Runway Asphalt Pavements (Bottom Lifts)	200	4/1/26	10/17/26
26	Project 5 - Runway 11/29 (Runway and Taxiway Asphalt Pavements (Top Lift)	180	10/4/27	4/1/28
27	Project 6 - Runway 11/29 (Runway Grooving, Markings, Electrical)	150	4/1/28	8/28/28
28	Project 7 - Runway 11/29 (FAA NAVAIDS Construction)	150	4/1/28	8/28/28
29	**Stages 1 & 2 - FAA Coordination, Design & Construction**	3983	12/2/17	10/27/28
30	Execute FAA PDRA for Existing Runway 11 Glideslope Antenna Coordination	120	12/2/17	4/1/18
31	Existing Runway 11 Glideslope Antenna Coordination (Earthwork, Subgrade, Base, Pavements)	3050	4/1/18	8/6/26
32	Execute Runway 11/29 FAA PDRA for Ultimate NAVAIDS Design	120	8/10/26	12/8/26
33	Runway 11/29 Ultimate NAVAIDS Design	265	12/8/26	8/30/27
34	Execute Runway 11/29 FAA MOA for Construction (EDDA's, RE, Equipment, Designing	265	12/8/26	8/30/27
35	Obstruction Survey	100	8/30/27	12/8/27
36	Approaches Feasibility Study and Design	45	12/8/27	1/22/28
37	Approaches Development in OKC	200	1/22/28	8/9/28
38	Flight Inspection Review of Approaches	20	8/9/28	8/29/28
39	Flight Check (Runway 11 Approach and NAVAIDS)	0	8/29/28	8/29/28
40	Flight Check (Runway 29 Approach and NAVAIDS)	0	8/29/28	8/29/28
41	Approach Procedure Publish Date	0	10/27/28	10/27/28
42	**Stage 3 - Construction (Existing Runway 11/29 Conversion to Taxiway A)**	980	4/1/29	12/6/31
43	Project 1 - Runway 11/29 (Earthwork Phase 3 of 3)	275	4/1/29	12/31/29
44	Project 2 - Existing Runway 11/29 Conversion to Taxiway A (Phase 1 of 3)	250	4/1/29	12/6/29
45	Project 3 - Existing Runway 11/29 Conversion to Taxiway A (Phase 2 of 3)	275	4/1/30	12/31/30
46	Project 4 - Existing Runway 11/29 Conversion to Taxiway A (Phase 3 of 3)	250	4/1/31	12/6/31





AIRFIELD CIVIL ENGINEERING
- **Ryan Sisemore, PE**
- **Ryan Reed, PE**
- **Zac Simpson, PE**
- **Adam White, PE**
- **Adam Roberson, PE**

AIRFIELD ELECTRICAL/ NAVAIDS
- **Eric Farmer, PE**
- **Bart Gilbreath, PE, LEED AP**
- Matthew LeMay, PE
- Ryan Patton, PE, LEED AP

CONSTRUCTION MANAGEMENT
- **Earl Mott, Jr., PE**
- **Petey Chambless**
- Brad Butler
- Jim Morris

ENVIRONMENTAL
- **Dave Nafie, AICP, LEED AP**
- **Karen Brown**
- Ryan Mountain, PWS

LANDSIDE DRAINAGE
- **Jeffrey Mace, PE, CFM**
- Burt Weathersbee, PE, CFM

27 ¼ ROAD RELOCATION
- **John Boulden, PE**
- **Ron Nies, PE**
- Bill Taylor, PE, CFM, CSA
- Quinn Spann, PE

UTILITY RELOCATION
- **Ryan Gordon, PE**
- Bob Brandeberry, PLS
- Dean Vrla, PE

GEOTECHNICAL
- **Scott Richards, PE, PG**
- Ryan Hogge, PE
- Mickey Bryan
- **Donald Clark, PE**

AERIAL DATA
- **Paul Akers, PLS, PMP**
- **Radha Kandukuri, CP, CMS**

SCHEDULING/ PROJECT CONTROLS
- **Jennifer Russell, EISE**
- Mark Schwartz, CPM

BLM ROW GRANT
- **Scott Thompson, PLS**
- **Alec Thomas, PLS, CFM**

SWPPP
- **Maurice Foye**
- Anna Smith

SURVEYS
- **Alec Thomas, PLS, CFM**
- **Scott Thompson, PLS**
- Lanny Beavers, PS

COST MANAGEMENT/ VALUE ENGINEERING
- **Ben Thompson, CVS, CPE, CSI**
- Peter Smaus

GRANT ADMINISTRATION
- **Dave Nafie, AICP, LEED AP**

AGIS
- **Dave Nafie, AICP, LEED AP**
- **Peter Murphy, PE**
- Josh Peters

LEGEND

Garver | *River City* | *WHPacific* | *Woolpert* | *Yeh and Associates* | *HRL Compliance* | *Terracon* | *SGM* | *Sunland Group*

Bold name indicates key personnel.

Firms' Roles in this Project

Garver
Project management
Airfield civil engineering
Airfield electrical/NAVAIDs
Construction management

River City Consultants
Landside drainage
Surveys
BLM ROW Grant

WHPacific
Environmental
AGIS
Grant coordination

Sunland Group
Cost estimating

SGM
Utility relocations
27 1/4 Road relocation

Woolpert
18B surveys

Yeh and Associates
Geotechnical engineering

Terracon
Geotechnical engineering QC

HRL Compliance
SWPPP

Workload and Availability

The Garver Team has analyzed our workload and has the availability and abundant resources necessary to complete your runway replacement project. Our project manager, Frank McIllwain, PE, and our lead personnel are committed to meet every milestone and funding deadline.

Garver Aviation Key Staff's Current Workload and Availability

Garver maintains a manageable workload to allow resources to be assigned to meet every project's schedule and also allow our personnel to be responsive to our client's needs. At this time, Garver's Aviation Team has on average 2,400 hours of labor available each month to assign to projects, and currently we have 5,400 average monthly hours of contracted labor over the next 12 months.

GARVER AVIATION TEAM AVAILABILITY



Garver Lead Personnel	Role in the Project	Availability
Frank McIllwain, PE	Project Manager	50%
Colin Bible, PE	Deputy Project Manager and Construction Manager	40%
Mike Griffin, PE	Principal in Charge	15%
Mark Williams, PE	Quality Control	10%
Ryan Sisemore, PE	Airfield Civil Engineering (Lead)	30%
Eric Farmer, PE	Airfield Electrical/NAVAIDs (Lead)	40%
Petey Chambless	Construction Management (Observer)	100%

Experience, Qualifications, and Technical Competence of the Project Manager

Frank McIllwain, PE has 19 years of experience in the planning, design, and construction of airfield improvement projects. **Frank's experience includes managing and designing some of Garver's largest, most complex airport projects.** His project experience includes runway rehabilitations and extensions, taxiway extensions, holding bay construction, public street and utility relocation, localizer and approach lighting system relocation, approach analysis, multi-agency review, runway safety areas, and capital improvement plan implementation. He is an expert on FAA guidelines and requirements associated with the FAA's funding programs, including coordination with multiple branches of the FAA. In addition, Frank is a licensed, instrument-rated pilot, and he incorporates his pilot's perspective into all of Garver's airport projects.

Professional Licenses

Professional Engineer, TX, 93229

Professional Engineer, CO, Pending

Experience in Managing Similar Projects

Dallas Love Field Taxiway Bravo Rehabilitation

Clinton National Airport New Runway 4R and Extension

Various Greenfield Airport Experience

Experience, Qualifications, and Technical Competence of the Construction Manager

Colin Bible, PE is a project manager with 11 years of experience. Colin's responsibilities include project management, construction management, and design of infrastructure projects, including pavement rehabilitation and reconstruction, drainage, and utility relocation. He has designed and provided construction management services for airport projects, including airfield pavement rehabilitations, new runways and taxiways, runway and taxiway extensions, apron construction, airfield drainage improvements, perimeter fencing, airport roads, and utility relocations. He has a comprehensive understanding of the FAA Advisory Circular for airfield design criteria. Colin has also designed and provided construction management services for airport improvement projects. His construction management experience strengthens his designs and gives him a greater understanding of the importance of construction phasing and the constraints placed on the contractor in the construction environment.

Professional Licenses

Professional Engineer, TX, 107159

Professional Engineer, CO, Pending

Experience in Managing Similar Projects

Abilene Regional Airport Runway 17R-35L

Wichita Falls Regional Airport Taxiway Charlie

Dallas Executive Airport Runway 13-31 Reconstruction

Subconsultants' Experience and Qualifications

SGM

SGM is a civil engineering, consulting, and surveying firm, was founded in 1986. For more than 30 years SGM employees have lived, worked, and raised families in the Western Slope communities they have helped build. SGM's services are delivered with unparalleled authenticity and pride with attention to quality and detail. SGM has made many long term, trusted relationships with a wide range of municipal, county, state, federal, and private development clients. As a result, SGM has grown from less than 10 to over 90 employees, making it the largest full-service engineering, consulting, and surveying firm in Western Colorado. In addition to its Grand Junction office and headquarters in Glenwood Springs, SGM also has offices in Gunnison, Meeker, Salida, Durango, and Aspen to provide hands-on service to clients.

SGM has been serving as a partner with municipal and county clients for decades. Their ability to maintain strong client relationships over such extended time periods demonstrates the success of an approach based on listening, building trusted relationships, maintaining integrity, and upholding the client's and community's interests at all times.

WHPacific

WHPacific is one of the western United States leading aviation consulting firms. They bring more than four decades of experience in the fields of airport planning, environmental, engineering, and construction administration. WHPacific has prepared master plans, action plans, airport layout plan updates, feasibility studies and site selection studies for dozens of airports in the western US.

WHPacific has completed over 100 AGIS surveys. Their firm was selected to provide aeronautical surveying services as part of the FAA's Wide Area Augmentation System Program (WAASP). The surveys met the requirements of the new FAA Advisory Circular (AC) 150/5300-18B at 57 different airports in the western United States, and will be used to develop LPV instrument approach procedures at various airports in the western US. Recently, WHPacific conducted AGIS field and data analysis for several projects as a subconsultant.

WHPacific's key individuals who will be assigned to the Runway 11/29 Replacement Project provide extensive aviation project experience in their respective roles at airports of all sizes. These key people are also backed by many other experience aviation engineers, planners, environmental scientists, architects, and surveyors located in WHPacific offices throughout the western US.

River City Consultants

River City Consultants, Inc. (RCC) is a multi-disciplined engineering and land surveying firm headquartered in Grand Junction. RCC serves clients throughout Colorado and the Rocky Mountain region.

The owners and staff of RCC have been instrumental in the successful completion of some of the largest and most prominent projects in Grand Junction and the surrounding areas including numerous public works projects. They have an extensive resume of municipal design and land development projects involving survey, streets, sewers, water distribution,

pedestrian trails, floodplain mapping and associated FEMA applications, watershed management, and project management. They have engineered hundreds of miles of roads and surveyed at least 38 airport projects. In addition, their staff has provided full service engineering services including permitting, environmental engineering, stormwater management, reclamation, construction management, construction services, among others.

RCC has worked with and developed personal relationships with officials from many local, state, and federal agencies, utilities, and special districts, including the City of Grand Junction, Mesa County, Grand Valley Rural Power, Ute and Clifton Water, CDOT, Bureau of Land Management, and others. RCC staff have relationships with the planning department and engineers with the City of Grand Junction through countless development projects, including a current hydraulic modeling project on Leach Creek.

Yeh and Associates, Inc.

Yeh and Associates is a full-service geotechnical consulting firm established in 1999, comprised of highly qualified engineers, scientists, and field technicians with a wide range of experience. With an office in Grand Junction, the firm is familiar with the Airport's location and geographic conditions. Yeh is a certified Disadvantaged Business Enterprise (DBE) for construction services and employs over 160 professionals with a wide range of experience. Yeh has specialized experience in horizontal construction working extensively with the Colorado Department of Transportation and local government agencies for roadway and bridge foundation design recommendations and construction services such as management, inspection and materials testing.

Yeh and Associates performed geotechnical engineering and materials testing services for Grand Junction Regional Airport in 2010, 2011, and 2016 Their technicians are trained and certified to provide all FAA required testing and are familiar with FAA construction regulations and airport safety.

Terracon

Terracon is multi-discipline firm specializing in geotechnical, construction, and environmental services founded in 1994. Terracon provides geotechnical consulting services for the design of pavements, drilled shaft and driven pile bridge foundations, cast-in-place retaining walls, MSE walls, drilled shaft walls, soil nail walls, and global stability analyses of retaining walls and slopes. Materials testing services are provided for soils, concrete, structural steel, and drilled shafts. In the past five years, Terracon has worked on hundreds of aviation projects exceeding $17 million in revenue. In addition, the firm has been listed in Engineer News-Record's Top 500 Design Firms, most recently ranking at No. 32 in 2016. **Garver and Terracon have teamed together on more than 40 airport projects.**

Woolpert

Woolpert is a national architecture, engineering, and geospatial (AEG) firm dedicated to providing exceptional services, employing cutting-edge technologies, and developing and implementing industry-best processes for a wide range of clients. Started in 1911 as a small surveying firm (in business over 105 years), Woolpert has grown in size, expanded areas of expertise, and matured their client relationships to become an industry-leading provider of quality consulting services. Woolpert offers an unparalleled level of experience and knowledge

helping airports adapt to managing spatial data and leveraging such data to improve the planning, design and construction process in support of the FAA's Airports GIS standards, operations and maintenance, and business processes.

Woolpert has successfully performed geospatial and aeronautical surveys at more than 1,400 airports (1,800 projects). Overall, Woolpert has completed more than 650 projects within the FAA's Airports GIS system — more than any other consultant in the country. While mostly focused on aeronautical (obstruction) surveys both independently and as part of Master Plan update projects, these services also included numerous LiDAR surveys, geodetic control establishment, mapping, and GIS implementation services. Woolpert brings decades of experience working with the FAA in support of NextGen technologies and spatial data at airports and within a regional airspace and delivering these projects on-time and under budget. Woolpert has developed the FAA's online airport GIS training program (FAA IDLE) that is guiding the aviation industry on the FAA AGIS data standards. As a result, Woolpert has more FAA IDLE Level 3 certified staff than any firm in the country.

HRL Compliance Solutions, Inc.
Environmental Consultants

HRL Compliance Solutions, Inc.

HRL Compliance Solutions, Inc. (HRL) is a full-service environmental consulting firm providing environmental site assessment and remediation, project and facility permitting, environmental compliance consulting, and waste management services. HRL's senior management averages 18 years of experience in project and construction management, regulatory compliance and permitting, field services, site assessment, and advanced remediation activities for a wide range of oil and gas projects. With offices located in western Colorado and southwest Colorado, HRL is positioned to provide its full range of environmental services.

HRL is a certified DBE with the corporate mission of safely providing expert environmental consulting services in a client-focused and cost effective manner to our clients nationwide. HRL strives to effectively maintain compliance, develop innovative solutions, and enhance the business models and operations of enterprises through the application of science, policy, and adaptive management strategies.

Sunland GROUP

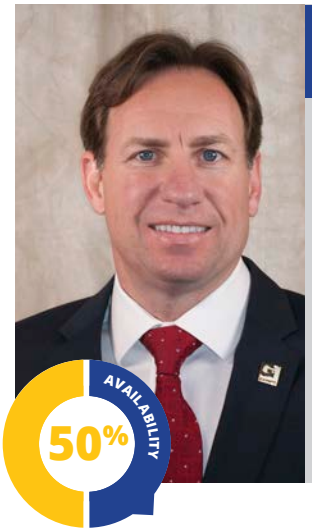
Sunland Group, Inc.

Sunland Group, Inc. (Sunland) is a multidisciplinary company of professionals providing program, project, and construction management services as well as architectural design and civil engineering for a variety of clients. Sunland's designers, managers, and technicians are committed to addressing their clients' needs. Since its inception, Sunland has provided professional services to both public and private sector clients and delivered professional services to more than 400 major projects with a total construction value of over $8 billion. Sunland is currently providing extensive services at major airports in Texas and Colorado.

What sets Sunland apart from other firms is their ability to provide a wide range of value-added services; to provide innovative services tailored to clients' needs; and their ability to respond quickly and positively to meet clients' goals. Their mission is always to create recognizable value for clients in the planning, management, design, construction, and maintenance of projects.

6 APPENDIX





Frank McIllwain, PE

Project Manager

Frank McIllwain is a vice president on Garver's Aviation Team with 19 years of engineering experience. Frank's responsibilities include managing and designing some of Garver's largest, most complex airport projects. His project experience includes runway rehabilitations and extensions, taxiway extensions, holding bay construction, public street and utility relocation, localizer and approach lighting system relocation, approach analysis, runway safety areas, and capital improvement plan implementation. He is an expert on FAA guidelines and requirements associated with the FAA's funding programs, including coordination with multiple branches of the FAA. In addition, Frank is a licensed, instrument-rated pilot, and he incorporates his pilot's perspective into all of Garver's airport projects.

Education

Bachelor of Science in Civil Engineering

Professional Licenses

Professional Engineer, TX, 93229

Professional Engineer, CO, *Pending*

Number of Years Licensed

15

Number of Years of Experience

19

Number of Years With Garver

19

Number of Years in Proposed Role

9

Icon Indicates Commercial Service Airport

Dallas Love Field Taxiway Bravo Rehabilitation

Dallas, TX

Project manager responsible for oversight for reconstruction of Taxiways B and B3, realignment of Taxiways B2 and B3, and installation of a surface painted island to meet new FAA geometry standards. The project included development and evaluation of alternatives for removal of non-standard high-speed taxiways and complex construction phasing to minimize runway closures and impacts on Southwest Airline's use of terminal gates.

Clinton National Airport New Runway 4R and Extension

Little Rock, AR

Project manager responsible for civil design of extension of Runway 4R and Taxiway R and coordination of structural, water, and electrical designs. Also responsible for coordination with regulatory and review agencies due to impacts on drainage, floodplain, aircraft operations, approaches, and NAVAIDs. Managed project team and provided coordination for the Runway 4R 1,050-foot extension, its parallel and connecting taxiways construction, and perimeter road and fence extensions.

Abilene Regional Airport Runway 17R-35L Rehabilitation

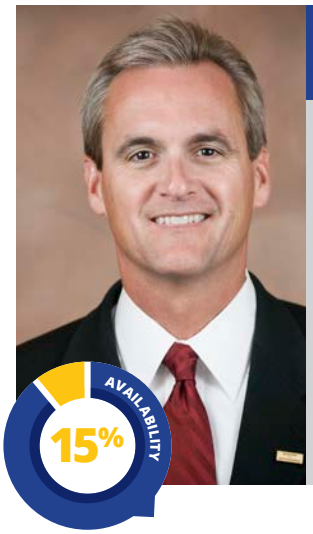
Abilene, TX

Principal in charge and quality assurance for design, bidding, and construction services. Project consisted of detailed analysis of non-destructive pavement testing resulting asphalt reconstruction of a 7,203-foot runway and grading and underdrain improvements.

Tulsa International Airport North Development Area Taxiways

Tulsa, OK

Project manager responsible for the design team. Responsibilities included oversight and quality control, assigned design team tasks, monitored team's progress, and held weekly meetings with the design team.



Mike Griffin, PE

Principal in Charge

Mike Griffin is a senior vice president and director of aviation with 32 years of experience. Mike's responsibilities include coordinating the efforts of 70 full-time aviation personnel in 14 regional offices. His experience includes extensive project engineering and program management support on airport operational facilities, including runway, taxiway and apron geometry and design, pavement design, lighting system design, and construction observation and management. As a presenter at FAA conferences, Mike is well versed in FAA advisory circulars and guidelines. ***He has provided project management and QA/QC for the planning, design, and construction oversight of seven new greenfield airports and over $700 million in airport improvements.*** *Mike is an instrument-rated pilot with more than 1,500 flight hours.*

Education

Bachelor of Science in Civil Engineering

Professional Licenses

Professional Engineer, AR, 7144

Number of Years Licensed

28

Number of Years of Experience

32

Number of Years With Garver

32

Number of Years in Proposed Role

10

Icon Indicates Commercial Service Airport

Clinton National Airport New Runway 4R and Extension

Little Rock, AR

Principal in charge responsible for developing the Engineer's Report, scoping and negotiating engineering services contract, coordinating advisory committee meetings, supervising plans/specs production, administering office support of field personnel during construction phase, and assembling and assigning survey and design staff for this $17 million project.

Nashville International Airport Runway 2L-20R Reconstruction

Nashville, TN

Principal in charge responsible for providing project oversight and contract/technical review assistance. Duties included EOR selection interview, contract negotiation and execution, and various office staff assignments to perform the work. Also reviewed the engineering quality control plans for the work and assisted in the resolution of construction issues.

Clinton National Airport Runway 18-36 Rehabilitation

Little Rock, AR

Principal in charge responsible for negotiating scope and fee amounts, assembling and directing survey and design teams, and administering office support for field observers during construction phase.

Tulsa International Airport Runway 2L-20R Reconstruction

Tulsa, OK

Principal in charge responsible for Runway 8-26 taxiways C and L rehabilitation, including OANG BAK-12/14 relocation on the east and west end of the runway.



Mark Williams, PE

Quality Control

Mark Williams is a senior project manager with 24 years of aviation experience. He has extensive experience in the planning, design and construction of airfield improvement projects, and he has performed numerous design and planning functions at airports throughout the United States. Mark's aviation experience has involved civil airside design, lighting and navigational aid layouts, airport planning, pavement management, and GIS program development. He has served as a project manager, design engineer, and resident engineer on numerous projects in multiple FAA regions.

Education

Bachelor of Science in Civil Engineering

Professional Licenses

Professional Engineer, KS, 14970

Number of Years Licensed

19

Number of Years of Experience

24

Number of Years With Garver

8

Number of Years in Proposed Role

4

Icon Indicates Commercial Service Airport

Kansas City International Airport Stormwater Master Plan

Kansas City, MO

Civil engineer responsible for supporting the development of the ultimate design criteria for the stormwater collection system. Evaluated FAA, USACE, City, and other standards for design criteria to develop standard requirements for future improvements at the airport. Supported GIS development team to develop a database for stormwater infrastructure inventory and condition assessment.

Strother Field Airport Runway 13-31 Rehabilitation

Winfield/Arkansas City, KS

Project manager for the rehabilitation of Runway 13-31. Led the construction administration team to support the Strother Field Commission and the contractor to complete the construction of the runway rehabilitation ahead of schedule and below budget.

Huntsville International Airport Group VI Improvements

Huntsville, AL

Aviation engineer responsible for performing a QA/QC review to make that the project met 13A, ADG VI, and TDG-6 criteria.

Clinton National Airport Taxiway A and B Rehabilitation

Little Rock, AR

Senior project manager responsible for conducting a quality control review of the contract documents for conformance with FAA standards.



Colin Bible, PE

Deputy Project Manager, Construction Manager

Colin Bible is a project manager and Garver Aviation Team Leader with 11 years of experience. He has designed projects at more than 30 airports, including airfield pavement rehabilitations, new runways and taxiways, runway and taxiway extensions, apron construction, airfield drainage improvements, and utility relocations. He has a comprehensive understanding of the FAA Advisory Circular for airfield design criteria. Colin has also designed and provided construction management services for airport improvement projects. His construction management experience strengthens his designs and gives him a greater understanding of the importance of construction phasing and the constraints placed on the contractor in the construction environment. He will serve as the Construction Management lead on this project.

Education

Bachelor of Science in Civil Engineering

Professional Licenses

Professional Engineer, TX, 107159

Professional Engineer, Co, *Pending*

Number of Years Licensed

7

Number of Years of Experience

11

Number of Years With Garver

11

Number of Years in Proposed Role

7

Icon Indicates Commercial Service Airport

Abilene Regional Airport 17L-35R Rehabilitation

Abilene, TX

Project manager responsible for managing the design and bidding services of the runway rehabilitation project. The rehabilitation of this 7,502-foot by 150-foot asphalt runway included associated paving, grading, lighting, signage, grooving, and marking improvements.

Abilene Regional Airport 17R-35L Rehabilitation

Abilene, TX

Project manager responsible for overseeing the design and bidding services of the Runway 17R-35L rehabilitation design project. The project consisted of a full-depth pavement reconstruction of the runway along with lighting adjustments, new markings, and grading and drainage improvements.

Fort Worth Meacham International Airport 17-35 Rehabilitation

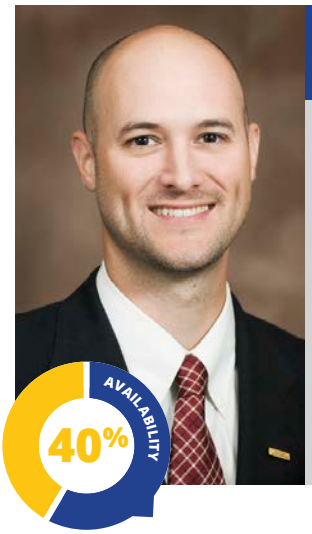
Fort Worth, TX

Project manager responsible for construction administration of asphalt overlay, LED MIRL replacement, 4-box PAPI installation, ALCMS upgrade, and vault improvements to Runway 17-35.

Dallas Executive Airport Runway 13-31 Reconstruction

Dallas, TX

Project manager responsible for managing design and construction services for the reconstruction of 5,450 linear feet of Runway 13-31, which involved removing and replacing pavement with a new 10-inch concrete pavement section. This project also included the realignment, reconstruction, and removal of all taxiways connecting to Runway 13-31 to improve the efficiency of each taxiway and to adhere to the new pavement geometry requirements in the FAA Advisory Circular.



Ryan Sisemore, PE

Airfield Civil Engineering

Ryan Sisemore serves as a vice president and director of the east region for our Aviation Team with 20 years of engineering experience. Ryan's responsibilities include project development and funding support, planning, environmental assessments, design, bidding, and construction management. His project experience includes new and expanded runways with lengths exceeding 5,000 feet, parallel and connector taxiways, aprons, hangars, terminal buildings, security upgrades, fuel facilities, entrance roads, and parking lots primarily in Tennessee, Kentucky, and Alabama. He has assisted with designing utility relocations and new runway and taxiway electrical systems, and he regularly provides construction administration and observation services.

Education

Bachelor of Science in Civil Engineering

Professional Licenses

Professional Engineer, TN, 107661

Number of Years Licensed

15

Number of Years of Experience

20

Number of Years With Garver

16

Number of Years in Proposed Role

16

Icon Indicates Commercial Service Airport

Nashville International Airport Runway 2L-20R Reconstruction

Nashville, TN

Project manager responsible for analysis, design, bidding, and construction services to reconstruct Runway 2L-20R and all associated taxiways on the south end of the runway. The project included reconstructing the concrete runway, widening the runway shoulders from 15 to 35 feet, electrical and drainage structures, as well as taxiway reconstruction, including demolishing Taxiways A2, A3, and B2, reconstructing Taxiways B1, B3, and K, and constructing Taxiway A2. The project included analysis for both perpendicular and angled connections and correspondence with FAA and ATC for layout selection.

Nashville International Airport Runway 13-31 Reconstruction

Nashville, TN

Project manager responsible for the design, bidding and construction services to reconstruct 3,000 linear feet of Runway 13-31. This pavement was the oldest pavement on any of the four runways and also required longitudinal gradient corrections. Coordinated the use of Rolling Dynamic Deflectometer testing on the existing pavement in order to improve the analysis of the existing pavement structure and make recommendations for the reconstruction. The project also includes shoulders for the remainder of the runway to the northwest and runway distance remaining signs for the entire length of the runway. Taxiways reconstructed as part of this project included L2 and L3.



Ryan Reed, PE

Airfield Civil Engineering

Ryan Reed is a project manager and team leader on Garver's Aviation Team with 19 years of engineering experience. Ryan's responsibilities include design, project management, construction administration, land acquisition, lease agreements, feasibility studies, life-cycle cost analyses, and airport minimum standards. His work encompasses all aspects of airport development from conception through construction completion, including new airport design. His project experience includes airfield and landside development and improvements, expansion and rehabilitation projects, infield drainage improvement, runway and taxiway widening and construction, parking aprons, fuel systems, NAVAIDs installations, security improvements, and hangars.

Education

Bachelor of Science in Civil Engineering

Professional Licenses

Professional Engineer, AL, 25769

Number of Years Licensed

14

Number of Years of Experience

19

Number of Years With Garver

16

Number of Years in Proposed Role

16

Icon Indicates Commercial Service Airport

Huntsville International Airport Group VI Improvements

Huntsville, AL

Project manager resonsible for the design and administration of Group VI Improvements Phases 1 through 4 at the Huntsville International Airport. Design included an in-depth analysis of the airfield's current geometry and pavement strengths, followed by an iterative process in collaboration with airport personnel to refine and prioritize project-specific components. The project included strengthening, widening, and adding shoulders to nearly every component of the airport's pavement system as well as removing and replacing the bulk of the airfield's lighting systems.

Huntsville International Airport Taxiway Charlie Improvements

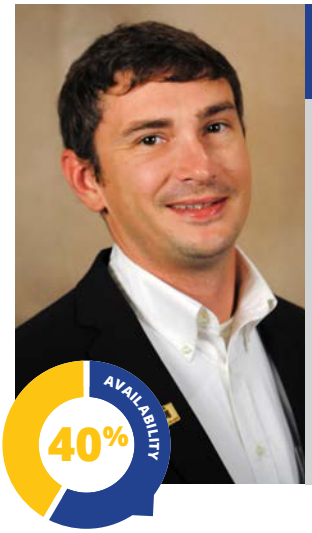
Huntsville, AL

Project manager responsible for the design and construction of a new parallel taxiway. This project included the construction of Taxiway Charlie (75 feet wide) between Charlie 3 and Charlie 5; widening the cargo apron to abut Taxiway Charlie; constructing 30-foot shoulders for all new taxiways; and installing taxiway edge lighting, guidance signs, and new pavement markings. Bidding assistance and construction administration also required.

Southwest Alabama Regional Airport New Airport Development

Thomasville, AL

Project manager responsible for services provided to establish a new airport. Initial engineering services consisted of an environmental assessment, airport layout plan, capital improvement plan, targeted justification study, aerial photography/topographic mapping, and associated surveys and administrative services. The Southwest Alabama Regional Airport Authority is comprised of three sponsoring municipalities: Clark County, City of Thomasville, and City of Grove Hill.



Zac Simpson, PE

Airfield Civil Engineering

Zac Simpson is a project manager on our Aviation Team with 17 years of civil, nuclear, and electrical engineering experience. Zac's responsibilities include design, plan preparation, specification preparation, client contact, and construction support. Zac has experience working at numerous general aviation airports. Zac's airport and site development project experience includes runway extensions, airfield rehabilitation and construction, parallel taxiway construction, ramp expansion, pavement overlays, pavement marking, and apron rehabilitation. Skilled in both Microsoft Office and Bentley software.

Education

Bachelor of Science in Civil Engineering

Professional Licenses

Professional Engineer, CO, 0051110

Number of Years Licensed

7

Number of Years of Experience

17

Number of Years With Garver

9

Number of Years in Proposed Role

9

Icon Indicates Commercial Service Airport

Huntsville International Airport Group VI Improvements

Huntsville, AL

Aviation engineer responsible for final plans and specifications as well as construction management for this project to upgrade all airfield pavement to Group VI aircraft standards. The project included strengthening, widening, and adding shoulders to nearly every component of the airport's pavement system; installing new runway edge identifier light (REIL) fixtures; sealing cracks/joints; and applying surface treatment and new markings on Runway 18L and various taxiways.

Dallas Love Field Taxiway Bravo Rehabilitation

Dallas, TX

Aviation engineer responsible environmental analysis, preliminary engineering report review and specifications, coordinating with subconsultants, and review assistance for final plans and specifications this project that involved the reconstruction of approximately 44,000 square yards of pavement on Taxiway Bravo.

Wichita Falls Regional Airport Taxiway Charlie Rehabilitation

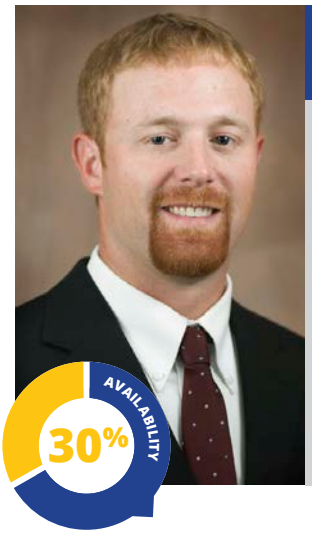
Wichita Falls, TX

Aviation engineer responsible for construction management for reconstructing Taxiway Charlie from Runway 35 end to Taxiway Delta, excluding the area adjacent to the new terminal apron.

Strother Field Airport Runway 13-31 Rehabilitation Design

Winfield/Arkansas City, KS

Aviation engineer responsible for leading the design effort for the rehabilitation of Runway 13-31. Developed a pavement rehabilitation method that could meet the FAA design standards, withstand construction traffic and remain within the proposed budget. Coordinated directly with the FAA to develop new standard full-depth reclamation specification and state mix asphalt pavement specifications to reduce project costs.



Adam Roberson, PE

Airfield Civil Engineering

Adam Roberson is a project manager on Garver's Aviation Team with 11 years of experience working at numerous air carrier and general aviation airports. Adam's responsibilities include client contact and coordination, project design, plan and specification production, and construction observation and management. His project experience includes airport design, runway extensions, runway safety area improvements, utility installation, site layout, pavement rehabilitation, pavement reconstruction, airfield lighting systems, property acquisition, perimeter fencing, roadway design, asphalt and concrete overlays, parking lot improvements, and stormwater drainage design and studies.

Education

Bachelor of Science in Civil Engineering

Professional Licenses

Professional Engineer, AR, 14713

Number of Years Licensed

6

Number of Years of Experience

11

Number of Years With Garver

11

Number of Years in Proposed Role

11

Icon Indicates Commercial Service Airport

Clinton National Airport Taxiway A & B Rehabilitation

Little Rock, AR

Project manager responsible for overseeing project administration, design, bidding, and construction support services for this $20 million project. The project included the reconstruction of Taxiways A, B, K, L, and portions of C, D, and P. These existing asphalt taxiways were reconstructed with portland cement concrete pavement. The new concrete taxiway will accommodate large cargo planes that frequent the west general aviation ramp. A complex phasing plan was developed for the project that reduced closure time and created alternate taxi routes during all phases of construction.

Clinton National Airport Drainage Improvements

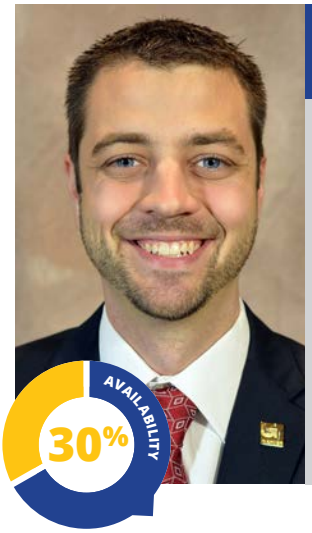
Little Rock, AR

Project manager responsible for overseeing project administration, design, bidding, and construction support services for replacement of the existing drainage system located between Runway 18-36, Runway 4L-22R, and Taxiway P. The project included removal and replacement of approximately 7,800 linear feet of reinforced concrete pipe, installation of approximately 3,400 linear feet of cured-in-place pipe, removal and replacement of approximately 29 grate inlets and junction boxes, and associated drainage improvements.

Clinton National Airport Runway 18-36 Extension

Little Rock, AR

Aviation engineer responsible for all drainage aspects on this project to extend the runway 1,100 feet. Responsibilities included apron design, construction safety plan, and construction materials testing plan. The runway extension also included the extension of two taxiways, relocation of a perimeter road, construction of the relocated runway safety area, installation of the associated lighting and navigational aids, relocation of existing water and sewer mains, and relocation of a city street.



Adam White, PE

Airfield Civil Engineering

Adam White is a project manager on Garver's Aviation Team with 9 years of experience. Adam specializes in design, evaluation, and maintenance of airfield pavements. Adam's responsibilities include airport design, project management, construction management, airport master planning, coordination with commercial service and general aviation clients, coordination with the FAA, and writing specifications. His project experience includes construction of runways, taxiways, aprons, hangars, perimeter fencing, parking lots, access roads, ARFF Stations, and terminals. Adam also has experience in developing greenfield airports, having worked on the development of four such airports. He also specializes in pavement rehabilitation, and has inspected over 5 million square feet of airport pavement.

Education

Bachelor of Science in Civil Engineering

Professional Licenses

Professional Engineer, AR, 15425

Number of Years Licensed

5

Number of Years of Experience

9

Number of Years With Garver

9

Number of Years in Proposed Role

9

Icon Indicates Commercial Service Airport

Northwest Arkansas Regional Airport Taxiway B Reconstruction Bid Package

Bentonville, AR

Project engineer responsible for all airfield design. Including geometric layouts, pavement designs, drainage design, and marking layout. Also coordinated all construction safety and airspacing with the FAA. Project engineer was also responsible for coordinating plan set development with the electrical design team.

Northwest Arkansas Regional Airport Commercial Ramp Taxilane Modifications

Bentonville, AR

Project leader responsible for construction administration including biweekly progress meetings, pay estimates, submitted reviews, and contract coordination.

Northwest Arkansas Regional Airport Cell Phone Parking Lot and Taxi Queue Lane

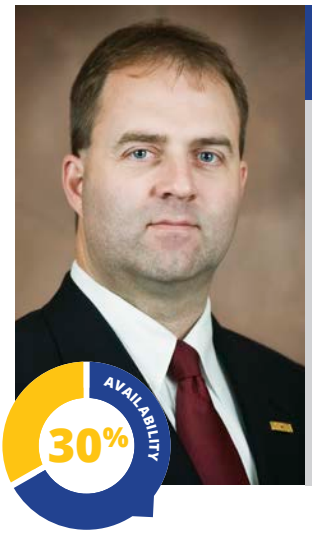
Bentonville, AR

Prime aviation engineer responsible for designing the cell phone lot and taxi queue lane. Responsibilities included preliminary and final design, project layout plan, construction safety plan, plans and specs, and record drawing. The lighted cell phone lot allows free parking for people waiting on a call from arriving passengers to come pick them up.

Clinton National Airport Runway 18-36 Rehabilitation Construction

Little Rock, AR

Project engineer responsible for coordinating the utility relocations associated with the construction. He also worked with the on-site observer and regulatory agencies to minimize the runoff impact during construction.



Eric Farmer, PE

Airfield Electrical/NAVAIDs

Eric Farmer is a senior project manager and electrical engineer on Garver's Aviation Team with 25 years of experience at more than 75 airports. Eric's responsibilities include directing a staff of engineers and support personnel in design and production of complete project assignments. His project experience includes extensive design and construction in military and civilian airport lighting and control systems, including approach lighting and NAVAIDs; arc flash and coordination studies; motor controls and instrumentation; lighting (interior, exterior, site, roadway, and interchange); and a range of special electrical systems, including lightning protection, fire alarm, access control, intrusion detection, security, closed circuit television, and telecommunication-structured wiring systems for copper and fiber optic cable networks.

Education

Bachelor of Science in Electrical Engineering

Professional Licenses

Professional Engineer, CO, 40002

Number of Years Licensed

20

Number of Years of Experience

25

Number of Years With Garver

25

Number of Years in Proposed Role

25

Icon Indicates Commercial Service Airport

Clinton National Airport Runway 4R-22L Centerline Lighting and Rehabilitation

Little Rock, AR

Project manager responsible for overseeing project administration, design, and construction support services. This project included removing and replacing concrete joint sealant, performing full-depth and spall repairs, removing and replacing pavement markings on Runway 4R-22L, Taxiway R, Taxiway S, Taxiway T, Taxiway U, Taxiway V Taxiway W and Taxiway Y, installing new in-pavement LED runway centerline lighting on Runway 4R-22L, relocating an existing FAA MALSR electrical panel and the associated electrical work, and performing ALCMS modifications and control equipment updates.

Clinton National Airport Taxiway A and B Rehabilitation

Little Rock, AR

Electrical engineer responsible for performing electrical design and construction support work for upgrading one of the busiest taxi routes on the airfield. This project included reconstruction of Taxiway B along with portions of several other taxiways. The work included the installation of elevated and in-pavement LED taxiway edge lighting systems, LED taxiway centerline lighting systems, runway and taxiway LED guidance signs, modifications and updates to the airfield lighting control and monitoring system (ALCMS), and associated electrical vault improvements.

Clinton National Airport Runway Taxiway D Rehabilitation

Little Rock, AR

Lead electrical engineer responsible for providing the electrical plans and specifications for the new taxiway in-pavement LED centerline lighting, taxiway LED edge lighting, and new SMGCS in-pavement LED light bar systems. Design services included in-pavement lighting layouts, airfield series circuit cables, counterpoise systems, duct banks, grounding systems, and electrical vault modifications including new circuit selector switch and airfield lighting control system updates and modifications.



Bart Gilbreath, PE, LEED AP

Airfield Electrical/NAVAIDs

Bart Gilbreath is an electrical project manager and aviation electrical leader on Garver's Aviation Team with over 12 years of commercial and general aviation project design and management experience. Bart is responsible for managing over $10 million of electrical improvements annually. He has been involved in the planning and design of runway and taxiway lighting, guidance signage, approach lighting and NAVAIDs, and electrical power distribution projects. Bart has presented at numerous state and FAA conferences on airfield lighting technology, LED efficiency, and electrical safety. He has presented at the FAA 4-States Conference for the past four consecutive years. In addition, Bart has been responsible for the design and management on four International Illumination Engineering Society (IES) Award of Merit projects.

Education

Master of Science in Electrical Engineering

Bachelor of Science in Electrical Engineering

Professional Licenses

Professional Engineer, AR, 13836

Professional Engineer, CO, *Pending*

Number of Years Licensed

9

Number of Years of Experience

12

Number of Years With Garver

12

Number of Years in Proposed Role

12

Icon Indicates Commercial Service Airport

Tulsa International Airport Runway18L-36R BAK Relocation

Tulsa, OK

Electrical project manager and engineer of record responsible for designing BAK replacement and relocation. Design included extending 13.2kV primary to a new 30kVA 13.2kV-120/240V pad-mounted transformer for the BAK system due to the voltage drop and distance. Electrical design was performed in accordance with NEC, FAA, and air national guard requirements.

Northwest Arkansas Regional Airport Airfield and Terminal Electrical Study

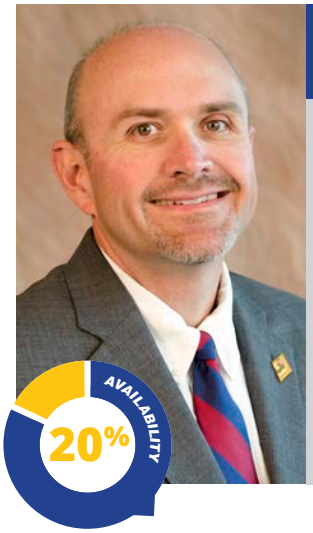
Bentonville, AR

Electrical engineer of record responsible for managing research, reconnaissance, calculations, and reviewing the electrical study. This included reviewing as-built drawings and conducting site visits, as well as reviewing arc flash and circuit breaker coordination calculations in accordance with NEC and NFPA 70e.

Northwest Arkansas Regional Airport Terminal Parking Lot Modifications

Bentonville, AR

Electrical project manager responsible for overseeing electrical design and electrical construction services for modifications to the terminal parking lots at XNA. Modifications include expansion of the economy, short-term, contract, and administration lots, and construction of a new cell phone lot. Parking lot lighting design was completed to match the existing lot layout configurations using energy efficient LED fixtures. The design also included a dynamic display board for the cell phone parking lot. This board is used to display airline arrivals for people parked in the cell phone lot. The design required working with the sign vendor to appropriately size the board and working with the airport's system integrator for wireless communication with the FIDS system in the terminal building.



Earl Mott, Jr., PE

Construction Management

Earl Mott is a senior project manager and director of Garver's Construction Services Team with 25 years of engineering experience. Earl's responsibilities include management, oversight, and coordination of Garver's construction services personnel. His project experience includes airport design, airfield lighting systems, new electrical vaults, PAPI approach systems, pavement crack cleaning and sealing, terminal building and hangar improvements, parking improvements, perimeter fencing, roadway design, site design, stormwater collection systems, hydrology, and erosion control.

Education

Bachelor of Science in Civil Engineering

Professional Licenses

Professional Engineer, AR, 9250

Number of Years Licensed

20

Number of Years of Experience

25

Number of Years With Garver

25

Number of Years in Proposed Role

9

Icon Indicates Commercial Service Airport

Clinton National Airport Runway 18-36 Extension

Little Rock, AR

Senior project leader responsible for oversight for the first stage of an 1,100-foot extension of the general aviation runway located on the west side of the airfield. Extending the runway resulted in the extension of two taxiways, relocation of a perimeter road, construction of the relocated runway safety area, installation of the associated lighting and navigational aids, relocation of existing water and sewer mains, and relocation of a city street.

Clinton National Airport Runway 22L Glideslope Relocation

Little Rock, AR

Project leader responsible for providing management services including design oversight, bidding services, and construction coordination to relocate the Runway 22L instrument landing system glideslope from the runway's east side to the west side and change the facility to a capture-effect type requiring an antenna tower extension.

Clinton National Airport Taxiway D Rehabilitation

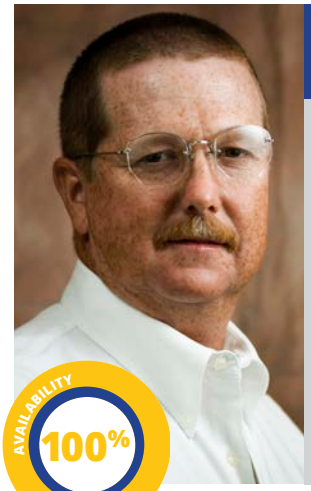
Little Rock, AR

Project leader responsible for providing management and oversight including design, FAA and grant coordination, and construction support services. The project rehabilitated Taxiway D as a 75-foot-wide concrete taxiway with adequate strength to be considered a heavy aircraft route.

Conway Municipal Airport Terminal Construction

Conway, AR

Lead construction manager for the design and construction of a 6,300-square-foot terminal building to serve the Conway Municipal Airport. This terminal design was part of the design and construction support project for a greenfield airport. The new airport included a 100-foot by 5,500-foot runway, full parallel taxiway, and hangar facilities.



Petey Chambless

Construction Management

Petey Chambless is a senior construction observer with 30 years of experience. Petey's responsibilities include observing that the contractor and subcontractors are working in accordance with the plans and specifications, that survey work has proper controls for accurate placement of structures and grades, and that on-site materials are properly stored and inventoried. Petey also maintains daily weather, contractor's forces, work completed and contract time used records, reviews the results of project site testing, monitors work schedules, and alerts the design staff to potential problems in construction and scheduling conflicts. In addition, Petey has been in charge of inspection and field testing on numerous concrete and asphalt paving projects as well as bridge and treatment plant work involving heavy reinforced concrete construction.

Education

Bachelor of Science in Civil Engineering

Professional Licenses

OSHA 10-hour Construction Safety and Health, 2013

Number of Years Licensed

n/a

Number of Years of Experience

30

Number of Years With Garver

24

Number of Years in Proposed Role

24

Icon Indicates Commercial Service Airport

Clinton National Airport Runway 18-36 Extension

Little Rock, AR

Construction observer responsible for observing a 1,100-foot extension of Runway 18. Construction support services included monitoring construction activities to document that the installation of the concrete runway, including subgrade, 13-inch PCC over cement-treated base, and concrete paving, was installed in accordance with FAA contract specifications. Services also included construction coordination between the contractor and the operation facilities personnel at the airport, quality assurance testing and documentation, issuing plan clarifications, and measuring of pay quantities for payment to the contractor. Managed contractor operations and surface closures to make sure two aircraft taxi routes remained available throughout construction.

Clinton National Airport Taxiways A and B Rehabilitation

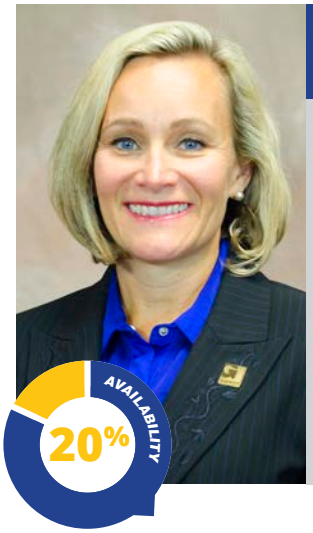
Little Rock, AR

Senior construction observer responsible for overseeing the removal and replacement of the existing Taxiway B pavement section and portions of Taxiway P, C, and A, installation of base mounted LED taxiway edge lights, installation of taxiway centerline in-pavement light fixtures along the existing SMGCS route, adjustment of signage, upgrading the existing drainage infrastructure, and associated pavement markings.

Clinton National Airport Taxiway D Rehabilitation

Little Rock, AR

Construction observer responsible for observing the overlaying of asphalt taxiway with a 75-foot-wide concrete taxiway with total reconstruction at the intersection of Runway 4L-22R and Runway 18-36 with cement-treated soil and cement-treated base. Constructed on a compressed schedule using ARRA funding.



Jennifer Russell, EISE

Scheduling/Project Controls

Jennifer Russell is a senior project manager at Garver with 23 years of experience. She has extensive experience in managing transportation project lifecycles through need analysis, project definition, design, to contract and construction supervision. Her vast experience also includes access management policy development and multimodal planning. She has worked on several projects throughout the United States, including the Honolulu Rail Transit and California High-Speed Rail projects.

Education

Master of Science in Systems Engineering

Bachelor of Science in Engineering Psychology

Professional Licenses

n/a

Number of Years Licensed

n/a

Number of Years of Experience

23

Number of Years With Garver

1

Number of Years in Proposed Role

23

* Indicates individual experience

Arkansas Highway and Transportation Department Connecting Arkansas Program Manager

Little Rock, AR

Senior project manager responsible for providing support through project controls activities on the Interstate 30 Crossing in Little Rock. Responsibilities include conducting schedule coordination, facilitating team collaboration, supporting the development of procurement documentation, and establishing internal processes to prepare for the management of the forth coming design-build contract.

Integrated Corridor Management Project

Kansas City, MO

Technical project manager for the development of a Concept of Operations for Integrated Corridor Management (ICM) on the congested I-35 central connection through the Kansas City metro area. Responsible for leading the development of the Concept of Operations for integrating highway, arterial, transit, and future technology solutions for current and future (2030) operations of I-35.

Access Management Policy Update *

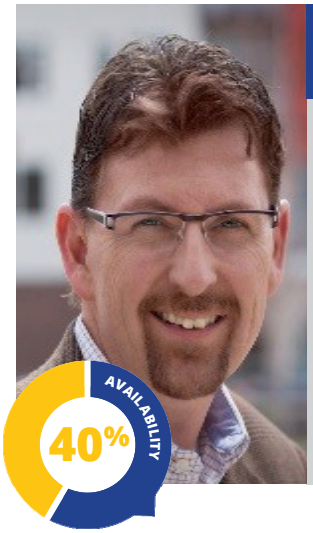
Statewide, KS

Deputy project manager for a $500,000 revision to the Kansas Department of Transportation (KDOT)'s Access Management Policy. The 10-year old KDOT policy was updated with the state-of-the-art access management practices integrated with the existing KDOT operational practices.

California High-Speed Rail Project *

Statewide, CA

Lead systems engineer for the current world's largest infrastructure project, the $68 billion, 800-mile (1,300-kilometer) system that is designed for 220-mph (354-kph) operations that will carry over 100 million people a year by 2030 and will be the first contemporary high-speed train operating on dedicated right-of-way in the U.S.



Dave Nafie, AICP, LEED AP

Environmental, Grant Administration, AGIS

Dave Nafie is director of aviation at WHPacific and has 25 years of aviation consulting experience. For much of that time he was based in Denver and contributed to successful projects at most of the state's commercial service airports. Dave has led environmental projects in Colorado, as well as FAA-sponsored Airports Geographical Information System (AGIS) pilot studies at multiple large airports across the country. He is a member of the American Planning Association and the American Association of Airport Executives.

Education

Bachelor of Science in Aviation Management

Bachelor of Arts in Liberal Arts

Professional Licenses

American Institute of Certified Planners (AICP)

LEED Accredited Professional

Number of Years Licensed

n/a

Number of Years of Experience

25

Number of Years With WHPacific

2

Number of Years in Proposed Role

25

Icon Indicates Commercial Service Airport

Durango-La Plata County Airport Environmental Assessment

Durango, CO

Planning manager for this environmental project that sought to meet the requirements under the National Environmental Policy Act for the terminal replacement site on undeveloped land across the airfield from the existing terminal complex. Scoping for this project required significant coordination with FAA to identify and contact 29 separate Native American tribal organizations.

Newport News Williamsburg International Airport Sustainability Master Plan with AGIS/eALP

Newport News, VA

Project manager for this Airport Master Plan which provided a demonstration vehicle for two pilot programs. Sustainability was a primary consideration during the entire development of the Plan and was the focus of a number of special activities related to the ultimate implementation of measures to enhance the Airport's economic, environmental, and social responsibility bottom lines. The pilot project aimed to be among the first, if not the first, to result in a fully electronic Airport Layout Plan based entirely in a Geographic Information System.

Durango-La Plata County Airport Master Plan Update

Durango, CO

Project manager for this master plan update that involved public engagement and an enhanced environmental analysis of candidate sites in order to capture data that could be used to identify fatal flaws as early as possible. The selected alternative features a new $85 million terminal complex on an undeveloped portion of the airport and is planned to be supported by a local tax measure in addition to at least $40 million in federal grant funds.



Karen Brown

Environmental

Karen Brown with WHPacific has 19 years of experience in the analysis of environmental impacts, permitting and regulatory compliance. Her experience includes coordination of the permitting and National Environmental Policy Act (NEPA) processes with federal, state and local agencies thought out the U.S. and Alaska. She determines and implements the appropriate environmental and regulatory analyses, consultations and documentation. Karen completes federal consultations for Endangered Species Act (ESA), National Historic Preservation Act (NHPA), Clean Air Act and Clean Water Act. She plans, organizes and manages complex airport, road and site development projects.

Education

Bachelor of Science in Environmental Science

Professional Licenses

OSHA 40-Hour HAZWOPER Certification, FL

Number of Years Licensed

n/a

Number of Years of Experience

19

Number of Years With WHPacific

1

Number of Years in Proposed Role

16

Orcas Island Airport Obstruction Removal Project

Eastsound, WA

Karen completed an EA and permitting for the removal of vegetation within the non-precision approach surface on Port-owned land for FAA. The project area included a 4(f) resources trail and wetland conservation easement. The project also required coordination with federal, state and local agencies and preparation of a state environmental checklist, county and storm water permits.

Orcas Island Airport Improvement Projects

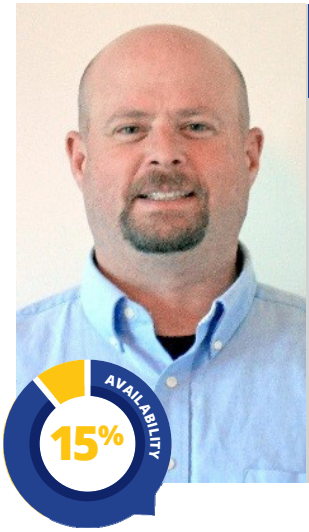
Eastsound, WA

Karen completed a Categorical Exclusion for FAA and permitting for multiple improvement projects including taxiway, connectors, lighting, fencing and drainage. The project required permits from USACE, Department of Ecology and Fish and Wildlife for grading in a channel and culvert replacement.

South Lewis County Airport Improvements Projects

Toledo, WA

Karen completed a Categorical Exclusion for FAA, state environmental checklist, and permits from USACE, state, and local agencies. The project required ESA coordination and purchasing wetland mitigation bank credits. Provided permit compliance assistance.



Peter Murphy, PE

AGIS

Peter Murphy is a senior aviation engineer and project manager for WHPacific with 23 years of experience. Peter has prepared over 50 AGIS projects as part of a team that delivered obstruction evaluations needed to implement the FAA's Wide Area Augmentation System (WAAS) navigation infrastructure. As part of a larger team, Peter also currently leads WHPacific's delivery of four AGIS projects to the Washington Department of Transportation, Aeronautics Division.

Education

Bachelor of Science in Civil Engineering

Professional Licenses

Professional Engineer, OR 77595PE

Number of Years Licensed

21

Number of Years of Experience

23

Number of Years With WHPacific

2

Number of Years in Proposed Role

18

Airport Obstruction Mapping (AGIS) at Various Airports

Oregon, Washington, Idaho, and California

Project engineer responsible for providing obstruction, NAVAID, and airport facilities mapping for 50 airports across the western portion of the US to be incorporated into the FAA and NGS national wide area augmentation system (WAAS) program.

Gold Beach Municipal Airport Runway Rehabilitation

Gold Beach, OR

Project engineer for the design and construction management services for the rehabilitation of Runway 16-34. The project included new MIRL runway lighting and electrical system upgrade, adding REILs to both runway ends, new lighted wind cones, new airport beacon, under-drain systems and installation of edge reflectors on the parallel taxiway. The design process developed various runway rehabilitation alternatives; the recommended alternative was approved by the FAA and was bid with costs under the original project estimates by 15% on this $1M project. Project financing included both state FAM grant and FAA AIP grant funds.

Aurora State Airport Runway Rehabilitation

Marion County, OR

Project engineer responsible for design and construction management services for the rehabilitation of Runway 17-35. Included the installation of a MIRL runway lighting system, distance to go signs and regulator upgrades. The project included many public meetings to discuss design alternatives. The parallel taxiway was re-striped and designated as a runway for small aircraft during construction.



Jeffrey Mace, PE, CFM

Landside Drainage

Jeffrey Mace is a principal and founder of River City Consultants. He has served as project manager and/or lead engineer on a wide variety of projects throughout Western Colorado as well as the Denver Metro area. Jeffrey has compiled a multi-disciplined engineering history including land development, site design, highway design, hydrologic and hydraulic analysis/design, and structural design and evaluation.

Education

Bachelor of Science in Civil Engineering

Professional Licenses

Professional Engineer, CO 37343

Certified Floodplain Manager, CO US-13-07004

Number of Years Licensed

15

Number of Years of Experience

20

Number of Years With RCC

11

Number of Years in Proposed Role

20

Icon Indicates Local Experience

KE Road Improvements

Mesa County, CO

Project manager and quality assurance supervisor for this project that included approximately 2,000 linear of roadway redesign, including intersection redesign, shoulder and pavement section widening, floodplain analysis, drainage basin analysis, wetlands delineation and mitigation, and guardrail design. This project required that traffic be maintained during construction as well as coordination with utilities and landowners.

Lower Little Salt Wash Riverfront Trail Connection

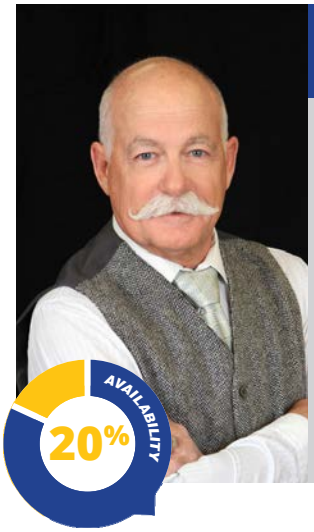
Mesa County, CO

Project manager and quality assurance supervisor for this project that consisted of clearing and grubbing, grading, a base course placement, construction of a 10-foot wide concrete trail with shoulders, associated trail connections, and miscellaneous appurtenances (e.g. signs), and stormwater conveyance facilities (ditches and culverts). Alignment challenges included following serpentine wash while maintaining safe travel and sight distance and surveying of cross sections of the wash to analyze floodplain data in comparison with outdated FEMA mapping. Federal funding required CDOT review and coordination.

Powderhorn Road Improvements Project

Mesa County, CO

Project manager for design services for phased improvements and road widening to Powderhorn Road just west of State Highway 65. Design included additional shoulder to provide safe parking of vehicles, culvert replacements, drainage improvements, and limited areas of road reconstruction. RCC also performed all of the surveying, utility locating and public information services for this design project and performed construction oversight and administration of the infrastructure improvements.



Scott Thompson, PLS

BLM ROW Grant, Surveys

Scott Thompson is a principal and one of the founders of River City Consultants. He has extensive experience in boundary, design, and construction surveys on federal, state, local, and private projects. Since founding River City Consultants, the firm has performed surveying services on over 37 airport projects. Since 1985, Scott has performed and supervised design surveys and construction staking on numerous airports, including the initial layout of Telluride Airport, initial design surveys for Eagle County Airport, construction staking for numerous apron and runway projects throughout Western Colorado, among other design surveys for airports in Colorado, Utah and Wyoming. He also has extensive experience in the surveying of residential and commercial subdivisions, highways, and utility projects.

Professional Licenses

Professional Land Surveyor, CO 18480

Number of Years Licensed

36

Number of Years of Experience

35

Number of Years With RCC

11

Number of Years in Proposed Role

30

Icon Indicates Commercial Service Airport

Icon Indicates Local Experience

Grand Junction Regional Airport Design Surveys

Mesa County, CO

Complete site design surveys on eight acres of existing airport buildings and paved ramps for an airport improvement project. This project included the establishment of a control network for future construction projects.

Grand Junction Regional Airport North Boundary and BLM Withdrawal Survey

Mesa County, CO

North Boundary and BLM withdrawal survey. The project was successfully completed to establish new Government Lots for transfer from the BLM to the Airport Authority to accommodate a new runway.

Grand Junction Regional Airport Aerial Photogrammetry

Mesa County, CO

Coordinate and set control for 2,000 acres of high accuracy aerial photogrammetry with LIDAR. This project, over 90% complete, began in October 2016.

F ½ Road Sidewalk Improvements Project

Mesa County, CO

Survey Project Manager. This sidewalk safety redesign project for Mesa County along F ½ Road. The project included right of way; boundary, topographic, and utility surveying and associated tasks; preparation of construction documents; attention to drainage issues so as not to affect local property owners.



Alec Thomas, PLS, CFM

Surveys, BLM ROW Grant

Alec Thomas is knowledgeable and skilled in boundary, design, and construction surveys, and has completed a variety of survey projects throughout Colorado. Since joining River City Consultants he has been the primary surveyor on numerous design surveys in Colorado, Wyoming and Utah. Alec is a member of the National Society of Land Surveyors and Western Colorado Land Surveyors.

Education

Bachelor of Science in Surveying & Mapping

Professional Licenses

Professional Land Surveyor, CO 38274

Certified Floodplain Manager, CFedS 1718

Number of Years Licensed

6

Number of Years of Experience

17

Number of Years With RCC

5

Number of Years in Proposed Role

17

Icon Indicates Commercial Service Airport

Icon Indicates Local Experience

Grand Junction Regional Airport Runway Overlay and Repavement

Mesa County, CO

Surveyor for runway overlay and repaving design. This project included the establishment of control for data collection on the existing runway surface and for future construction.

Grand Junction Regional Airport Aerial Photogrammetry

Mesa County, CO

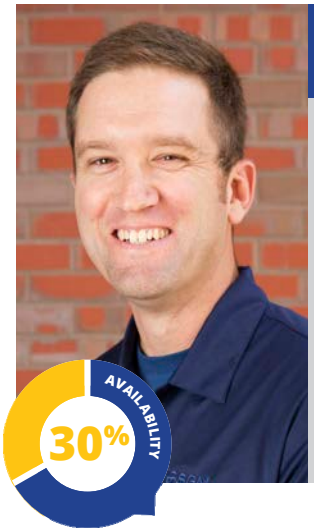
Surveyor responsible for setting control and processing the survey data for aerial photo control points, verification check points and ground detail survey points for 2000 acres of high accuracy aerial photogrammetry with LIDAR. This project, over 90% complete, began in October 2016.

Telluride Regional Airport Runway Reconstruction*

Telluride, CO

Surveyor responsible for monitoring aggregate movements of 3 million cubic yards of shale and sandstone excavation. Construction layout of runway base courses and utilities, including multi-plate tunnel under runway.

* Indicates individual experience



John Boulden, PE

27 ¼ Road Relocation

John Boulden is a structural engineer at SGM with extensive experience in the geo-structural design field. John has designed retaining wall projects using Mechanically Stabilized Earth (MSE), soil nails, soldier pile and lagging, cantilevered concrete, secant pile, and sheet piling. He has experience designing structures using concrete, steel, masonry, and wood materials. Some of the foundation systems he has designed include traditional spread footings as well as drilled concrete piers, helical piers, push piers, auger-cast piers, driven piling, caissons, and micro-piles. He recently co-authored a journal paper on lateral earth pressures on timber lagging.

Education

Master of Science in Civil Engineering

Bachelor of Science in Civil Engineering

Professional Licenses

Professional Engineer, CO, 43185

Number of Years Licensed

6

Number of Years of Experience

12

Number of Years With SGM

9

Number of Years in Proposed Role

8

Icon Indicates Local Experience

Red Canyon Pedestrian Bridge Project

Grand Junction, CO

Project manager for a 110-foot span pedestrian bridge. Design included reinforced concrete abutments, micropile foundation, and mechanically stabilized earthen wall.

Limekiln Pedestrian Bridge Project

Grand Junction, CO

Project manager and lead designer of a 100-foot pedestrian bridge and sidewalk project. Design included reinforced concrete abutments, micropile foundation and large block concrete retaining walls.

29.5 to E.63 Bridge Replacement Project

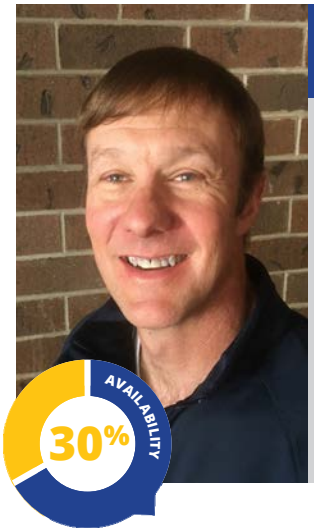
Grand Junction, CO

Project manager and lead designer of a 40-foot canal crossing. Design included reinforced concrete abutments, driven piles and prestressed concrete girders. This project was funded through local agency grants administered by CDOT.

Highway 330 Bridge Reconstruction Project

Mesa County, CO

Project manager for a 64-foot span prestressed concrete box beam bridge. Responsible for bridge design oversight, including design of the deck, beams, integral abutments, pile foundations, quantities, and deck elevations.



Ron Nies, PE

27 ¼ Road Relocation

Ron Nies is a senior engineer at SGM with 27 years of experience in transportation projects, specializing in roadway and interchange design. Ron provides project management, design coordination, plan production, and quality control of a wide range of projects, from large highway and interchange design projects to urban intersection improvements. Ron has extensive experience in all phases of design and is well acquainted with design standards ranging from AASHTO to the Colorado Department of Transportation (CDOT) to local municipalities. As a project manager, Ron emphasizes quality control and team member development. His computer software capabilities include MicroStation, InRoads, AutoCAD, Geopak, and Microsoft Project.

Education

Bachelor of Science in Civil Engineering

Professional Licenses

Professional Engineer, CO, 30594

Number of Years Licensed

6

Number of Years of Experience

27

Number of Years With SGM

1

Number of Years in Proposed Role

27

East Campus Pedestrian Bridge over Boulder Creek

Boulder, CO

Project manager responsible for the engineering of a new 150 foot, prefabricated pedestrian bridge over Boulder Creek on the University of Colorado campus. Management responsibilities included coordinating the bridge design with bike path connection design, coordinating the environmental documentation efforts to meet CDOT Categorical Exclusion requirements, and directing the work of all project subconsultants for lighting, environmental, and geotechnical disciplines.

Clear Creek Crossing, I-70 Ramps at 32nd Avenue

Wheat Ridge, CO

Project manager for the final design of new interchange ramps at the I-70 and 32nd Avenue interchange. The new ramps are required for access to and from a new commercial development being constructed in the adjacent property, Clear Creek Crossing. Project components include four highway ramps, one bridge, retaining walls with sound walls, new traffic signals, monotube sign structures, and extensive phasing plans, all in accordance with CDOT design and plan requirements.

144th and York Street Intersection Improvements

Thornton, CO

Project manager for roadway and storm drain design services for the widening of 144th Avenue between Franklin Street and York Street from two-lanes to five-lanes. The project includes a new traffic signal pole at the intersection and the installation of approximately 1,500 of storm drain, ranging in pipe sizes from 18 inches to 42 inches.



Ryan Gordon, PE

Utility Relocation

Ryan has 14 years of experience working and managing projects in the municipal and industrial sectors. He has provided the engineering design services, engineering construction support, and project management for pump stations, gravity and pressure pipelines, water storage reservoirs and municipal water and wastewater treatment facilities. Specialties include integration with multiple disciplines and startup/balancing of complex treatment trains. Ryan has an extensive knowledge of the State of Colorado's Department of Public Health and Environment regulations for water and wastewater.

Education

Bachelor of Science in Civil Engineering

Professional Licenses

Professional Engineer, CO, 51921

Number of Years Licensed

12

Number of Years of Experience

14

Number of Years With SGM

1

Number of Years in Proposed Role

15

Colorado Springs Local Collector and Interceptor Program

Colorado Springs, CO

Project engineer for the Local Collector and Interceptor Program for the City of Colorado Springs. Duties included the design of several wastewater pipeline creek crossings, conventional gravity conveyance systems utilizing pipe bursting. Ryan prepared several alternative analysis studies based on proposed alignment, best installation options and construction costs.

San Andreas Extension Pipeline (SAPL2) Needs Assessment Report, Alternatives Analysis Report, and Conceptual Engineering Report

San Fransisco, CA

Lead project engineer for the 54-inch San Andreas Extension Pipeline (SAPL2) task order which included the development of the Needs Assessment Report (NAR); Alternatives Analysis Report (AAR) and Conceptual Engineering Report (CER). Tasks included coordinating data collection condition assessment tasks for the NAR, evaluation of alternatives based on criteria including cost, constructability, seismic reliability and maintenance accessibility for the AAR and the progression of the selected alternative for the CER.

Various Water/Sewer Pipeline Projects at Rainbow Municipal Water District

Carlsbad, CA

Project engineer in the design and the construction of various small diameter water and sewer pipelines. He managed the design including obtaining permits for various local agencies, producing plans and specifications, and working with District staff to meet their goals. Ryan performed the construction inspection and project engineering for the project during construction. Activities included day-to-day inspection, stormwater management and project invoicing.



Scott Richards, PE, PG

Geotechnical

Scott Richards with Yeh and Associates has 16 years of experience in geological and geotechnical engineering projects. His experience includes the management of geotechnical engineering projects for design recommendations for airports, roads, bridges and commercial structures. Scott's duties have included report writing, geotechnical, geological engineering, construction management including field personnel in inspection, construction and materials testing, and budgets. Additional experience includes geologic hazards such as expansive/collapsible soils, slope stability analysis (installation and monitoring of piezometers and inclinometers for analysis); deep foundation systems (drilled piers, driven piles, screw piles); and has performed geological engineering/hazards analysis.

Education

Master of Science in Geological Engineering

Bachelor of Science in Environmental Earth Science

Professional Licenses

Professional Engineer CO, 45426

Number of Years Licensed

6

Number of Years of Experience

16

Number of Years With Yeh

4

Number of Years in Proposed Role

16

Commercial Service Airport

Local Experience

Grand Junction Regional Airport Taxiway Reconstruction

Grand Junction, CO

Project manager for the quality assurance testing and inspection of the Taxiway Reconstruction Project. Managed staff and budget, reviewed test results, assembled final reports and performed engineering consultation during the project.

Geotechnical Engineering Project Management

Various Airports

Project manager for geotechnical engineering investigations for the preliminary Grand Junction Regional Airport New Runway Project, Meeker Airport New Runway Project, and the Montrose Regional Airport New Runway Project. Responsibilities included design and implementation of an investigation, lab testing, and providing results, analysis and recommendations for new construction.

La Plata County Regional Airport Taxiway Rehabilitation and Reconstruction

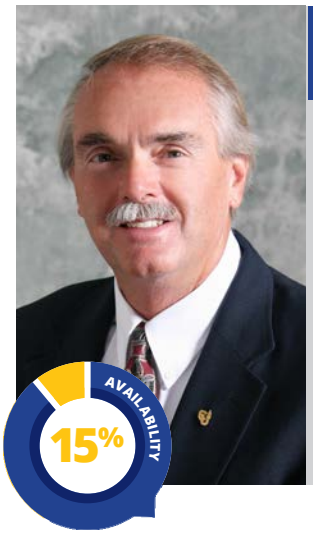
Durango, CO

Project manager for quality assurance testing and inspection of the construction phase. Managed staff and budget, reviewed test results, assembled final reports and performed engineering consultation. Assisted in rutting evaluation during construction phase which led to design and implementation of a subsurface investigation in selected areas for analysis and evaluation of apparent asphalt rutting.

Eagle County Regional Airport Apron Reconstruction

Eagle, CO

Project manager for the quality control testing and inspection of the Apron Reconstruction Project. Managed staff and budget, reviewed test results, assembled final reports during the project



Donald Clark, PE

Geotechnical

Donald Clark is a senior principal and senior consultant for Terracon and has over 44 years of technical and administrative experience in the engineering industry. He established Terracon's Denver and Phoenix offices, and is responsible for directing projects in geotechnical and construction materials engineering. Donald's experience includes providing geotechnical engineering services on a variety of projects located throughout the western United States, including including geotechnical assessments for airports, buildings, roads, streets, highways, bridges, railroads, pipelines, retention ponds, and retaining (MSE) walls.

Education

Master of Science in Civil-Geotechnical Engineering,

Bachelor of Science in Civil Engineering

Professional Licenses

Professional Engineer AZ, 12546

Number of Years Licensed

41

Number of Years of Experience

44

Number of Years With Terracon

23

Number of Years in Proposed Role

44

Icon Indicates Commercial Service Airport

Telluride Regional Airport

Telluride, CO

Project principal for a variety of engineering studies at the airport since 1987 including the design level geotechnical studies for the reconstruction of Runway 9-27 Safety Area Improvements in 2010.

Phoenix Sky Harbor International Airport Maintenance Hangar

Phoenix, AZ

Served as senior principal for Terracon's geotechnical and pavement engineering services for improvements to the existing facility at Sky Harbor International Airport. The project included the evaluation of existing apron pavements following the procedures in ASTM D5340, Standard Test Method for Airport Pavement Condition Index Surveys.

Tucson International Airport General Aviation Infrastructure

Tucson, AZ

Project principal for geotechnical engineering services for the development of GA infrastructure. Development included aircraft storage, self-serve maintenance, fuel and wash-rack area, taxiway and apron areas and public parking. Infrastructure improvements under this contract included utilities and pavements.



Paul Akers, PLS, PMP

Aerial Data

Paul Akers is a senior associate and survey project manager at Woolpert with 31 years of experience. His extensive experience includes photogrammetric and geodetic surveys, GIS data collection and analysis, airborne GPS applications, topographic surveys, geodetic leveling, subsurface utility engineering, hydrographic and boundary surveys. As the manager for numerous aviation-specific geospatial related projects, Paul possesses technical expertise on all mandatory aspects of FAA and related geospatial surveys and mapping requirements. To date, he has overseen the completion of over 400 aeronautical surveys. His project work has also extended into aviation planimetric and topographic data collection projects, airport asset management data collection, and high accuracy geodetic control establishment.

Education

Associate of Science in Civil Technology, Surveying, & Mapping

Professional Licenses

Professional Land Surveyor, AR 1565

Project Management Professional, 1932572

Number of Years Licensed

13

Number of Years of Experience

31

Number of Years With Woolpert

15

Number of Years in Proposed Role

30

Icon Indicates Commercial Service Airport

Orlando International Airport eALP

Orlando, FL

Project manager for this project that involved completing an eALP. The team performed an aeronautical survey to complete ALP base mapping that met the standards outlined in the FAA Advisory Circulars, with further guidance from the FAA Eastern Region and the Office of Airports Safety and Standards. The survey specifications used adhere to the requirements for an Airport Layout Plan per Advisory Circulars.

Asheville Regional Airport eALP

Asheville, NC

Project manager responsible for collecting surveying and mapping information that was used to develop base mapping for an Airport Layout Plan (ALP), including submission to the FAA Airports GIS (AGIS). Topographic mapping was also produced for 1 inch = 1,600 feet scale mapping with 5-foot contour intervals, 4,000 feet laterally on each side of the runway and 4,000 feet off each runway end. The mapping was required for the ALP submittal. Woolpert also developed and delivered orthophotography to a resolution of 0.5-foot pixel size. The entire safety critical dataset was delivered on schedule and without rejection.

Newport News-Williamsburg International Airport eALP Development Support for an Airport Master Plan

Newport News, VA

Project manager responsible for all new airport GIS database mapping and eALP data compliant with the FAA Advisory Circulars AC-150/5300-16A, -17B & -18B. Woolpert collected aerial photogrammetry, conducted an obstruction survey, and developed planimetric data and collected/developed attribution to support airport planning, design and construction activities.



Radha Kandukuri, CP, CMS

Aerial Data

Radha Kandukuri is an experienced photogrammetrist and phase manager within Woolpert's geospatial team. He has an extensive background in acquiring, monitoring and producing the orthophotography process. Radha conducts field surveys, completes photogrammetric processing, leverages oblique imagery and feature attributes, prepares tile layouts, provides quality assurance and quality control, and utilizes flight equipment to gather aerial imagery. Radha was the photogrammetric team lead responsible for collecting hydro breaklines on Fugro's airborne Interferometric Synthetic Aperture Radar (IFSAR) system. Some of his main clients include USACE, Department of Transportation, and National Oceanic and Atmospheric Administration (NOAA).

Education

Master of Science in Geology

Bachelor of Science in Geology

Professional Licenses

Certified Photogrammetrist, 1439

Certified Mapping Scientist, RS197

Number of Years Licensed

7

Number of Years of Experience

14

Number of Years With Woolpert

1

Number of Years in Proposed Role

12

Icon Indicates Commercial Service Airport

Montrose Regional Airport Surveys and ALP Update

Montrose, CO

Photogrammetrist responsible for assisting review of aerial triangulation results and ensured they met or exceeded national map accuracy standards. Woolpert's team gathered aerial imagery, performed obstruction analysis, and completed planimetric and topographic mapping. The digital images were georeferenced in softcopy format to be utilized for mapping and creation of orthophotography. The compiled plans, reports and data files were submitted to the FAA and airport in ESRI ARC Geodatabase and CADD formats.produced the required deliverables for NGS review.

Nevada County Air Park (GOO) Imagery Acquisition (C&S)

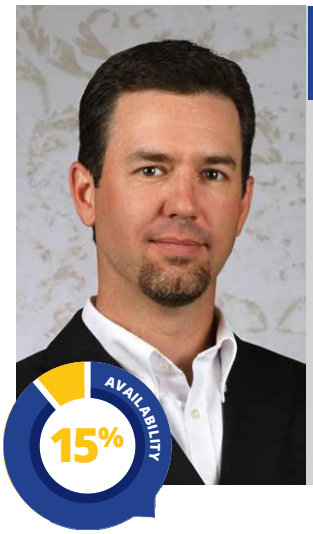
Nevada County, CA

Photogrammetrist who Woolpert engaged with Nevada County Air Park (GOO) and C&S to acquire and process aerial imagery for FAA. The team performed obstruction analysis; developed and delivered AGIS-compliant data for safety critical procedures; submitted the final Imagery Acquisition Report to AGIS; and delivered orthophotography to FAA, NGS and C&S.

Yuma Municipal Airport (2V6) IPD Survey

Yuma, CO

Photogrammetrist who assisted in the Clearflite obstruction analysis, georeferencing of stereo imagery, and orthorectification process. Woolpert acquired aerial imagery for the Yuma Municipal Airport (2V6) to produce an IDP survey. This included development of new orthophotography; collecting six-inch GSD imagery for obstruction analysis; runway critical point and profile surveys; and developing and delivering an AGIS-compliant data file containing safety critical data.



Maurice Foye

SWPPP

Maurice Foye is an executive vice president and acting primary lead for HRL Compliance Solutions Inc. with 12 years of experience, specializing in regulatory and environmental compliance for industrial project design and implementation. He provides quality control and assessment through organizational support for team members on a program basis. Maurice's expertise is related to minimization of project operational costs and efficient regulatory and environmental program development associated with: wildlife management, local, state and federal permitting, 404 compliance, and unmanned aerial survey.

Education

Bachelor of Science in Forestry, Ecosystem Science, and Management

Professional Licenses

n/a

Number of Years Licensed

n/a

Number of Years of Experience

12

Number of Years With HRL Compliance

12

Number of Years in Proposed Role

12

Icon Indicates Commercial Service Airport

Pittsburgh International Airport Project

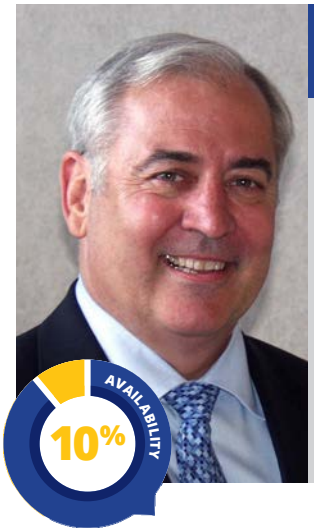
Pittsburgh, Pennsylvania

Providing interpolation of federal regulations related to the Migratory Bird Treaty Act, applying compliance principles to system design and engineering for clients working at Pittsburgh International Airport. The scope of work included designing, fabricating, and installing large-scale bird deterrent systems over large water impoundments to protect aircraft from bird aircraft strike hazards (BASH), and eliminate harm to birds landing in potentially contaminated water.

Willow Creek Crygenic Gas Plant

Western Colorado

Provided regulatory and environmental oversight during planning and construction of the $410 million cryogenic gas plant. The scope of work included site investigation, reporting, permitting and construction oversight for stormwater, U.S. Army Corps of Engineers (USACE), reclamation, and noxious weeds management.



Ben Thompson, CVS, CPE, CSI

Cost Management/Value Engineering

Ben Thompson with Sunland Group has more than 37 years of experience in project management, construction management, facilities studies, value engineering, feasibility studies, economic analysis, project controls, and life-cycle costing. He has provided project management services on numerous aviation, light rail, building, technology, industrial, laboratory, and military projects. His commercial airport experience includes projects at Dallas/Fort Worth International Airport, George Bush Intercontinental Airport Houston, Austin-Bergstrom International Airport, San Antonio International Airport, Denver International Airport, Los Angeles International Airport, Newark Liberty International Airport, John F. Kennedy International Airport, LaGuardia Airport, Seattle-Tacoma International Airport, and Logan International Airport.

Education

Bachelor of Science in Technology

Professional Licenses

Certified Value Specialist, 88302

Certified Professional Estimator, 259

Construction Specifications Institute

Number of Years Licensed

37

Number of Years of Experience

37

Number of Years With Sunland

18

Number of Years in Proposed Role

30

Icon Indicates Commercial Service Airport

Denver International Airport Multi-Year IDIQ Contract

Denver, CO

Sunland is part of a team providing construction management services, including cost estimating, on this multi-year IDIQ contract that includes the design and construction of both vertical and horizontal projects. Ben's responsibilities include the staffing of project managers, construction managers, estimators, schedulers, and inspectors for multiple task orders. Ben is Sunland's project executive on this project and is also part of the construction claims defense team.

Austin-Bergstrom International Airport Architectural/Engineering Services Rotation List

Austin, TX

Chief cost estimator responsible for cost estimations related to architectural investigation, design recommendations, and programmatic support on the ABIA Terminal Improvements Phase 5 project; the Information Systems (IS) Building 7355 Emergency Power Improvements project; Ground Transportation Staging Area (GTSA) Relocation and Renovation; and the Cell Phone "Stage-and-Go" Parking Lot projects.

Austin-Bergstrom International Airport New Airport Project

Austin, TX

During the conversion of Bergstrom Air Force Base to commercial use, Ben assisted in negotiations of the architect/engineer fees for changes in the design. It was his responsibility to come up with an independent estimate of what changes were required because of design errors or emissions and what changes were required because of changes in the scope of work for the particular designer. Ben's estimates were based on drawings generated, types of drawings (plans, detail sheets, elevations, etc.), engineering hours, engineer-in-training hours, CAD hours, etc. Since that time, Ben has been involved with numerous projects for the Airport.



GARVER

GarverUSA.com

GRAND JUNCTION REGIONAL AIRPORT





Statement of Qualifications for

RUNWAY 11/29 REPLACEMENT

Professional Airport Engineering Services





Kimley»Horn

Prepared for Grand Junction Regional Airport by Kimley-Horn

March 15, 2017

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

SIGNATURE PAGE
RFQ FORM #1

"✓"Check box that indicates business structure of Respondent

- ☐ Individual or Proprietorship
- ☐ Partnership or Joint Venture
- ☑ Corporation

The undersigned certifies that (s)he is Senior Vice President/Principal (title) of the Respondent entity named below; that (s)he is designated to sign this Proposal Form (if a Corporation then by resolution with Certified Copy of resolution attached) for and on behalf of the entity named below, and that (s)he is authorized to execute same for and on behalf of and bind said entity to the terms and conditions provided for in the Proposal as required by this RFQ, and has the requisite authority to execute an Agreement on behalf of Respondent, if awarded

Respondent Organization Name: Kimley-Horn and Associates, Inc.

By: 

Printed Name: Michael J. Hermann, P.E.

Title: Senior Vice President/Principal

If Respondent is a Joint Venture, an authorized signature from a representative of each party is required.

By: _____

Printed Name: _____

Title: _____

Kimley»Horn

Certificate of Secretary

To Whom It May Concern:

I am the duly qualified and acting Secretary of Kimley-Horn and Associates, Inc., a North Carolina Corporation.

The following is a true copy of a resolution duly adopted by the Board of Directors of the corporation at the Board meeting held on December 15, 2016 and entered in the minutes of such meeting in the minute book of the corporation.

"The Board unanimously approved the contract signing authority of employees as presented." (A copy of the employee lists as presented is enclosed.)

The resolution is in conformity with the articles of incorporation and bylaws of the corporation, has never been modified or repealed, and is now in full force and effect.

Dated:

Richard N. Cook, Secretary

(corporate seal)



Kimley-Horn and Associates, Inc.
FULL CONTRACT SIGNING AUTHORITY
(December 15, 2016)

ATLANTIC

NEW YORK
Nejad, Anush A.

NORTHERN VIRGINIA
Carter, Erica V.
Chavers, James T.
Elman, Paul D.
Lefton, Steven E.
Martin, Robert J.
Murphy, Terence T.
Sauro, Thomas J.
Whyte, Richard D.
Yarnal, Brian D.

RICHMOND
Brewer, Brian J.
Lickliter, Ashley C.
White, Timothy E.

VIRGINIA BEACH
Chambers, Jon S.
Mackey, William F.
Marscheider, Edward A.
Nash, William A.
Royal, Jack R.
Tewksbury, Carl F.

CALIFORNIA

LOS ANGELES DT
Blume, Robert D.
Kerry, Nicole M.
Phaneuf, Alyssa S.

LOS ANGELES SFV
Fares, Jean B.

OAKLAND
Dankberg, Adam J.
Durrenberger, Randal R.

ORANGE
Adrian, Darren J.
Ciandella, Serine A.
Fares, George B.
Hourigan, E. Vincent
Matson, Jason B.
Melvin, M. Pearse
Phillips, Chad E.

PLEASANTON
Mowery, Michael C.
Sowers, Brian E.

SACRAMENTO
Coppin, Thomas G.
Melvin, Enda
Squires, Christopher A.
Weir, Matthew D.

SAN DIEGO
Barlow, Matthew T.
Harry, Jennifer L.
Kaltsas, Joseph D.
Knapton, Michael J.
Landaal, Dennis J.
Meyerhofer, Peter N
Podegracz, Anthony J.
Ross, Michael S.

SAN JOSE
Hedayat, Leyla
Venter Frederik J.

FLORIDA

BOCA-DELRAY
Schwartz, Michael F.
Webber, Jason A.

FORT LAUDERDALE
Alam, Mudassar M.
Capelli, Jill A.
Kyle, Gregory S.
Ratay, Gary R.
Saxena, K.K.

JACKSONVILLE
Mecca, Joseph P.
Roland, George E.

LAKELAND
Bulloch, Kelly B.
Wilson, Mark E.

MIAMI
Baldo, Burt L.
Buchler, Aaron E.
Collier, Julio A.
Fernandez, Jorge L.

OCALA
Bryant, M. Lewis
Busche, Richard V.

ORLANDO
Chau, Hao T.
Jackson, Jay R.
Martin, Jonathan A.
Mingonet, Milton S.
Thigpen, Jonathan D.

SARASOTA
Nadeau, Gary J.
Schmid, Seth E.
Stovall, Thomas M.

TALLAHASSEE
Barr, Richard R.
Sewell, Jon S.

TAMPA
Campbell, David C.
Gilner, Scott W.
White, Wayne E.

VERO BEACH
Cave, Derrick B.
Good, Brian A.
Peed, Brooks H.
Roberson, Kevin M.

WEST PALM BEACH
Atz, John C.
Barnes, R. Russell
Cherry, Paul L.
Jackson, Kenneth W.
Mufleh, Marwan H.
Rapp, Bryan T.
Schanen, Kevin M.
Sumislaski, James M.
Walthall, David W.

MID-WEST

CHICAGO DOWNTOWN
Dvorak, Jr., William E.
Morton, Jr., Arthur J.

CHICAGO SUBURBAN
Antony, Dean M.
Heinen, Andrew N.

TWIN CITIES
Bishop, Mark C.
Coyle, Daniel J.
Danielson, Paul B.
Horn, Jon B.
Leverett, Christopher C.
Matzek, William D.
Smalkoski, Brian R.

MOUNTAIN

DENVER
Colvin, Scott W.
Krell, Gabriel M.
Phelps, Randall J.
Rowe, Curtis D.
Salvagio, Robin

LAS VEGAS
Ackeret, Kenneth W.
Colety, Michael D.

MESA
Margetts, Sterling T.
Marin, Laura S.
Walnum, Nathan C.

PHOENIX
Conrad, John R.
Hermann, Michael J.
Kissinger, John C.
Leistiko, David J.
Mutti, Brent H.
Noon, Lisa K.
Omais, Ahmad A.
Perillo, Adam C.
Pretorius, Petrus S.
Purtle, Vicki L.
Schiller, Michael G.

TUCSON
Crowther, Brent C.

SOUTHEAST

ALPHARETTA
Fanney, Lawson H.
Hamilton, James R.

ATLANTA
Rushing, Michael L.
Walker, John D.
Wilson, Deborah L.

ATLANTA MIDTOWN
Fink, Kenneth L.
Meador, Emily H.
Montanye, Emmeline F.
Ross, Robert A.
Stricklin, David L.
Webb, Floyd C.

CHARLOTTE
Blakley, Jr., Stephen W.
Edwards, Matthew A.
Hume, Robert M.
Wilhelm, William R.

MEMPHIS
Collins, James F.
Danley, Drake E.

NASHVILLE
Dufour, Zachary J.
Rhodes, Christopher D.

RALEIGH
Adams, Richard C.
Barber, Barry L.
Burchett, Thomas F.
Byrd, Michael N.
Cook, Richard N.
Deans, Neil T.
Dunzo, Mark W.
Flanagan, Tammy L.
McEntee, David L.
Nuckols, Charles A.
Penny, H. Dean
Rohrbaugh, Richard R.
Venters, Samantha
Voisin, William J.
Wilson, Jon E.
Wilson, Mark S.

TEXAS

AUSTIN
Boecker, Brian C.
Van Leeuwen, Andrew

DALLAS
Hall, James R.
Henigsman, Dean A.
Hoppers, Kevin P.
Nathan, Aaron W.
Smith, Eric Z.
Swindler, Roderick P.
Wilshire, Roy L.

FORT WORTH
Arnold, Scott R.
Gary, Glenn A.
James, Jeffery

FRISCO
Brignon, Brit A.
McCracken, Paul D.

HOUSTON
Frysinger, Chris V.
Guillory, Michael B.

LAS COLINAS
Tribble, Guy B.

Kimley-Horn and Associates, Inc.
STANDARD CONTRACT SIGNING AUTHORITY
December 15, 2016
These persons have authority to sign contracts using unmodified Kimley-Horn forms (not client-drafted contracts).

ATLANTIC

BALTIMORE
Falk, Katherine W.
Kraft, Jonathan H.

NEW YORK
Gibson, Adam T.
Van Hise, Kevin

NORTHERN VIRGINIA
Giffin, Geoffrey D.
Harris, Michael J.
Kauppila, John L.
Papazian, Edward Y.
Stevens, Ross S.

RICHMOND
Ellington, David B.
Harmon, Amanda R.
Musarra, Salvatore J.

VIRGINIA BEACH
Brich, Stephen C.
Collins, Carroll E.
France, William D.
Jucksch, Rebecca R.
Mertig, Karl E.
Miller, Edward W.

CALIFORNIA

LOS ANGELES DT
Chakravarthy, Srikanth
Choi, Michael

LOS ANGELES SFV
Wakenhut, Jonathan R.

OAKLAND
Akwabi, Kwasi
Dean, Felicia C.

ORANGE
Holst, Tyler J.
Melchor, Jason J.
Regueiro, Eric

PLEASANTON
Pulliam, John E.
Tsoi, Kevin K.

SACRAMENTO
Klein, Paul A.
Pittalwala, Fareed S.

SAN DIEGO
Duenas, Ross P.
Espelet, Leonardo E.
McCormick, Matthew
Sorenson, David K.
Washkowiak, Michael S.

SAN JOSE
Worthington-Forbes, Laura

FLORIDA

BOCA-DELRAY
Spruce, Michael D.

FORT LAUDERDALE
Falce, Christopher T.
McWilliams, John J.
Robertson, Stewart E.

FORT MYERS
Van Buskirk, Peter T.

JACKSONVILLE
Brenny, Martin T.
Schilling, William J.

LAKELAND
Lewis, Jason A.

ORLANDO
Burkett, Leon F.
Tate, Jr., S. Clif

SARASOTA
Waddill, William D.

SARASOTA
Conerly, William E.

TALLAHASSEE
Wetherell, Ryan S.

TAMPA
Hatton, Christopher C.
Lee, Nathan Q.

VERO BEACH
Husainy, Kinan F.
Kiefer, Michael E.
Van Rens, Peter J.

WEST PALM BEACH
Fairchild, Angelina
Heggen, Christopher W
Potts, John E.

MIDWEST

CHICAGO DOWNTOWN
Lemmon, Peter
Marnell, Colleen L.

CHICAGO SUBURBAN
Muller, Justin M.
Rahman, M. Anees
Sjogren, Timothy

INDIANAPOLIS
Butz, Jr., William A.

TWIN CITIES
Henderson, Benjamin J.
Lincoln, Thomas J.
Pertzsch, Jerry D.
Sieh, Patricia D.
Witzig, Jeanne M.

MOUNTAIN

DENVER
Steder, Matthew C.
Turner, Meaghan M.
Valentine, Brian W.

LAS VEGAS
Belsick, Jody
Moles, Richard A.

MESA
Grandy, Michael L.

PHOENIX
Burgess, Lisa M.
Burns, Leslie D.
Delmarter, Michael L.
Haney, Stephen E.

RENO
O'Brien, Molly M.

SALT LAKE CITY
Johnson, Zachary A.

TUCSON
Solis, Richard P.

SOUTHEAST

ALPHARETTA
Fanney, Angela L.
West, Brian B.

ATLANTA
Newton, Gary T.

ATLANTA MIDTOWN
Johnston, Sean P.
Nix, Christopher J.
Strychalski, Raymond P.

CHARLOTTE
Hampton, Eric C.
Taylor, Benjamin S.
Watts, Austin L.

COLUMBIA
Guy, Jonathan R.
Iser, Christopher M.

DURHAM DOWNTOWN
Beck, Chadwick W.
Lewellyn, Earl R.

MEMPHIS
Monroe, Kenneth W.

NASHVILLE
Coode, David A.
McMaster, Ryan

RALEIGH
Bostic, Christopher O.
Cochran, Adam P.
Hachem, Stephanie L.
Howell, Cory J.
Moore, Jeffrey W.
Reed, Elizabeth A.
Robinson, Larry D.
Sutter, Karl V.

TEXAS

AUSTIN
Parker, Brian J.

BRYAN/COLLEGE STATION
Harris, Joseph C.

DALLAS
Galloway, Steven D.
Gaskey, Kevin S.
Harris, Mark E.
Hart, Patrick B
Kacir, Kent C.
Lucas, Matthew A.
Underwood, Sarah M.
Williamson, Sarah T.

FORT WORTH
Morales, Hugo

FRISCO
Dickey, Kyle A.
Millner, Daniel C.
Safford, Ryan C.

HOUSTON
Frysinger, Ashley M.
Kirkland, Mark R.

LAS COLINAS
Delmotte, Ryan M.

MCKINNEY
Riccardi, Joseph C.

SAN ANTONIO
Cox, B. Matthew
Holscher, Nicholas F.

THE WOODLANDS
Freeman, Jr., Steven C.

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

SUBMITTAL CHECKLIST
RFQ FORM #2

Use this checklist to ensure all required document have been included in the SOQ and that they are properly ordered.

	Document	Initial to Indicate Document is Included
1.	Submittal Cover/Signature Page (RFQ Form #1)	
2.	Submittal Checklist (RFQ Form #2)	
3.	Litigation Disclosure (RFQ Form #3)	
4.	Conflict of Interest (RFQ Form #4)	
5.	Affirmative Action Plan (If Required)	
6.	Executive Summary	
7.	Statement of Qualifications	

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

LITIGATION DISCLOSURE
RFQ FORM #3

Respond to each of the questions below by checking the appropriate box. Failure to fully and truthfully disclose the information required by this Litigation Disclosure form may result in the disqualification of your response from consideration or termination of the contract, if awarded.

Have you or any member of your Firm or Team to be assigned to this engagement ever been indicted or convicted of a felony or misdemeanor greater than a Class C in the last five (5) years?

YES ☐
NO ☑

Have you or and member of your Firm, your Firm, or Team to be assigned to this engagement been terminated (for cause of otherwise) from any work being performed for the Grand Junction Regional Airport, Walker Field Airport Authority, or any other Federal, State, or Local Government, Airport, or Private Entity?

YES ☑
NO ☐

Have you or and member of your Firm or Team to be assigned to this engagement been involved in and claim or litigation with the Grand Junction Regional Airport, Walker Field Airport Authority, or any other Federal, State, or Local Government, Airport, or Private Entity?

YES ☑
NO ☐

If you have answered "Yes" to any of the above questions, please indicate the name(s) of the person(s), the nature, and the status and/or outcome of the information, indictment, conviction, termination, claim or litigation, as applicable. Any such information should be provided on a separate page, attached to this form and submitted with your response.

Response to RFQ Form #3 Question 2:

Kimley-Horn is not aware of any contracts terminated for cause, and we do not track contracts terminated for convenience.

Response to RFQ Form #3 Question 3:

Currently, Kimley-Horn has no pending or open litigation or claims with any airport.

In 2016, Kimley-Horn provided consulting services to more than 125 airports nationwide. In the past five years, Kimley-Horn's aviation practice had consultant fees of nearly $300M. Kimley-Horn and its subsidiaries have provided services in all 50 states and numerous countries. Because of the many and varied projects we have completed, we are subject to various legal proceedings from time to time and in the ordinary course of business. None of the pending matters, if decided against Kimley-Horn, would have a material impact on our financial statements or impair in any way our ability to serve our clients. Generally, these matters are covered by insurance, and we consider them to be without merit. If you would like to discuss our legal matters in more detail, please contact Kimley-Horn's General Counsel, Richard Cook, at 919.677.2058.

The cases related to commercial airport projects litigated in the last five years are as follows:

- Arkansas: The W.L. Harper Company v. Northwest Arkansas Regional Airport Authority, et al: United States District Court Western District of Arkansas Fayetteville Division; Case No. 145390; filed 2014; General Contractor suit for payment; **mediated; closed 2015**.
- Florida: Chalks Airline, Inc. v. Linden Airport Services Corp, et al: United States District Court for the Southern District of Florida; Case No. 15-CV-24322-UNGARO/OTAZO-REYES; filed 2015; alleged economic loss; **all claims against Kimley-Horn were dismissed by the court; closed 2016**.

The claims related to commercial airport projects in the last five years are as follows:

- Arizona: Nesbitt Contracting Co (client), Phoenix Mesa Gateway Airport; error in plans led to additional costs by the client; **settled; closed 2016.**
- Colorado: Telluride Regional Airport Authority (client), error by survey subconsultant; Kimley-Horn worked with client; **settled; closed 2016.**
- Florida: County of Volusia, FL (client), Daytona Airport Taxiway project: error in plans led to additional costs to the client; **settled; closed 2014.**
- Minnesota: Metropolitan Airports Commission (client), Rental Car Facility at MSP Airport: error in plans led to additional costs to the client; **settled; closed 2014.**

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

CONFLICT OF INTEREST (COI) DISCLOSURE FORM
RFQ FORM #4

This COI Disclosure Form must be completed by the Firm and each of its Subcontractors.
This COI Disclosure Form must be signed by a principal of the Firm to certify that it is correct.
A Firm's certification that its disclosure form is correct includes the disclosure by its Associates and Subcontractors.
My signature certifies that as disclosed on or attached to the present form:
The Firm's disclosures are complete, accurate, and not misleading.
The Firm has received COI Disclosure Form(s) from all Subcontractors (if any) and the present form has attached any COI Disclosure Form(s) thereof.

I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	Kimley-Horn and Associates, Inc.
Address:	4582 S. Ulster Street, Suite 1500, Denver, CO 80237
Signature:	
Name (type/print):	Michael J. Hermann, P.E.
Title:	Senior Vice President/Principal
Date:	February 22, 2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
furnish all relevant facts that are necessary to make the response complete, accurate, and not misleading; and identify any actions that must be taken to avoid, neutralize, or mitigate such conflict of interest (e.g. communications barriers, restraint or restriction upon future contracting activities, or other precaution)

1. Is any Associate of the Firm a former employee of the Airport within the last five years or a family member of a current employee of the Airport?
☐ YES ☑ NO

2. Does the Firm or any Associate of the Firm have a conflict of interest with regard to any known member of the Airport procurement evaluation or selection team?
☐ YES ☑ NO

3. Does the Firm, or any Associate of the Firm, have any past, present or currently planned interests that are an Actual or Potential Conflict of Interest, with respect to performing the work for the Airport.
☐ YES ☑ NO

4. Have Subcontractors furnished COI Disclosure Forms separate from the present form? (If yes, attach Subcontractor disclosures).
☑ YES ☐ NO

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

CONFLICT OF INTEREST (COI) DISCLOSURE FORM
RFQ FORM #4

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I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	Connico Incorporated
Address:	2594 N. Mount Juliet Road, Mount Juliet, TN 37122
Signature:	Connie S. Gowder
Name (type/print):	Connie S. Gowder
Title:	President/CEO
Date:	March 3, 2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
furnish all relevant facts that are necessary to make the response complete, accurate, and not misleading; and identify any actions that must be taken to avoid, neutralize, or mitigate such conflict of interest (e.g. communications barriers, restraint or restriction upon future contracting activities, or other precaution)

1. Is any Associate of the Firm a former employee of the Airport within the last five years or a family member of a current employee of the Airport?
   ☐ YES ☒ NO

2. Does the Firm or any Associate of the Firm have a conflict of interest with regard to any known member of the Airport procurement evaluation or selection team?
   ☐ YES ☒ NO

3. Does the Firm, or any Associate of the Firm, have any past, present or currently planned interests that are an Actual or Potential Conflict of Interest, with respect to performing the work for the Airport.
   ☐ YES ☒ NO

4. Have Subcontractors furnished COI Disclosure Forms separate from the present form? (If yes, attach Subcontractor disclosures).
   ☐ YES ☒ NO

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

CONFLICT OF INTEREST (COI) DISCLOSURE FORM
RFQ FORM #4

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I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm: River City Consultants Inc
Address: 744 Horizon Court, Suite 110, Gr. Jct, CO 81506
Signature: K Scott Thompson
Name (type/print): K. Scott Thompson
Title: President
Date: February 24, 2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
furnish all relevant facts that are necessary to make the response complete, accurate, and not misleading; and identify any actions that must be taken to avoid, neutralize, or mitigate such conflict of interest (e.g. communications barriers, restraint or restriction upon future contracting activities, or other precaution)

1. Is any Associate of the Firm a former employee of the Airport within the last five years or a family member of a current employee of the Airport?
   ☐ YES ☒ NO

2. Does the Firm or any Associate of the Firm have a conflict of interest with regard to any known member of the Airport procurement evaluation or selection team?
   ☐ YES ☒ NO

3. Does the Firm, or any Associate of the Firm, have any past, present or currently planned interests that are an Actual or Potential Conflict of Interest, with respect to performing the work for the Airport.
   ☐ YES ☒ NO

4. Have Subcontractors furnished COI Disclosure Forms separate from the present form? (If yes, attach Subcontractor disclosures).
   ☐ YES ☒ NO

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

CONFLICT OF INTEREST (COI) DISCLOSURE FORM
RFQ FORM #4

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The Firm has received COI Disclosure Form(s) from all Subcontractors (if any) and the present form has attached any COI Disclosure Form(s) thereof.

I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	Ground Engineering Consultants, Inc.
Address:	41 Inverness Drive Englewood, Colorado 80112 (Corporate Address)
Signature:	
Name (type/print):	Hsien-Hsiang Chiang
Title:	Vice President
Date:	March 3, 2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
furnish all relevant facts that are necessary to make the response complete, accurate, and not misleading; and identify any actions that must be taken to avoid, neutralize, or mitigate such conflict of interest (e.g. communications barriers, restraint or restriction upon future contracting activities, or other precaution)

1. Is any Associate of the Firm a former employee of the Airport within the last five years or a family member of a current employee of the Airport?
☐ YES ☒ NO

2. Does the Firm or any Associate of the Firm have a conflict of interest with regard to any known member of the Airport procurement evaluation or selection team?
☐ YES ☒ NO

3. Does the Firm, or any Associate of the Firm, have any past, present or currently planned interests that are an Actual or Potential Conflict of Interest, with respect to performing the work for the Airport.
☐ YES ☒ NO

4. Have Subcontractors furnished COI Disclosure Forms separate from the present form? (If yes, attach Subcontractor disclosures).
☐ YES ☒ NO

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

CONFLICT OF INTEREST (COI) DISCLOSURE FORM
RFQ FORM #4

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The Firm's disclosures are complete, accurate, and not misleading.
The Firm has received COI Disclosure Form(s) from all Subcontractors (if any) and the present form has attached any COI Disclosure Form(s) thereof.

I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	LEAN Technology Corporation
Address:	5319 University Dr., Suite 141, Irvine, CA 92612
Signature:	
Name (type/print):	Doron Lean
Title:	President
Date:	03-13-2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
furnish all relevant facts that are necessary to make the response complete, accurate, and not misleading; and identify any actions that must be taken to avoid, neutralize, or mitigate such conflict of interest (e.g. communications barriers, restraint or restriction upon future contracting activities, or other precaution)

1. Is any Associate of the Firm a former employee of the Airport within the last five years or a family member of a current employee of the Airport?
☐ YES ■ NO

2. Does the Firm or any Associate of the Firm have a conflict of interest with regard to any known member of the Airport procurement evaluation or selection team?
☐ YES ■ NO

3. Does the Firm, or any Associate of the Firm, have any past, present or currently planned interests that are an Actual or Potential Conflict of Interest, with respect to performing the work for the Airport.
☐ YES ■ NO

4. Have Subcontractors furnished COI Disclosure Forms separate from the present form? (If yes, attach Subcontractor disclosures).
☐ YES ■ NO

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

CONFLICT OF INTEREST (COI) DISCLOSURE FORM
RFQ FORM #4

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My signature certifies that as disclosed on or attached to the present form:
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I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	Alpine Archaeological Consultants, inc.
Address:	PO Box 2075 Montrose, CO 81402
Signature:	Kimberly L. Redman
Name (type/print):	Kimberly L Redman
Title:	President/General Manager
Date:	03/03/2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
furnish all relevant facts that are necessary to make the response complete, accurate, and not misleading; and identify any actions that must be taken to avoid, neutralize, or mitigate such conflict of interest (e.g. communications barriers, restraint or restriction upon future contracting activities, or other precaution)

1. Is any Associate of the Firm a former employee of the Airport within the last five years or a family member of a current employee of the Airport?
   ☐ YES ☒ NO

2. Does the Firm or any Associate of the Firm have a conflict of interest with regard to any known member of the Airport procurement evaluation or selection team?
   ☐ YES ☒ NO

3. Does the Firm, or any Associate of the Firm, have any past, present or currently planned interests that are an Actual or Potential Conflict of Interest, with respect to performing the work for the Airport.
   ☐ YES ☒ NO

4. Have Subcontractors furnished COI Disclosure Forms separate from the present form? (If yes, attach Subcontractor disclosures).
   ☐ YES ☒ NO

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

CONFLICT OF INTEREST (COI) DISCLOSURE FORM
RFQ FORM #4

This COI Disclosure Form must be completed by the Firm and each of its Subcontractors.
This COI Disclosure Form must be signed by a principal of the Firm to certify that it is correct.
A Firm's certification that its disclosure form is correct includes the disclosure by its Associates and Subcontractors.
My signature certifies that as disclosed on or attached to the present form:
The Firm's disclosures are complete, accurate, and not misleading.
The Firm has received COI Disclosure Form(s) from all Subcontractors (if any) and the present form has attached any COI Disclosure Form(s) thereof.

I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	Harris Miller Miller & Hanson Inc.
Address:	77 South Bedford Street, Burlington MA 01803
Signature:	Mary Ellen Eagan
Name (type/print):	Mary Ellen Eagan
Title:	President & CEO
Date:	March 6, 2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
furnish all relevant facts that are necessary to make the response complete, accurate, and not misleading; and identify any actions that must be taken to avoid, neutralize, or mitigate such conflict of interest (e.g. communications barriers, restraint or restriction upon future contracting activities, or other precaution)

1. Is any Associate of the Firm a former employee of the Airport within the last five years or a family member of a current employee of the Airport?
   ☐ YES ☐ (NO)

2. Does the Firm or any Associate of the Firm have a conflict of interest with regard to any known member of the Airport procurement evaluation or selection team?
   ☐ YES ☐ (NO)

3. Does the Firm, or any Associate of the Firm, have any past, present or currently planned interests that are an Actual or Potential Conflict of Interest, with respect to performing the work for the Airport.
   ☐ YES ☐ (NO)

4. Have Subcontractors furnished COI Disclosure Forms separate from the present form? (If yes, attach Subcontractor disclosures).
   ☐ YES ☐ (NO)

GRAND JUNCTION REGIONAL AIRPORT
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I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm: Amec Foster Wheeler Environment & Infrastructure
Address: 2275 Logos Court, Grand Junction, CO 81505
Signature: [signature]
Name (type/print): STEVEN D. RIMA
Title: VICE PRESIDENT
Date: 10 March 2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
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The Firm has received COI Disclosure Form(s) from all Subcontractors (if any) and the present form has attached any COI Disclosure Form(s) thereof.

I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm: HBL Compliance Solutions Inc
Address: 2385 F ½ Road Grand Junction Colorado 81505
Signature: [signature]
Name (type/print): Herman Lucero
Title: President
Date: February 27, 2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
furnish all relevant facts that are necessary to make the response complete, accurate, and not misleading; and identify any actions that must be taken to avoid, neutralize, or mitigate such conflict of interest (e.g. communications barriers, restraint or restriction upon future contracting activities, or other precaution)

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☐ YES ☒ NO

4. Have Subcontractors furnished COI Disclosure Forms separate from the present form? (If yes, attach Subcontractor disclosures).
☐ YES ☒ NO

EQUAL EMPLOYMENT OPPORTUNITY (EEO) AND AFFIRMATIVE ACTION POLICY (AAP) STATEMENT OF KIMLEY-HORN AND ASSOCIATES, INC.

Effective May 1, 2016

It is the policy of Kimley-Horn, and my personal commitment to provide fair and equal treatment of all current and prospective employees without regard to race, color, age, religion, sex, sexual orientation, gender identity, marital status, national origin, qualified disability, medical condition, protected veteran status, or any other reason under applicable federal, state, or local laws. This commitment to fairness means that we provide equal opportunities in all areas of employment, including recruitment, selection, job changes, promotions, terminations, wages or other forms of compensation, benefits, training, and other privileges, terms, and conditions of employment. Kimley-Horn commits to comply with the equal employment and affirmative action regulations of various federal, state, and local governmental entities, including Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended (VEVRAA) and Titles VI and VII of the Civil Rights Act of 1964 as amended.

Kimley-Horn takes affirmative action to ensure that all employment practices are free of discrimination. A written Affirmative Action Plan is prepared annually to document responsibilities, implementation and dissemination plans, mechanism for internal monitoring, and goals. Any employee or applicant may receive a copy of the plan by contacting the Affirmative Action Officer.

Barry L. Barber, Senior Vice President, and Joy A. Pado, Vice President, have been designated as the firm's Title VI, EEO and Affirmative Action Officers and assigned overall responsibility for the coordination, implementation, and direction of the Affirmative Action Plan and EEO Program. The Board of Directors reviews the Affirmative Action Plan and regularly monitors performance against the plan. In addition, all other employees are expected to perform their job responsibilities in a manner that supports equal employment opportunity for all.

Any employee or applicant for employment who believes he or she has been treated in a way that violates this policy should contact their supervisor; a member of the Regional Human Resources team; Mr. Barber; Ms. Pado; or John C. Atz, President. Responsible parties will promptly investigate allegations of discrimination or harassment in a confidential manner, and Kimley-Horn will take appropriate action in response to these investigations. Any employee committing any discriminatory practice will be subject to discipline up to, and including, termination. We will not tolerate any retaliation against any employee or applicant for employment who raises a concern about a potential violation of this policy or provides any information in connection with any complaint.

John C. Atz, PE, CEO

5/1/16
Date

EXECUTIVE SUMMARY

Kimley-Horn would like to thank the Grand Junction Regional Airport Authority (GJRAA) for the opportunity to present our team's qualifications, experience, resources, and approach to successfully completing your Runway 11/29 Replacement Program. We are confident our team is your best choice for this project. We make this statement with confidence, as **we are currently engaged in similar successful multi-year FAA-funded runway programs at Telluride Regional Airport, El Paso International Airport, San Antonio International Airport, and Huntington Tri-State Airport**. Our team has devoted a considerable amount of time studying the planning, preliminary design, and environmental documents prepared for this project. The knowledge gained through review of relevant, publicly available project and Airport information has enabled us to hand-pick the best suited staff and subconsultants for our team. Through our research we have developed a deep understanding of the project,which allows us to quickly become your trusted advisor moving this project forward.

The local and national partners selected to complement our in-house experts provide additional specialty services to ensure all aspects of your project are addressed:

- **River City Consultants, Inc. (River City)**, a local partner will provide **professional land surveying** services and complete the Airports Geographic Information System (AGIS), control, and obstruction surveys. In addition, they will provide **civil engineering** for landside roadway design and local agency coordination.
- **Ground Engineering Consultants, Inc. (Ground)** will provide **professional geotechnical** services for design. They will provide soils management plan input for the construction processing of materials. Additionally, they will provide **owner quality assurance testing** services during construction.
- **Connico, Inc.** will provide independent **cost estimating and CIP planning** services for the overall program to aid in accurate financial planning. They will also assist in providing **project delivery and asset management** services for program control and long-term maintenance solutions.
- **Lean Corporation** will complete an **approach procedures study** to develop and recommend improvements to aircraft approach/departure procedures and navigational upgrades.
- **HRL Compliance Solutions, Inc. (HRL Compliance)** is a local partner and will provide **professional environmental** services to ensure National Environmental Policy Act (NEPA) compliance, complete wildlife studies, provide mitigation strategies for plant and animal impacts, and coordinate with the U.S. Army Corps of Engineers (USACE) National 404 Permit requirements. In addition, they will provide **erosion control and revegetation evaluation of soils**.
- **Alpine Archaeological Consultants, Inc.,** a local partner, will field-identify **historical and cultural resources** during design and construction. They will ensure compliance with the Bureau of Land Management (BLM) Memorandum of Agreement (MOA) and the State Office of Archaeology & Historic Preservation.
- **Harris Miller Miller & Hanson, Inc. (HMMH)** will be responsible for **blast fencing and noise evaluation** for the run-up test apron.
- **AMEC Foster Wheeler (AMEC FW)** is a local partner and will complete **professional radiological evaluation** services to identify Uranium Mill Tailings locations on the airfield and provide a construction **soils screening plan** for contaminated materials. In addition, they will provide **identification** services during construction.

The Kimley-Horn Team Brings a Client-Focused, Holistic Approach.

Our **Project Manager, Mike Norby, P.E.,** brings over 24 years of aviation experience to your program. **He has completed more than 30 runway reconstruction, rehabilitation, and reconfiguration projects across the country.** Mike's client partnering approach achieves successful large, multi-year, complex airfield programs like the Runway 11/29 Replacement Program. Mike's extensive knowledge of airfield planning, design, construction, and "in the trenches" experience enables him to identify and implement measures to avoid program pitfalls before they occur.

Our key personnel begins with our **Deputy Project Manager, Bob Jones, P.E.** Bob will ensure Phase 1 Program Management services remain focused on delivering the overall project in compliance with federal requirements. He will assist GJRAA in financial planning, stakeholder coordination, and Federal Aviation Administration (FAA) Grant eligibility. He will work in conjunction with Project Manager Mike Norby to monitor and guide subconsultants and provide overall grant administration throughout the project. **Dave Morris, P.E.** will provide independent programming for budget and financial control. Program deliverables will be monitored with independent Quality Control reviews by **Steve Reeder, P.E.**

Pam Keidel-Adams will lead airfield planning. **Jerry Haliw, P.E.** will support the overall program as leader for airfield design. Jerry will be supported by key airfield design personnel including **Jared Moreng, P.E., Nathan Lemon, P.E.**, and **Mike Boyles**. Airfield drainage runoff and storm-water quality designs will be completed by **Laurie Marin,**

P.E. and **Erin Griffin, P.E.** Leading our airfield electrical/NAVAID design effort is **Anees Rahman, P.E.,** who will be supported by **Dene Egami, P.E.** and **Dustin Colwell, P.E.**

Roadway and landside developments will be led by **Ivan Geer, P.E.** of River City. Overseeing environmental efforts will be Debbie Wilson. Construction administration services will be led by Nathan Lemon, P.E. and supported by other key personnel already indicated above. Additionally, these stated key personnel will draw from our Kimley-Horn team's deep bench of aviation professionals to successfully deliver the Runway 11/29 Replacement Program on time and within budget.

Benefits of the Kimley-Horn Team

Our team's top priority is to provide engineering services that best serve the interests of GJRAA. By selecting the Kimley-Horn team, GJRAA will enjoy the following benefits:

- **Proven, Successful National Experience:** Kimley-Horn draws from the aviation expertise of over 200 aviation planning, design, and construction professionals to support your runway replacement program. Our one profit center business philosophy promotes nationwide collaboration to solve critical project issues and meet project schedules. Our internal transparency allows all employees to take ownership in project progress and financial performance daily. National and local subconsultants complement the team by focusing on project elements critical to delivering an on budget, on schedule, and agency compliant program. Our team's working relationships with agencies will ensure compliance with the FAA, BLM, Fish and Wildlife Service (FWS), USACE, Department of Energy (DOE), Colorado Department of Public Health and Environment (CDPHE), and City of Grand Junction.



GJRAA will benefit from our team's expertise and program execution. We will deliver a legally-compliant program that is on schedule and within budget. Our team will handle details that prevent "surprises" during and after the project. We will streamline processes that reduce Airport staff hours. We will work to become GJRAA's trusted advocate.

Celebrating our 50-year company history, industry recognition has exemplified our success.

- **Ranked #7 of Top Aviation Engineering Firms** by Engineering News-Record
- Recipient of **AAAE's 2016 Corporate Cup of Excellence** serving the Aviation Industry
- **Ranked #11** by Fortune Magazine's **Best Places to Work**
- Recipient of Airport Minority Advisory Council's (AMAC) **2016 Award** for Airport Architectural, Engineering, Construction **Innovation and Inclusion Catalyst Award**

- **Fresh Perspective:** Based on a preliminary review of available documents, **we have developed approaches and solutions that can reduce overall project costs and decrease the total estimated schedule.** The Kimley-Horn team will compile and review all documents associated with the runway program and review our findings with you. All assumptions, justifications, and agreements will be vetted and verified with project stakeholders and will be provided in a concise summary report. In addition, the team will complete a client-focused Full-Criteria and Compliance Review to establish the basis of the Project Work Plan. This will include several site and condition planning studies, including but not limited to:
  - Approach/departure procedures development
  - NAVAID Facilities capabilities and condition
  - Airfield capacity benefit-cost-analysis (BCA) for high-speed taxiways
  - Obstruction evaluation including runway ends and existing buildings/ proposed facilities
  - Establish Reimbursable Agreement with FAA for NAVAID design
  - Verify Airport Layout Plan (ALP) and Exhibit A Property Map are current for FAA funding programming
  - Map historical, cultural, and environmental resources which require mitigation/protection
  - Complete soil revegetation/erosion mitigation study
  - Map airfield locations of uranium mill tailings and develop a soil management plan
  - Permitting and interagency coordination plan

  Benefits GJRAA could realize include improved aircraft approaches-airline marketing tool, significant costs savings, reduce program duration, compliance with current FAA criteria, Environmental Assessment (EA) agreements and stipulations being met, reduced long-term soil erosion maintenance issues, and low risk of "radiological surprises" in future development areas.

- **Strong Client Advocate, Trusted Partner:** The team will earn GJRAA's trust through demonstrating our project execution process, engagement of GJRAA staff and Board Members, and delivering successful program results. The Kimley-Horn

team is client-focused and goal driven. Project processes will be implemented to align and comply with federal requirements and decisions determined with justification and documentation. The team will perform as an extension of Airport staff and will partner, support, and educate as requested.

GJRAA will benefit by having determined goals achieved throughout the project. The focus on compliance will ensure agency acceptance and successful audits.

- **Clear Project Understanding:** The Kimley-Horn team provides the in-depth technical expertise required to complete the runway replacement program. Our team's diverse knowledge base ensures every detail of the individual project elements are comprehensively understood. Thoroughly addressing issues and details in the planning and design stages provides for successful construction. We have identified the following potential challenges to be resolved during planning and design include:
  - Excavation of an estimated 4.0 million cubic yards of soil
  - High-swell/low-strength clay and Manco Shale soil and bedrock
  - 96 million gallons of water required to process site soil and rock
  - Updating airfield geometry for compliance with current FAA criteria
  - Handing and placement of on-site Uranium Mill Tailings
  - Airfield pavement design for low subgrade strength
  - Safety and security throughout project
  - Parallel taxiway conversion – construction phasing and operational impacts

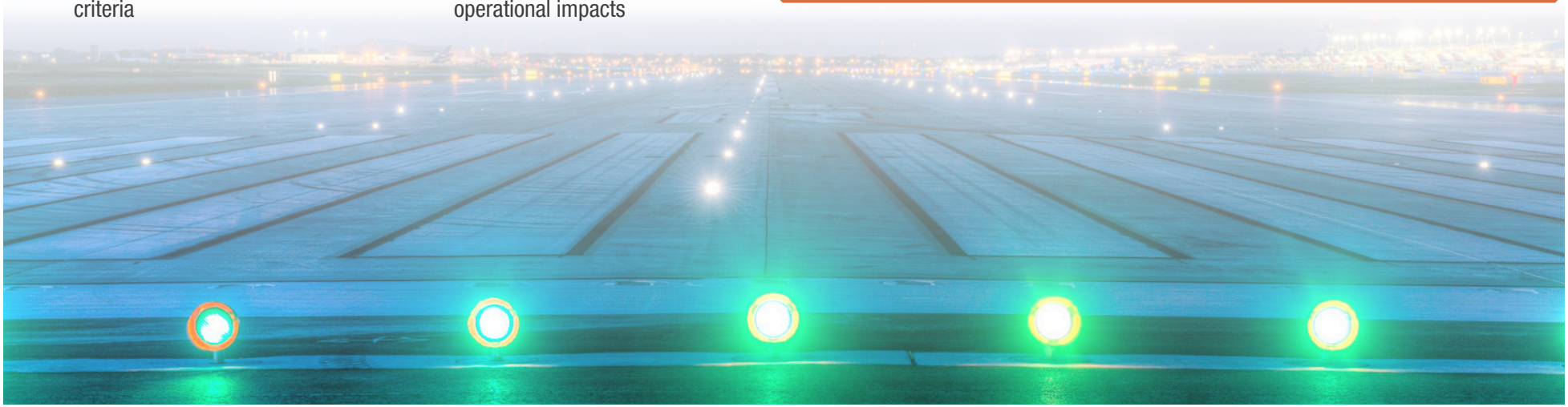
We will address anticipated construction challenges during the design process. This will minimize change orders and cost overruns. Difficult design, construction, and program factors will be properly addressed and federal compliance maintained. Our Western Slope, Telluride Regional Airport runway replacement project, moved over 3.2 million cubic yards of earthwork over a 15-year period though eight separate phased projects. Our team brings the experience and lessons learned to benefit GJRAA's Program.

- **Simply A Better Experience:** The recommendations and solutions proposed by our team will not only encompass the expertise and experience gained from decades of successfully completing similar programs, but will take on an integrated approach that respects and accounts for the needs and interests of ALL stakeholders. **Kimley-Horn's commitment to GJRAA is to a successful project that has a sustained positive impact on the Airport and local community well into the future.**

Kimley-Horn's Promise

- When you select us, we guarantee responsive, personal service and proven results.
- We will deliver a legally-compliant program that is on schedule and within budget.
- We will provide bullet-proof plans that capture FAA funds and avoid costly change orders.

We will work to become your trusted advocate.



4.1 QUALIFICATIONS AND EXPERIENCE

Kimley-Horn offers GJRAA a highly experienced and diverse group of engineering and planning professionals, including over 200 aviation specialists firmwide with extensive experience working on a variety of airport projects across the country. Our team has worked closely with numerous primary commercial airports such as Denver International Airport (DEN), El Paso International Airport (EPIA), San Antonio International Airport (SAT), Detroit Metropolitan Wayne County Airport (DTW), and numerous others. Additional local airport experience includes Telluride Regional Airport (TEX) and Colorado Springs Airport (COS). **Providing engineering and construction administration services to these regional facilities has given Kimley-Horn the tailored knowledge to address the unique challenges of the climate, terrain, soils, and material issues prevalent in Grand Junction. FIGURE 1** provides an overview of our nationwide aviation experience.

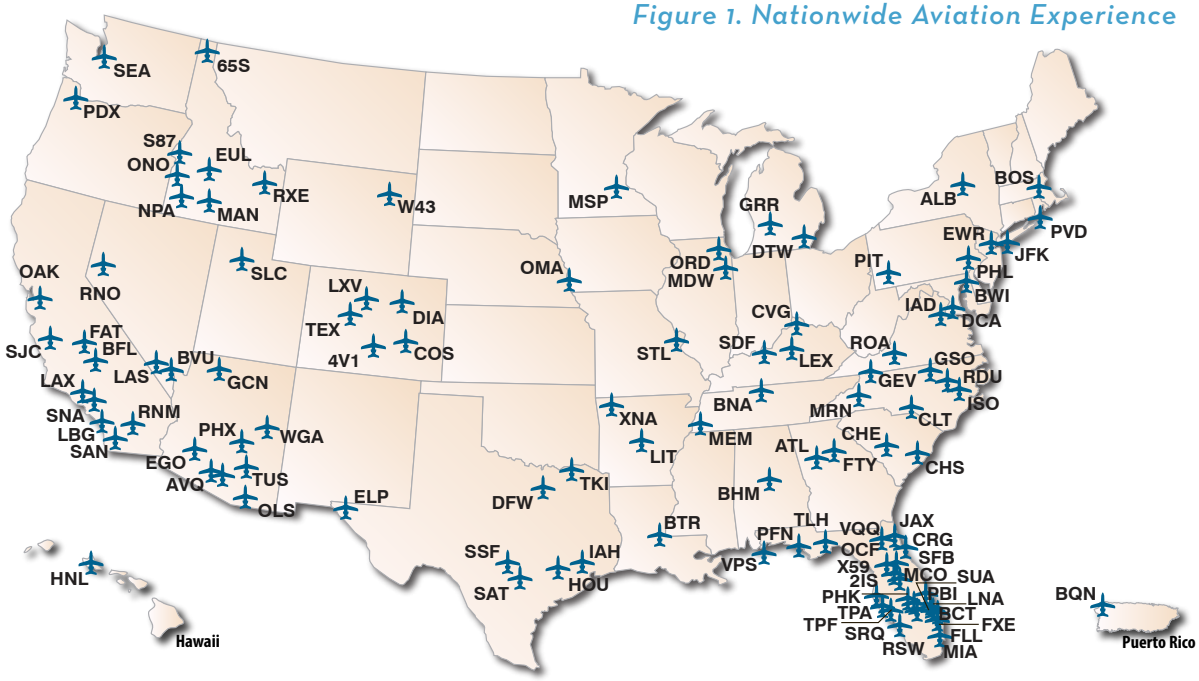
Related Project Experience

With each client we work with, we strive to become their trusted advisor. For each of the relevant projects on the following pages, we have included a map illustrating not just the referenced project and similarities, but all of the projects we have completed for each airport. The quality of our work coupled with our client-focused, holistic approach earns us trust and respect from our clients and they continue to seek our expertise on their important projects.

TABLE 1 on page 11 provides a matrix of additional project experience completed by our key team members.



Figure 1. Nationwide Aviation Experience



In 2016, *Engineering News-Record* ranked Kimley-Horn as the **7th largest airport consultant firm** in the U.S.

SERVING OVER **50** YEARS **CLIENTS**

MORE THAN 200 Aviation Professionals FIRMWIDE

RUNWAY 11/29 REPLACEMENT

EL PASO INTERNATIONAL AIRPORT EXPERIENCE

Project Stats

- Over $90M in project construction costs since 1998
- Over 15 design projects
- Re-aligned Runway 8L/26R
- Rehabilitated/ reconstructed all three runways
- NAVAID installation on all three runways

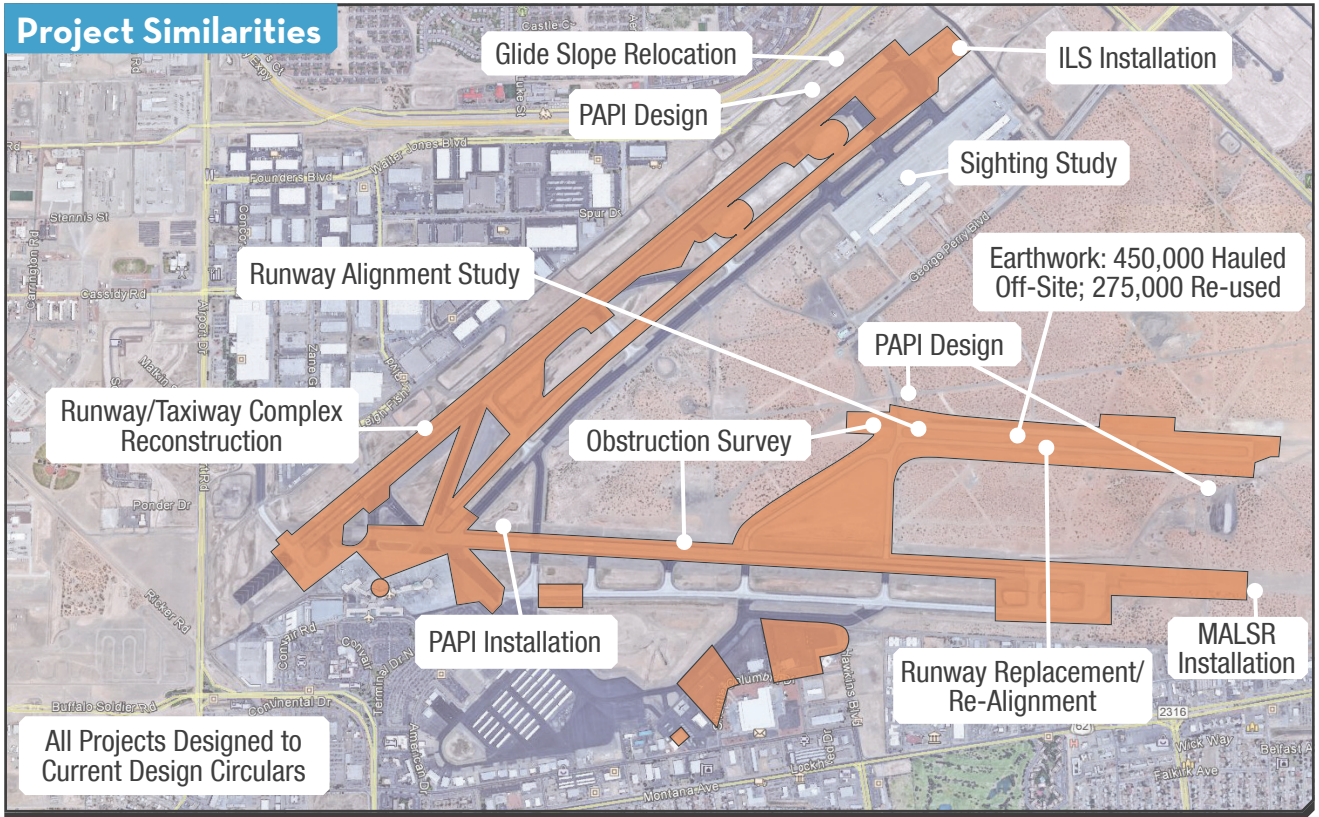
Issues

- Meet current design criteria
- Safe runway operations re-alignment
- Limited closures (Runway 8R/26L)
- Pavement design/life cycle costs
- Phasing operations
- Significant earthwork
- Material availability
- Several million cubic yards of material moved for all projects
- Significant excavation
- Runway drainage

Solutions

- Geometric design of runway and taxiway pavements in accordance with current FAA AC 150/5300-13A (Chg. 1)
- Re-designed entire complex to include runway realignment for safety purposes, added parallel taxiway, removed hot spot, and flattened runway to meet grade requirements
- FAA/airport stakeholder coordination
- Graded new infields to channel water away from pavement
- Contractor information meetings
- Identify key issues up front and take a holistic approach
- Identify re-use of material
- Worked with contractor on temporary taxiway that reduced closure time by half and conducted significant stakeholder coordination
- Reused millings for shoulders by incorporating a small amount of asphalt and re-compacting

Project Similarities









Schedule/Budget Performance:	Completed on time and within budget
Completion Dates:	Design in June 2014, Construction in December 2015
M/WBE Performance:	9%
Key Staff:	Mike Norby, Steve Reeder, Dene Egami, and Dave Morris
Reference:	Sam Rodriguez, P.E., 915.780.4766, rodriguezs3@elpasotexas.gov

RUNWAY 11/29 REPLACEMENT

SAN ANTONIO INTERNATIONAL AIRPORT EXPERIENCE

Project Stats

A seven-year program to:

- Construct and rehabilitate mulitple taxiways and portions of Runway 12R/30L
- Develop new taxiways
- Demolish and relocate Taxiways E and N
- Over $100M in total construction costs in eight packages
- Heavy FAA regional office and headquarters coordination to implement new design standards

Issues

- Significant funding challenges
- Multiple projects constructed simultaneously with multiple contractors. We good with simultaneously
- Salvaged and excess materials
- NAVAID disturbance/flight checks
- Environmental remediation/removal
- FAA design circular criteria changed twice in first two years of design
- Phasing issues

Solutions

- Geometric design of runway and taxiway pavements in accordance with current FAA AC 150/5300-13A (Chg. 1)
- Re-designed entire complex to include runway realignment for safety purposes, added parallel taxiway, removed hot spot, and flattened runway to meet grade requirements
- FAA/airport stakeholder coordination
- Graded new infields to channel water away from pavement
- Contractor information meetings
- Identify key issues up front and take a holistic approach
- Identify re-use of material
- Worked with contractor on temporary taxiway that reduced closure time by half and conducted significant stakeholder coordination
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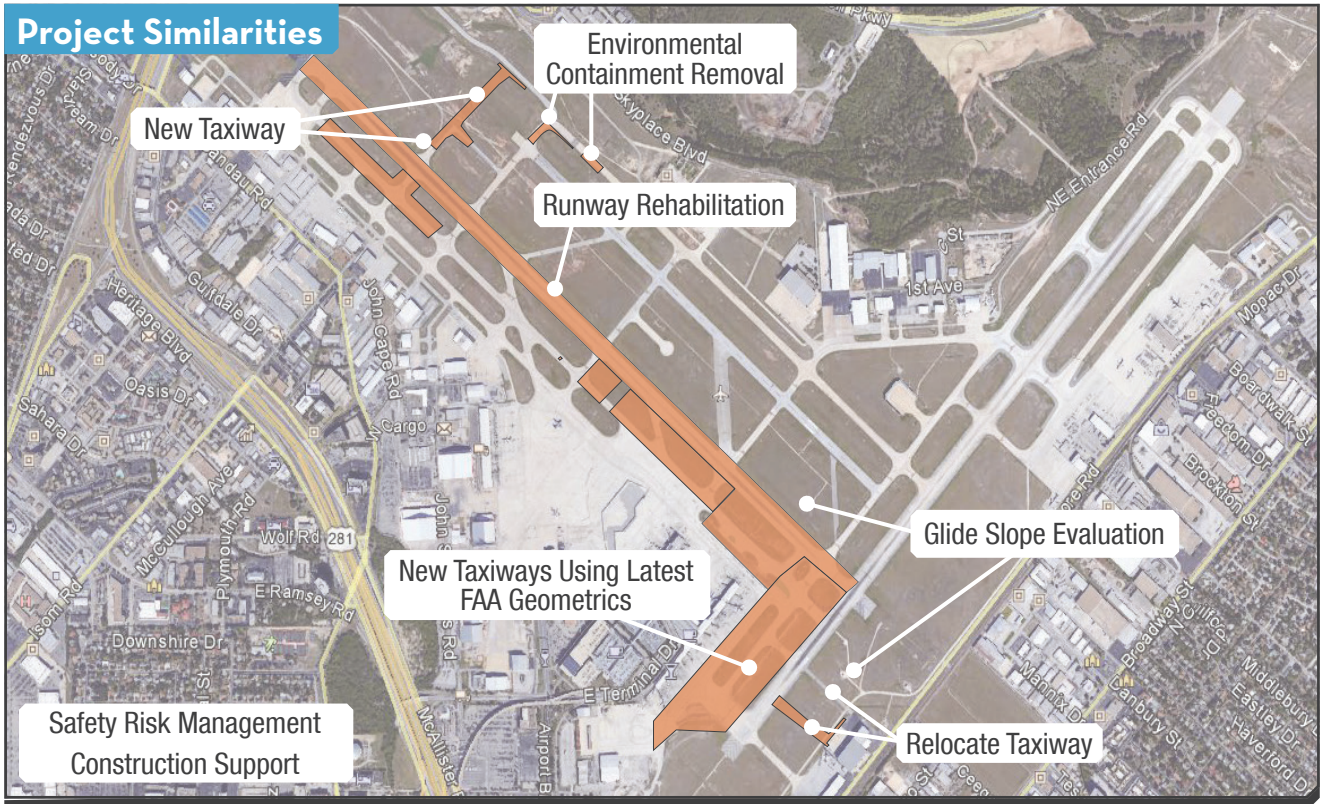
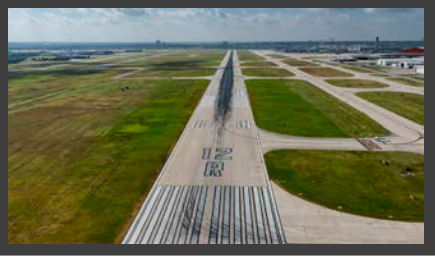
Project Similarities



Construction bids came in $3M under the Engineer's Estimate and with only a 0.8% difference between bidders. This low bid and the narrow margin between bidders are a testament to the high-quality plans Kimley-Horn produced.





Schedule/Budget Performance:	Ongoing, within schedule and budget. First construction package was designed in 2.5 months then redesigned in one month based on FAA circular criteria changes
Completion Dates:	Package 1 in February 2015
M/WBE Performance:	21%
Key Staff:	Mike Norby, Jerry Haliw, Mike Boyles, Dene Egami, Nathan Lemon, and Laurie Marin
Reference:	Dennis Fiemeyer, P.E., 210.207.3401, dennis.tiemeyer@sanantonio.gov

RUNWAY 11/29 REPLACEMENT

DETROIT METROPOLITAN WAYNE COUNTY AIRPORT EXPERIENCE

Project Stats

- Provided preliminary design, environmental processing, final design, and bid phase services
- $150M Program
- Multi-year project was phased to address funding limitations
- One taxiway design was expedited to meet FAA grant funding

Issues

- Airline impacts
- Required limited closures
- Meet current design criteria
- Maintain operations

Solutions

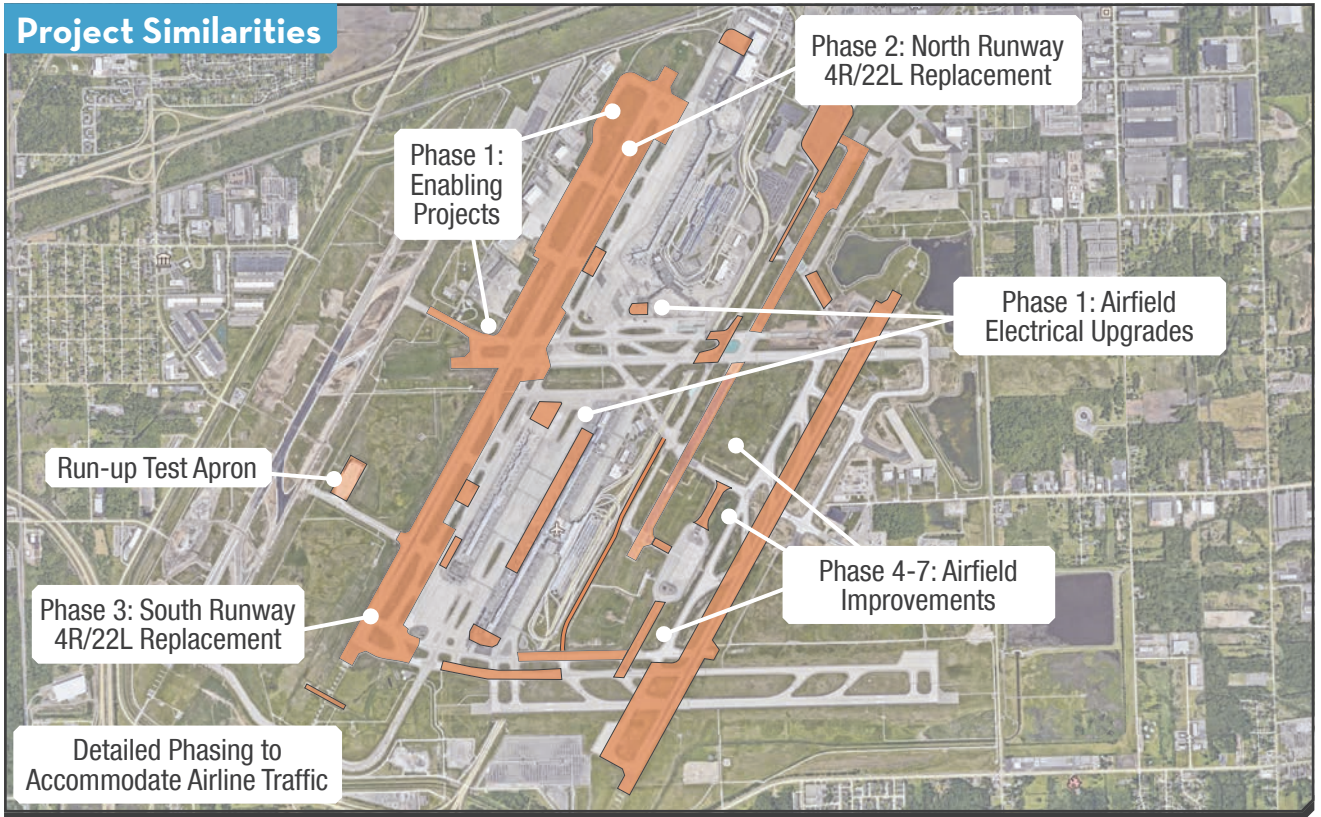
- Reconstructed the runway and connector taxiways within Runway Safety Area (RSA) over two years with two 100-day shut downs.
- Relocated Taxiway Z to meet Aircraft Design Group (ADG) VI runway to taxiway separation requirements
- Runway 4R threshold was relocated to meet current FAA standards

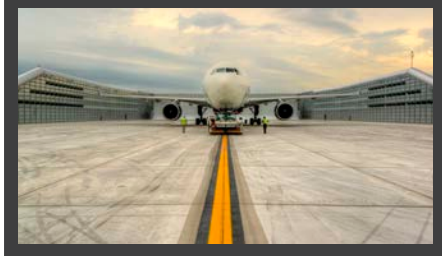
Fun Facts

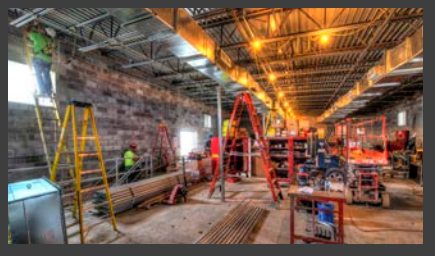
- Approximately 528,120 sq. yds. of 17-inch concrete pavement, equivalent to nearly 140 lane miles of highway pavement
- More than 7,800 tons of reinforced concrete pipe, outweighing the steel structure of the Eiffel Tower by more than 500 tons
- 110 miles of electrical cable were installed

2016 AMAC Airport AEC Innovation and Inclusion Catalyst Award Winner (for meeting or exceeding DBE and M/WBE goals for over two years).

Project Similarities









Schedule/Budget Performance:	Completed ahead of schedule and within budget
Completion Dates:	Design in February 2013, Construction in November 2014
M/WBE Performance:	31% with a goal of 15%
Key Staff:	Mike Norby, Jerry Haliw, Mike Boyles, Steve Reeder, Dene Egami, and Laurie Marin
Reference:	Tom McCarthy, 734.247.4923, tom.mccarthy@wcaa.us

SAN DIEGO INTERNATIONAL AIRPORT PROJECT EXPERIENCE

Project Stats

- $150M Program
- Fast-track design (six weeks)
- Emergency mill and replace
- Single commercial runway
- All runway and taxiway markings were repainted to conform to the most current FAA Advisory Circular

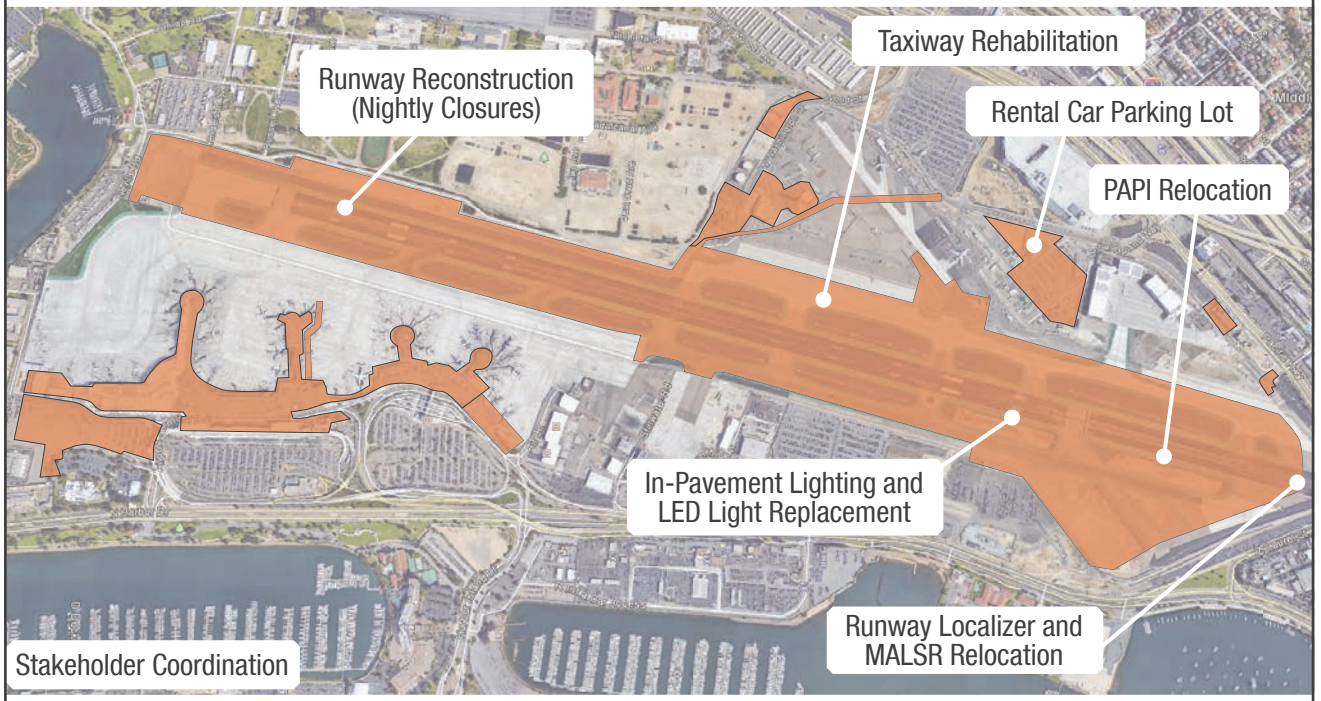
Issues

- Single runway
- Maintaining operational activities
- P-401 material/paving
- Light can replacement

Solutions

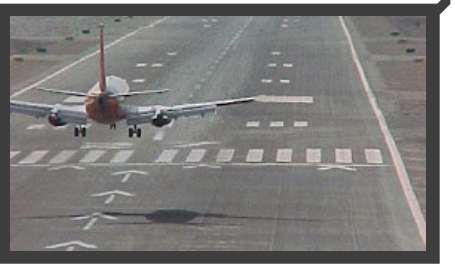
- Designed construction phasing plans to accommodate nightly construction schedule based on six-hour window. Airport re-opened every morning by 5:30am
- Phasing was crucial to minimize the operational impact to this runway
- P-401 spec compliance/ quality had been a problem in Southern California for years. We modified the P-401 spec to the extent possible, which addressed local quality issues
- Designed a light can replacement process to work within the time constraints

Project Similarities









"This was an exemplary project [Runway 9/27] as far as planning, collective partnering, design, and construction. The project has won many awards, and we were very pleased with the team's performance."

Iraj Ghaemi, San Diego Int'l Airport

Schedule/Budget Performance:	Completed on time and within budget
Completion Dates:	Design in June 2006, Construction in December 2006
M/WBE Performance:	29% with no set goal
Key Staff:	Mike Norby, Dene Egami, Mike Boyles, Dustin Colwell, and Steve Reeder
Reference:	Iraj Ghaemi, 619.231.5288, ighaemi@san.org

RUNWAY 11/29 REPLACEMENT

HUNTINGTON TRI-STATE AIRPORT EXPERIENCE

Project Stats

- $9M rehabilitation of the single commercial runway
- Provided construction observations services
- Design mitigated existing pavement cracks, updated lighting, and paved shoulders
- Replaced select High-Intensity Runway Lights (HIRL) edge light base cans and all runway light fixtures and wiring
- Placed over 22,000 tons of asphalt in 54-hour closure

Issues

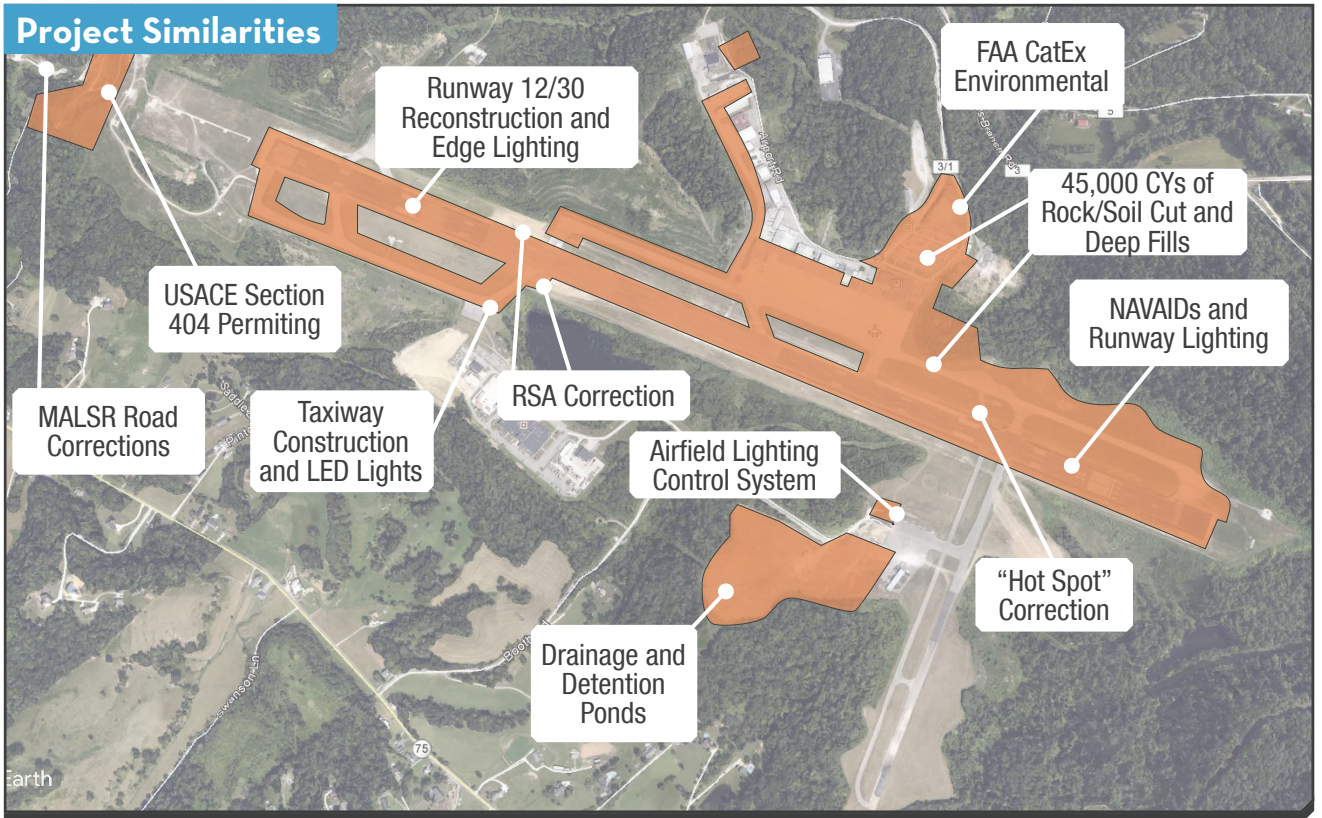
- Smoothness if paved in small, nightly sections
- Timing/minimizing impacts to daily commercial flights
- Mitigate severe reflective cracking
- Shoulder safety, poor drainage, and significant maintenance time and cost
- Failing runway edge lighting system
- Correcting non-standard runway conditions

Solutions

- Developed the plan to pave the 7,016-foot-long runway in one weekend, and complete other construction during 120 individual nighttime closures
- Gained FAA approval and buy-in from the three airlines to conduct aircraft operations on micro-milled surface in advance of 54-hr closure
- Installed temporary lighting around runway so existing lighting could be replaced during paving
- Obtained FAA appproval for West Virginia's first paved runway shoulders
- Installed edge light conduit and light bases before shoulder paving. New fixtures reduce maintenance

Winner of the 2013 AAAE Southeast Chapter Commercial Airport Project of the Year Award, Airfield Category

Project Similarities



Schedule/Budget Performance:	Completed on time and under budget
Completion Dates:	Design: Ongoing, began October 2012, Construction: Summer 2017
M/WBE Performance:	5.5%
Key Staff:	Bob Jones, Jerry Haliw, Nathan Lemon, Mike Boyles, Dene Egami, Laurie Marin, Erin Griffin
Reference:	Jerry Brienza, 304.453.2801, jbrienza@tristateairport.com

RUNWAY 11/29 REPLACEMENT

TELLURIDE REGIONAL AIRPORT EXPERIENCE

Project Stats

- Commercial service, single runway airport
- $82M, 15-year runway replacement program in eight phases
- Runway 9/27 and associated taxiways were reconstructed with approximately 14,500 tons of asphalt concrete
- Phase VIII is scheduled for completion in 2017
- Existing airfield underwent significant transformation to correct criteria issues including runway/taxiway geometric standards, safety area width/overrun grading, and removal of airspace impacts

Issues

- Maintain operational safety
- Mitigate severe reflective cracking
- Shoulder safety, poor drainage, and significant maintenance time and cost
- Failing runway edge lighting system
- Correct non-standard runway, profile, and grade conditions
- Correct Part 77 obstruction impacts

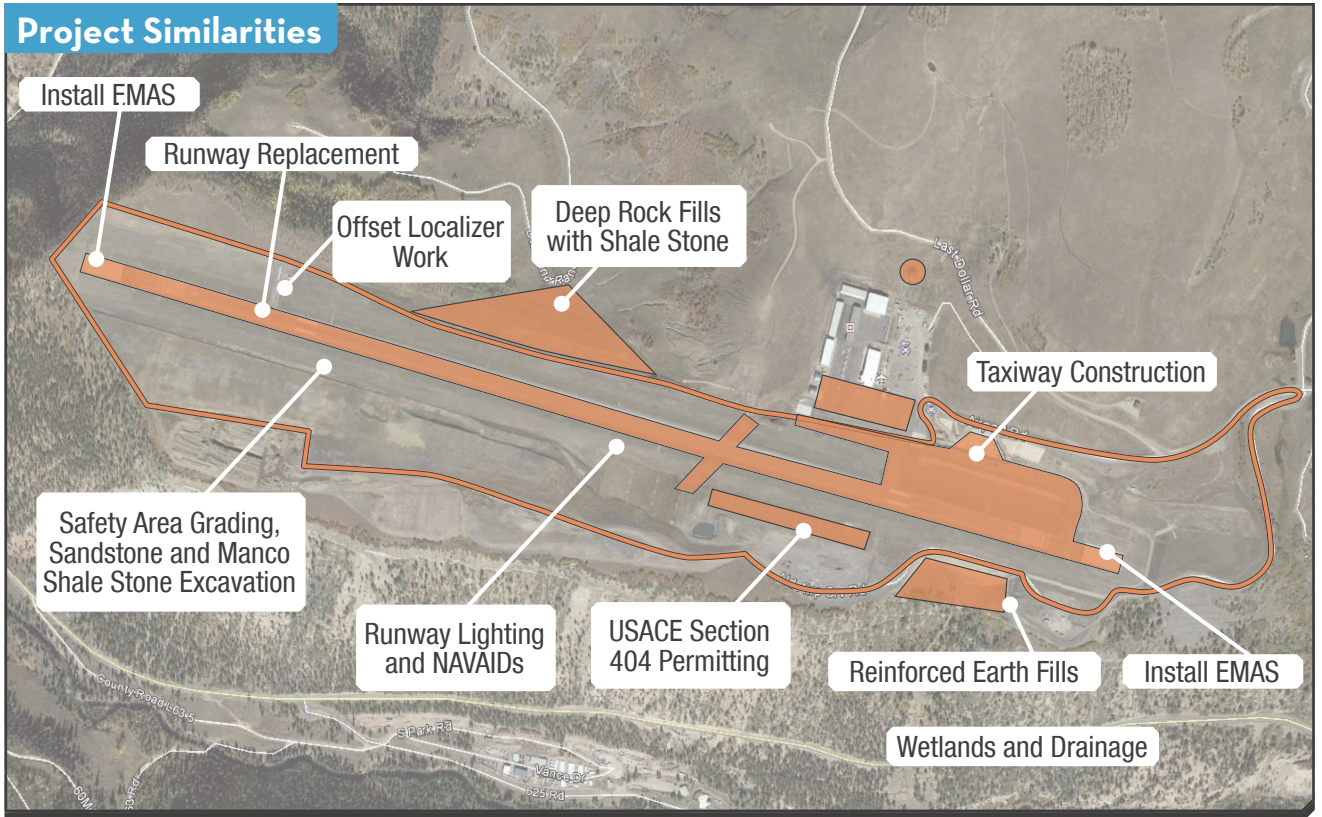
Solutions

- Phased project to minimize impacts to daily commercial flights for this one-runway airport
- Moved 3.5M CY of dirt during project, none was taken off airport property
- Native resources were used to make most of the sub-base material, saving the airport money
- Phased approach to meet AIP funding

"We have worked with Kimley-Horn for over 10 years as part of the Telluride Airport upgrade. The Kimley-Horn team steps up to the plate, stands behind us, and has continually served the best interest of our airport."

Rich Nuttall, Airport Manager
Telluride Regional Airport, Colorado

Project Similarities









Schedule/Budget Performance:	Completed on time and within budget
Completion Dates:	Ongoing, began 2002, currently on Phase VIII Construction
M/WBE Performance:	Met or exceeded goals
Key Staff:	Mike Norby, Bob Jones, Mike Boyles, Steve Reeder, Dene Egami, and Laurie Marin
Reference:	Richard Nuttall, 970.728.8601, rich@tellurideairport.com

TABLE 1. SIMILAR PROJECTS TABLE

Airport / Project Name	Multi-Year Phasing	Runway Design	Taxiway Design	Permitting	Agency Coord.	Electrical Design	NAVAIDs / Lighting	Drainage Modifications	Drainage / Stormwater Structures	Grant Admin	Phasing/ Construction Plans	Cost Estimates	Inspection / Evaluations	Construction Phase Services
Telluride Regional														
Runway 9/27 Reconstruction and Safety Area Improvements (8 phases)	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
Colorado Springs Municipal														
Runway 17L/35R and Taxiways Reconstruction	✈	✈	✈		✈	✈	✈	✈	✈		✈	✈	✈	✈
El Paso International														
Runway 8R/26L & Taxiway L Ext. – Reconstruction of Taxiway W		✈	✈		✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
Runway 4/22 Reconstruction and Rehabilitation – Taxiways N, Q, and R	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
Reconstruction and Re-align Runway 8L/26R and Taxiways U and V		✈	✈		✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
Reconstruction of Runway 8R/26L and Taxiway E		✈	✈		✈		✈	✈			✈	✈	✈	✈
Runway 4/22 and Taxiway H Mill and Replace – Taxiway G		✈	✈		✈		✈	✈			✈	✈	✈	✈
Runway 8R/26L Mill and Replace – Taxiway L Reconstruction		✈	✈		✈	✈	✈	✈		✈	✈	✈	✈	✈
Runway 4/22 and Taxiway J Ext.		✈	✈		✈	✈	✈	✈	✈		✈	✈	✈	✈
San Antonio International														
Design of 7 Construction Packages for Runway 12R/30L	✈	✈	✈		✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
San Diego International														
Runway Reconstruction and Apron Construction	✈	✈	✈		✈	✈	✈	✈	✈		✈	✈	✈	✈
Chicago - O'Hare International														
Runway 9R/27L	✈	✈	✈		✈	✈	✈	✈	✈		✈	✈	✈	✈
Detroit Metropolitan Wayne County														
Runway 4R/22L	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
Runway 3R/21L and Taxiway W	✈	✈	✈		✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
Las Vegas McCarran International														
Runway 7R/25L and Taxiway A Reconstruction		✈	✈			✈	✈	✈	✈		✈	✈	✈	✈
Memphis International														
Runway 9/27 Reconstruction		✈	✈			✈	✈	✈	✈	✈	✈	✈	✈	✈
Terminal Apron	✈	✈	✈			✈	✈	✈	✈		✈	✈	✈	✈
Huntington Tri-State														
Runway 12/30 Rehabilitation		✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
Phoenix Sky Harbor International														
Center Runway (7L/25R) Reconstruction	✈	✈	✈		✈	✈	✈	✈	✈		✈	✈	✈	✈
Taxiway D and E Reconstruction			✈		✈	✈	✈	✈	✈		✈	✈	✈	✈
East Taxiway C Reconstruction			✈		✈	✈	✈	✈	✈		✈	✈	✈	✈

*Additional Project Experience Available Upon Request

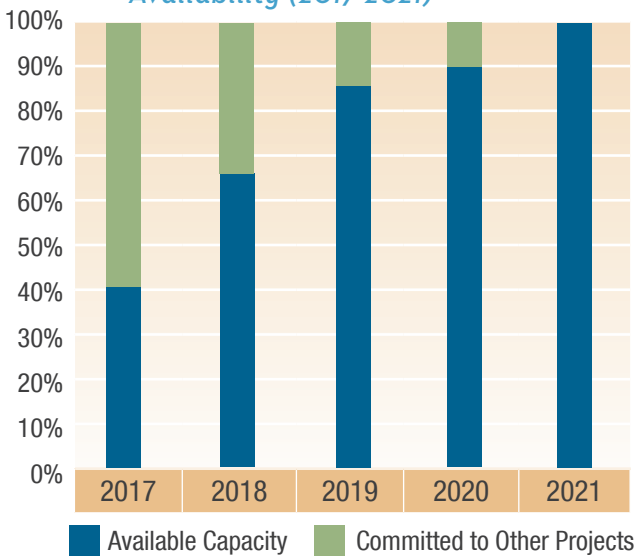
4.2 RESOURCES

Availability

The Kimley-Horn team is 100% committed to meeting the objectives of the Runway 11/29 Replacement project in accordance with the schedule, funding, and operational requirements of the Airport. Our core team has worked together to complete similar reconstruction and replacement projects across the country, and we are available to start immediately. As requested in the Request for Qualifications (RFQ), the Kimley-Horn team's projected availability for the contract period is in **FIGURE 2** below.

Each of our subconsultants has also confirmed their availability and commitment to meeting identified schedules. **Together, we offer the very best of expertise and resources to ensure Grand Junction's needs are met successfully, on time, and within budget.**

Figure 2. Kimley-Horn Team Availability (2017-2021)



History of Completing Projects in a Timely Manner

We know that the ultimate success of the Runway 11/29 Replacement project hinges on our ability to deliver a quality product on time and within budget. Our team has a proven track record of successfully undertaking aviation planning, design, and construction projects with accelerated schedules that other firms simply would not consider. **TABLE 2** below demonstrates a sample of our schedule and budget history on past projects.

Client Commitment

Project Manager Mike Norby, P.E. managed two projects that demonstrate this commitment to the client. For EPIA, we completed Taxiway J and M reconstruction and the Rehabilitation of Runway 8R/26L and Taxiway L reconstruction both in just six weeks, including survey and geotechnical, and can provide numerous other examples at other airports across the country.

Table 2. Kimley-Horn Schedule and Budget History

Project	Completed Ahead of/ Within Schedule	Budget
Telluride Regional Airport Runway and Safety Area Improvements, Eight Phases	Within Schedule	Within
San Antonio International Airport Runway 12/30L Rehabilitation and Taxiway Improvements Program	Within Schedule	Within
El Paso International Airport Runway 8L/26R and Taxiways U, V, and New Parallel Taxiway	Within Schedule	Within
Detroit Metropolitan Wayne County Airport Reconstruction of Runway 4R/22L and Associated Taxiways	Ahead of Schedule	Within
San Diego International Airport Runway 9/27 Rehabilitation	Within Schedule	Within
Huntington Tri-State Airport Runway 12/30 Rehabilitation	Ahead of Schedule	Under
El Paso International Airport Emergency Taxiway J and M Reconstruction	Completed in Six Weeks	Within
El Paso International Airport Runway 8R/26L and Taxiway Extension	Behind Schedule (due to FAA NAVAID changes)	Within
Reno-Tahoe International Airport Taxiway A South Reconstruction	Within Schedule	Under
Colorado Springs Airport Runway 17L/35R Reconstruction	Within Schedule	Under
Long Beach Airport Pavement Rehab of Runway 12/30	Within Schedule	Under

Staffing Capabilities

Kimley-Horn routinely analyzes workload priorities throughout the company and assigns staff as needed to meet priorities. To confirm the availability of team members, we use a proactive management program called cast-aheads. This process forecasts our workload over a weekly, monthly, and six-month period and enables us to avoid work overloads and/or shortfalls for each office and discipline. Based on our most recent cast-ahead projection, the team assigned to the Grand Junction Runway 11/29 Replacement project is fully committed and available to serve from notice-to-proceed through final project close-out.

We can also call upon any of our over 200 aviation specialists firmwide should additional staffing or other resources be required to maintain the proposed schedule at no additional cost to you. Each of these team members are devoted to aviation projects and understand the need and priority of completing projects on time.

Project Understanding and Work Efforts

Kimley-Horn brings a fresh perspective to the GJRAA. Our holistic approach to understanding this large safety improvement project includes understanding the Airport and challenges facing GJRAA. We will partner with you to accomplish your vision and economic goals.

Our understanding of the Runway 11/29 Replacement Project is based on:

- Attending the last several GJRAA Board Meetings;
- A field review on March 9th;
- Reviewing the Environmental Assessment (EA), FAA FONSI, and Airport Master Plan;
- Delving into specific discussions with our team's discipline-specific experts;
- Contacting several government agencies including:
  - Department of Energy and Colorado Department of Public Health and Environment about the uranium mill tailings
  - FAA about their overall design expectations; and
- Applying our extensive work on very large, similar airfield/runway replacement projects.

Mike, Bob, and several other key staff personnel have been completing the Telluride Regional Airport Runway 9/27 Replacement project over the last 15 years. This project makes an ideal case study for your runway replacement project as it is a Western Slope airport with similar soils, is a single commercial service runway requiring extreme safety improvements, and has been funded through the FAA AIP in coordination with the Denver Airports District Office and Colorado Aeronautics Division.

Kimley-Horn has as understanding of the of the legal matters GJRAA has faced over the last several years. We have followed the story and have been impressed by GJRAA's determination and effort to establish a new culture and implement new processes to comply with legal requirements. We want to be part of the continuing solution that brings additional success to GJRAA. Kimley-Horn prides itself on being a highly ethical and open national company, and will strive to become your trusted partner.

The Runway 11/29 Replacement project realigns the runway with a centerline offset to approximately 637.5 feet to the northwest. This work entails:

- Realigning 27¼ Road to remove it from the proposed Runway Protection Zone (RPZ) and to maintain recreational access and parking for BLM Land.
- Grading runway and imaginary FAR Part 77 surfaces to establish current safety area criteria and obstruction removal.
- Excavating/placement of roughly 4M cubic yards of soil and rock.
- Detention ponds for five watershed drainages flowing from BLM Land required to mitigate storm flow volumes.
- Three water quality ponds to meet NEPA requirements for storm drainage leaving airport property.
- FAA pavement design efforts and pavement edge lighting for new runway and taxiway configuration.
- Relocating the testing run-up apron and Airfield's primary and secondary survey control points due to significant impacts to airfield facilities.
- New perimeter fencing.
- Relocating the automated surface observing system (ASOS).
- Relocating or replacing NAVAIDs and equipment like MALSR approach lighting, instrument landing system, and other visual aids.
- Relocate existing Remote Transmitter/Receiver, which is currently under design by the FAA.
- Construct a new parallel taxiway once and connectors.

Kimley-Horn's approach to achieving the goals and objectives of the Runway 11/29 Replacement project at the Airport is divided into four distinct phases. The overall project will be guided by the **Phase 1 Program Management** key personnel throughout the multi-year runway replacement. Studies and overall coordination elements will be completed in **Phase 2 Planning**. The overall airfield design as well as individual bid packages will be delivered as part of **Phase 3 Design Development**. Individual bid packages will be built under **Phase 4 Construction Services**. We address each of these phases on the following pages and include Phase tables detailing key issues, Kimley-Horn solutions, and the benefits to GJRAA.

PHASE 1 Program Management

The Kimley-Horn team's Project Management approach begins with direct and thorough communication with all stakeholders. The team will review all existing planning, engineering, and policy documents to establish the airfield and specifically, the runway realignment existing conditions. Based on stakeholder input and the existing data, the team will develop a Project Execution Plan. This Plan will focus on key elements that impact the overall program to be implemented on every phase throughout the multi-year runway program. This establishes the program management control necessary to meet the legal requirements of an airport using federal funding. Specific activities include:

- Conduct a detailed review of legal compliance documentation including:
  - Department of Justice (DOJ) Non-Prosecution Agreement
  - Airport processes/procedures
  - GJRAA ethics policies
  - MOA with the BLM and State Office of Archaeology & Historic Preservation (OAHP)
  - FAA certification inspection reports
  - FAA ADO requirements, etc.
- Determine stakeholder list and appropriate involvement
- Develop outreach process, start coordination
- Review financial planning documents and coordinate with staff
- Establish project delivery process and supporting documents
- Participate in airfield safety reviews, RSAT meetings, etc.

PHASE 1

	Project Management Key Issues	Kimley-Horn Team Solutions	GJRAA's Benefits
1	**Compliance with Federal Department of Justice (DOJ) Requirements and FAA Grant Assurances**	◢ Engage and partner with GJRAA staff and compliance committee ◢ Develop compliance checklists for implementation on each project ◢ Establish legal review processes and integrate into each project schedule ◢ Establish sign-off tracking sheet for project milestones and legal compliance	◢ Legal compliance concerns are addressed consistently for each project in an open format ◢ Ensures individual project adjustments are addressed from a legal point of view ◢ Provides for documented process accountability and allows flexibility for change management ◢ Ensures legal requirements are completed and minimizes staff review efforts
2	**Stakeholder Coordination and Community Transparency**	◢ Determine stakeholders with Airport staff ◢ Hold periodic stakeholder collaboration meetings ◢ Develop and maintain a stakeholder critical coordination matrix ◢ Conduct public outreach	◢ Ensures important input from all impacted stakeholders is received ◢ Provides for direct input of stakeholders and identifies agreed to solutions through design and construction ◢ Addresses concerns early on when solutions are more cost-effective ◢ Provides public project status information and allows for community feedback
3	**Financial Planning**	◢ Develop a comprehensive multi-phased plan with associated costs ◢ Establish individual project funding eligibility with stakeholder buy-in ◢ Engineering-based cost estimating for Capital Improvement Project (CIP) programming ◢ Alternate funding source assistance	◢ Establishes funding eligibility and alternate sources ◢ Detailed estimates identify required funding levels ◢ Provides GJRAA long-term budget planning, FAA, and CDOT Aeronautics programming
4	**Budget Control**	◢ FAA grant reporting per 2 CFR 200 ◢ Schedule monthly project budget reviews ◢ Individual task managers assigned to maintain effort level and schedule	◢ Maintains budget limits and schedule ◢ Required changes are addressed quickly and cost-effectively ◢ Ensures grant assurance compliance

Project Management Key Issues		Kimley-Horn Team Solutions	GJRAA's Benefits
5	Project Delivery	◢ Dedicate experienced team staff to provide project tracking ◢ Develop standardized Project Procurement Documents ◢ Resolve individual project conflicts with overall program elements quickly	◢ Ensures consistent project documentation using GJRAA-preferred methods and software ◢ Ensures compliance with federal requirements ◢ Maintains project schedule and budget
6	Airfield Safety, Standards, and FAA Criteria	◢ Lead SRA panels ◢ Address FAA criteria early ◢ Collaborate with Airport Operations to include methods that reduce foreign object debris (FOD) during construction	◢ Meets FAA safety initiatives ◢ Develops accurate cost estimates which reduces cost change orders during construction
7	Asset Management	◢ Use in-house experience to deliver sound data for long-term use on continuing facility maintenance	◢ Integrates project data to develop and maintain a complete facility database for GJRAA maintenance staff

Funding Coordination

Kimley-Horn's contacts at both the state and federal levels have been instrumental in securing state department of transportation funding and United States Congressional support for FAA funding. In the event that this project will not be constructed in one bid set of plans due to funding availability, we will provide documentation that maximizes the justification and subsequent funding to allow for additional alternate bids to be included with the plans. **We are currently completing the San Antonio Runway 12R-30L Rehabilitation and Taxiway Improvement program in seven bid packages just for this reason.**

PHASE 2 Planning

The planning effort identifies the appropriate timing for all phases of Runway 11/29 replacement, and addresses key issues critical for subsequent funding discussions with the FAA. Specific activities to be completed include, but are not limited to:

- Conduct a detailed review of historical documentation
  - EA and Airport Master Plan
  - BLM MOA
  - Land acquisition documentation
  - FAA Reimbursable Agreement (RA)
  - Record drawings
  - Studies/agreements with OAHP
  - Available CAD data from EA
  - Drainage studies, etc.
- Update runway and taxiway geometry to meet current FAA standards
- Complete topographical survey
- Complete an Aircraft Approach Procedures Study
- Complete supplemental geotechnical investigations including geophysical analysis of subsurface layers, waste areas, road relocation areas, and facility foundation locations
- Analyze aircraft fleet mix for design criteria determination
- Airfield and roadway pavement design
- Investigate drainage conditions
- Complete runway end obstruction evaluation
- Determine RSA requirements and evaluate solutions
- Develop EA conformance checklist for individual project execution
- Complete site radiological review to identify and map uranium mill tailings limits
- Develop soil and rock processing management plan
- Develop an earthwork waste area plan, including rough associated land development plan
- Complete additional environmental reviews on waste areas not included in EA
- Complete jet blast/erosion/noise study for run-up test pad
- Complete soil amendment revegetation study
- Update Airport master documents (ALP, Master Plan, Exhibit A) as required to reflect project elements
- Complete engineering- and construction-based opinion of probable construction costs, report and document findings
- Coordinate FAA meetings to discuss findings, recommendations, and funding options
- Develop FAA RA for the electrical system and NAVAIDs. Consider possibility of appending to existing RA for the RTR relocation project, to save valuable FAA review time
- Utility potholing

Project Scoping Meetings will review all tasks with Airport staff, FAA, and other stakeholders (see **FIGURE 3** on next page for a list of potential stakeholders). The critical key issues to the right must be resolved at this stage. The planning effort activities listed above will set the stage for the overall design and individual project bid package development and corresponding financial planning. Critical timelines for surveys, FAA RA's, MOA deadlines, etc. will be established and coordinated with all project phases.

The Kimley-Horn team has completed this same design process for recent similar projects at numerous airports including TEX, SAT, and DTW. Meeting runway and taxiway geometry requirements outlined in the FAA Advisory Circulars often poses a challenge for airports. These situations will likely require extensive FAA involvement to understand GJRAA's regulatory obligations, and determine acceptable geometry. Just as we have done at numerous airports aross the country, we will correct all FAA requirements not currently met with the existing runway. **We propose a comprehensive review of the geometrics associated with this project to identify potential concerns early on and prevent issues later in the process.** FAA directives not identified until a project is at 95% to 100% design results in costly project delays. Therefore, it is imperative that all non-compliant conditions are identified and discussed with all stakeholders early. Deviation from current FAA standards or policy requires a Modification of Standards (MOS) at a minimum.

PHASE 2

	Planning Key Issues	Kimley-Horn Team Solutions	GJRAA's Benefits
1	**Impacts to Airline Service and Aircraft Approach Procedures with New Runway 11/29 Alignment**	◢ Complete an aircraft approach procedures study ◢ Adjust airfield geometric layout during initial design stages ◢ Design approach procedures that benefit commercial airlines and general aviation (GA) clients	◢ Use study as marketing tool for maintaining and enticing new airline service ◢ NAVAID facility improvement recommendations at design phase ◢ Approach procedures designed for commercial aircraft using the Airport as well as corporate GA aircraft
2	**MOA with BLM Expires March 2018**	◢ Develop an action plan with BLM staff to identify and meet MOA requirements and deadlines ◢ Identify Critical Agreement dates	◢ Keep project on schedule ◢ Prevent a MOA rewrite
3	**Meet EA and FONSI Compliance Requirements**	◢ Develop an EA compliance action plan ◢ Incorporate mitigation procedures for animals, plants, and historical sites into project documents ◢ Review project for NEPA compliance	◢ Ensures NEPA compliance ◢ Addresses stakeholder concerns ◢ Ensures procedures are follow through construction
4	**Current Airport Layout Plan and Exhibit A Property Map**	◢ Review all current programming and proposed CIP projects ◢ Coordinate with FAA ADO to ensure ALP is complete and acceptable ◢ Update ALP – Exhibit A as needed ◢ Land Use Coordination with FAA HQ	◢ Maximizes project grant eligibility ◢ Meets FAA requirements in a timely manner ◢ Meets grant assurances ◢ Ensures project is built on Airport property ◢ Receive FAA land use concurrence on public roadway and public assembly areas

Planning Key Issues		Kimley-Horn Team Solutions	GJRAA's Benefits
5	On-Airfield Uranium Mill Tailings	◢ Complete a Radiation Risk Analysis on the airfield and potential waste areas ◢ Work directly with CDPHE to identify areas and facilitate handling procedures ◢ Address eligibility with FAA HQ ◢ Use our specialty subconsultant, AMEC FW ◢ Coordinate hazardous waste due diligence audit with FAA ADO	◢ Minimizes costly surprises during construction ◢ Ensures CDPHE and Department of Energy procedures are properly executed ◢ Eliminates "tailings" showing up in future development areas ◢ Budget impacts known early on and not determined during construction ◢ Due diligence audit meets AIP requirement ◢ Land-use concurrence with FAA for hazardous material
6	Contaminated Soils and Placement of 4M CYs of Excavated Material with 96M Gallons of Water	◢ Develop a Soil Management Plan and Processing Plan and incorporate into project documents ◢ Ensure waste areas have Environmental Clearance ◢ Develop water supply plan with City	◢ Addresses additional need for environmental evaluation in excess embankment areas ◢ Ensures compliance and peace of mind ◢ Addressed on all individual projects
7	Runway Ends AGIS Obstruction Survey/ Part 77 Review	◢ Incorporate this long lead item into the overall schedule ◢ Early coordination with FAA	◢ Ensures FAA process is followed in a timely manner ◢ Provides FAA with data to make decisions
8	Removal of Primary Aeronautical Horizontal and Vertical Survey Control Stations	◢ Relocate Primary Airport Control Station/ Secondary Airport Control Station (PACS/ SACS) ◢ Determine schedule for new control stations ◢ Address FAA long lead review time	◢ Ensures projects are built with current, accurate survey control

Technical Report

Kimley-Horn will document the pre-design planning effort findings in a technical report summarizing the project's overall recommended timing and scope and we will prepare an opinion of probable construction costs. We will then present this information to the FAA for consideration. While we understand that funding is not currently available or planned for this project, determinations regarding project timing and scope affect other projects already outlined in the Airport's CIP.

Your consultant must be your partner through this process to develop a plan that achieves the goals and objectives of GJRAA and all stakeholders. Kimley-Horn has partnered with airports across the country to do just this, and met with the various FAA regional representatives to present findings of pre-design investigations to obtain project-specific funding.

Figure 3: Potential Stakeholders List

- GJRAA
- FAA ADO and Airway Facilities
- Air traffic control tower (ATCT)
- Aircraft rescue and firefighting (ARFF)
- Commercial airlines
- Fixed-based operators
- Tenants (cargo, general aviation, and others)
- BLM
- Colorado Department of Aeronautics
- Colorado Department of Public Health and Environment
- City of Grand Junction



Once GJRAA and members of the Kimley-Horn team have collectively met with the FAA and agreed to the scope and timing of the project, we will meet with all the Airport's key stakeholders to present the project and identify any special considerations that might present challenges. Kimley-Horn's preliminary list of stakeholders is on the previous page (**FIGURE 3**).

PHASE 3 Design Development

The design development phase will incorporate all the documentation, program management directives, individual planning studies, compliance controls, and stakeholder concerns into the overall runway replacement project plans. The overall site design documents will be taken to a 70% design level. From this 70% level plan set, individual project bidding packages will be developed. The following activities will be conducted as part of the Phase 3 Design Development process:

- Airfield design
- Electrical design
- FAA NAVAID coordination and RA
- Drainage conveyance design
- Detention pond and water quality pond design
- Perimeter fencing and obstruction verification
- Procurement contract documents
- Material technical specifications
- Phasing and operational issues
- Construction safety and phasing plan, construction management plan, and engineer's design report
- Airside vehicle service road design
- Landside public roadway design
- Pavement design
- Utility easements and design
- Land development layout
- OPCCs
- Constructability review

Airfield Design

Airfield design will include all geometric and vertical elements of the relocated Runway 11/29, new parallel taxiway, connector taxiways, pavement marking, safety area and object free area grading, and Part 77 transitional surface grading. The current FAA Airport Design Advisory Circular, 150/5300-13A, Change 1, dated February 26, 2014 will be followed during design preparation. The FAA criteria determined appropriate for this project will be based on the Phase 2 Planning analysis of updated current and forecasted air traffic at the Airport. One concern we have for the existing geometric layout is the high-speed exit taxiways. These angled taxiways may not be justifiable under current FAA requirements and guidance. The FAA currently requires justification for a high-speed exit taxiway based on flight delays due to airport capacity issues and a benefit-cost analysis. The Airport is currently operating at less than 50% of its capacity. The high-speed taxiway configuration requires a larger runway to parallel taxiway separation, which generates considerably more earthwork, pavement, and lighting needs making it a much more costly option than using standard 90 degree exit taxiways. Our approach to designing the runway and taxiway vertical elements is to locate them as high as possible to minimize the quantity, complexity, and cost of excavation into the hillside.

Earthwork

Our subconsultants, Ground, conducted the preliminary geotechnical investigation that was included in the EA. Their investigation concluded that site soils will be very difficult to process and place. **The clay and shale soils and rock were found to be expansive, highly variable, and hard enough to require blasting in some cases. Also, the nature of these soils will require a tremendous volume of water (96M gallons) to process.** Based on this information, our approach is to minimize the excavation width and depth in the hillside north of the current runway. Also, we believe additional geotechnical analysis including shear wave velocity testing to develop a three-dimensional (3D) map of site geology, and soil processing test runs is needed to provide accurate and achievable earthwork designs. Also, soil strength information in the preliminary geotechnical report shows highly variable values over the site. The California Bearing Ratio (CBR) numbers ranged between 1.5 and 9.0 for the individual soil and rock materials encountered. The preliminary pavement design assumed a CBR of 5.4 everywhere. Developing a blended fill material that combines available soils in a favorable way is needed and strength testing selected subgrade soil will be performed for final pavement design.

Airfield Electrical System

One of the advantages Kimley-Horn has over other consultants is in-house expertise for the airfield electrical system and NAVIADs design. This allows for cohesive coordination, scheduling, and overall quality of the design. GJRAA will benefit from our previous successful similar projects that our in-house electrical staff has completed with Mike Norby, Bob Jones, and Jerry Haliw.

Runway 11/29 has numerous airfield lighting components and NAVAIDS that will be impacted by the Runway 11/29 Replacement project. As a part of the preliminary design evaluation, any electrical items requiring relocations or modifications (frangibility) will also be reviewed.

Items that have been identified to be replaced, modified, impacted, or may require protection during the project include, but are not limited to:

- Runway 11 and Runway 29 edge lighting, precision approach path indicator (PAPI), and medium-intensity approach lighting system with runway alignment (MALSR) lights,
- Instrument landing system (ILS) localizer/glide slope,
- Localizer type Directional Aid (LDA) and runway guidance signs,
- Runway visual range, and
- Associated taxiway lighting and guidance signs.

Other equipment including wiring, duct banks, conduits, handholes, or manholes that are within the project limits or under the runway will also require identification, protection, and/or relocation.

This project will also impact the existing ILS systems where the localizers and glide slopes will need to be relocated and decommissioned during construction.

The FAA is currently in design for a nationwide Electrical Line Distribution (ELD) project that updates and consolidates the utility power connections to all the FAA NAVAIDs at Part 139 airports. With the relocation of the FAA NAVAIDs, we recommend coordinating with the FAA ELD team to include this design into the runway relocation design. We have coordinated with, provided provisions for, and designed these FAA ELD designs at various airports across the country.

Any modifications to the systems noted above will also require an FAA RA, coordination during the design, FAA construction inspection during the construction, and flight check at construction's end.

Light emitting diode (LED) technology will also be considered during the design of the electrical modifications. LED technology can be considered for the following items:

- **High-Intensity Runway Lighting (HIRL).** This LED option will be further evaluated due to lack of infrared (IR) signature on HIRL and current unresolved issues surrounding heads-up display (HUD) avionics in some aircraft. This will also require stakeholder coordination.
- **Taxiway Lighting (MITL).** The FAA will not allow intermixing of LED and non-LED lighting on geometric segments. We will evaluate each circuit modification to determine where LED conversion may be acceptable.
- **Runway Distance Remaining Signs.**
- **Guidance Signs.** We will evaluate both replacement and retrofit options for LED implementation.
- **Wind Cones.**
- **PAPI Systems.** We will coordinate with the FAA for them to assume ownership of the PAPIs after the project.
- **Runway End Identifier Lights (REIL) System.**

Depending on the agreed-upon airfield electrical modifications, we will also review associated impacts to the MALSR power feeds and impacts to power equipment within the airfield lighting electrical vault. If multiple LED installations are implemented, we will review regulator sizing and electrical feeder sizing to maximize on the economic advantages of LED systems.

As with any project, we will start by gathering all available existing documents related to the airfield electrical systems. Upon completing our review of the existing documents, we will conduct a thorough on-site inspection of all facilities impacted by the project to verify the documents are current and capture any on-site information that will help in the analysis of existing equipment or design of the new systems.

Our on-site inspection will include:

- Meet with Airport Operations and Maintenance staff to understand existing issues, concerns, standards, likes, and dislikes
- Perform meggering of existing circuits
- Gather name plate data off equipment, take measurements, and inspect general condition of existing equipment
- A sampling of base can fixtures will be opened for inspection to determine existing conditions of splices, heat shrink, water level, and corrosion

Our project site review of the airfield lighting vault revealed circuit readings indicating poor mega-ohm readings. This is a potential safety and cost issue that needs prompt review. Corrective options need to be determined and added to CIP planning for funding allocation.

Once all existing conditions have been verified and prior to start of design, we will complete our analysis regarding proposed changes and potential costs. A meeting will then be conducted with GJRAA to review options and finalize the scope of the electrical modifications, including the possible correction/upgrading of the existing airfield electrical system.

Drainage Improvements

Major drainage modifications and grading will be required for the Runway 11/29 Replacement project. Relocating the runway requires significant grading for not only the new pavements and

associated safety areas, but also necessitates extensive earthwork modifications to protect critical airspace per FAR Part 77 requirements. Due to the magnitude of the anticipated earthwork and grading modifications, existing drainage patterns will be significantly altered.

Initially, our team will review and use the overall drainage model and recommendations contained within the most recent EA. Based on the calculations, pond sizes and depths, and other drainage recommendations contained within the EA, each individual phase of the program will be modeled to determine the most effective implementation of both permanent and temporary stormwater runoff control features. Factors such as erosion control; water quality, wildlife control; ease of maintenance; land-use compatibility; downstream continuity; and all federal, state, and local requirements will be considered in developing the overall drainage plan.

As part of the overall drainage plan, a combination of multiple features may be implemented into design including, but not limited to:

- Detention ponds on adjacent BLM land to control upstream flows along the Airport's north property line; side-slope armoring, wire mesh protection systems, and other measures may be considered to assist in wildlife control and land-use compatibility requirements
- Underground drainage collection and diversion systems on-site to ensure that stormwater does not collect or pond on airfield surfaces, safety areas, or infield areas
- Water quality ponds downstream of Airport property to ensure sediment control and other stormwater pollutants

Our team will develop each phase of the drainage plan through close coordination and collaboration with all project stakeholders, including all applicable governmental and regulatory agencies. We will evaluate the drainage design recommendations in the EA to ensure they are adequate. If modifications are necessary, our team is fully prepared to develop the appropriate drainage models and calculations necessary to complete the design.

PHASE 3

Design Key Issues		Kimley-Horn Team Solutions	GJRAA's Benefits
1	Geometric Layout	◢ Evaluate high-speed vs 90 degree exit taxiways ◢ Use standard taxiway to taxiway separations	◢ **Potential to save several million dollars and complete project several years sooner**
2	Soil Management and Processing	◢ Prepare geologic 3D map ◢ Soil processing plan to blend soils ◢ Uranium tailings handling and disposal plan	◢ More accurate design and better bids ◢ Reduce potential for swelling, better bids, and fewer construction problems ◢ Safely move and dispose of tailings and meet legal requirements
3	Drainage Facilities	◢ Coordinate with BLM for improvements on Federal Land	◢ Reduce project time and potential future issues
4	Site Erosion and Sediment Control	◢ Specialty subconsultant and BLM-experienced local revegetation specialist, Alpine	◢ Maximize revegetation success and agency approval
5	Pavement Design	◢ Develop soil strength for representative blended soil mix ◢ Evaluate cement and lime treatment of subgrade soil	◢ Achieve desired pavement life with least amount of repairs ◢ Improve soil strength, reduce swell, create consistent platform for construction over multi-year phases
6	Roadway/Utilities	◢ Experienced local professionals included on team	◢ Ensures smooth and efficient permitting, design, and approval of these improvements
7	Historical Site Mitigation	◢ Experienced local cultural and historical resource subconsultant on team, Alpine	◢ Knowledge and experience with local resources and agencies to streamline process and avoid surprises during construction
8	Fencing	◢ Early stakeholder coordination and review of security requirements	◢ Avoid access issues and ensure fencing materials/equipment are appropriate for needs
9	FAA NAVAID Reimbursable Coordination	◢ Perform analysis of instrument approaches ◢ Early involvement of FAA in regard to NAVAIDS and communication equipment	◢ Determine if runway realignment or threshold shifts improve instrument approaches ◢ Ensure FAA participation in project is not delayed and adequate funding is programmed for their services

Roadway Design

Relocating Runway 11/29 to the northwest of its existing location, causes a corresponding shift to the RPZ. Currently, 27 ¼ Road encroaches into Runway 11/29's RPZ and will continue to encroach into the new RPZ once Runway 11/29 is replaced. As such, the road must be relocated further west to be outside of the future RPZ limits.

Our approach to relocating 27 ¼ Road begins with a thorough review of existing BLM land-use agreements and the MOA between the BLM and GJRAA, property limit lines, utility easements, drainage easements, mineral leases, master plans, environmental studies, and other documents in order guide the proposed route, design, and construction phasing of the relocated roadway.

Early engagement with City of Grand Junction Planning and Engineering, Mesa County Planning and Engineering, BLM, FAA, US Fish and Wildlife Service, Colorado Division of Wildlife, and other potential stakeholders early in the design process will ensure that the varying interests are not overlooked or unheard. It is also understood that the BLM lands north of the City are a major recreational area for the local community, and a project phasing goal will be to maintain consistent access during construction.

In addition, River City will complement our project team by leading the roadway relocation component of this program. With River City's extensive local roadway design experience, the timely relocation of 27 ¼ Road will be one of the first construction packages in the program to enable future phases of Runway 11/29 redevelopment.

Pavement Design

We will utilize strength data developed for a composite subgrade material to design pavement sections appropriate for the latest and forecasted aircraft types at the Airport. Pavements will be designed using the most current FAARFIELD and Layered Elastic Design procedures (LEDFAA) with the current fleet mix for Runway 11/29. Paving material specifications will be modified as necessary to control the mix design and pavement production to provide the best product to the Airport. Due to poor site soil conditions, pavement designs will look at amendments for the soil immediately below the pavements. In the past, cement treatment has been found to economically mitigate low CBRs, stabilize expansive soils, and extend pavement life. Kimley-Horn will further evaluate this during the geotechnical task.

Perimeter Fencing

The overall footprint of the Airport property will be expanded and modified to encompass the Runway 11/29 Relocation and associated improvements. As such, modifications to the airport perimeter fence will be required. Our project team recognizes that an Airport perimeter fence is much more than chain link fabric, steel posts, and three strands of barbed or electrified wire. The safety and security of the airport facilities are a top priority when considering alterations to the perimeter fence. In addition, a perimeter fence and its associated access points should be one of the key assets for providing secure, yet efficient, access to authorized airport users. Our project team will engage with GJRAA staff; TSA; FAA; BLM; ARFF and Emergency Services; airline representatives; airport tenants such as West Star Aviation, FedEx, the GA Community; and other stakeholders early in the design process to ensure that secure, efficient access to airport facilities is achieved.

Cultural Resources

We have included Alpine Archaeological Consultants, who specialize in cultural and historical site mitigation, on our team to document any such sites impacted by the Runway 11/29 Relocation program and to coordinate between the OAHP and the design team. Identifying and documenting cultural and historical sites early in the design process ensures that any construction or installation, including perimeter fencing, is fully compliant with applicable regulations and that program delays are avoided.

Construction Phasing

The Little Book Cliff Railway resource will be delineated and protected as coordinated with stakeholders.

The Kimley-Horn team will partner with the GJRAA to evaluate all construction and phasing alternatives for the replacement of Runway 11/29 before making a final decision as to the methods used. This could potentially include contractor outreach meetings to gain critical input related to the feasibility of the construction methods and alternatives under consideration. During all phasing options, coordination will be required to keep stakeholders informed of each phase of the project, the duration of each closure, and the anticipated completion times.

PHASE 4 Construction Services

Specific activities to be completed during the construction phase include:

- Bid phase services
- Stakeholder meetings and coordination
- Accurate testing and acceptance
- Maintain accurate installed quantities for pay application verification
- Waste material mitigation
- Construction observation, resident project representation, and resident inspections
- Project close-out, as-built documentation, and final construction report

Weekly construction coordination meetings will be held with all stakeholders in conjunction with the start of construction. Kimley-Horn will partner with the contractor to develop a construction schedule per the specifications that will be presented to all stakeholders and adjusted as necessary to ensure the successful completion of the project with minimal impacts to operations.

Our recent experience has proven that construction observation will be critical for project success and will require a cohesive team of engineers with a history of successfully working together on other similar projects. The team must have the expertise and experience to quickly make the decisions necessary to keep the project progressing without delay. Kimley-Horn has a team of senior engineers and construction observers with the proven ability to deliver this type of unique project. Our construction staff includes Project Manager Mike Norby, P.E.; Construction Services Lead Nathan Lemon, P.E.; and Electrical/NAVAID Installation Observation Dustin Colwell P.E., all supported by a team of Kimley-Horn and River City personnel.

Close-Out Procedures

We recognize that properly and quickly closing-out projects is an important portion of the overall program. Necessary close-out procedures include accurately preparing all of the required paperwork, as-built documents, final construction report, and any final billing required by the project. Our team has taken the internal steps necessary to help our clients expedite the close-out process, and we will continue to take these steps for GJRAA.

Kimley-Horn has a vast amount of experience closing-out projects and working in coordination with airports to submit final documentation to the FAA in a timely manner. We will partner with you to quickly close-out the grants so GJRAA remains in compliance with the FAA and can obtain future grants without issues.

We know that excitement will come each time a new phase begins, and there will be a lull in the process as previous phases come to a close. Mike Norby understands the importance of keeping the entire team excited for the duration of all phases of this project. Mike and all core team members have completed multiple similar projects encompassing planning, design, construction, and close-out processes. **Our team will stay involved from project start to finish, and will actively ensure the project is successfully delivered.**

While this continuity may seem simple, our level of staff engagement has proven to be a key factor in the continual success of our projects. We take pride in our reputation for taking projects from planning through close-out, and we are excited about the opportunity to plan, design, and construct the Runway 11/29 Replacement project. We look forward to developing a strong relationship with GJRAA.

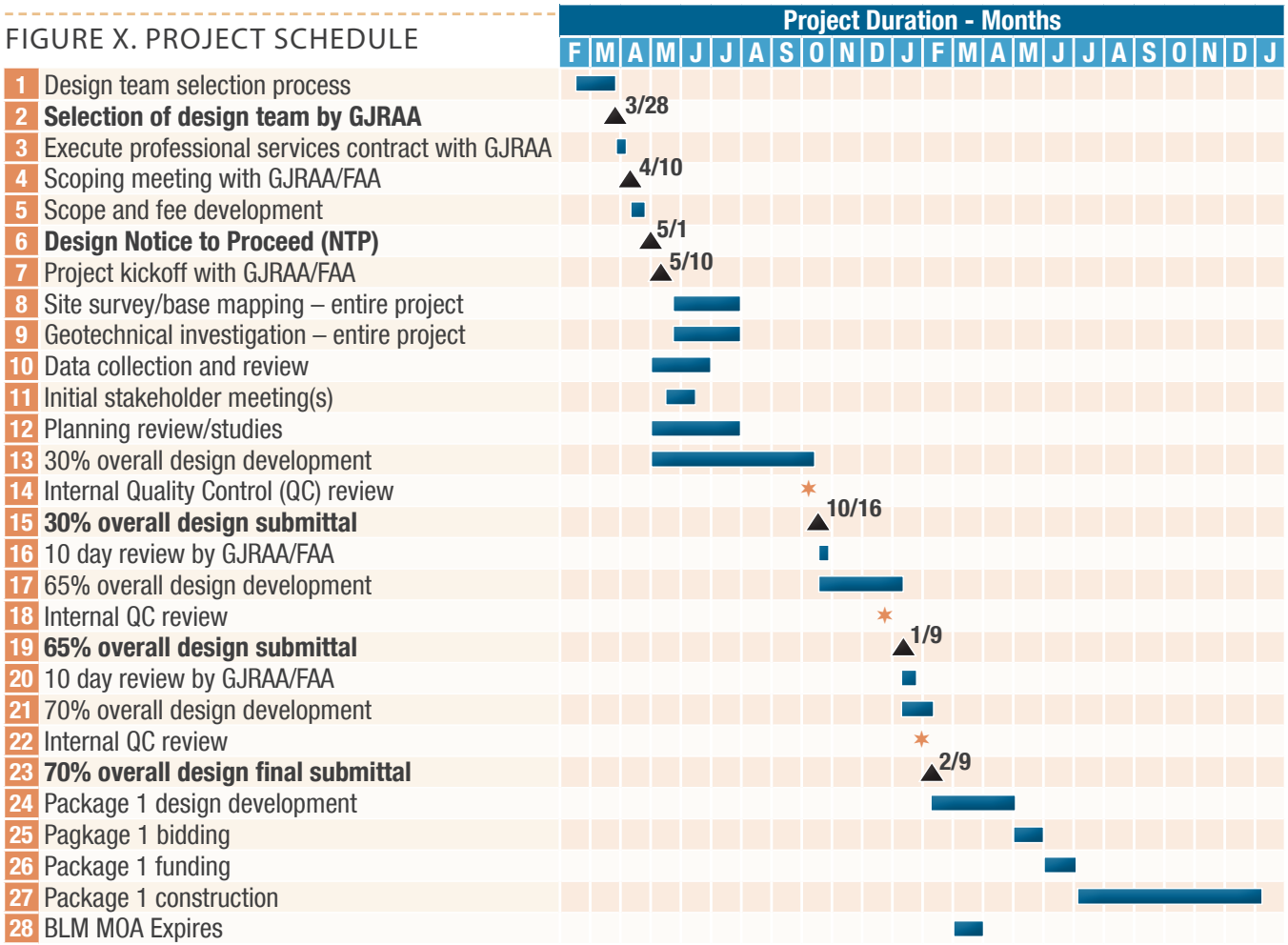
PHASE 4

Construction Services Key Issues		Kimley-Horn Team Solutions	GJRAA's Benefits
1	FAA Required Documentation and Reporting	◢ Maintain up to date and accurate reports and records	◢ Ensures compliance with FAA regulations and facilitates project acceptance
2	Site Safety, AOA Operations and Industrial Hygiene	◢ Detailed Construction Safety and Phasing Plan ◢ Uranium handling and safety plan	◢ Safe and efficient aircraft operations with minimal deviations from normal use ◢ Worker safety and compliance with state regulations
3	Earthwork Volume Measurement and Tracking	◢ Use 3D geologic model developed in design with periodic survey during construction	◢ Accurate tracking of excavation and use of the various soil types to ensure proper blending and to verify quantities for payment
4	Environmental Compliance Requirements	◢ Monitoring by local specialists throughout construction	◢ Avoid delays and facilitate project acceptance by agencies
5	FAA NAVAID Installation and commissioning	◢ Advance involvement and coordination with FAA Facilities and Flight Check	◢ Coordination of RAs for proper closeout funding. No delays due to scheduling
6	Construction Quality Assurance	◢ Full-time monitoring and proactive involvement of QA personnel during earthwork and pavement construction	◢ Achieve specification requirements the first time. Provide longer service life with less repair.
7	Timely Closeout	◢ Provide adequate staff during construction to complete closeout documentation as project progresses	◢ Meets FAA requirements in a timely manner and keeps funding for future phases on schedule

Anticipated Schedule

One key to a successful project is managing the right resources at the right time. Frequent communication and clear definition of team members responsibilities are critical elements in maintaining the schedule. We will develop a Project Work Plan at project inception that identifies critical milestones and deliverable dates, and Project Manager Mike Norby will ensure the project team is accountable for achieving each of the defined deadlines. The Kimley-Horn team can handle any aspect of aviation engineering required, and our proposed team is immediately available to meet the objectives of this project. Kimley-Horn's proposed **SCHEDULE (FIGURE 4).** for Package 1 bidding is provided below. This schedule is only an example draft that can be adjusted to work with any planning or design duration required. A more thorough project schedule will be developed based on the overall yearly funding distribution. This schedule will be updated on a regular basis and discussed monthly during coordination meetings.

FIGURE X. PROJECT SCHEDULE



Team Organization and Availability

The Runway 11/29 Replacement project will be led by Mike Norby, P.E., and an established, core group of aviation professionals including project managers, engineers, designers, electrical/NAVAID engineers, airport planners, pavement specialists, drainage engineers, roadway designers, environmental scientists, noise specialists, and construction administrators and inspectors. One page resumes for all key team members have been included in the Appendix. The Kimley-Horn team composition provides all-around competency and pertinent experience.

Having the right mix and framework of firms is one part of how the Kimley-Horn team will serve GJRAA. Our team has an unmatched mix of national experience at small, medium, and large hub commercial and primary airports and a single-minded passion for client service. Our team is composed of the discipline-specific experts presented in **FIGURE 5. ORGANIZATIONAL CHART** on page 24.



FIGURE 5.
ORGANIZATIONAL CHART

GRAND JUNCTION REGIONAL AIRPORT

PROJECT PRINCIPAL
MIKE HERMANN, P.E.

PROJECT MANAGER
MIKE NORBY, P.E.

QA/QC
STEVE REEDER, P.E.

PROGRAM MANAGEMENT DEPUTY PM – BOB JONES, P.E.

- **FAA / DOJ REQUIREMENTS COMPLIANCE** — Jerry Haliw, P.E.
- **FINANCIAL PLANNING / BUDGET CONTROL** — Dave Morris, P.E.
- **PUBLIC OUTREACH** — Vanessa Solesbee
- **STAKEHOLDER COORDINATION** — Mike Norby, P.E.; Bob Jones, P.E.
- **PROJECT DELIVERY / ASSET MANAGEMENT** — David Hunley, P.E. (3); Lisa Heckendorn-Blake, PMP (3)
- **FAA GRANT COMPLIANCE** — Bob Jones, P.E.

AIRFIELD PLANNING LEAD
PAM KEIDEL-ADAMS

- **LAND ACQUISITION / LAND USE / TRANSFER** — Dave Rickerson
- **AGIS / PACS-SACS OBSTRUCTION SURVEY** — Scott Thompson, PLS (1)
- **APPROACH PROCEDURES** — Alec Seybold (4)
- **SRA / SMS CLIENT SUPPORT** — Jacob Bower, AICP
- **ALP / PROPERTY MAP UPDATE** — Pam Keidel-Adams; Mike Boyles
- **CIP PLANNING / COST ESTIMATING** — David Hunley, P.E. (3); Jared Moreng, P.E.

AIRFIELD CIVIL DESIGN LEAD
JERRY HALIW, P.E.

- **GEOMETRIC DESIGN** — Jared Moreng, P.E.; Mike Boyles
- **PAVEMENT DESIGN** — Jared Moreng, P.E.; Nathan Lemon, P.E
- **DRAINAGE DESIGN / EASEMENTS** — Laurie Marin, P.E., CFM; Jeff Mace, P.E., CFM (1)
- **STORM WATER / WATER QUALITY** — Erin Griffin, P.E., CPESC; Maurice Foye (8)
- **EROSION CONTROL / REVEGETATION** — Maurice Foye (8)
- **PERIMETER FENCE / OBSTRUCTION EVAL** — Jerry Haliw, P.E.
- **CONSTRUCTION PHASING** — Jerry Haliw, P.E.
- **TOPOGRAPHIC SURVEY** — Scott Thompson, PLS (1); Alec Thomas, PLS, CFED (1)
- **CONTRACT DOCUMENTS / TECHNICAL SPECS** — Jerry Haliw, P.E.
- **GEOTECHNICAL ENGINEERING** — Jason Smith, P.E. (2)
- **BLAST FENCING DESIGN** — Brad Nicholas (6)

AIRFIELD ELECTRICAL DESIGN LEAD
ANEES RAHMAN, P.E.

- **AIRFIELD LIGHTING COORDINATION** — Dene Egami, P.E.; Dustin Colwell, P.E.
- **APPROACH LIGHTING AND NAVAIDS** — Anees Rahman, P.E.; Dene Egami, P.E.; Dustin Colwell, P.E.
- **AIRFIELD LIGHTING CONTROL SYSTEM** — Dene Egami, P.E.; Dustin Colwell, P.E.
- **AIRFIELD FAA FACILITY ASOS RELOCATION** — Anees Rahman, P.E.; Dustin Colwell, P.E.

ENVIRONMENTAL / FEDERAL AGENCY LEAD
DEBBIE WILSON, AICP

- **ENVIRONMENTAL NEPA COMPLIANCE** — Maurice Foye (8)
- **BLM RIGHT-OF-WAY** — Scott Thompson, PLS (1); Maurice Foye (8)
- **HISTORIC / CULTURAL RESOURCE COMPLIANCE** — Rand Greubel, RPA (5)
- **WILDLIFE / PLANT STUDIES-MITIGATION** — Maurice Foye (8)
- **USACE 404 PERMIT COORDINATION** — Maurice Foye (8)
- **URANIUM RADIATION RISK ANALYSIS** — Steve Rima (7)

CONSTRUCTION SERVICES LEAD
NATHAN LEMON, P.E

- **RESIDENT ENGINEERING** — Nathan Lemon, P.E
- **CIVIL CONSTRUCTION OBSERVATION** — Ivan Geer, P.E. (1); Bill Hussey, EIT
- **ELECTRICAL CONSTRUCTION OBSERVATION** — Dustin Colwell, P.E.
- **QUALITY ASSURANCE TESTING** — Chris Hutto, CET (2)
- **GRANT CLOSEOUT** — Nathan Lemon, P.E; Bob Jones, P.E.

ROADWAY / LAND DEVELOPMENT DESIGN LEAD
IVAN GEER, P.E. (1)

- **LOCAL AGENCY COORDINATION** — Ivan Geer, P.E. (1)
- **ROADWAY DESIGN** — Jeff Mace, P.E., CFM (1); Chris Hopkins, P.E.
- **UTILITIES** — Jeff Mace, P.E., CFM (1)
- **BLM RECREATION AREA PARKING** — Scott Thompson, PLS (1)

SUBCONSULTANTS

1. River City Ground
2. Connico
3. Lean Corporation
5. Alpine Archaeological
6. HMMH
7. AMEC FW
8. HRL Compliance

indicates Key Staff

Project Manager Experience



Mike Norby, P.E.

- M.S., Civil Engineering, Northern Arizona University
- B.S., Physics, Northwest Missouri State University
- Professional Engineer in CO (pending), AZ, TX, NV

Guided by 24 years of directly applicable experience in the aviation industry, Mike Norby, P.E., will serve as the Project Manager for the Replacement of Runway 11/29 at the Airport. He is a proven team leader with the expertise to ensure the delivery of a multi-phased complex project including planning, design, and construction that meets all FAA requirements while achieving the scheduling and budgetary requirements of the GJRAA.

Mike is a nationally renowned expert in airside aviation project planning, design, and construction; pavement management services; condition surveys; structural analyses; and pavement alternatives. He has been the invited guest speaker at three universities to discuss pavements and the importance of proper maintenance, and presented on pavement, pavement management, and alkali-silica reactivity (ASR) to the American Association of Airport Executives (AAAE), Airports Council International (ACI), ACI World, Transportation Research Board, and numerous state-level organizations. Mike has completed more than 30 runway and numerous taxiway system projects at aviation facilities across the country—many of which were of similar size and scope to your Runway 11/29 Replacement. **TABLE 3** to the right provides just a small sample of Mike's project management experience relevant to this project.

Mike has been the project manager or key team member for most of the design and construction projects that Kimley-Horn has been involved in over the last 24

Table 3. Mike Norby, P.E.
Representative Experience

	Multi-Year Phasing	New Construction	Asphalt Concrete Pave	Portland Cement Pave	Operational Impacts	Large Earthwork	Electrical	NAVAIDs	Bidding Phase Services	Const. Phase Services
Reconstruction										
El Paso Runway 4/22, Taxiways N, Q, & R	✈		✈		✈	✈	✈	✈	✈	✈
San Antonio Runway 12R/30L	✈			✈	✈		✈	✈	✈	✈
Telluride Runway 9/27	✈	✈	✈		✈	✈	✈	✈	✈	✈
El Paso Runway 8R/26L Taxiway E			✈		✈		✈	✈	✈	✈
El Paso Runway 8L/26R (Re-Alignment) and New Taxiway System	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
Safford Regional Runway 12/30			✈		✈		✈	✈	✈	✈
Tucson Ryan Field Runway 6L/24 & Taxiway Network	✈	✈	✈		✈	✈	✈	✈	✈	✈
Sky Harbor International Runway 7L/25R	✈	✈	✈	✈	✈		✈	✈	✈	✈
Detroit Metropolitan Runway 3R/21L	✈			✈	✈		✈	✈	✈	✈
Memphis Runway 9/27			✈	✈	✈	✈	✈	✈	✈	✈
Rehabilitation										
El Paso Runway 4/22 Keel Replacement			✈		✈				✈	✈
El Paso Runway 8R/26L Mill and Replace			✈		✈		✈		✈	✈
San Diego International Runway 9/27			✈		✈		✈	✈	✈	✈
San Antonio Runway 12R/30L Partial Rep.				✈	✈		✈		✈	✈
Extensions										
El Paso Runway 8R/26L, Taxiway L Extension, New Taxiway W		✈	✈	✈	✈	✈	✈	✈	✈	✈
El Paso Runway 4/22, Taxiway J Extension, New Taxiway K2		✈	✈	✈	✈	✈	✈	✈	✈	✈
Sarasota Bradenton Runway 14/32 Extension (both ends)		✈	✈		✈	✈	✈	✈	✈	✈
Flagstaff Airport - Runway 3/21		✈	✈		✈	✈	✈	✈	✈	✈
McCarran International Runway 7L/25R		✈		✈	✈		✈	✈	✈	✈

Kimley-Horn's Project Manager is the Most Qualified to Address Your Project Issues

- Has completed over 30 runway rehabilitation, reconstruction, and/or extension projects across the country.
- Has managed large, complex airfield projects like this runway
- Brings extensive knowledge of FAA regulations and policies
- Works with you to make the process goes smoothly

years, including current projects at SAT (multiple projects), EPIA (multiple projects), and the Memphis International Airport Runway 9/27 Rehabilitation. He also has led most of the pavement management projects over this same timeframe with recent work at Nashville International Airport (update), Dallas Love Field Airport (update), and Detroit Metropolitan Wayne County Airport (initial development and update)—just to name a few. Additionally, Mike works extensively with numerous statewide airports systems including the Florida Department of Transportation (DOT) Aviation Pavement Management System and the Arizona DOT's Airport Pavement Maintenance Program to develop cost-effective solutions to lengthen the overall life of pavement through maintenance. Mike has worked in most regions of the FAA, including the FAA Northwest Mountain Region and nationally in Washington D.C. On numerous occasions, issues addressed in one region will be the next items addressed in another, such as geometrics, SRAs, FAA SOPs, and construction change orders, among others. Mike welcomes the opportunity to continue to develop the strong working relationships that streamline project coordination and regulatory compliance to keep your project moving forward.

As a hands-on project manager, Mike is committed to his clients and their airports. His vast experience helps him anticipate your needs and proactively bring you efficient solutions. He wants to be notified immediately if you ever have a question or concern. Mike is available anytime by phone, 602.799.1231. On several occasions airports have experienced issues and called Mike late at night or on weekends, and he has made a trip the next day to evaluate and solve the problem. One such instance involved a taxiway at EPIA where a taxiing 727 sank into the pavement, creating a failure approximately 15 feet long in the wheel path. EPIA called Mike, he was there the next day evaluating the issue and as-builts, and communicated a solution with EPIA and the airlines. Ultimately, the team obtained FAA ADO emergency funding and redesigned the entire taxiway in 40 days to address deficient pavements, including survey and geotechnical work.

> "Kimley-Horn has performed in an exemplary manner, and I feel like they are always looking for ways to meet our needs efficiently..."
>
> —Kao-Lin Chen, P.E., Sr. Airport Engineer,
> San Antonio International Airport (retired January 2017)

In summary, Mike has and will work as an extension of your own staff and does what is necessary to provide the level of service that the GJRAA requires when it is required—including accelerating schedules or providing information beyond the project's original scope. GJRAA and the Airport can be confident that Mike has the relevant expertise and ability to lead to the team to develop practical planning, design, and construction solutions tailored to the unique technical, operational, regulatory, and administrative requirements of the Runway 11/29 Replacement project acceptable to the numerous stakeholders and Airport constituents who may be impacted by the project. Mike will also be supported by a highly skilled team committed to exceeding your expectations. One page resumes for all key team members are in the Appendix.



Construction Manager/Field Engineer Experience

Kimley-Horn provides construction administration and inspection services for our aviation design projects. Because of our level of project-specific understanding and desire to see projects constructed successfully, we will be on-site throughout the project. We will coordinate weekly meetings with GJRAA and the contractor so the entire team is aware of construction progress and can discuss any issues that have arisen and identify any potential issues that may arise. We will also meet with the stakeholders to discuss schedules and closures prior to the beginning of construction.



Nathan Lemon, P.E.

- B.S., Civil Engineering, University of Colorado at Denver
- Professional Engineer in CO (No. 45385)

Construction Services Lead Nathan Lemon, P.E. specializes in airport design, rehabilitating and reconstructing airport facilities, and construction administration of airfield and airport-specific projects. This includes civil construction experience in the proper application of methods and practices for both horizontal and vertical construction. Nathan is accomplished at leading teams of discipline engineers, analysts, and inspectors in the design and construction of airport facilities. Specifically, this includes the coordination of large, complex, phased projects involving the rehabilitation and/or reconstruction of pavement surfaces on active airfields. Nathan is well versed with FAA Advisory Circulars as they pertain to both design and construction of airfield systems and infrastructure.

Nathan's responsibilities often include scope of work development, concept design work, cost estimating, cost/benefit economic evaluation, project schedule development, preparing funding request documents, directing contracted consulting engineers, specifying and selecting materials and/or design methodologies, reviewing bids, and construction management. He manages budgets and schedules and the engineering and construction teams to complete projects on time and under budget. He is skilled at construction management of airfield projects which includes bidding/ procurement services, construction administration, resident project representation, and project closeout.

TABLE 4 to the left provides just a small sample of Nathan's construction experience relevant to this project.

Table 4. Nathan Lemon, P.E. Representative Experience

	Multi-Year Phasing	New Construction	Operational Impacts	FAA Doc./ Compliance	Grant Admin.	Stakeholder Coordination	Construction Safety Plans	Project Grant Closeout	Site Grading/ Mass Grading	Storm Drainage Insp.	Change Orders/RFIs	Submittal Review	Permit Compliance
Reconstruction													
*Colorado Springs Taxiway E, G, & H – Phases III, IV, & V	✈		✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
*Colorado Springs Taxiway M and F			✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
Denver jetCenter Apron			✈	✈	✈	✈	✈	✈		✈	✈	✈	✈
*Boise Cargo Apron			✈	✈			✈						
*Spokane International Apron	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
Rehabilitation													
San Antonio Runway 12R/30L and Taxiway	✈		✈	✈			✈	✈	✈	✈	✈	✈	✈
Huntington Tri-State Taxiway A East		✈	✈	✈	✈	✈	✈						
*George Bush Intercontinental Taxiways WA and WB		✈	✈	✈			✈	✈	✈				
*Colorado Springs Runway 12/30			✈	✈	✈		✈	✈			✈	✈	✈
*Boise Taxiway F			✈	✈			✈						
Extensions													
Telluride Regional Run-up Apron and De-icing Pad		✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
Memphis International Centralized De-icing Facility	✈	✈	✈	✈	✈	✈	✈						
Huntington Tri-State MALSR Drainage		✈			✈	✈	✈	✈	✈	✈	✈	✈	✈
*Reno-Tahoe Runway Extension and Safety Area Imp.	✈	✈	✈	✈	✈	✈	✈						

* = Completed prior to joining Kimley-Horn

Subconsultants

Kimley-Horn's in-house staff will be enhanced by a subconsultant team selected specifically for this project based on their individual expertise, established working relationships with our staff, and proven abilities to prepare high quality, on-time deliverables to our clients.

- **Established working relationships –** Our local subconsultants, River City, HRL Compliance, Alpine, and AMEC FW, are part of the Grand Junction community and take personal ownership in completing successful projects. They accomplish this with proven working relationships with local agencies.
- **Understanding of Existing Site Conditions –** Our subconsultants have the experience with existing local site condition pitfalls and locally utilized construction materials. Focusing this local knowledge throughout the program provides a clear understanding of all project details. This ensures issues are addressed early, which minimizes cost impacts and provides higher quality projects.
- **Local Economic Impact –** Using local subconsultants has a positive impact to Grand Junction's businesses and overall economy.
- **Specialty Aviation Expertise –** We have added national teaming partners to complement our aviation skill set. These experts are able to streamline FAA approval for new approach procedures. In addition, one maintains airport-specific construction cost data to provide accurate airfield project financial planning and project delivery. Another national subconsultant provides noise and jet blast evaluation specific to aircraft testing operations. These national specialty subconsultants provide expertise to ensure the runway replacement program exceeds all expectations.

Our highly qualified subconsultants have proven track records and exceptional reputations for quality service on similar projects. Through our consistent communication and follow-up, we stay on top of our subconsultants' work, so you do not have to. Project Manager Mike Norby will be the primary point of contact and will provide regular oversight of activities undertaken by our subconsultants. He will ensure each team member is making active and productive strides towards project success—delivering a timely and cost-efficient project.

Furthermore, Kimley-Horn's team composition achieves meaningful diversity by including DBE-, M/WBE-, and SBE-certified firms. We will exceed the standard goal set forth in the U.S. Department of Transportation, 49 CFR Part 26.

A summary of each firm is provided below with specific task responsibilities.

River City

Surveying, Roadway Design Engineering, BLM Right-of-Way, and Construction Observation

River City is a multidiscipline engineering and land surveying firm headquartered in Grand Junction. The owners and staff of River City have been instrumental in successfully completing some of the largest and most prominent projects in Grand Junction. They have engineered hundreds of road miles and surveyed at least 38 airport projects.

Relevant Experience

- Colorado Law Enforcement Training Facility
- KE Road Improvements

Ground

Geotechnical Engineering and Geophysical Site Evaluation

Ground is a 32-year-old Colorado geotechnical engineering firm providing geotechnical and environmental engineering; materials testing laboratory services; building and utility, third party government, and ICC special inspections; and geothermal conductivity testing and drilling capabilities. Ground provides services to government, city, and municipal organizations, as well as to commercial and industrial sectors, on projects including educational facilities, infrastructure, roadways, transportation, heavy civil engineering, and energy.

Relevant Experience

- Grand Junction Regional Airport
- Montrose Airport

Connico (DBE)

CIP Planning/Cost Estimating/Program Delivery

Founded in 1990, Connico specializes in cost estimating, scheduling, and program and project management. The firm primarily focuses on aviation, including all aspects of airport airside and landside planning, design, and construction. Connico's projects range from master, capital improvement, and land use plans to on-call and as-needed consulting services, new construction and renovation, and feasibility studies. Connico is a CDOT-certified DBE, M/WBE, and SBE.

Relevant Experience

- San Antonio Runway 12R-30L Rehabilitation Multiple Packages
- DTW, Taxiway Z Relocation

Lean Corporation

Approach Procedures Study

Through an exclusive partnership with DragonFly Aeronautics, LLC (DFA), Lean Corporation delivers innovative and collaborative solutions related to advanced instrument procedure design, aeronautical data management, aircraft performance, and flight operations engineering. DFA utilizes working access to software used by FAA, USAF, NGA, and FAR Part 91/135/121 aircraft operators to create and update complex runway designs that must balance all stakeholders needs throughout the project. Lean Corporation and DFA have performed more than 200 airport projects worldwide at more than 75 commercial and military airports.

Relevant Experience

- Telluride Approach Feasibility and LOC M Special Implementation
- Oakland International Airport Runway 12/30 Rehabilitation

HRL Compliance (DBE)

Environmental NEPA Compliance, Wildlife/Plant Studies, USACE Section 404 Permit Coordination, Erosion Control Evaluation

HRL is a full service environmental consulting firm in Grand Junction providing environmental site assessment and remediation, project and facility permitting, environmental compliance consulting, and waste management services. Founded in 2002, HRL is a CDOT-certified DBE.

Relevant Experience

- Pittsburgh International Airport Wildlife Studies
- NEPA Services for Seismic Exploration on BLM Lands

Alpine Archaeological Consultants, Inc. (Alpine)

Historical/Cultural Resource Compliance

Alpine is a respected, full-service archaeological consulting firm headquartered in Montrose. They have a long history of helping clients implement projects through compliance with historic preservation laws. They have well-established relationships with the land-managing agencies and the OAHP. They have completed 10 projects in support of airport construction and expansion, including several in western Colorado, as well as over 130 small and large-scale projects in and around Grand Junction for private and federal clients.

Relevant Experience

- Class III Cultural Resources Inventory of the 1,400-acre BLM Hubbard Mesa OHV Open Area
- Class III Cultural Resources Inventory of Nine Parcels for the BLM along the Gunnison River

HMMH

Jet Blast Protection and Noise Evaluation

HMMH provides expert assistance on the full spectrum of environmental and planning services to the aviation industry including more than 200 airports worldwide. HMMH's noise and vibration capabilities range from basic assessments of noise exposure to detailed, innovative technical analyses of unique airport problems. HMMH is a leader in developing noise and land use compatibility plans under Title 14, CFR Part 150 and 161, in the design, specification, and installation of airport Noise and Operations Monitoring Systems (NOMS), in acoustical testing for airport sound insulation programs, and in conducting airport ground noise studies.

Relevant Experience

- Noise Barrier Feasibility Study, Tweed-New Haven Airport
- Ground Run-up Enclosure Siting Study, Los Angeles International Airport

AMEC FW

Uranium Radiation Risk Analysis

For more than 60 years, AMEC FW has served the nuclear industry with distinction. They are one of only a few organizations with a Mobile Nuclear Regulatory Commission (NRC) license, advanced radiation detection/measurement technology, and the technical expertise to plan and execute complex radiological projects. AMEC FW has a long history with the Uranium Mill Tailings Remedial Action (UMTRA) Program.

Relevant Experience

- Moab UMTRA, Moab and Cresent Junction, UT
- Fukushima Dai-ichi Radioactive Materials Cleanup, Fukushima Prefecture, Japan

Appendix: Resumes



Education: M.S., Civil Engineering, Northern Arizona University

B.S., Physics, Northwest Missouri State University

Licenses/Certifications: Professional Engineer in CO (No. 38265), AZ, KY, LA, NV, TN, TX, and MI

20
YEARS LICENSED

24
YEARS OF AVIATION EXPERIENCE

20
YEARS OF EXPERIENCE IN ROLE

24
YEARS WITH KIMLEY-HORN

MIKE NORBY, P.E.

ROLE: Project Manager and Stakeholder Coordination Lead

Biography

Mike has 24 years of experience with Kimley-Horn serving as a project manager and engineer for numerous aviation projects across the country including airfield design, construction, and specifically pavement management. Mike's specific design experience includes a complete understanding of FAA AC 150-5300/13A, phasing, runway, taxiway and apron design, pavement section determination, and utility coordination. Additionally, Mike has performed several site-specific mix design evaluations to aid airports in the development of specifications for production of pavement throughout construction. He has also been the guest speaker at many professional organizations including Airports Council International (ACI) World, ACI, American Association of Airport Executives (AAAE), and numerous universities to discuss pavement management and its importance.

Relevant Experience

- El Paso International Airport, Reconstruct Runway 4/22 and Taxiway Improvements, El Paso, TX — Project Manager
- San Antonio International Airport, Runway and Taxiway Improvements (Runway 12R/30L), San Antonio, TX — Project Manager
- El Paso International Airport, Reconstruct and Re-align Runway 8L/26R, Taxiways U, V, and New Parallel Taxiway, El Paso, TX — Project Manager
- Detroit Metropolitan Wayne County Airport, Reconstruction of Runway 4R/22L and Associated Taxiways, Detroit, MI — Project Engineer
- San Diego International Airport, Runway 9/27 Mill and Overlay, San Diego, CA — Project Engineer
- Telluride Regional Airport Runway 9/27 and Safety Area Improvements Overall Design, Telluride, CO — Project Engineer
- Airports Authority of Trinidad and Tobago, A.N.R. Robinson International Airport, Runway 11/29 Rehabilitation and Perimeter Road and Fence Upgrade, Republic of Trinidad and Tobago — Project Manager
- El Paso International Airport, Runway 8R/26L and Taxiway L Extension, El Paso, TX — Project Manager
- Colorado Springs Airport Runway 17L/35R and Taxiways Pavement Condition Survey, Colorado Springs, CO — Deputy Project Manager
- Detroit Metropolitan Wayne County Airport, Reconstruction of Runway 3R/21L and Southern Portion of Taxiway W, Detroit, MI — Project Engineer
- Detroit Metropolitan Wayne County Airport Pavement Management, Detroit, MI — Project Manager
- Denver International Airport Pavement Maintenance/Management Program, Denver, CO — Project Engineer
- Nogales International Airport Taxiway A and Adjoining Taxiways Design, Nogales, AZ — Project Manager
- Ryan Airfield Runway 6L/24R and Taxiway Rehabilitation (Design & Construction), Tucson, AZ — Project Manager
- Safford Municipal Airport Runway 12-30 Design, Safford, AZ — Project Manager



Education: M.S., Civil Engineering, University of California, Berkley

B.S., Civil Engineering, University of Washington

Licenses/Certifications: Professional Engineer in CO (No. 36983), CA, WY, WV, UT, and AK

30
YEARS LICENSED

32
YEARS OF AVIATION EXPERIENCE

29
YEARS OF EXPERIENCE IN ROLE

9
YEARS WITH KIMLEY-HORN

BOB JONES, P.E.

ROLE: Deputy Project Manager, Stakeholder Coordination, FAA Grant Compliance, CIP Planning/Cost Estimating, and Grant Closeout

Biography

Bob has 32 years of planning, design, and construction experience at large and small airports across the nation. Currently Bob manages our Colorado aviation team and oversees planning, design, and construction projects. He strives to develop clear and thorough communication through all project phases and understands the benefits that coordination and planning have on project schedules, budgets, and impacts to normal operations. Bob constantly strives to deliver exceptionally high quality projects with the least operational impacts using innovative construction methods and materials.

Relevant Experience

- Huntington Tri-State Airport, Runway 12/30 Rehabilitation, Huntington, WV — Project Manager
- Telluride Regional Airport Runway and Safety Area Improvements Phase II Final Design and Construction, Telluride, CO — Task Manager
- Detroit Metropolitan Wayne County Airport, Reconstruction of Runway 4R/22L and Associated Taxiways, Detroit, MI — QC/QA Reviewer
- Denver International Airport M/E/P On-Call Services, Denver, CO — Project Manager
- Colorado Springs Taxiways E, G, H, and M, Colorado Springs, CO — Project Manager
- Spanish Peaks Airport, Runway Reconstruction, Walsenburg, CO — Project Manager
- Telluride Regional Airport Runway 9/27 and Safety Area Improvements Overall Design, Telluride, CO — Project Engineer
- Huntington Tri-State Airport, Rehabilitation of Taxiway A East Design, Huntington, WV — Project Manager
- Huntington Tri-State Airport, Taxiway Rehabilitation Design, Huntington, WV — Project Manager
- Huntington Tri-State Airport, Medium Intensity Approach Lighting System Drainage, Huntington, WV — Project Manager
- Hulett Airport Engineering Services, Hulett, WY — Project Manager
- Lake County Airport Apron and Fuel System, Leadville, CO — Project Manager
- Telluride Regional Airport, Runup and Deicing Pad, Telluride, CO — Project Manager
- *Centennial Airport Complete Runway 10/28 Reconstruction, Arapahoe County, CO — Project Design/Construction Manager
- *Mather Airport Taxiway F Reconstruction, Sacramento, CA — Project Manager/Lead Engineer
- *Springfield Branson Regional Airport Taxiway D and F Construction, Springfield, MO — Project Manager
- *Yampa Valley Regional Airport Runway 10/28 Rehabilitation, Hayden, CO — Project Design/Construction Manager

*Completed prior to joining Kimley-Horn



Education: B.S., Civil Engineering/Construction Option, University of Wyoming

Licenses/Certifications: Professional Engineer in AZ and CA

22
YEARS LICENSED

25
YEARS OF AVIATION EXPERIENCE

22
YEARS OF EXPERIENCE IN ROLE

19
YEARS WITH KIMLEY-HORN

STEVE REEDER, P.E.

ROLE: Quality Assurance/Quality Control

Biography

Steve has 25 years of aviation design and construction experience and specializes in the development of specifications for runways, taxiways, and aprons and construction phasing plans with modeling of aircraft movements. His comprehensive airport design experience encompasses taxilanes, aprons, runways, taxiways, pavement analysis and design, drainage, and lighting with particular expertise in security, grading, drainage, geometrics, pavement design, and construction documents. Steve has served as a key team member in runway rehabilitation and reconstruction projects for general aviation and international hub airports across the nation including El Paso, Telluride, San Antonio, Long Beach, Phoenix Sky Harbor, San Jose, Flagstaff, Phoenix-Mesa Gateway, and others.

Relevant Experience

- El Paso International Airport, Mill and Replace Runway 8L/26R, Taxiways U, V, and New Parallel Taxiway, El Paso, TX — Project Engineer
- San Antonio International Airport, Runway and Taxiway Improvements (Rwy 12R/30L), San Antonio, TX — Project Engineer
- Telluride Regional Airport Runway 9/27 and Safety Area Improvements Overall Design, Telluride, CO — Project Engineer
- Airports Authority of Trinidad and Tobago, A.N.R. Robinson International Airport, Runway 11/29 Rehabilitation and Perimeter Road and Fence Upgrade, Republic of Trinidad and Tobago — Project Engineer
- City of Douglas Airport Planning and Engineering Services, Douglas, AZ — Project Manager
- City of Flagstaff, Flagstaff Airport Terminal Apron Pavement Rehabilitation, Flagstaff, AZ — Project Manager
- Colorado Springs Airport Runway 17L/35R and Taxiways Pavement Condition Survey, Colorado Springs, CO — Project Engineer
- El Paso International Airport Pavement Rehabilitation of Runway 4-22, El Paso, TX — Project Engineer
- El Paso International Airport, Runway 8R/26L and Taxiway L Extension, El Paso, TX — Project Engineer
- Flagstaff Airport Runway 3/21 Extension, Flagstaff, AZ — Project Engineer
- Flagstaff Airport Taxiway Mill and Replace - Design, Flagstaff, AZ — Project Manager
- Flagstaff Airport, Taxiway A Construction Administration, Flagstaff, AZ — Project Manager
- Mesa Falcon Field Airport Design, Mesa, AZ — Project Manager
- Long Beach Airport Pavement Rehabilitation of Runway 12-30, Long Beach, CA — Project Engineer
- San Jose International Airport Runway 12R/30L and High Speed Taxiways Reconstruction, San Jose, CA — Project Engineer
- Phoenix-Mesa Gateway Airport Runway 30L Reconstruction, Mesa, AZ — Project Manager



Trainings: Construction Administration and Observation Training Course, Airport Consultants Council

Total Quality Project Management/Controlling Project Design Costs

42
YEARS OF ENGINEERING EXPERIENCE

40
YEARS OF EXPERIENCE IN ROLE

17
YEARS WITH KIMLEY-HORN

DAVE MORRIS

ROLE: Financial Planning/Budget Control

Biography

David Morris has more than 42 years of experience in civil engineering. As a project manager, his principal areas of focus have included site development planning and design, municipal infrastructure design (including roadways and utilities), and construction administration and resident engineering services on aviation projects. Most recently, Dave has been tasked with managing the construction administration services for the ADOT Airport Pavement Management Systems (APMS) Program and provides additional administration services directly to the Director of ADOT's Aeronautics Group.

Relevant Experience

- El Paso International Airport, Mill and Replace Runway 8L/26R, Taxiways U, V, and New Parallel Taxiway, El Paso, TX — Task Leader
- El Paso International Airport, Runway 4/22 and Taxiway J Extension, El Paso, TX — Task Leader
- Flagstaff Airport Taxiway Mill and Replace – Design, Flagstaff, AZ — Task Leader
- Chandler Aviation Fuel Tank Replacement, Chandler, AZ — Task Leader
- Arizona DOT, Airport Pavement Management System (APMS), Statewide, AZ — Task Leader
- Phoenix-Mesa Gateway Airport Cargo Apron and Parallel Taxiway A and B Construction, Mesa, AZ — Construction Administrator
- Perrin Ranch Wind Turbine Site Development, Williams, AZ — Task Leader
- Carl T. Hayden Medical Center – VA Hospital Research Medical Building Addition, Phoenix, AZ — Task Leader
- Salt River Pima-Maricopa Indian Reservation Casino, Maricopa County, AZ — Task Manager
- The Marlin Group, Inc. 83rd Avenue and Union Hills Drive Off-site Improvements, Glendale, AZ — Task Manager
- Paradise Valley 40th/Lincoln, Paradise Valley, AZ — Task Leader
- Apache Junction Fire Station No. 265, Apache Junction, AZ — Task Leader
- Arizona Biltmore Resort and Spa, Phoenix, AZ — Project Manager
- City of Phoenix Cave Creek Water Service Maintenance Yard, Phase I and II, Phoenix, AZ — Project Manager
- Mamalahoa Bypass Highway, Kona Coast, HI — Project Manager
- Banner Thunderbird Medical Center, Glendale, AZ — Project Manager
- Casino Arizona at Indian Bend, S.R.P.M. Indian Community, AZ — Task Manager
- Lehi Community Center, Scottsdale, AZ — Task Manager



Education: B.S., Urban Administration, University of Cincinnati

27
YEARS OF AVIATION EXPERIENCE

27
YEARS OF EXPERIENCE IN ROLE

4
YEARS WITH KIMLEY-HORN

PAM KEIDEL-ADAMS

ROLE: Airfield Planning Lead / ALP/Property Map Update

Biography

Pam has 27 years of full-time aviation planning expertise, starting her career as a part-time intern with a nationally recognized aviation planning firm. Pam has completed assignments in approximately 30 states and worked in all FAA regions. She has played key roles in numerous large-scale and smaller airport projects with a focus on both policy, project management, and the technical elements of airport planning. Her areas of expertise include airport master planning, activity forecasting, airport capacity and design standards evaluations, economic impact analysis, air service development, aviation system planning, business and strategic planning, public outreach, and land use analysis including non-aviation development. She has led more than 40 airport or system-level planning assignments across the U.S. as well as several international aviation planning assignments, including a prominent role in a large-scale aviation planning project for the Port Authority of New York and New Jersey focused on the regional system's capacity.

Pam's recent experience in airport master planning has provided her with a detailed knowledge of airport-specific operations, as well as current FAA regulations, policies, and procedures. The master plans were developed consistent with FAA advisory circulars and were supplemented with survey and public and stakeholder coordination efforts.

Relevant Experience

- Bentonville Municipal Airport, Master Plan Update, Bentonville, AR — Project Manager
- Denton Municipal Airport Master Planning – Texas DOT Aviation, Denton, TX — Project Manager
- FDOT Aviation Office Consultant Contract, Statewide, FL — Project Planner
- North Carolina DOT Division of Aviation, North Carolina Aviation System Plan (NCASP), Statewide, NC — Project Manager
- Missouri DOT, Missouri Statewide Airports Economic Impact Study, Statewide, MO — Project Manager
- Montana Economic Impact of Airports Update, Statewide, MT — Project Manager
- Denton Airport Entrance Improvements, Denton, TX — Project Manager
- Washington State DOT Aviation System Plan Update, Statewide, WA — Project Manager
- Mena Airport Master Plan, Mena, AR — Project Manager
- Mar de Cortes International Airport, Air Travel Market Study, Puerto Penasco, Sonora, MX — Project Planner
- Chandler Municipal Airport Economic Analysis, Chandler, AZ — Project Manager
- ADOT APMS, Statewide, AZ — Project Planner
- Phoenix Goodyear Airport Master Plan Update, Goodyear, AZ — Project Manager



Education: B.S., Engineering, Colorado School of Mines

Licenses/Certifications: Professional Engineer in CO (No. 33800)

18
YEARS LICENSED

24
YEARS OF AVIATION EXPERIENCE

24
YEARS OF EXPERIENCE IN ROLE

6
YEARS WITH KIMLEY-HORN

JERRY HALIW, P.E.

ROLE: Airfield Civil Design Lead, Construction Phasing, Contract Documents/Technical Specifications, and FAA/DOJ Requirements Compliance

Biography

Jerry has 24 years of experience leading and coordinating a wide range of airport development projects. He has extensive experience with FAA design criteria related to runway, taxiway, and apron geometric layout; safety area grading; drainage system design; hydrology; and navigational aid site layout. He has managed the preparation of dozens of design plans, technical specifications, contract documents, engineering reports, technical reports, and project documents. Representative projects include the pavement joint evaluation, Salt Lake City International Airport; Runway 12/30 rehabilitation, Huntington Tri-State Airport; Runway 4R/22L reconstruction, Detroit Metro Wayne County Airport; Runway 7/25 smoothness improvements – event area 1, Denver International Airport; runway guard light installation, Bob Hope Airport; Runway 8/26 safety area improvements, Reno-Stead Airport; Runway 9L/27R phased airfield modifications, Fort Lauderdale-Hollywood International Airport; Runway 7/25 shoulder improvements, Denver International Airport; and Runway 13L/31R rehabilitation, Palm Springs International Airport. Additional background includes pavement evaluation, detailed project design using civil computer-aided design software, 3D modeling, roadway and parking lot layouts, project scheduling, and cost estimating.

Relevant Experience

- San Antonio International Airport, Runway and Taxiway Improvements (Runway 12R/30L), San Antonio, TX — Project Engineer
- Huntington Tri-State Airport, Runway 12/30 Rehabilitation, Huntington, WV — Project Engineer
- Huntington Tri-State Airport, Rehabilitation of Taxiway A East Design, Huntington, WV — Project Engineer
- Denver jetCenter Apron Reconstruction, Englewood, CO — Project Manager
- Denver International Airport On-Call Mechanical/Electrical Design Services 2010, Denver, CO — Project Engineer
- Huntington Tri-State Airport, Architectural, Engineering, and Planning Services, Huntington, WV — Project Engineer
- Huntington Tri-State Airport, Medium Intensity Approach Lighting System Drainage, Huntington, WV — Project Engineer
- Denver International Airport, Tower Road Snow Staging Site Access Roads, Denver, CO — Project Engineer
- Telluride Regional Airport, Runup and Deicing Pad, Telluride, CO — Project Engineer
- Denver International Airport M/E/P On-Call Services, Denver, CO — Project Engineer
- Transportation Research Board, ACRP 07-09, Apron Planning and Design Guidebook, Nationwide, US — Project Engineer
- *Tampa International Airport, Taxiway “V” and “W” Reconstruction, Tampa, FL — Project Engineer
- *Spokane International Airport, Concourse A and B Commercial Apron Rehabilitation , Spokane, WA — Project Engineer
- *Boise Airport, Greenfield Runway 9-27 Design/Construction, Boise, ID — Project Manager

*Completed prior to joining Kimley-Horn



Education: B.S., Civil Engineering, Colorado State University

Licenses/Certifications: Professional Engineer in CO (No. 48319), FL, and TX

3
YEARS LICENSED

8
YEARS OF AVIATION EXPERIENCE

8
YEARS OF EXPERIENCE IN ROLE

<1
YEAR WITH KIMLEY-HORN

JARED MORENG, P.E.

ROLE: Airfield Civil Design, Geometric Design, Pavement Design, and CIP Planning/Cost Estimating

Biography

Jared has over eight years of airport project experience specializing in runway, taxiway, and apron geometric design, airport pavement design and evaluation, airfield drainage and grading, navigational aid site layout, airfield markings layout, and utilities. In addition, Jared excels in developing and coordinating large project construction safety and phasing plans on active airfield facilities. Jared also has experience leading and coordinating multidiscipline teams of engineers, project inspectors, and other support personnel in the successful planning, design, bidding, construction, and closeout of airport projects. He is also knowledgeable in pavement evaluation and maintenance, detailed design using AutoCAD, project scheduling, cost estimating, and budget management.

Relevant Experience

- Tampa International Airport Taxiway N and W Reconstruction and Airfield-wide Portland Concrete Cement Pavement Replacement, Tampa, FL — Project Engineer
- Tampa International Airport Airfield Pavement Rehabilitation Construction Administration, Tampa, FL — Project Engineer
- Fort Lauderdale Executive Airport Taxiway Foxtrot Pavement Rehabilitation, Fort Lauderdale, FL — Project Engineer
- *George Bush Intercontinental Airport IAH Terminal Redevelopment Program Enabling Utilities-Landside, Houston, TX —Deputy Project Manager/Civil Design Task Lead
- *George Bush Intercontinental Airport Emergency Structural Conditions Assessment, Houston, TX — Project Engineer
- *Canyonlands Field Apron Rehabilitation and Grade Correction Construction Administration and Field Engineering, Moab, UT — Project Engineer
- *Canyonlands Field Concrete Hardstands Design, Construction Administration, and Field Engineering, Moab, UT — Project Engineer
- *Logan-Cache Airport Taxilane Construction and Pavement Rehabilitation Construction Administration and Field Engineering, Logan, UT — Project Engineer
- *Alamogordo/White Sands Regional Airport Airfield Drainage Rehabilitation and Improvements Design and Construction Administration, Alamogordo, NM — Project Engineer
- *Bryce Canyon Airport Apron Rehabilitation Design and Construction Administration, Bryce Canyon, UT — Project Engineer
- *Colorado City Municipal Airport PAPI Replacement Design and Construction Administration, Colorado City, AZ — Project Engineer
- *General Dick Stout Field Runway 1/19 Rehabilitation and Safety Area Grading, Hurricane, UT — Project Engineer and Project RPR
- *Holyoke Municipal Airport Apron Expansion and Hardstand Construction, Holyoke, CO — Project Engineer

*Completed prior to joining Kimley-Horn



Education: B.S., Civil Engineering, University of Colorado at Denver

Licenses/Certifications: Professional Engineer in Colorado (No. 45385)

5
YEARS LICENSED

14
YEARS OF AVIATION EXPERIENCE

14
YEARS OF EXPERIENCE IN ROLE

1
YEAR WITH KIMLEY-HORN

NATHAN LEMON, P.E.

ROLE: Construction Services Lead, Resident Engineer, Pavement Design, and Grant Closeout

Biography

Nathan brings 14 years of professional experience with airport design, rehabilitating airport facilities, and construction administration of airfield and airport-specific projects. He also has extensive civil construction inspection experience in the proper application of methods and practices for both horizontal and vertical construction. Nathan is thoroughly familiar with FAA ACs as they pertain to both design and construction of airfield systems and infrastructure.

Relevant Experience

- San Antonio International Airport, Runway and Taxiway Improvements (Runway 12R/30L), San Antonio, TX — Project Engineer
- Telluride Regional Airport, Run-up Apron and Deicing Pad, Telluride, CO — Project Engineer
- Huntington Tri-State Airport, Rehabilitation of Taxiway A East Design, Huntington, WV — Project Engineer
- Huntington Tri-State Airport, Medium Intensity Approach Lighting System Drainage, Huntington, WV — Project Engineer
- Huntington Tri-State Airport, Architectural, Engineering, and Planning Services, Huntington, WV — Project Engineer
- Spanish Peaks Airfield, Airport Consulting Services, Walsenburg, CO — Project Engineer
- Oakland International Airport, Design and Construction Management Services, Runway 12/30 Rehabilitation South Field, Oakland, CA — Project Engineer
- Memphis International Airport, Centralized Deicing Facility Design and Glycol Management Program, Memphis, TN — Project Engineer
- Denver jetCenter Apron Reconstruction, Englewood, CO — Project Engineer
- Chicago Department of Aviation, Drainage Improvements and Wetland Removals at O'Hare, Chicago, IL — Project Engineer
- *Colorado Springs Airport Taxiway E, G, H Reconstruction-Phases III, IV, & V, Colorado Springs, CO — Lead Design Engineer/ Construction Engineer
- * Colorado Springs Airport Taxiway M & F Reconstruction, Colorado Springs, CO — Lead Design Engineer/Construction Engineer
- *Spokane International Airport, Apron Rehabilitation, Spokane, WA — Design Engineer
- *George Bush Intercontinental Airport, Rehabilitation of Taxiway WA and WB, Houston, TX — Design Engineer
- *Colorado Springs Airport, Runway 12/30 Rehabilitation, Colorado Springs, CO — Design Engineer
- *Boise Airport, Cargo Apron Reconstruction and Taxiway F Rehabilitation, Boise, ID — Design Engineer
- *Reno-Tahoe Airport, Runway Extension and Runway Safety Area Improvements, Reno, NV — Design Engineer

*Completed prior to joining Kimley-Horn



Education: A.A.S., Denver Institute of Technology

25
YEARS OF AVIATION/CIVIL ENGINEERING EXPERIENCE

25
YEARS OF EXPERIENCE IN ROLE

20
YEARS WITH KIMLEY-HORN

MIKE BOYLES

ROLE: Airfield Civil Design, Geometric Design, ALP/Property Map Update, and Perimeter Fence/Obstruction Evaluation

Biography

Mike has over 25 years of experience in aviation, roadway, residential, commercial, structural, and traffic disciplines. He is also proficient with Autodesk Civil 3D, AutoCAD, MicroStation, AutoTurn and StormCAD software packages. Mike's current projects include the Orlando International Airport South Airport Terminal C Phase 1 and San Antonio International Airport Runway and Taxiway Improvements.

Relevant Experience

- San Antonio International Airport, Runway and Taxiway Improvements (Runway 12R/30L), San Antonio, TX — Designer
- San Diego International Airport, Runway 9/27 Mill and Overlay, San Diego, CA — Designer
- Huntington Tri-State Airport, Runway 12/30 Rehabilitation, Huntington, WV — Designer
- Huntington Tri-State Airport, Rehabilitation of Taxiway A East Design, Huntington, WV — Designer
- Telluride Regional Airport Runway 9/27 and Safety Area Improvements Overall Design, Telluride, CO — Designer
- Telluride Regional Airport Runway Reconstruction – Phase I Design, Telluride, CO — Designer
- El Paso International Airport Runway 8/26 Rehabilitation and Taxiway L Reconstruction, El Paso, TX — Designer
- Denver International Airport M/E/P On-Call Services, Denver, CO — Designer
- Denver International Airport, Tower Road Snow Staging Site Access Roads, Denver, CO — Designer
- Telluride Regional Airport Runway and Safety Area Improvements Phase II Final Design and Construction, Telluride, CO — Designer
- San Diego International Airport Airfield Lighting and Signage Replacement and New Runway Guard Light System, San Diego, CA — Designer
- El Paso International Airport Terminal Apron/Taxilane A Reconstruction, El Paso, TX — Designer
- El Paso International Airport, Runway 4/22 and Taxiway J Extension, El Paso, TX — Designer
- El Paso International Airport, Runway 8R/26L and Taxiway L Extension, El Paso, TX — Designer
- Flagstaff Airport Runway 3/21 Extension, Flagstaff, AZ — Designer
- Orlando International Airport South Airport Terminal C Phase 1, Orlando, FL — Designer
- Phoenix Sky Harbor International Airport East Taxiway C Design, Phoenix, AZ — Designer
- Phoenix Sky Harbor International Airport Center Runway (7L-25R) Reconstruction, Phoenix, AZ — Designer



Education: M.S., Engineering – Water Resources, Arizona State University

B.S., Civil Engineering, Arizona State University

Licenses/Certifications: Professional Engineer in CO (No. 48037), AZ, CA, NV, and WV

Certified Floodplain Manager

17
YEARS LICENSED

20
YEARS OF WATER RESOURCES EXPERIENCE

20
YEARS OF EXPERIENCE IN ROLE

20
YEARS WITH KIMLEY-HORN

LAURIE MARIN, P.E., CFM

ROLE: Drainage Design/Easements

Biography

Laurie has 20 years of comprehensive drainage and flood control experience including hydrology/hydraulics modeling, bridge hydraulics and bridge scour, river mechanics, drainage design, and FEMA submittals. Currently, Laurie is the drainage leader for the McKay Lake Drainageway LOMR in Thornton, CO. Laurie has completed numerous drainage and flood control projects in Colorado. Laurie's hydrologic analysis and design project experience includes HEC-1 and Rational Method modeling, split flow, diversion and storage analysis. Her hydraulic analysis experience includes bridge design, channelization, levees, grade control structures, stilling basins, culverts, and bank protection. Laurie is proficient in a number of hydrologic and hydraulic modeling software packages, including HEC-1, CUHP, HEC-2, HEC-RAS, HY8, and FlowMaster, and the use of regional regression equations for flood control projects.

Relevant Experience

- Huntington Tri-State Airport, Medium Intensity Approach Lighting System Drainage, Huntington, WV — Project Engineer
- Denver International Airport Water Quality Master Plan, Denver, CO — Project Engineer
- Huntington Tri-State Airport, Architectural, Engineering, and Planning Services, Huntington, WV — Project Engineer
- Phoenix Sky Harbor International Airport, Phoenix Sky Train Stages 1A and 1B, Phoenix, AZ — Project Engineer
- Denver Premium Outlets, Thornton, CO — Project Engineer
- Mile High Monument at Mile High Stadium, Denver, CO — Project Engineer
- Elliot Pollack Company Golden Shores Erosion Repairs, AZ — QC/QA Reviewer
- Flood Control District of Maricopa County White Tanks No. 4 Flood Retarding Structure Rehabilitation, Maricopa County, AZ — Project Engineer
- WestPro Development Waiaha Drainageway Splitflow No. 2 CLOMR, Pualani-Makai, Kona, HI — Project Engineer
- Flood Control District of Maricopa County Upper Rawhide Wash Floodplain Delineation Study, Maricopa County, AZ — Project Engineer
- Flood Control District of Maricopa County STP (Scottsdale-Tempe-Phoenix) Papago Flood Management Study, Scottsdale, AZ — Project Engineer
- Graham County Stockton Wash FRS Incremental Damage Analysis, Graham County, AZ — Project Engineer
- Yuma County San Luis Area Drainage Study, San Luis, AZ — QC/QA Reviewer
- United Metro Materials Salt River Sediment Transport Analysis (Granite Reef Dam to 115th Avenue), Phoenix, AZ — Analyst
- ADOT Sacramento Wash Bridge and Roadway Improvements, Oatman, AZ — Project Engineer



Education: B.S., Civil Engineering, Iowa State University

Licenses/Certifications: Professional Engineer in CO (No. 42694)

Certified Professional in Erosion and Sediment Control

8
YEARS LICENSED

13
YEARS OF WATER RESOURCES/CIVIL ENGINEERING EXPERIENCE

13
YEARS OF EXPERIENCE IN ROLE

13
YEARS WITH KIMLEY-HORN

ERIN GRIFFIN, P.E., CPESC

ROLE: Storm Water/Water Quality

Biography

With 13 years of experience, Erin is project manager and engineer on a variety of projects throughout Colorado and nationwide. She understands all aspects of land development with experience in site design, grading, drainage and Stormwater Management Programs, roadway, utility layout and design, parking layouts, traffic impact studies, traffic signal design, and off-site improvements. Erin's experience also includes site feasibility, due diligence, team coordination, coordinating permits and approvals with reviewing agencies, and construction administration during construction. Erin has extensive experience in the erosion and sediment control aspects of a project, both from the design and construction sides. She is proficient in AutoCAD Land Development Desktop, HEC-RAS, StormCAD, and FlowMaster.

Relevant Experience

- Huntington Tri-State Airport, Rehabilitation of Taxiway A East Design, Huntington, WV — Project Engineer
- Huntington Tri-State Airport, Taxiway Rehabilitation Design, Huntington, WV — Project Engineer
- Denver Premium Outlets, Thornton, CO — Project Engineer
- Lennar Multifamily 144th and Grant Street Improvements and Roundabout Design, Thornton, CO — Project Engineer
- Cannon Design Anschutz Inpatient Pavilion Expansion Traffic Impact Study at Fitzsimons, Aurora, CO — Project Engineer
- Colorado School of Mines - 19th Street Parking Lot (aka 19th Street/F Parking Lot), Golden, CO — Project Engineer
- Denver Country Club, Denver, CO — Project Engineer
- Design Workshop Festival Park Expansion, Castle Rock, CO — Project Engineer
- Southern Nevada Regional Transportation Commission Transit Before and After Study, Las Vegas, NV — Project Engineer
- Greystar Speer and Bannock Mixed-Use Development, Denver, CO — Project Engineer
- SQLC Sentinel Ridge Senior Living, Colorado Springs, CO — Project Engineer
- Picerne Development 16th Avenue Residences, Denver, CO — Project Engineer
- Lennar Multifamily Parkfield Apartments, Denver CO — Project Engineer
- UCHealth Douglas County, Highlands Ranch, CO — Project Engineer
- University of Colorado, Boulder As-Needed Engineering and Consultant Services, Boulder, CO — Project Engineer
  - Flood Mitigation Phases I and II



Education: B.S., Electrical Engineering, University of Illinois at Chicago

Licenses/Certifications: Professional Engineer in IL and MN

14
YEARS LICENSED

30
YEARS OF AVIATION ELECTRICAL EXPERIENCE

28
YEARS OF EXPERIENCE IN ROLE

1
YEAR WITH KIMLEY-HORN

ANEES RAHMAN, P.E.

ROLE: Airfield Electrical Design Lead, Approach Lighting and NAVAIDs, and Airfield FAA Facility Relocation Lead

Biography

Anees is an industry leader in the electrical design of aviation lighting systems. He has worked for more than 30 years in concept, preliminary, and final design of aviation lighting and signage systems; electrical utilities design; underground power; communication design; electrical master plans; and construction management. He has worked at many large to small hub airports in designing new systems, relocating systems, and rehabilitating systems. He knows how to coordinate electrical services with airport stakeholders to ensure power distribution systems are reliable. For runway rehabilitation projects, he has provided electrical engineering and construction inspection and punchlist services. Projects have included the complete removal and replacement of existing cabling and edge light fixtures, centerline and touchdown zones lights, threshold lights, runway end identification lights (REILs), and rotating beacon. He also has designed PAPIs for runway approaches as well as new airfield guidance signage, and supplemental wind cones.

Relevant Experience

- San Antonio International Airport, Runway and Taxiway Improvements (Runway 12R/30L), San Antonio, TX — Project Engineer
- Cleveland Hopkins International Airport, North Airfield Improvement Project (Hot Spots Removal), Cleveland, OH — Project Engineer
- ASIG, Midway International Airport Fuel Farm Modifications, Chicago, IL — Project Manager
- Chicago Department of Aviation, Centralized Deicing Facility and Crossfield Taxiway System, Chicago, IL — Electrical Engineer
- Chicago Department of Aviation, Professional Task Order Services for Facilities A/E and Airport Engineering (Non-Federal), Chicago, IL — Project Engineer
- Indianapolis Airport Authority, Value Engineering On-Call, Statewide, IN — Project Manager
- Port Authority of New York and New Jersey, Indefinite Quantity Contracts for the Performance of Expert Professional Aeronautical Engineering Design Services for Federally Funded Projects As Requested During 2015, New Jersey and New York — Project Manager
- *Detroit Metropolitan Wayne County Airport, Runway 3R/21L Rehabilitation, Detroit, MI — Electrical Engineer
- *Chicago O'Hare International Airport, Taxiway ZC and South Access Road, Chicago, IL — Airfield Lighting Design/Construction Manager
- *Tampa International Airport, Taxiways J and K, and Air Cargo Apron Project, Tampa, FL — Project Engineer
- *Duluth International Airport, Runway 9/27 Rehabilitation, Duluth, MN — Electrical Engineer
- *Chicago O'Hare International Airport Electrical Utilities Relocation Project, IL — Project Manager
- *Duluth International Airport, Taxiway A Rehabilitation, Duluth, MN — Electrical Engineer

*Completed prior to joining Kimley-Horn



Education: B.S., Electrical Engineering, University of the Pacific

Licenses/Certifications: Professional Engineer in NV, IL, MN, OH, WV, and HI

19
YEARS LICENSED

25
YEARS OF AVIATION ELECTRICAL EXPERIENCE

23
YEARS OF EXPERIENCE IN ROLE

12
YEARS WITH KIMLEY-HORN

DENE EGAMI, P.E.

ROLE: Airfield Lighting Coordination, Approach Lighting and NAVAIDs, and Airfield Lighting Control System

Biography

Dene has 25 years of electrical engineering and communications design experience specializing in the design of airfield electrical systems including lighting, control systems, guidance signage, NAVAIDS, and power distribution. Prior to working on airfield projects, Dene was involved in the design of electrical and communications systems for commercial and industrial building spaces including hospitals, schools, jails, and other governmental buildings. His diverse electrical engineering background includes the design of CCTV systems and vehicle and pedestrian access gates.

Relevant Experience

- El Paso International Airport, Mill and Replace Runway 8L/26R, Taxiways U, V, and New Parallel Taxiway, El Paso, TX — Electrical Designer
- San Antonio International Airport, Runway and Taxiway Improvements (Runway 12R/30L), San Antonio, TX — Electrical Designer
- Huntington Tri-State Airport, Runway 12/30 Rehabilitation, Huntington, WV — Electrical Designer
- Telluride Regional Airport Runway Reconstruction – Phase I Design, Telluride, CO — Electrical Designer
- San Diego County Regional Airport Authority, Taxiway C Reconstruction – Final Design, San Diego, CA — Electrical Designer
- Chicago Department of Aviation, Chicago O'Hare International Airport Taxiway J/Z and Tank Farm Road, Chicago, IL — Electrical Engineer
- San Diego International Airport, Relocation of Runway 9 Threshold, San Diego, CA — Electrical Designer
- Chicago O'Hare International Airport, Runway 9R/27L Extension and Associated Taxiways, Chicago, IL — Electrical Engineer
- Colorado Springs Taxiways E, G, H, and M, Colorado Springs, CO — Electrical Designer
- Detroit Metropolitan Wayne County Airport, Reconstruction of Runway 3R/21L and Southern Portion of Taxiway W, Detroit, MI — Electrical Designer/QC Designer
- Cleveland Hopkins International Airport, North Airfield Improvement Project (Hot Spots Removal), Cleveland, OH — Electrical Engineer
- El Paso International Airport, Runway 8R/26L and Taxiway L Extension, El Paso, TX — Electrical Designer
- Phoenix-Mesa Gateway Airport Taxiway C Extension Design, Mesa, AZ — Electrical Designer
- Huntington Tri-State Airport, Rehabilitation of Taxiway A East Design, Huntington, WV — Electrical Designer
- Telluride Regional Airport Runway and Safety Area Improvements Phase II Final Design and Construction, Telluride, CO — Electrical Designer



Education: B.S., Electrical Engineering, University of Nebraska, Lincoln

Licenses/Certifications: Professional Engineer in NV and TX

4
YEARS LICENSED

8
YEARS OF AVIATION ELECTRICAL EXPERIENCE

8
YEARS OF EXPERIENCE IN ROLE

8
YEARS WITH KIMLEY-HORN

DUSTIN COLWELL, P.E.

ROLE: Airfield Lighting Coordination, Approach Lighting and NAVAIDs, Airfield FAA Facility Relocation, and Electrical Construction Observation

Biography

Dustin has eight years of airfield electrical engineering experience in design, analysis, and construction management. His responsibilities encompass preparing bid documents and specifications, cost estimates, and planning for electrical and architectural projects. Technical experience includes design and analysis of airfield lighting and signage, FAA and non-FAA NAVAIDs, 5kV airfield power distribution, voltage drop calculations for power distribution, airfield lighting control scheme and interface, photometric design and calculations, and fiber optic network design. Dustin's construction management experience includes inspection, submittal review, pay request review, RFI response, and field directives.

Relevant Experience

- Detroit Metropolitan Wayne County Airport, Reconstruction of Runway 4R/22L and Associated Taxiways, Detroit, MI — Resident Engineer
- San Antonio International Airport, Runway and Taxiway Improvements (Runway 12R/30L), San Antonio, TX — Analyst
- El Paso International Airport, Runway 4/22, El Paso, TX — Electrical Engineer
- San Diego International Airport, Relocation of Runway 9 Threshold, San Diego, CA — Electrical Engineer
- Boulder City Municipal Airport On-Call Consultant, Boulder City, NV — Project Engineer
- County of San Diego County Airports As-Needed Services for 2008-2013, San Diego, CA — Analyst
- Chicago Department of Aviation, Engineering Services for Design of Remote Transmitter/Receiver Facility "U" and Special Purpose Area Facility, Chicago, IL — Analyst
- Flagstaff Airport, Taxiway A Construction Administration, Flagstaff, AZ — Project Engineer
- Spokane Airport Felts Field Regulator Building, Spokane, WA — Electrical Engineer
- McCarran International Airport, Runway 7L/25R and Taxiway C Reconstruction, Las Vegas, NV — Electrical Engineer
- Spokane International Airport Runway 3/21 Extension and Line of Sight Projects, Spokane, WA — Analyst/Resident Engineer
- Oakland International Airport, North Field Runway Safety Area Improvements, Oakland, CA — Construction Administrator
- Phoenix-Mesa Gateway Airport Taxiway C Extension Design, Mesa, AZ — Electrical Engineer
- Reno-Tahoe Airfield Lighting Control System, Reno, NV — Analyst
- Reno-Tahoe International Airport Airfield Lighting Systems Upgrade, Reno, NV — Analyst



Education: B.S., Civil Engineering Environmental Concentration, University of Notre Dame with Honors

Licenses/Certifications: Professional Engineer in CO (No. 35518)

16
YEARS LICENSED

21
YEARS OF ENGINEERING EXPERIENCE

21
YEARS OF EXPERIENCE IN ROLE

<1
YEAR WITH RIVER CITY

IVAN GREER, P.E. (RIVER CITY)

ROLE: Civil Construction Observation Lead

Biography

Ivan is a principal of River City since September 2016. He has been licensed as a Colorado professional engineer (No. 35518) since 2001. He has worked in many facets of the civil infrastructure industry in roles ranging from engineering consultant, production engineer/quality control, engineering manager, land/development manager, construction management, and executive leadership. Ivan's project experience includes wastewater treatment, water treatment, design build construction, water resources, civil engineering, aggregate resource development, permitting, and compliance. In particular, Ivan has approximately five years of experience in managing different aspects of construction.

Relevant Experience

- C Road Aggregate Resource Development, Parkerson Construction, Mesa County, CO — Project Manager

Develop an 80-acre sand and gravel resource starting in 2015 and nearing final permitting in 2017. This project required interfacing with numerous departments within the City of Grand Junction, Mesa County, the State of Colorado, and the federal government on issues including right of way, annexation, water quality, air quality, reclamation, utilities, mining engineering, wildlife, wetlands, transportation, and conditional use.

- McKelvie Reservoir, Private Owner, Mesa County, CO — Task Manager

Provided engineering, permitting, and construction management of a private dam rehabilitation in a previous engagement 2009. This project included replacing inlet and outlet structures, lining and grout sealing of the outlet piping, a new outlet valve, and slope repair. Permit applications, plans and specification were developed and submitted to the State of Colorado Division of Water Resources for approval. Post approval construction management activities included bid document preparation, contractor selection, construction inspection, and as-builts under the scrutiny of Colorado Division of Water Resources engineers.

- *30 Road UnderPass, Grand Junction Ready Mix, Mesa County, CO — QC/QA Reviewer

Conducted construction inspection and quality assurance of 5,000+ yards concrete underpass installed under a railroad bridge in 2003 as part of a previous engagement. This project required on-site inspections of contractor and quality assurance lab testing methods involving the testing, handling, and placement of concrete on a large concrete pavement and retaining wall project.

- *Wis-Pak Industrial Wastewater Treatment Plants, Mankato, MN, and Watertown, WI — Project Manager

As part of a previous engagement, these two projects involved process design, process and instrumentation diagrams, engineering, construction management, startup and operator training of biological wastewater treatment plants on projects that were constructed from 1995-1996. The plants contained anaerobic and aerobic tanks, biogas handling, chemical distribution, controls, pumps and civil engineering components. Construction management including contractor oversight, on-site construction inspections, and budget management services were also provided.

*Completed prior to joining Kimley-Horn



Education: M.S., City and Regional Planning, Harvard University

B.S., Physics, Political Science, John Carroll University

Licenses/Certifications: American Institute of Certified Planners (No. 4401)

33
YEARS LICENSED

37
YEARS OF ENVIRONMENTAL EXPERIENCE

37
YEARS OF EXPERIENCE IN ROLE

32
YEARS WITH KIMLEY-HORN

DEBBIE WILSON, AICP

ROLE: Environmental/Federal Agency Lead, Environmental NEPA Compliance, and BLM Right-of-Way

Biography

A certified planner, Debbie brings 37 years of professional experience in assessing land use, socioeconomic, and environmental impacts of airports, and highway and freeway corridors. She was the environmental manager for Kimley-Horn's Jackson-Hartsfield Atlanta International Airport project that involved a 30-month completion of the final environmental impact statement and Record of Decision for the fifth runway, which opened May 2006. Debbie also completed an environmental impact statement for the relocation of Panama City Airport in FL, which is now built and open. She regularly evaluates engineering and environmental factors for projects, such as preparing purpose and need, alternatives, affected environment, environmental consequences, and mitigation sections of the EIS, and being involved with agency coordination. Debbie will apply her depth of experience to perform as-needed environmental services for this contract. Other airports she has provided environmental services include Detroit Metropolitan, Memphis International, and Naples Municipal Airport.

"I wanted to take a moment to acknowledge, both personally and on behalf of the FAA, your outstanding work. As the project manager for Kimley-Horn, you should be very proud of the quality of the EIS, the expeditious completion, and the overall success of the EIS team under often trying circumstances....so many times you were the calming influence and guiding hand when we seemed to be at an unmanageable impasse. Your patience and persistence were invaluable." Scott L. Seritt, Manager, Federal Aviation Administration, in reference to the Fifth Runway EIS at Hartsfield-Jackson International Airport project.

Relevant Experience

- Detroit Metropolitan Wayne County Airport, Reconstruction of Runway 4R/22L and Associated Taxiways, Detroit, MI — QC/QA Reviewer
- Hartsfield-Jackson Atlanta International Airport EIS for the Extension of the Fifth Runway and Associated Projects, Atlanta, GA — Project Manager
- Northwest Florida Beaches International Airport Environmental Impact Statement for Proposed Relocation of Panama City-Bay County International Airport, Bay County, FL — Project Manager
- Memphis International Airport, Centralized Deicing Facility Design and Glycol Management Program, Memphis, TN — Environmental Planner
- Memphis International Airport, Environmental Assessment for Consolidated Rental Car Maintenance Facility, Memphis, TN — Project Manager
- Naples Municipal Airport Pavement Analysis and Rehabilitation includes Taxiway Alpha East and Taxiway Alpha West, Naples, FL — QC/QA Reviewer
- Pompano Beach Airpark Continuing Services (including Runway 15/33 Rehabilitation), Pompano Beach, FL — QC/QA Reviewer
- West Virginia Regional Airport, Lincoln County, WV — Task Manager, Project Manager

Mead & Hunt
1743 Wazee Street, Suite 400
Denver, Colorado 80202
303-825-8844
meadhunt.com

Grand Junction Regional Airport
ATTN: Kip Turner
Executive Director
2828 Walker Field Drive
Grand Junction, Colorado 81506

Subject: Professional Airport Engineering Services – Runway 11/29 Replacement Project

Dear Mr. Turner and Selection Committee Members:

Grand Junction Regional Airport is the life blood of commercial aviation and cargo delivery for the Western Slope. The Runway 11/29 Replacement Project must be completed in a manner that is safe, cost effective, expedited, and well-coordinated. Minimizing airport closures during construction is a high priority for the Airport Board and staff, airport passengers, airlines, general aviation users, and the FAA.

Today, more than ever, airports are being asked to do more with less – so choosing a consulting firm to help your airport with its improvement needs is an extremely important decision. You'll want a firm with extensive experience, a solid reputation and a commitment to your airport and communities. Mead & Hunt brings that, plus a level of service that has helped make us one of the top aviation consulting firms in the country.

CH2M is our primary partner for this project and supplements the team by providing global experience and additional local expertise. Mead & Hunt and CH2M both have been successfully designing airport runways nationwide at commercial service airports for decades, including throughout the Northwest Mountain Region. Additional Mead & Hunt teams members include: River City Consultants, Ground Engineering, David Evans and Associates, and Leibowitz and Horton.

We are excited for the opportunity to continue our relationship and help the Airport meet its long-term goals. We are confident you will value the high level of personal service, technical skill and attention the Mead & Hunt team offers. However, don't just take our word for it. We encourage you to call our other clients — we know you won't be disappointed in what you hear.

The attached Statement of Qualifications for the Runway 11/29 Replacement Project describes our team's unmatched qualifications, relevant experience, and resources for completing this important project. We welcome the opportunity to discuss our qualifications and demonstrate our commitment to you. If you have any questions or require additional information, please contact Ryan Hayes at 303-597-0897.

Sincerely,

Ron Engel
Principal in Charge

P. Scott Cary
Program Manager

Ryan Hayes
Program Implementation Coordinator



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This document was printed on paper that is manufactured entirely Carbon Neutral Plus, using 100% Certified Renewable Energy and made with fiber from well-managed forests. The paper is Green Seal™ certified ensuring it contains a minimum of 30% post consumer fiber and that the mill processes, including packaging, are environmentally preferable.

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

SIGNATURE PAGE
RFQ FORM #1

"✓"Check box that indicates business structure of Respondent

- ☐ Individual or Proprietorship
- ☐ Partnership or Joint Venture
- ☒ Corporation

The undersigned certifies that (s)he is Vice President (title) of the Respondent entity named below; that (s)he is designated to sign this Proposal Form (if a Corporation then by resolution with Certified Copy of resolution attached) for and on behalf of the entity named below, and that (s)he is authorized to execute same for and on behalf of and bind said entity to the terms and conditions provided for in the Proposal as required by this RFQ, and has the requisite authority to execute an Agreement on behalf of Respondent, if awarded

Respondent Organization Name: Mead & Hunt

By: Bradley Rolf

Printed Name: Brad Rolf

Title: Vice President

If Respondent is a Joint Venture, an authorized signature from a representative of each party is required.

By: _____

Printed Name: _____

Title: _____

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

SUBMITTAL CHECKLIST
RFQ FORM #2

Use this checklist to ensure all required document have been included in the SOQ and that they are properly ordered.

	Document	Initial to Indicate Document is Included
1.	Submittal Cover/Signature Page (RFQ Form #1)	CWR
2.	Submittal Checklist (RFQ Form #2)	CWR
3.	Litigation Disclosure (RFQ Form #3)	CWR
4.	Conflict of Interest (RFQ Form #4)	CWR
5.	Affirmative Action Plan (If Required)	CWR
6.	Executive Summary	CWR
7.	Statement of Qualifications	CWR

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

LITIGATION DISCLOSURE
RFQ FORM #3

Respond to each of the questions below by checking the appropriate box. Failure to fully and truthfully disclose the information required by this Litigation Disclosure form may result in the disqualification of your response from consideration or termination of the contract, if awarded.

Have you or any member of your Firm or Team to be assigned to this engagement ever been indicted or convicted of a felony or misdemeanor greater than a Class C in the last five (5) years?

YES ☐
NO ☒

Have you or and member of your Firm, your Firm, or Team to be assigned to this engagement been terminated (for cause of otherwise) from any work being performed for the Grand Junction Regional Airport, Walker Field Airport Authority, or any other Federal, State, or Local Government, Airport, or Private Entity?

YES ☐
NO ☒

Have you or and member of your Firm or Team to be assigned to this engagement been involved in and claim or litigation with the Grand Junction Regional Airport, Walker Field Airport Authority, or any other Federal, State, or Local Government, Airport, or Private Entity?

YES ☐
NO ☒

If you have answered "Yes" to any of the above questions, please indicate the name(s) of the person(s), the nature, and the status and/or outcome of the information, indictment, conviction, termination, claim or litigation, as applicable. Any such information should be provided on a separate page, attached to this form and submitted with your response.

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

CONFLICT OF INTEREST (COI) DISCLOSURE FORM
RFQ FORM #4

This COI Disclosure Form must be completed by the Firm and each of its Subcontractors.
This COI Disclosure Form must be signed by a principal of the Firm to certify that it is correct.
A Firm's certification that its disclosure form is correct includes the disclosure by its Associates and Subcontractors.
My signature certifies that as disclosed on or attached to the present form:
The Firm's disclosures are complete, accurate, and not misleading.
The Firm has received COI Disclosure Form(s) from all Subcontractors (if any) and the present form has attached any COI Disclosure Form(s) thereof.

I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	Mead & Hunt, Inc.
Address:	1743 Wazee Street, Suite 400, Denver, CO 80202
Signature:	
Name (type/print):	Brad Rolf
Title:	Vice President
Date:	3/3/2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
furnish all relevant facts that are necessary to make the response complete, accurate, and not misleading; and identify any actions that must be taken to avoid, neutralize, or mitigate such conflict of interest (e.g. communications barriers, restraint or restriction upon future contracting activities, or other precaution)

1. Is any Associate of the Firm a former employee of the Airport within the last five years or a family member of a current employee of the Airport?
☐ YES ☒ NO

2. Does the Firm or any Associate of the Firm have a conflict of interest with regard to any known member of the Airport procurement evaluation or selection team?
☐ YES ☒ NO

3. Does the Firm, or any Associate of the Firm, have any past, present or currently planned interests that are an Actual or Potential Conflict of Interest, with respect to performing the work for the Airport.
☐ YES ☒ NO

4. Have Subcontractors furnished COI Disclosure Forms separate from the present form? (If yes, attach Subcontractor disclosures).
☒ YES ☐ NO

GRAND JUNCTION REGIONAL AIRPORT
REQUEST FOR QUALIFICATIONS
PROFESSIONAL AIRPORT ENGINEERING SERVICES
RUNWAY 11/29 REPLACEMENT PROJECT

CONFLICT OF INTEREST (COI) DISCLOSURE FORM
RFQ FORM #4

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I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm: River City Consultants Inc
Address: 744 Horizon Court, Suite 110, Gr. Jct, CO 81506
Signature: K Scott Thompson
Name (type/print): K. Scott Thompson
Title: President
Date: February 24, 2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
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I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	CH2M HILL, INC.
Address:	9191 S. JAMAICA ST. Englewood, CO. 80112
Signature:	
Name (type/print):	WILLIAM L VAN HERCKE
Title:	MANAGER OF AVIATION - NW Region
Date:	2-23-2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

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I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	David Evans and Associates, Inc.
Address:	1600 Broadway, Suite 800, Denver, CO 80202
Signature:	Joseph A. Hart
Name (type/print):	Joseph A. Hart
Title:	Senior Vice President
Date:	March 10, 2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

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I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	Ground Engineering Consultants, Inc.
Address:	41 Inverness Drive Englewood, Colorado 80112 (Corporate Address)
Signature:	Thomas L Buelt
Name (type/print):	Thomas L. Buelt
Title:	Senior Project Manager
Date:	February 21, 2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

If the answer to any of the questions 1 through 4 is "Yes," then:
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I hereby certify that I am authorized to sign this COI Disclosure Form as a Representative for the Firm identified below:

Complete Legal Name of Firm:	LEIBOWITZ & HORTON AMC INC.
Address:	31 BLUE HERON DRIVE, GREENWOOD VLG, CO 80121
Signature:	Stephen Horton
Name (type/print):	STEPHEN HORTON
Title:	PRINCIPAL
Date:	2/22/2017

Please answer all questions "Yes", "No" or "N/A", and if uncertain answer "Yes."

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   ☐ YES ☑ NO

Affirmative Action / Equal Employment Opportunity Policy Statement

January 2017

It is the policy of Mead & Hunt, Inc., to provide equal employment opportunity to all individuals regardless of race, color, creed, religion, sex (except where sex is a *bona fide* occupational qualification), national origin, age, disability, sexual orientation, veteran status, or any other characteristic protected by federal, state, and/or local law.

Mead & Hunt, Inc., is further committed to assuring that:

- All recruiting, hiring, training, promotion, and compensation programs are granted fairly to all persons on an equal opportunity basis without regard to any legally protected characteristic.
- Employment decisions are based on the principles of equal opportunity and affirmative action. All personnel actions such as compensation, benefits, transfers, promotions, hiring, termination, training, social and recreational programs are administered without regard to any legally protected characteristic.

Mead & Hunt, Inc. believes in and practices equal opportunity and affirmative action. Wendy Culver, the company's Human Resources Director, serves as the company's Equal Opportunity Officer and has overall responsibility for assuring compliance with this policy. All employees are responsible for supporting the concepts of equal opportunity and affirmative action, and assisting with meeting its goal. Also, it is the company's policy to ensure and maintain and working environment free of harassment, intimidation, and coercion.

Mead & Hunt, Inc. maintains affirmative action plans for women, minorities, disabled persons, and veterans. Any questions regarding these plans or the company's equal opportunity policy should be directed to Wendy Culver in Human Resources. If you wish to view these plans, contact the front desk receptionist during normal business hours.

Rajan I. Sheth, PE, SE
CEO and Chairman of the Board

Wendy K. Culver, SPHR, SHRM-SCP
Human Resources Director, AA/EEO Officer

EXECUTIVE SUMMARY

Mead & Hunt continues to be a partner to Grand Junction Regional Airport and is excited for the opportunity to deliver the Runway 11/29 Replacement Project. We have program knowledge, key relationships, and an understanding of your needs. This is more than a standard design and construction project and is a full program that will implement a complex transformation of your airfield. Our understanding comes from close to a decade of working side by side with Grand Junction Regional Airport and the community to advance this program. This understanding has positioned the Mead & Hunt team to best serve you. The Mead & Hunt Team brings resources that you can trust, are knowledgeable about your program, and provide unmatched recent regional experience designing and constructing replacement greenfield primary air carrier runways.

Project Team

The Mead & Hunt team is comprised of carefully selected firms and individuals who will provide you with expert service. The combined experience of Mead & Hunt and CH2M, our primary teaming partner, provides you with the assurance of having proven partners bringing our full resources toward adding value to your program to save time and money. Our knowledge of FAA regulations, policies, procedures and personnel is unsurpassed in the industry. Mead & Hunt is a firm with more than 550 planners, engineers, architects, analysts and support staff. Of our total staff, more than 200 are solely focused on delivering aviation projects. CH2M brings the resources of hundreds more aviation engineers and specialist. Both Mead & Hunt and CH2M have both been successfully designing airport runways nationwide at commercial service airports for decades, including throughout the Northwest Mountain Region.

- **Mead & Hun**t will serve as the prime consultant and will be responsible for leading all efforts associated with this project.
- **CH2M** will provide services relating to QA/QC, Airfield Lighting, Navigational Aids, Construction Administration support, and general support as appropriate.
- **River City Consultants** will be providing comprehensive surveying services, local permitting support and other related services.
- **Ground Engineers** will provide geotechnical investigation, geotechnical recommendations related to embankment management, quality assurance and quality control testing.
- **David Evans and Associates** will lead the 27 ¼ Road realignment and support traffic related needs throughout the program.
- **Leibowitz and Horton** will assist in long range funding analysis and strategic financial planning and advice.

Demonstrated Experience

The Mead & Hunt Team understands the complexities, challenges, and opportunities associated with the development of new runways at commercial service airports. More importantly, through our involvement with the initial steps in the planning and assessment of your new runway, we provide both detailed project knowledge in combination with the experience of having designed similar projects for multiple other airports within the Northwest Mountain Region.

The Mead & Hunt team works collaboratively with the FAA to develop plans that are realistic, separating program activities into what is achievable in a given year, aligned with FAA and local funding availability, and minimizes disruptions to airfield operations. The Mead & Hunt team is uniquely positioned to seamlessly transition from our current role to your design and construction administration team and will execute the program sequence without delay.

Our team has significant experience phasing programs to allow commercial, corporate and general aviation operations to continue with minimal delays. Our experience constructing runways and taxiway connectors at restricted capacity runway airports is extremely valuable in minimizing delays and promoting a safe operating environment. It's a whole different ball game when you only have one runway capable of handling commercial and cargo operations. Mead & Hunt knows how to work within those constraints. We work closely with the FAA to help write the reimbursable agreements for the airport and to prepare drawings and specifications that are acceptable to the FAA that allow for the FAA to take

the systems over for operation and maintenance. We have provided design for Glide Slope antenna and shelters, Localizer antenna arrays and shelters, DME antenna, RVR equipment, PAPI equipment and MALSR equipment and shelters.

The most recent and relevant of Mead & Hunt's experience is the design and construction of the replacement primary air carrier runway at Pullman Moscow Regional Airport. That program is very similar to yours because it balances the timeline of finances with constructability and minimal disruption to aircraft operations. The new runway will be built next to the existing runway without shutting down the airport. The result will be 7,100 feet of new runway and parallel taxiway, with instrument landing capability, on an alignment that avoids conflict with surrounding terrain and features.

FAA Denver Airport District Office Experience

We have built our professional reputation by meeting agency goals and satisfying FAA concerns. Our many years of interaction with FAA personnel in the Northwest Mountain Region and Denver Airports District Office (ADO) brings first-hand understanding of agency policy and procedures. This experience translates directly to enhanced AIP funding opportunities and the success of your projects. The majority of our airport improvement projects deal with the same issues and technical details that are important to Grand Junction Regional Airport – maximizing the cost-effective design and construction of airfield improvements, minimizing disruption of essential airport services, coordinating with airport users and tenants, and communicating with the FAA. Almost all of our projects were funded through the FAA's AIP grant program.

Through our knowledge of FAA procedures and regulations, we can increase your ability to obtain and use grant funds for your projects. By preparing the necessary paperwork, we can reduce the staff time you devote to administering grants. We routinely help our clients prepare Airport Capital Improvement Plans (ACIPs) and AIP grant application packages. Our grant packages are specifically tailored to maximize our clients' airport development opportunities.

Program Leadership Team

Due to the size and complexity of your project, we will approach the runway as a Program, not simply a project. We have found a program leadership team, working closely with GJT and the FAA, results in fewer delays, reduced costs, and more thoughtful solutions. For Runway 11/29 Replacement Project, we propose a Program Leadership Team that is comprised of our best managers and provide the resources and expertise needed for a complex undertaking such as yours. Our Program Leadership Team provides the leadership necessary to bridge between your total capital improvement program, program implementation, project design, and project construction.

Scott Cary, PE LEED AP will serve as the Project Manager and Program Manager. Scott's 23 years of airport engineering design and construction management includes performing as the Engineering Program Manager for the Pullman Moscow Regional Airport Runway Realignment, overall design manager for the Meadows Field Runway complex rehabilitation, and Quality Control Manager for the Sonoma County RSA, along with involvement in eight greenfield runway programs from field engineering through program management.

Ryan Hayes CM will serve as program implementation manager. Among his 20 years of aviation program experience, he has seven years of managing the planning, environmental and preliminary design of the GJT program, and will continue to be involved in all aspects of the program. Ryan has demonstrated his ability to coordinate and solve complex challenges, manage a large team, communicate clearly and effectively, maintain schedule and budget, and exceed the expectations of the FAA. Ryan will continue his role with GJT in developing the comprehensive strategy for the program, so the benefit and impact of every decision and action is considered from the perspective of the program, community and stakeholders.

Jeremy Lee P.E. will serve as the construction manager. Jeremy has over 15 years of experience managing infrastructure design and construction projects. His experience includes 11 years in the aviation industry and four years as a project engineer for a national construction contractor, delivering large programs. Jeremy has delivered design and construction programs for the Gunnison-Crested Butte Regional airport, and more than ten years of delivery for the Yampa Valley Regional airport. In addition to these programs, Jeremy has experience on runway programs at Detroit, Pullman-Moscow Regional Airport, Elko, NV, and significant engagements as the onsite civil engineer for the Denver International Airport Hotel and Transit Center construction.

Ron Engel P.E., Mead & Hunt's Aviation Services Group Leader will serve as Principal in Charge and senior technical advisor.

Brad Rolf P.E. will serve as the strategy and resource manager, supporting Ryan and Scott by managing Mead & Hunt's resources for communication, performance and delivery of program elements.

Project Schedule

We have included a schedule in this statement of qualifications based on our understanding of your capital improvement program and an anticipated FAA funding constraint of approximately $10M per year of discretionary funds for construction including the runway and ongoing maintenance. For the new replacement Runway 11/29 we will phase the work to minimize disruptions to existing Runway 11/29 while maintaining air carrier and cargo operations. We would do this by constructing the runway in phases focused on protecting existing navigational aids until full runway transfer. This approach allows the ILS and western approach lighting system to remain operational, until existing Runway 11/29 is closed. We propose opening the replacement runway with a reduced number of taxiways connected to existing Runway 11/29 to expedite transfer and minimize rework related to reconstruction of the existing runway.

The Best Team for Your Project

The Mead & Hunt team provides you with unmatched project knowledge, key relationships, understanding of your needs and trust of the community. Our team's understanding of the program and established relationships allow us to hit the ground running and avoid confusion. We also understand the needs and expectations of airport staff, the Airport Board and the FAA. Selecting Mead & Hunt provides for a seamless transition into the final phase of the program.

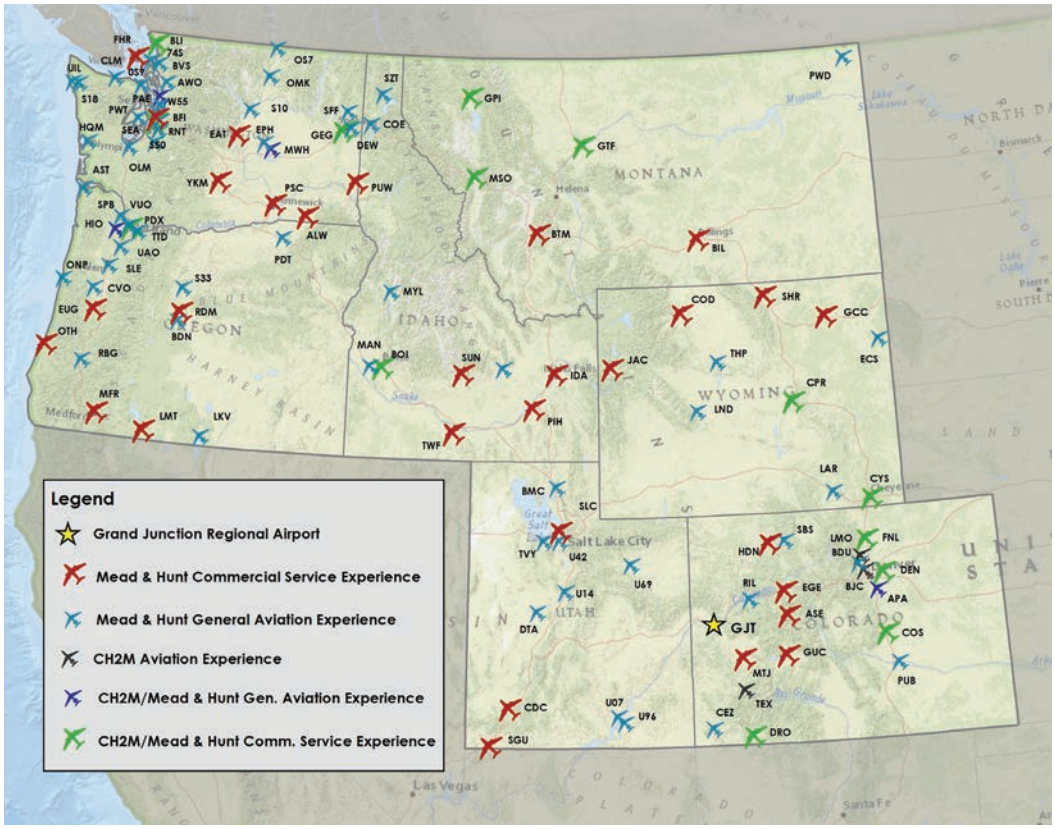
The Mead & Hunt team provides the experience, depth of resources, local support, program understanding, community relationships, commitment and leadership you know, trust and need to make this a successful program. Over the past 10 years, Mead & Hunt has performed 600 airport improvement projects funded through the FAA's Airport Improvement Program (AIP), exceeding $1 billion in construction. Helping our clients navigate the ever-changing funding landscape requires knowledge of FAA regulations and requirements and a high degree of communication and coordination with FAA personnel.

Our repeat clients are a testament to the quality of our work. We have been in the aviation consulting business for 70 years and retain many of our original clients. Our goal is to meet and exceed your expectations and deliver the best possible value to you. The Mead & Hunt Team is sensitive to Grand Junction Regional Airport Authority's fiscal responsibilities. The Airport Authority is responsible to the airlines, the passengers, and ultimately to the community for the best use of dollars. The Mead & Hunt Team shares this concern and is deeply committed to demonstrating cost control throughout the various aspects of this project to the Airport Authority, and ultimately to the airlines, users, and public at large.

SOQ - QUALIFICATIONS AND EXPERIENCE

RELEVANT EXPERIENCE

Mead & Hunt has diverse project experience for airport design, construction, compliance and program management for commercial service airports. The maps below show the airports in the region and across the country where our staff have worked.





Mead & Hunt, with our primary teaming partner CH2M have both been successfully designing airport runways nationwide at commercial service airports for more than 50 years, including throughout the Northwest Mountain Region. Mead & Hunt is one of the fastest-growing architectural, engineering and planning firms in the nation. For several consecutive years, *Engineering News Record* has ranked us as a top 500 A/E design firm and a "Top 25 in Airports" firm. In addition, Mead & Hunt received the prestigious 2011 American Association of Airport Executives' Corporate Cup of Excellence award. We were also ranked in the top ten "Best civil engineering firms to work for" in the nation by *CE News magazine*.

Mead & Hunt has been in business for 117 years, and we attribute this longevity to our ethical and straightforward business practices. Our integrity and reputation, as well as the trust of our clients are paramount to our long-term success. Mead & Hunt is a full-service aviation consulting firm, providing planning, capital improvement program, air service and financial, environmental, design, construction, operations, and strategy development services for airports nationwide. Our wide-ranging abilities in airport development provides big-picture perspective on even the smallest challenge. It is our understanding of pavement geometry that allows us to consider aircraft ground movement and visibility from the tower. Our background with aircraft procedures informs our considerations of threshold locations and runway length. Our familiarity with passenger processing educates our planning for queuing and flow for aircraft loading. Mead & Hunt's experience in these and other processes qualify us to evaluate and communicate solutions for a variety of commercial service airport facilities.

Mead & Hunt has grown into a firm with more than 550 planners, engineers, architects, analysts and support staff in 30 offices nationwide. We are an employee-owned corporation with 160 shareholders. We take pride in our successful record and ability to provide continuity and top-quality architecture, engineering and scientific solutions for today's most difficult projects.

Mead & Hunt is excited to showcase both our regional and national experience focusing on multi-year programs at airports similar to Grand Junction Regional Airport.

Over the past 10 years, we have performed 600 airport improvement projects funded through the FAA's Airport Improvement Program (AIP), exceeding $1 billion in construction. Helping our clients navigate the ever-changing funding landscape requires knowledge of FAA regulations and requirements and a high degree of communication and coordination with FAA personnel. These projects included runways, taxiways, passenger terminal buildings, airport traffic control towers, aircraft rescue and firefighting facilities, snow removal equipment/maintenance buildings, aircraft storage hangars, airport entrance roads, parking lots and garages, security systems, environmental mitigation projects and other support facilities.

The Mead & Hunt team has extensive experience helping our clients secure and maximize federal funding for program management, planning, environmental, design, construction administration and commissioning. Our projects have included a wide variety of funding sources and mechanisms, many of which could apply to Grand Junction Regional Airport, including:

- FAA AIP grants – Discretionary/Entitlements
- FAA Reimbursable Agreements
- Letters of Intent
- Transportation Security Administration
- Air Traffic Organization funding
- Passenger Facility Charges (PFC)
- Long-term lease agreements
- Congressional Earmarks
- State funding
- Airport sponsor funding
- Airport sponsor bond sales (revenue bonds, GO bonds, PFC-backed bonds)
- Short-term financing
- Private donors
- Reductions in Local Funding Shares

Working Together

With our Aviation focused Denver office leading our team, we have supplemented our capable in-house staff with CH2M, River City Consultants, Ground Engineering, David Evans, and Leibowitz and Horton We have strengthened our team with these partners to help increase project efficiency and provide local and national expertise. Each team member adds to the capabilities necessary to deliver the Runway 11/29 Replacement Project.

CH2M is a key partner for this project and their support provides our team with an unmatched ability to deliver. Supplementing Mead & Hunt, CH2M provides global experience and local expertise with work at 20 of the top 30 busiest airports in the US, the top two busiest airports in the UK, three of the largest airports in India, many of the fastest growing airports in the Middle East, and they are beginning work on the largest greenfield airport development project in Latin America. CH2M aviation services include:

- NAVAIDs and airspace
- Airfield civil and electrical design
- Program and construction management
- Facilities MEP (mechanical, electrical, and plumbing) design (
- Airport planning and simulation
- Airport landside access
- Airport asset management
- Facilities and operations management
- Public-Private Partnership (P3) client advisory
- Sustainability master planning
- Sustainability planning
- Value engineering

Mead & Hunt and CH2M have a long and successful history of partnership, which currently includes active projects at Dallas Fort Worth International Airport, Northwest Arkansas Regional Airport, and Hillsboro Municipal Airport. Past airport projects we have completed together include many throughout Colorado and throughout the Northwest Mountain Region.

FAA Denver Airport District Office Experience

Mead & Hunt has a legacy of successful relationships with the Federal Aviation Administration (FAA). We have built our professional reputation by meeting agency goals and satisfying agency concerns. Our many years of interaction with FAA personnel in the Northwest Mountain Region and Denver Airports District Office (ADO) brings first-hand understanding of agency policy and procedures. This experience translates directly to enhanced AIP funding opportunities and the success of your projects. The majority of our airport improvement projects deal with the same issues and technical details important to Grand Junction Regional Airport – maximizing the cost-effective design and construction of airfield improvements, minimizing disruption of essential airport services, coordinating with airport users and tenants, and communicating with the FAA. Nearly all of our projects were funded through the FAA's AIP grant program.

Through our knowledge of FAA procedures and regulations, we can increase your ability to obtain and use grant funds for your projects. By preparing the necessary paperwork, we can reduce the staff time you devote to administering grants. We routinely help our clients prepare Airport Capital Improvement Plans (ACIPs) and AIP grant application packages. Our grant packages are specifically tailored to maximize our clients' airport development opportunities by optimizing the use of available FAA funds.

FAA contacts

Key FAA personnel for the Denver ADO whom Mead & Hunt has experience working with on a routine basis include:

- John Bauer, ADO Manager
- Chris Schaffer, Assistant Manager
- Marc Miller, Program Manager
- Linda Bruce, Planner
- Kandice Krull, Environmental Specialist

In the Northwest Mountain Region, we also work with Airports Division Manager Randall Fiertz, Warren Farrell in Finance, Janell Barrilleaux in Environmental, Ryan

Zulauf in Planning, Deepa Munoz in Airports GIS and Safety Management Systems, and Cindy Hirsch in Engineering.

Our extensive nationwide aviation involvement offers relationships with key FAA Headquarters personnel in Washington, D.C. built through policy review, industry partnership and client programming. These connections, from Deputy Associate Administrator Winsome Lenfert in the Office of the Associate Administrator for Airports and Elliott Black in the Office of Airport Planning and Programming, to Kent Duffy in the Planning and Environmental Division, and Khalil Kodsi in the Airport Engineering Division, give us the perspective of FAA guidance and the familiarity to inquire about policy change and interpretation. With the recently updated Airport Improvement Program Handbook and Airport Design guidance document, and upcoming AIP Reauthorization, these relationships will allow us to advance the position of Grand Junction Regional Airport.

These FAA staff members know Grand Junction Regional Airport, and they know the Mead & Hunt team. This established trust with you and the FAA allows the Mead & Hunt team to continue our progress seamlessly. With Mead & Hunt, there is no wasted time waiting for comfort and confidence emerge regarding our abilities and understanding of Grand Junction Regional Airport.

Compliance with FAA grant programs

Our team has extensive experience working on FAA funded project not only in Colorado, but throughout the United States. Our knowledge of these regulations/orders/advisory circulars will play a strong role in helping you to complete your project in a way that is fully compliant with your grant requirements.

Ability to meet state and federal requirements

Mead & Hunt aviation professionals routinely work with the FAA's Denver ADO and are well versed in their requirements. Mead & Hunt staff will work closely with you and FAA staff to prioritize and schedule your project and provide timely, cost efficient planning and engineering solutions for your airport improvement needs. Our team has worked directly with the FAA on hundreds of projects for many years, covering all aspects of aviation-related planning, environmental evaluation, engineering and airport facilities. The members of the Mead & Hunt team understand the importance of providing planning and design/engineering services that comply with appropriate FAA Advisory Circular (AC) standards.

Through our involvement in the master plan and environmental assessment for Grand Junction Regional Airport, we have identified and understand the needs of local, state and federal regulatory agencies. We have worked closely with each to understand regulatory requirements and have developed solutions that are ready to be implemented during the design and construction process. Our team has set up your program for a streamlined and efficient regulatory permitting process.

Design and Construction for Primary Commercial Service Runways on New (Greenfield) Sites

The Mead & Hunt Team understands the complexities, challenges, and opportunities associated with developing new runways at commercial service airports. More importantly, through our involvement with every initial step in the planning and assessment of your new runway, we provide both intimate project knowledge in combination with the experience of having designed similar projects for multiple other airports within the Northwest Mountain Region.

Mead & Hunt is responsible for the design and construction of the replacement primary air carrier runway at Pullman Moscow Regional Airport. That program is very similar to yours because it balances the timeline of finances with constructability and minimal disruption to aircraft operations, as the new runway will be built next to the existing runway without shutting down the airport. The result will be 7,100 feet of new runway and parallel taxiway, with instrument landing capability, on an alignment that avoids conflict with surrounding terrain and features.

Another example of a greenfield runway recently designed by Mead & Hunt is the new Runway 12L/30R and Taxiway D at the Portland-Hillsboro Airport. Port of Portland determined that Hillsboro Airport, Portland's Reliever Airport, needed a new runway to accommodate the mixed-performance aircraft traffic. A parallel configuration allowed for simultaneous operations of larger, faster business jets on the primary runway, and smaller, slower, local training on the new parallel runway – adding safety and capacity, and reducing delay and inconvenience. The new runway was built on a green site, undeveloped area of the airfield. In addition to the considerations of pavement, access and navigational aids, decisions had to be made on every aspect of drainage, wetlands, aircraft operation patterns, and anticipated hangars and aprons. This new runway was the opening of an entire new development, and forward planning and thinking led to solid design and implementation.

In designing airfields, we follow guidelines issued by the FAA in their Advisory Circulars (ACs), especially those pertaining to airfield pavements, 150/5300-13, 150/5320-6, 150/5320-12, 150/5370-10 and 150/5360- 13. We remain current with the most recent ACs, Orders, Policies and Procedures Memoranda (PPM), Policy Guidance Letters (PGL), Federal Aviation Regulations (FARs) and legislation. Much of this documentation, especially the PPMs and PGLs, are developed within FAA regions. Therefore, our more than 30-year relationship with the Northwest Mountain Region and Denver ADO provides a strategic advantage for Grand Junction Regional Airport. We have developed close ties to staff in those offices, and they regularly share regional interpretations of rules and regulations with us. Our electrical engineering practice is active on a nationwide basis, coordinating with FAA equipment manufacturers and providing efficient and effective solutions to airfield electrical needs.

The Mead & Hunt team works collaboratively with the FAA to develop realistic plans that seperate program activities into what is achievable in a given year, aligned with FAA and local funding availability, and minimizes disruptions to airfield operations. The Mead & Hunt team is uniquely positioned to seamlessly transition from our current role to your design and construction administration team and will execute the program sequence without delay.

Our team has significant experience phasing programs to allow commercial, corporate and general aviation operations to continue with minimal delays. Our experience constructing runways and taxiway connectors at restricted capacity runway airports will prove vital in minimizing delays and promoting a safe operating environment. It's a whole different ball game when you only have one runway capable of handling commercial and cargo operations. Mead & Hunt knows how to work within those constraints.

Design and Construction of FAA Facilities including instrument approach facilities

We work closely with the FAA to help write the reimbursable agreements for the airport and to prepare drawings and specifications that allow for the FAA to take the systems over for operation and maintenance. We have provided design for Glide Slope antenna and shelters, Localizer antenna arrays and shelters, DME antenna, RVR equipment, PAPI equipment and MALSR equipment and shelters.

Mead & Hunt and CH2M have considerable experience in design and installation of CAT I instrument landing systems. Mead & Hunt recently completed working with the FAA on an upgrade from a CAT I system to a CAT II system at Dane County Regional Airport, Wisconsin and have similarly completed several others in the past year at General Mitchell International Airport in Milwaukee and similar commercial service airports. Further, Mead & Hunt provided design and construction administration services for the reconstruction of the Willow Run Airport's primary runway, which is used by Boeing 747 aircraft. Similarly, CH2M successfully completed design and construction services for Great Falls International Airport, which upgraded all electrical, installed new navigational Aids and Approach Procedures. Close coordination with the FAA was also required because several FAA-owned navigational aids required relocation or replacement. Additionally, CH2M

has designed and constructed NAVAID systems at Calgary International Airport, Columbus International Airport, and Reagan National Airport.

Your program at Grand Junction Regional Airport will relocate an existing instrument landing system (ILS) and associated equipment. The FAA is currently working to implement a NextGen program, and during the 2020s may begin phasing out ILS technology and updating to Ground Based Augmentation Systems (GBAS) or LPV/WAAS procedures. Mead & Hunt has a team of experienced airfield electrical engineers that has designed, overseen and coordinated the installation or relocation of ILS and other NAVAIDs at other airports in the region and around the country. Our team understands the timelines and needs of the FAA that are essential to having facilities in place on opening day.

We understand this runway is the life blood of commercial aviation and cargo delivery for the Western Slope. Phasing is proposed to avoid shutting down the Instrument Landing systems, until the final transition. Currently the majority of the critical elements in this system are located in areas requiring fill or grade adjustments. We recommend coordinating with Air Traffic for maintaining the glide slope, the Touchdown Runway Visual Range and PAPI (potentially requiring an early FAA Reimbursable agreement), confirming grading impacts to the offset localizer for grading occurring in front of the facility, and delaying completion of the western end taxiways to maintain the Approach Lighting System. This increases commercial and cargo reliability.

Quality of projects previously undertaken and capability to complete projects without having major cost escalations or overruns:

Mead & Hunt takes exceptional care to develop quality deliverables. Our repeat clients are a testament to the quality of our work. We have been in the aviation consulting business for 70 years and retain many of our original clients. Our goal is to meet and exceed your expectations and deliver the best possible value to you. Our quality assurance process focuses on the procedures that enable Mead & Hunt to deliver the very best services possible while our quality control program gives us the tools and tasks to achieve quality deliverables. Having internal quality control procedures is a given in this industry.

Our quality assurance and value engineering process builds in redundant reviews to make sure you receive cost-effective, high quality solutions. Quality begins at the individual designers, with forms and procedures to document their actions in relation to our standard methods. Our cloud-based network allows our team members to share data efficiently among our offices, with reduced potential for system failures and real-time updates of shared data for large program delivery.

The Mead & Hunt Team is sensitive to Grand Junction Regional Airport Authority's fiscal responsibilities. The Airport Authority is responsible to the airlines, the passengers, and ultimately to the community for the best use of dollars. The Mead & Hunt Team shares this concern and is deeply committed to demonstrating cost control throughout the various aspects of this project to the Airport Authority, and ultimately to the airlines, users, and public at large.

The Mead & Hunt Team's cost control philosophy begins with providing high quality planning, engineering, environmental, and construction administration services at very competitive rates. We have performed services for airfield design projects in a variety of contract arrangements, including lump-sum, time and materials, and cost plus fixed fee. One of our firm's guiding principles is to treat clients the way we would like to be treated: fairly and honestly. For more than 100 years, this time-honored approach to business has resulted in success.

Our Team's approach is structured to control scope, schedule and budget for the professional services being provided for the mutual benefit of our clients and our team. Just as important is the philosophy and approach we employ to reduce construction cost overruns and escalation of construction costs.

During construction many variables can impact a project. Therefore, no single process or procedure can be used to definitively control construction cost

overruns. Rather, it takes a number of processes and procedures working in concert to drive a culture of cost control. We employ the following:

- **Risk Analysis** – Risk analysis is the systematic evaluation of uncertainty regarding a project's scope, cost, and duration. This uncertainty is in the form of risks that the project may encounter during the course of various design development and construction phases. It also evaluates opportunities for improving the cost and schedule prospects for a project. Risk Analysis offers a systematic, cost-effective approach to evaluate project uncertainty. For large projects we employ a formal Risk Analysis Workshop at 30 percent and 90 percent design which execute the following steps and analysis:
  - Risk Identification – Identifying risks that may impact the scope, cost, and schedule
  - Risk Assessment – Assessment of project risks according to significance, which needs to consider probability and potential impacts
  - Risk Mitigation Planning – Develop strategies to mitigate the potential costs and schedule impacts of risks
  - Implementation – Implement the selected risk mitigation strategies
- **Constructability Review** – We pride ourselves on accurate, clear and concise bid and construction documents. The quality of our documents leads to competitive, rational bids and minimizes uncertainty and problems during construction. We conduct a formal constructability review when a project reaches 60 percent design completion as part of our routine plan review process. These reviews have the potential to minimize the number and magnitude of changes, disputes, cost overruns, and delays during construction. They are conducted to determine that the design is constructible with conventional construction techniques, without undue difficulty or expense, or, if the design is unusual, that a construction methodology exists or is developed prior to release of the design. It is also a formal part of our QA/QC process to see that major elements of the project have received a thorough review prior to the completion of the 100 percent plans and specifications.
- **Value Engineering** - Value Engineering is a systematic, multi-discipline approach designed to optimize the value of each dollar spent on a project. To accomplish this goal, an independent team of engineers identifies, analyzes and establishes a value for a function at the lowest total cost (capital, operating, and maintenance) over the life of a project consistent with the requirements of performance, reliability, maintainability, safety and aesthetics. For large projects we employ a value engineering workshop early in the design process at the 10 percent level and again at the 30 percent level, before major decisions have been completely incorporated and built upon in the design.



- **Construction Contingencies** – Inherently unknown and unforeseen conditions can occur during construction projects, such as severe weather patterns, underground utility conflicts, poor subgrade conditions, and many other conditions. As part of the risk mitigation plan, it may be in the Sponsor's interest to include contingencies in the construction documents for the more significant risks. This establishes a budget within the project for these potential risks and provides competitively bid prices for the necessary construction units.
- **Construction Administration** – Proper construction administration and inspection may be one of the most important components in reducing construction cost overruns and escalation of construction costs. An experienced construction manager can see that the construction documents and specifications are adequately followed and enforced to limit potential cost overruns.

Through the use of the cost control methods identified above the Mead & Hunt Team has a very successful track record of completing projects that are very close to the project budget.

Project Examples

The following are example projects that demonstrate our team's recent, relevant, and comparable experience. Each of the projects have similarities in scope, size and complexity and highlight our ability to perform all aspects of the Scope of Services for the Runway 11/29 Replacement Project.

SOQ - QUALIFICATIONS AND EXPERIENCE

RELEVANT PROJECTS

PULLMAN-MOSCOW REGIONAL AIRPORT

For more than a decade, Mead & Hunt has supported the Pullman-Moscow Regional Airport (PMRA) in developing their new runway, providing services for Planning, Environmental, Design, and Implementation.

The terrain around the airport impacts aircraft access and reliability during weather, and the aircraft using the runway are larger than the airfield's design can accommodate and corrections could not be made in place. PMRA, faced with challenge and opportunity, called on Mead & Hunt to help. The need was identified for a new runway alignment, longer runway, increased runway-taxiway separation distance, and new airspace procedures.

This led to master planning which evaluated alternative solutions for a preferred option. An environmental assessment followed the NEPA process to determine the effects of the improvements. The resulting capital improvement plan addressed phasing and funding for land acquisition, wetland mitigation, utility relocation, earthwork, drainage, navigational aids, and pavements. Because of Mead & Hunt's effort, the FAA's investment in PMRA is justified, and the FAA made the project a priority for the Northwest Mountain Region funding a program similar to GJT in five years.

Design balances the timeline of finances with constructability and minimal disruption to aircraft operations, as the new runway will be built next to the existing runway without shutting down the airport. The result will be 7,100 feet of new runway and parallel taxiway, with instrument landing capability, on an alignment that avoids conflict with surrounding hills, on a site that accommodates future landside development and future runway extension. This $119 million dollar program will provide long-term benefits of transportation and economic generation for the Pullman-Moscow region.

Similar to GJT, PMRA's program involves moving more than 6 million cubic yards of soil from a hillside, a new runway, new parallel taxiway, utilities, significant flood control measures, roadway construction, and ensuring existing airfield operations are maintained. Design efforts, have been coordinated with the FAA to allow for waste materials to be utilized to prepare for a future terminal relocation, improving shoulder grading on roadways, and other related items. Navigational aids include relocation and installation of a full CAT I ILS approach package, for both traditional ILS and GPS approaches including RVR, ASOS, MALSF, REILs, PAPIs, etc. .

Throughout the program, the community has been the focus, as the airport represents two cities, two counties, two states, a port district, tenants, operators, and neighbors. It is the support of the airport by these stakeholders thatmakes the new runway program a success. Funding for the project is progressing more quickly than expected to expedite construction and reduce inflationary impacts.



Project Data

- Project Schedule Performance: Multiphase Project (Airport Master Plan, Environmental Assessment, Design, Construction Administration) All on Schedule
- Completion: : 2015 : Phase 1 Design, Wetland Mitigation Site Construction, 2016: Phase 2 Design, Phase 1 Construction, 2017: Phase 3 Design, Phase 2 Construction 2018: Phase 4 Design, Phase 3 Construction, 2018: Phase 5 Design, Phase 4 Construction, 2019: Phase 6 Design, Phase 5 Construction (Runway Opens), 2020: Phase 6 Construction (Project Complete)
- Project Budget Performance: $119M Program:
- W/W/DBE Performance: The overall goal for FY 2016-2018 is 1.17%
- Subject matter experts: Kevin Mulcaster (Co-Program Manager), Scott Cary (Engineering Program Manager), Ryan Bergstrom (Design Manager) Jeremy Lee (Program Management/Utilities/Phasing), Dave Phillips (Quality Assurance), Bill Ropposch (Airfield Electrical/ NAVAIDS), Jen Boehm (Design), Shan Rammah (Airspace Coordination/ Grading Design)
- Coordination: Bill Van Hercke,
- Design Task Leads: Doug Stewart, MIke Southwick.
- Construction: Kurt Reno

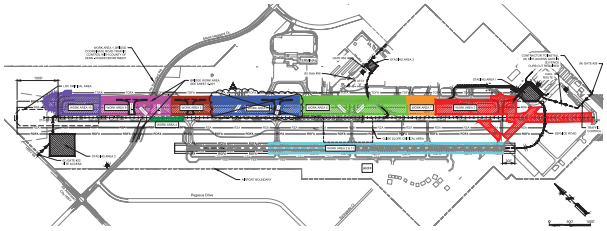
Reference: Tony Bean,
Airport Director
509-338-3223
tony.bean@pullman-wa.gov

MEADOWS FIELD AIRPORT

Mead & Hunt is currently completing design and construction administration services for the rehabilitation of Runway 12L/30R. This runway is 10,855 feet long with centerline lighting, touchdown zone lighting, SMGCS routing and an in-pavement approach lighting system. Mead & Hunt worked with the County and FAA to evaluate the remaining service life of their lighting systems, review the efficiency of their taxiway system in relation to revised FAA Advisory Circulars and validate airfield design. The runway's unique features include an overpass over a four-lane roadway, two accessible tunnels beneath the runway including crude oil pipelines, a flood plain cresting the runway and an approximately 2,000-foot overrun. In addition, the parallel taxiway is significantly higher than the runway and does not meet current FAA criteria.

The results of the preliminary investigation proposed a design for a full system reconstruction: structural overlay/partial reconstruction of the runway, installation of a runway crown, removal of five of the 17 connector taxiways to correct geometric and structural deficiencies, and full lighting upgrades. By reviewing the layout of taxiways and options for correcting geometric deficiencies, six connector taxiways on the eastside and a runway quarter crown were proposed that met operational and design criteria. This allowed approximately $21.5 million to be cut from an estimated $56.5 million project. Mead & Hunt quickly coordinated with the FAA and, within six months, this close coordination resulted in a package planned for construction in the fall of 2015 at between $14 million in funding, with follow-on projects to be awarded in 2016 and final design packaging planned for bidding in June.

The project is being reviewed for areas that funds can be further leveraged, such as obtaining necessary equipment in a 2014 grant and looking at ancillary rehabilitation of their secondary runway with AIP funding due to project impacts from this effort.





Reimbursable agreements are being phased for approach development, navigational aid replacement and AGIS coordination. Additional approach procedures were coordinated with the FAA to allow for operation of their secondary runway during inclement weather.

Project Data

- Project Schedule Performance: Design and construction 2015-2018
- Completion: Fall 2016
- Project Budget Performance: $42M Program
- W/W/DBE Performance: Very low and final TBD
- Subject matter experts: Scott Cary - Overall Design Manager
- Chris Birkmeyer, Ryan Bergstrom, Airfield Design, Bill Ropposch - Airfield Electrical/NAVAIDS, Chris Swonke Airfield Design, Construction Administration.
- Coordination: Scott Cary
- Overall Design: Scott Cary
- Bid Package 1 and 2 Design: Scott Cary
- Bid Package 3 Design: Chris Swonke
- Construction: Chris Swonke

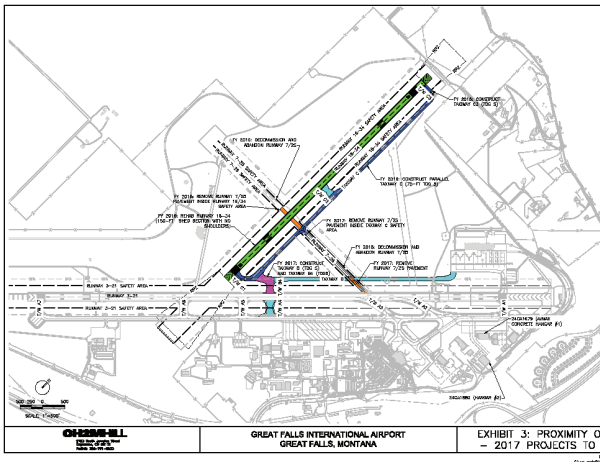
Reference: Richard Strickland,
Director
661-391-1817
stricklandr@co.kern.ca.us

GREAT FALLS INTERNATIONAL AIRPORT

CH2M performed planning, design and Construction Management for the 3 year, nearly $17 million contract to Upgrade Runway 16-34 to D-IV standards, extend the runway, provide a full length parallel taxiway, and provide a declination change to Runway 17-35. The project was designed and will be completed in 3 bid packages under 3 separate FAA AIP grants. Phase 1 included detailed design. Phase 2 and 3 included final design for each bid package and Construction as follows:

Reconstruct Runway 16-34, declination Change to Runway 17-35, and Construct Taxiway C (Phase 2)— CH2M successfully completed the design and services during construction of phase 2, which extended the runway to 6,030 feet, provided a new 150' wide runway surface, completely upgraded all electrical, installed new navigational Aids and Approach Procedures, and a Runway Weather Information System. A full-length Taxiway C was constructed to mitigate a non-standard Line of Sight condition on the runway, provide additional safety, and provide the airport with future development opportunities. The Runway Safety Area was improved to meet FAA standards as well. The project was completed with Construction between August 1, 2016 and December 11, 2016 on schedule and under budget.

Construct Taxiway A4, Taxiway B4, and Remove Hot Spot 1 (Phase 3)— CH2M recently completed the final design and is preparing to provide services during construction of phase 3, which will complete the program. Phase 3 provides easy access to Runway 17-35 while removing the abandoned Runway 7-25, which is an FAA flagged Hot Spot due to non-standard geometry. Runway 7/25 was converted to Taxiway Z for one year during Phase 2 to allow temporary access to the new runway complex. Detailed stakeholder involvement with the airlines, FedEx, Montana Air National Guard, and other tenants has been performed to mitigate construction downtime of the main Runway 03-21.



Project Data

- Project Schedule Performance: Project was designed and constructed over 3 FAA AIP Program grants in 2015, 2016 and 2017 (pending grant) and all scheduled dates were met.
- Completion: Project was completed on schedule to date – Phase 1 completed February 15, 2015. Phase 2 completed December 11, 2016. Phase 3 planned Construction completion November 1, 2017.
- Project Budget Performance: Estimated Construction Cost: $16.8 million (estimated) versus Final Construction Cost: $16.4 million (estimated). Phase 1 and 2 are completed and under budget by $400,000, Phase 3 is estimated at $5.2 million and bids April 2017.
- W/W/DBE Performance: Project goals were 4.59% and DBE achieved between Contractors and Engineering so far is 4.76%.
- Subject matter experts: Bill VanHercke, Sr. Advisor and Program Manager; Kurt Reno, Construction Manager; Chris Dodge, Design Manager and Field Inspector; Doug Stewart, Drainage, Mike Southwick, Navigational AIDS, Scott Jacobs, Electrical Engineer and Inspector
- Coordination: Bill Van Hercke
- Design Leads: Doug Stewart, Mike Southwick.
- Construction: Kurt Reno

Reference: Rod Hall, Assistant Airport Manager
406-727-3404
rhall@gtfairport.com

CHARLES M. SCHULZ – SONOMA COUNTY AIRPORT – SANTA ROSA, CALIFORNIA

In October 2014, the Airport completed construction of the Runway Safety Area Improvements that bring four extended safety areas, along with intersecting runways ends, into compliance with 2015 FAA safety area mandates. In essence, this project provides overlays or new construction for both runways and their associated taxiways over two construction seasons. This aggressive rehabilitation and improvement program was possible through close collaboration between the Airport, Mead & Hunt, the FAA ADO, local air traffic staff, tenants and state regulators.

The design phase ran concurrently with the Environmental Assessment, permitting and land acquisition elements of the overall project. Mead & Hunt is primarily responsible for the design elements, coordination with the Environmental Assessment, Land Acquisition and AGIS. Coordination between the Sponsor, FAA, SRM and project teams is critical to ensuring this high-priority FAA safety project stay on schedule and within budget. The initial phase of this two-year construction project started in September of 2013.

The design team required a multi-disciplined approach that addressed FAA approach procedures, NAVAID relocation, classic airfield design, electrical upgrades, extensive wetlands mitigation and threatened and endangered species protection. Specific elements that were finalized in design included:

- Design of an 885-foot Runway 14 extension, associated taxiways and 200-foot crosswind Runway 19 extension,
- Significant safety area embankment and grading for four extended safety areas,
- Realignment of Airport Creek beneath the extended safety area (30’ wide box culvert),
- Pavement preservation and restriping/renumbering from Runway 1/19 to 2/20, and
- Redesignation of all airfield taxiways and upgrading of signage and lighting to cost-efficient LED.

As frequent users of the Airport, our team understood the needs of the community and airport users. One of the goals of the project phasing was to ensure zero impacts to commercial air service operations throughout the multi-year construction period and minimal disturbance to the general aviation community. Any extended disruption to air service could cause the loss of significant revenue for funding future airport improvement projects and could affect the sustainability of the Airport over the long term. This was accomplished by designing a partial parallel taxiway for the cross-wind runway that could accommodate regional jet traffic.



Project Data

- Project Schedule Performance: Design 2012/13. Construction Fall 2013/ spring 15(punchlist)
- Completion: 2015
- Project Budget Performance:$56M
- W/W/DBE Performance: 1% (CA and constructability review)
- Subject matter experts: Jon Faucher, Scott Cary, Brett Siweck
- Coordination: Jon Faucher, Brett Siweck
- Design- Scott Van Gompel, Quality Assurance - Scott Cary
- Construction: Brett Siweck.

Reference: Jon Stout, AAE
Charles M. Schulz Airport
707-565-7243
jon.stout@sonoma-county.org

RIFLE - GARFIELD COUNTY REGIONAL AIRPORT

CH2M completed the 3 year $41.1 million project for Garfield County. The project was designed and completed in 3 bid packages under 3 separate FAA AIP grants. Phase 1 included detailed design. Phase 2 and 3 included final design for each bid package and Construction as follows:

Relocate CR 319, CR 352 and Utilities (Phase 2)—CH2M successfully completed the design and services during construction of phase 2, which moved 1,200,000 cubic yards of earthen fill and relocated two County Roads. Also included was design and construction of a retaining wall for the earthen fill at the western end of the Runway Safety Area (RSA). The project included detailed drainage design, a new detention pond, pavement thickness design, surface and subsurface drainage design, and relocation of 3,000 linear feet of sanitary, water, gas and electric. The project included significant phasing coordination with the FAA, and the County and City of Rifle.

Upgrade Runway to ARC D-II Standards (Phase 3)—CH2M provided planning, design services and Construction Management services for removing the old non-standard runway and constructing a new Runway at the airport. The project includes a new 7,000 foot by 100 foot runway with full length parallel taxiway. The project was constructed in 7 months with a total of 900,000 cubic yards of cohesive soil embankment, 40,000 tons of asphalt, 35,000 cubic yards of aggregate base, and 70,000 cubic yards of select granular fill. All new runway and taxiway lighting, Navigational Aids, and electrical signage was included, with over 200,000 linear feet of electrical wire installed. Drainage for the entire airfield was upgraded, with a total of 3,000 linear feet of drainage pipe installed. The runway was closed on April 5, 2011 and completely demolished. The project was complete and approved by the FAA with new approach procedures in place for a November 18, 2011 grand opening. CH2M provided detailed management services for the life of the program, including the following:

- FAA Reimbursable Agreement for VOR Relocation and Temporary VOR Location and hookup



- FAA Approach Procedures development
- FAA Flight Check testing and Approvals
- Localizer, Glide Slope, ODALS, and PAPI relocations and Construction Inspection
- FAA Administration, grant applications, grant tracking, RFR's, and closeout
- Land acquisition required for County Road and Runway realignment
- Utility relocations
- Storm water, erosion control, water quality, and dust control requirements

Project Data

- Project Schedule Performance: Project was designed and constructed over 3 FAA AIP Program grants in 2009, 2010 and 2011 and all scheduled dates were met
- Completion: Project was completed on schedule – Phase 1 completed February 1, 2010. Phase 2 completed October 15, 2011. Phase 3 completed November 18, 2011
- Project Budget Performance: Estimated Construction Cost: $41.3 million (estimated) versus Final Construction Cost: $41.1 million. Nearly all FAA discretionary funds were spent on project elements, without any over runs.
- W/W/DBE Performance: Project goals were 3.86% and DBE achieved between Contractors and Engineering were 4.58%.
- Subject matter experts: Bill VanHercke, Project Manager; Kurt Reno, Construction Manager; Doug Stewart, Utilities and Drainage, Mike Southwick, Navigational AIDS, Scott Jacobs, Electrical Engineer and Inspector
- Coordination: Bill Van Hercke
- Design: Bill Van Hercke
- Construction: Kurt Reno

Reference: Brian Condie, Airport Manager
970-625-1091
bcondie@garfield-county.com

COLORADO SPRINGS AIRPORT

Runway 17L/35R Design and Construction—This project included reconstruction of the main runway (13,500 feet by 150 feet) on the east side of the airfield and Taxiways E1, E7, and E8. The original runway surface consisted of PCC pavement with paved shoulders and overruns that had experienced failure due to Alkali Silica Reactivity (ASR), causing it to deteriorate. To prevent further progression of the ASR and to prevent failure of the runway pavements, this project was developed as a priority by the FAA. The first phase was to study the extent of deterioration and develop the appropriate mitigation techniques to ensure that ASR would not continue in the future.

The second phase of this project was to reconstruct the runway pavements. The reconstruction design included developing a new pavement section to meet current FAA design standards and the fleet mix in use at COSA. Specific construction items for the second phase of the project included earthwork and shoulder grading, concrete paving, construction of asphalt-paved shoulders, new runway edge lighting, in-pavement lighting and ductwork, and pavement marking. Detailed stakeholder involvement with the Airlines, Peterson AFB, FAA and airport tenants was accomplished.



Project Data

- Project Schedule Performance: Project was designed and constructed over 2 FAA AIP Program grants in 2009 and 2010, all scheduled dates were met
- Completion: Project was completed on schedule – November 13, 2010
- Project Budget Performance: Estimated Construction Cost: $39.2 million (estimated) versus Final Construction Cost: $34.5 million.
- W/W/DBE Performance: Project goals were 3.12% and DBE achieved between Contractors and Engineering was 3.82%.
- Subject matter experts: Bill VanHercke, Quality Manager; Kurt Reno, Construction Manager; Chris Dodge, Design task lead; Doug Stewart, Drainage, Mike Southwick, Navigational AIDS and Airfield Electrical
- Coordination: Bill Van Hercke
- Design Task Leads: Doug Stewart, MIke Southwick.
- Construction: Kurt Reno

Reference: Troy Stover, Assistant Airport Manager
719-550-1907
tstover@springsgov.com

SOQ - RESOURCES

RESOURCES

Mead & Hunt enjoys a longterm partnerhsip with Grand Junction Regional Airport and is excited for the opportunity to deliver the runway replacement program. We have program knowledge, key relationships, and an understanding of your needs. We understand this project goes beyond standard design and construction project. It is a full program that will implement a complex transformation of your airfield. Our understanding comes from close to a decade of working side-by-side with Grand Junction Regional Airport and the community to advance this program, which has positioned the Mead & Hunt team to best serve you. The Mead & Hunt Team offers resources that you can trust, are knowledgeable about your program, and provide recent regional experience designing and constructing replacement greenfield primary air carrier runways.

The proven combined experience of Mead & Hunt and CH2M offers the experience and resources to provide an approach that will add value to the program and save you time and money. Our knowledge and ability to deliver similar programs in the Rocky Mountain Region provides assurance You can be assured that our team can deliver a succesful project at GJT.

Ability to undertake and complete projects in a timely manner

Mead & Hunt has an excellent track record of accomplishing work on-time and within budget. This success can be attributed to creating dedicated project management teams, and an extensive and available staff that can complete projects quickly and efficiently. Our project teams are crafted for efficiency and responsiveness. The project management team is critical to successful and on-schedule execution of design and construction services.

In addition to Mead & Hunt staff, our primary teaming partner CH2M provides deep bench strength. We can assemble the necessary resources to design this project on your timeline. Our experienced teams can complete a successful design quickly to meet the schedule that works for you and FAA funding. Our team is located primarily in Colorado, meaning we can easily meet in-person whenever helpful to keep the design moving. Additionally, we will also take advantage of available technology, such as web-based file sharing so that documents can be quickly distributed to the design team.

Thoughtful leadership, extensive knowledge of your operations, excellent communications and working relationships with staff provide the framework to articulate your ideas, develop a realistic plan to accomplish those goals and complete them with minimal impacts. Frequent coordination with airport staff, including relevant project status updates and periodic meetings with the ADO, will help gather input at appropriate times and reduce unnecessary re-work to see that program stays on budget.

Staffing Capabilities and Dedication to Your Program

Mead & Hunt's 550 planners, engineers, architects, analysts and support staff will be supplemented by CH2M's hundreds of aviation engineers and specialist. The Mead & Hunt team includes carefully selected firms and individuals who will provide expert advice on your project issues. We will work together efficiently to accomplish your project tasks that we create collaboratively with the Grand Junction Regional Airport Authority and airport staff. Mead & Hunt will manage this team and be involved in every aspect of the project. Percent availability of a sampling of our staff is included following our organizational chart. We are committed and have the adaptable resources to complete your program efficiently.

PROJECT ISSUES

The Mead & Hunt team understands and has a full appreciation of the planning and assessment processes that resulted in the decision to construct a replacement runway at Grand Junction Regional Airport. The availability of the airport for commercial and general aviation users is of paramount importance, and as such, the construction of a replacement runway is necessary to maintain continuity of operations during the construction of airfield facilities that meet FAA standards, improve safety, and improve the operations at your airport.

The following are specific project considerations that the Mead & Hunt team understands and are ready to address:

Funding

Critical to the success of any program is the availability of funding at a Federal, State and Local level. Our project management team performs recurring financial team updates to review the status of grants, cash flow, short term financing needs, and projections of potential cost implications resulting from grant conditions. This continuous monitoring facilitates course corrections early in the program to best use funding as it becomes available. Mead & Hunt understands the Runway 11/29 program is a significant portion of the Airport's $140 million capital plan. Currently, the program is shown to be completed over more than ten years, with approximately $5 million of maintenance for existing Runway 11/29.

Your current program schedule is primarily constrained by funding. Mead & Hunt has plenty of experience advocating for accelerated funding, and the team is ready to assist the Grand Junction Regional Airport Authority do just that. We have similarly helped many of our airport clients make a successful case to the FAA for why funding for important projects, like yours, should be funded early and often. In a recent and similar project at Pullman-Moscow Regional Airport, our efforts with the Northwest Mountain Region have resulted in a $12 million advancement of funds (30 percent) in two years.

With the ability of the FAA Denver ADO to often capitalize on year end discretionary funding, we will see that your program is ready and able to accept those dollars. Our team is prepared to accelerate the phasing schedule and completion date should we be successful in making funding available sooner. With larger funding increments, your program could be completed in approximately five years, including all necessary Federal permits, Navigational Aids and Approach Procedures; thereby reducing the impacts of inflation and ongoing maintenance and coordination costs.

As the design process advances, the cost estimates will be updated regularly to reflect developing changes in FAA design standards, options to be considered, market trends and escalation and contingency. As these changes emerge, Mead & Hunt will meet with you immediately to communicate the issues and work with you to form a plan. If necessary, the Mead & Hunt team will develop community messaging so the matter is clearly communicated, and we will accompany you to the FAA ADO, regional and Washington DC offices to secure the support of the FAA for your project.

Mead & Hunt understands the importance of implementing your replacement runway program with fiscal responsibility. The financial investment being made by the Airport, the City, the County the FAA, CDOT Aeronautics and other potential contributors is significant, but has limitations. Our goal for the program is to design and build your replacement runway on or under budget.

Airfield Geometry Confirmation

The Airport Master Plan and Environmental Assessment processes began prior to a recent update to FAA guidance on airfield geometry. Current FAA guidance presents an opportunity to revise the size and number of connector taxiways, shoulders, blast pads, and potentially even reconsider the proposed runway/taxiway separation in an effort to reduce overall cost of the program. The first step in this program will be confirming project components and identifying areas for potential refinement. This process will result in revisions to the project budget that will be carried forward into long-range planning.

Minimizing Downtime of the Navigational Aids and Procedures

Currently, the majority of the critical elements in this system are located in areas requiring fill or grade adjustments. We recommend coordinating with Air Traffic for maintaining the glide slope, the Touchdown Runway Visual Range and PAPI (potentially requiring an early FAA Reimbursable agreement), confirming grading impacts to the offset localizer for grading occurring in front of the facility, and delaying completion of the western end taxiways to maintain Approach Lighting System.

Completion of BLM Land Transfer
As your on-call aviation planner, we are assisting with this effort and understand the complexities of the agreements and commitments that must be carried forward into project design and construction. Among the commitments made, the transfer of the recreational mitigation funds, along with the timing of construction of these improvements, will provide a positive opportunity for maintaining community support of the program.

Mesa County Soils/Aggregate Management
The Mead & Hunt team's Mesa County experience provides an understanding that expansive soils, uranium mill tailing backfill, Mancos shale, shale oil by-products and aggregates reactive in concrete are known concerns that factor into all design decisions. Our team's more than 25 years of experience with the soils of this area, provide a reassurance that decisions will be made specific to the long term durability of the airfield.

Army Corp of Engineer (COE) 404/401 Permit
As part of the Environmental Assessment, a nationwide permit application was completed for reshaping the drainages north of the Airport that cross the project site. Recently, new staff at the COE have indicated that a more in-depth Individual permit is appropriate. Fortunately, our discussions with the Grand Junction COE have suggested that the work we've already completed on the nationwide application provides about 90 percent of what will be needed for the individual permit application. This permit must be in place prior to any work in these dry washes and includes work on 27 ¼ Road. Our COE experts along with River City Consultants' local knowledge will assist with this critical permitting process, thereby reducing costs and potential delays.

Protection of water resources within the City and County
Water quality and water detention features are critical to protecting Grand Junction communities and the Colorado River. We recommend completing construction of the water quality ponds early in the program. This will provide a visual queue in the community that the project is moving forward prior to major landscape changes on airport and identify multi-year program erosion control features, thereby saving cost. Our design will also minimize the potential for downstream flooding in major storm events, which is very important to the City and the community.

Leveraging work to rehabilitate Runway 4/22
Currently Runway 4/22 is not eligible for Federal funding due to wind coverage. Nevertheless, that runway is a critical asset for the General Aviation community. We recommend sequencing rehabilitation work of your crosswind runway to use recycling methods we have used at many other airports, to coincide with paving operations on the new runway as feasible to minimize cost.

Uranium Mill tailings relocation
During the EA, we discovered that the Remote Transmitter/Receiver (RTR) Facility foundation and related trenches seem to have been constructed with mill tailings. Our team's relationships with a key radioactive waste disposal specialists, including work managing the Hanford facility, will ensure these materials are properly handled and disposed.

Community messaging of Land transfer/project
The historic off highway vehicle (OHV) uses to the north of the Airport will require careful sequencing of mitigation of parking areas prior to closing property boundaries in this area. Continued careful communication strategies will reduce potential conflicts with interested parties.

Design Optimization Opportunities
We are our strongest critics, and we continually look for better solutions. We are confident we will identify several small adjustments that could add up to a large cost savings. Below are some innovative cost savings opportunities we will evaluate in more detail during the design process:

Creative Bid Packages and Local Materials: Local materials and construction water sources are a key concern for a program of this size. Mead & Hunt will prepare bid packages that promote the use of local materials, which will reduce material transport costs while supporting the local economy.

Leverage Federal Funds: Mead & Hunt has successfully developed flexible bid packages for multi-year projects that can expedite construction and take advantage of year end funding. This results in inflation savings to GJT.

FAA Reimbursable Agreement for Navaids: Mead & Hunt has worked with our clients nationwide to develop dozens of reimbursable agreements and we know what is required to execute them properly so that the FAA keeps up with the design and construction schedule.

Continual Design Improvements: The preliminary design allows for targeted design refinements and exploration of innovative design opportunities that could translate into cost savings.

Careful, Consistent Review: The most obvious opportunity for cost savings is to avoid mistakes that cost time and money. You have seen the quality of our work firsthand, and you know that we pay great attention to detail.

Construction Phasing: Mead & Hunt will continue to refine construction phasing as we strive to reduce the construction schedule and haul distances, and maximize reuse of materials on-site, all while minimizing airport closures.

Efficient Earth Movement: The project requires more than 6 million cubic yards of earth, which is the single largest cost element. Creating an efficient method to move the earth and avoiding moving it twice will go a long way in keeping costs in line.

Drainage Refinements: The Environmental Assessment drainage design was a comprehensive solution to address storm water, water quality, and floodplain management. Our team will consider innovative solutions to reduce the cost of drainage improvements such as consideration of materials choice, relocation of facilities to minimize earthwork, sizing of detention ponds to avoid dam certification, etc.

Soil Stabilization: Our team's unique understanding of soil conditions in the Grand Valley will add efficiency and reduce project costs.

Efficient Design: We will assess the FAA specifications and practices to incorporate efficiency throughout the pavement life cycle and will consider the use of: cost effective pavements that incorporate recycled materials such as the millings from the old runway, low energy paving materials, cool and whitetopping of existing pavements. Due to the thickness of asphalt found in the existing runway, this lower quality asphalt could be partially removed, grades corrected and a concrete overlay could be placed for long term durability.

Intelligent Compaction Specifications: Intelligent Compaction optimizes the compaction process, reducing the risk of having inadequate material densities, which is a major factor in premature pavement failure.

Pavement Life-Cycle Analysis: The Mead & Hunt team will prepare a comprehensive life-cycle cost analysis to aid us in properly evaluating and selecting cost-effective pavements in the design and bid stage of your program.

The **graphic on the next pag**e identifies potential opportunities for program refinement. The ideas identified will be further evaluated in an effort to reduce cost, minimize impacts to the users, and streamline construction.

SCOPE OF WORK

The Mead & Hunt team has created an approach based from our experience at Grand Junction Regional Airport and with similar commercial service runway replacement programs that is best suited to see your program through to a successful completion. The Mead & Hunt team approaches the GJT improvement as a **Program** – that is, a series of steps and projects that depend on each other to produce the successful, desired outcome for the community. Some elements occur simultaneously, others in sequence. The time and cost savings of one step will be used to advance the next, and a successful step eases those that follow.

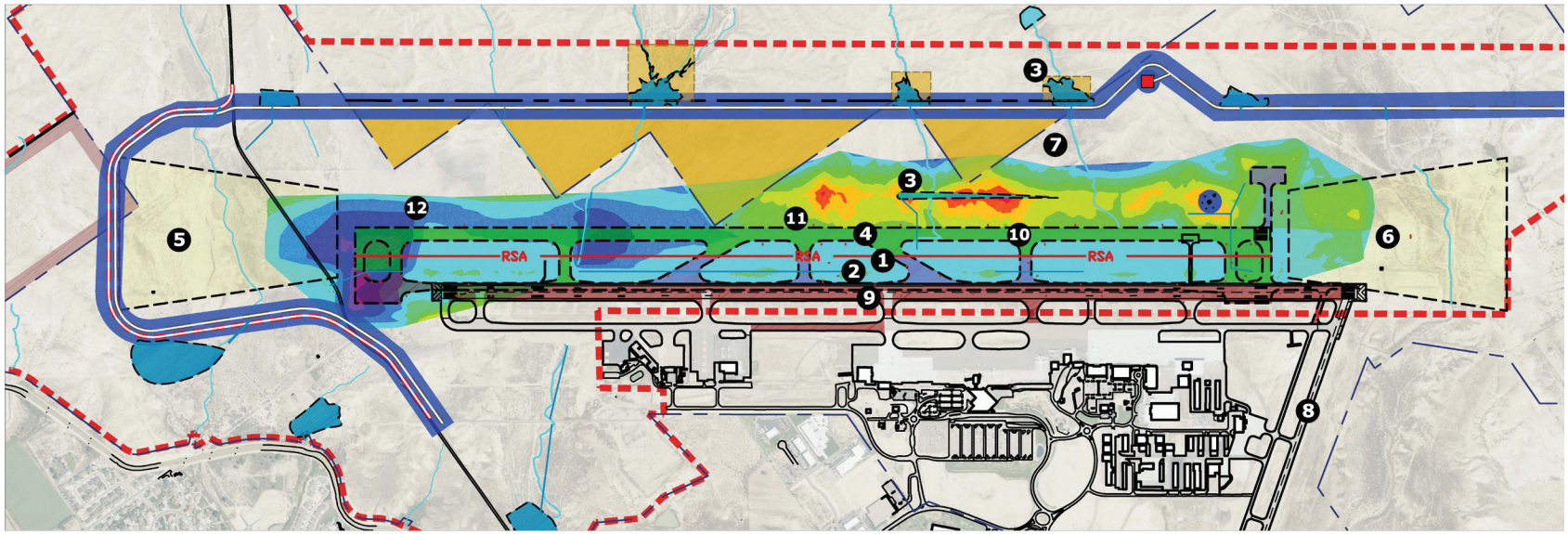
PHASING

- PHASE I - BLM Land Transfer & Easements
- PHASE II - Roadways/Drainage/Grading/RTR
- PHASE III - Runway construction/NavAids - minimize disruptions to (E) 11/29 Open with critical taxiways
- PHASE IV - Reconstruct Existing Runway 11/29 to taxiway
- PHASE V - Complete Taxiways etc. final surface roadways

LEGEND

- Existing Airport Property
- Existing Drainage
- Future Runway Protection Zone
- Proposed Roads
- Area of Potential Effect (APE)

0 1200
SCALE IN FEET



1. Confirm desired geometry taxiway configuration
2. Minimize existing runway safety area work until new runway opening
3. Confirm detention pond design
4. Confirm need for 637' runway/taxiway separation
5. Confirm runway protection zone requirements for 27 ¼ road relocation
6. Confirm navigational aid package
7. Balance/Phase earthwork on site
8. Minimize cost of ineligible items
9. Confirm potential concrete parallel taxi
10. Confirm runway shoulder requirements
11. Consider soil stabilization
12. Consolidation modeling of deep fills

Design Optimization Opportunities

GRAND JUNCTION REGIONAL AIRPORT

We have successfully delivered the first steps of the process (Airport Master Plan and the Environmental Assessment), navigating the governmental processes, aligning stakeholders and preparing a strategy for the runway improvement. In doing so, we showed our value to you, your community and the FAA, whose satisfaction, along with yours, we will continue to hold as our priority.

Beyond the technical steps, this project requires the understanding of and communication with the community. The perception of cost, time, progress, and potential impacts determine the community perspective of the project. Our team will continue our focus on both the 'harder' elements of the program schedule and delivery and the 'softer' elements of public outreach and involvement, to provide true success to the Airport Board and management, the stakeholders and the region.

The scope of work will be broken into program validation, program implementation, design and construction. We propose a phased design model, developing an overall 50 percent design, and continue with yearly bid packaging of elements meeting available funding and other constraints. With a project of this size, we routinely package for bidding more work than is anticipated for funding, to plan for variations in bid prices, or to leverage end of year and stimulus funding. Communication on a regular, or even daily basis with the airport and FAA results in a level of trust that the program will be delivered as planned. In two recent programs in the Northwest Mountain Region, our team has accelerate programs by multiple years.

Prior to design, we propose to develop a site-specific implementation plan with inputs from all of our stakeholders. Stakeholders include the Airport Authority, airport staff, tenants, airlines, FAA ADO, FAA Air Traffic Organization, Army Corp of Engineer, CDPHE, Bureau of Land Management, the consultant teams, and the contractors. The implementation plan is structured into seven primary elements: Funding, Permitting, Land Transfer, Design, Construction, FAA Navigational Aids, and Project Closeout. Preliminary goals include minimizing runway closures and disruptions in procedures, maximize cost effectiveness, incorporating safety, and avoiding rework.

Service & Response

The high level of service and response you have come to expect from Mead & Hunt has been provided to you on previous program steps. Mead & Hunt will open a Grand Junction office to hold local meetings, keep staff productive on site visits, and house resident construction engineers and inspectors during contractor activity. Mead & Hunt has been successful for more than a century because we share staff resources across offices, assign the best person for the appropriate task and relocate staff to program sites.

Continuous Communication

Our team has found that many of the unforeseen challenges that develop during a program of this magnitude start with breakdowns in communication. A communications plan and team charter will be developed with key stakeholders to confirm proposed methods of communication, document control, primary responsibilities, methods for distribution of information, etc. This is a living document and includes after action discussions internally and with our teaming partners, to continually improve processes for the team, saving time, money and headaches.

A structured communication plan will allow the program to stay ahead of public perception and stakeholder concern. This will be developed during program validation. Regular, often daily, communication will be conducted with you. We will also assist with briefings to the Airport Board and City. Regular tenant and operator meetings will share proposed work phasing, and regular community meetings will give updates and listen for developing issues.

Safety Management System

In recent years, the FAA, as a member of ICAO has agreed to formalize additional risk analysis programs to increase safety. This process is known as the Safety Management System (SMS). SMS evaluates projects

through a Safety Risk Management (SRM) process to identify, evaluate, avoid and mitigate risks associated with the construction of a feature and/or the operation of that feature.

Before the SMS process was formalized, the industry was coordinating with airports to manage risk by developing Construction Safety and Phasing Plans (CSPP) These plans are prepared, with input from GJT, the Tower, FAA, pilots, FBOs, airlines and those directly affected by the construction activity, including the construction contractor. The CSPP considers the duration and complication of construction elements, and sets guidelines to minimize potential for hazards. Our experience with the SMS process has found that a thoughtful CSPP, results in an SMS review, with few if any revisions to proposed phasing. Mead & Hunt, has experience with all phases of the SMS process, with both Airports Division and Air Traffic Organization. We expect a programmatic review of this process to occur with Air Traffic Organization during design along with potential annual reviews as the program moves closer to active pavements.

FAA Coordination

Our Program Leadership team has a first-rate reputation and excellent relationships with FAA staff. Ryan, Scott and Brad have worked on dozens of programs with staff in the Northwest Mountain Region and Denver Airports District Office (ADO), including Marc Miller who will manage your program, Kandice Krull who will remain involved throughout the environmental mitigation and permitting, and Chris Schaffer, and John Bauer who manage the ADO. We will leverage our existing relationships with the FAA Denver ADO, Northwest Mountain Region, and Head Quarters to keep your program adequately funded on schedule.

Procedure/Navigational Aid Development

Development of approach procedures and FAA navigational aid development is often overlooked early in design. This process can take years to complete and delays can cause lapses in commercial service. The current capital improvement program indicates navigational aid reimbursements to occur late in the program. Assuming you wish to minimize capital outlay, we recommend negotiating and funding these agreements in phases, with items such as the RTR immediately, with all navigational aids such as the Approach Lighting System, multiple Localizers, Runway Visual Range system (RVR) conversion of existing Visual Aid Slope Indicator (VASI) to a Precision Approach Path Indicator (PAPI) etc. beginning 3-5 years prior to runway opening and have those items operational immediately at opening.

This program will relocate the existing instrument landing system (ILS) and associated equipment. The FAA is currently working to implement a NextGen program, and during the 2020s may begin phasing out ILS technology and update to Ground Based Augmentation Systems (GBAS) or LPV/WAAS procedures. CH2M has a team of experienced airfield electrical engineers that has designed, overseen and coordinated the installation or relocation of ILS and other NAVAIDs at airports in the region and around the country. Our team understands the timelines and needs of the FAA that are essential to having facilities in place on opening day. Our team will also continue to monitor the FAA procedure development process and will coordinate those activities directly with Marc Miller and his team of airspace planners in the flight procedures department within the Northwest Mountain Region.

Construction Phasing – Keep Planes Flying!

Minimizing airport closures during construction has been and continues to be a high priority for the Airport Board, airport users and the FAA. Preliminary phasing has been devised to minimize cost, maintain safety, maximize the amount of time your ILS runway is operational, and accelerate opening of the replacement runway.

Geo Professional Solutions

The topography at and around the airport will look dramatically different when this program is complete, thanks to the relocation of 6.1 million cubic yards of soil. This is equivalent to filling the Ralph Stocker Stadium with a structure 1600 feet high. The effort

to remove and relocate this amount of soil is one of the largest cost elements for the program. The Mead & Hunt team recognized this during the planning phase and began preparations to reuse materials onsite. We identified fill locations to minimize haul distances, maintain airfield safety, and maximize the benefit of the waste material by placing it in locations that could be used in the future for revenue-generating building sites or other initiatives. Due to the significance of the earthwork required for this program, Ground Engineering is a team member to provide geotechnical exploration and integrate a comprehensive geotechnical design approach that incorporates local experience. Earthwork brings the greatest amount of risk to your program and you need a team with local experience that understands the unique soil conditions of the Grand Valley and has a history of providing solutions for local programs.

PROJECT SCHEDULE

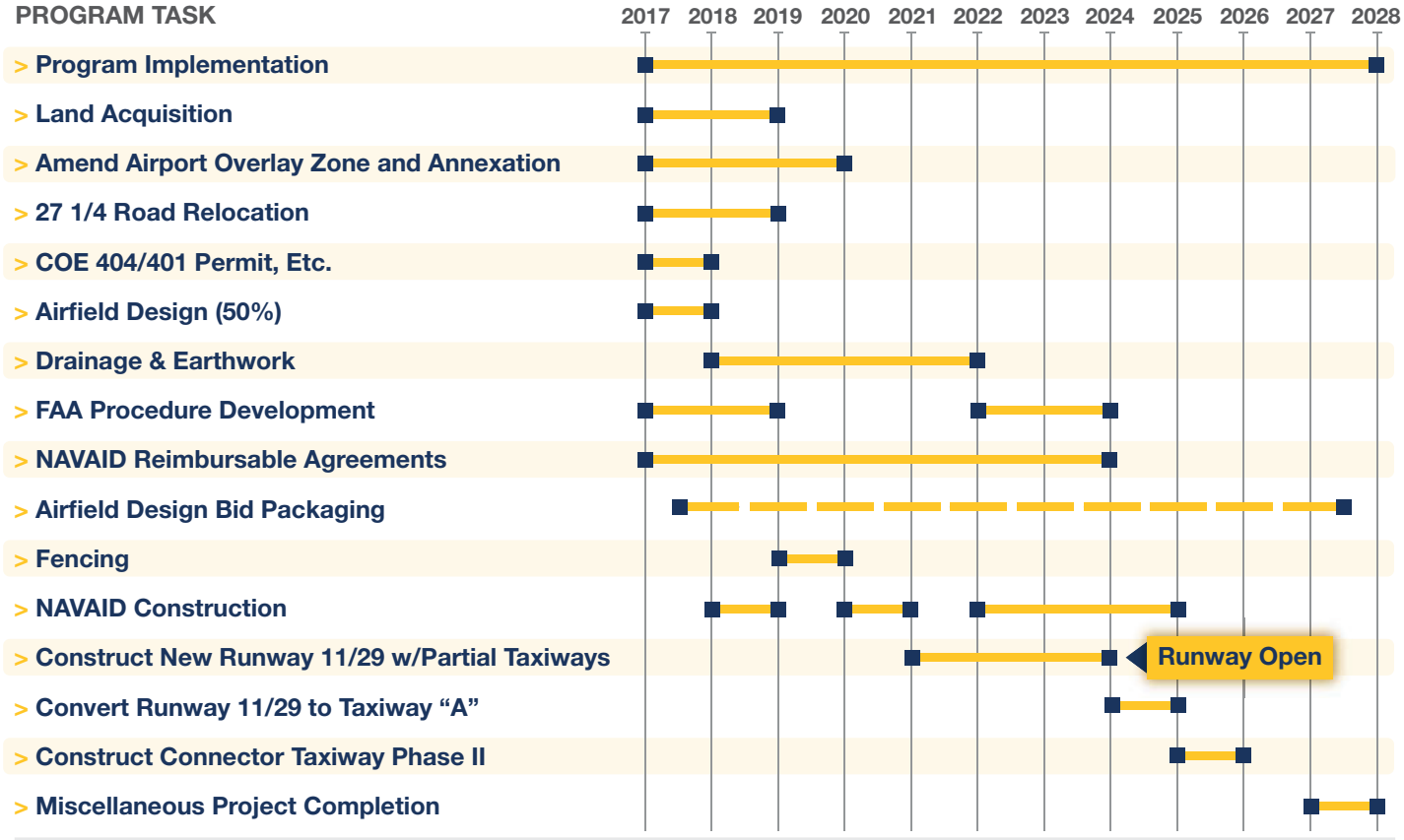
We have prepared a schedule based on our understanding of your capital improvement program and an anticipated FAA funding constraint of approximately $10M per year of discretionary funds your replacement runway construction as well as maintaining the airfield until the new runway opens.

Your current capital improvement program identifies a $3.3 million repair to Runway 11/29 for 2019. This coincides with a general rule of maintenance every 10-12 years. We anticipate that repairs to the existing runway 11/29 may not be needed as early as currently anticipated based on review of geotechnical reports and the 2016 Colorado Department of Transportation's pavement condition index survey. The 2016 CDOT survey identified the runway as a 90 out of 100, indicating the ten-year fix completed in 2008 is exceeding it's expected life and would suggest that monitoring should continue, and repairs be delayed. Deferral will result in faster runway completion, fewer closures and reduced cost.

For the new replacement Runway 11/29 we will phase the work to minimize disruptions to existing Runway 11/29 while maintaining air carrier and cargo operations. We would do this by constructing the runway in phases focused on protecting existing navigational aids until full runway transfer. This approach allows the ILS and western approach lighting system to remain operational, until existing Runway 11/29 is closed. We propose opening the replacement runway with a reduced number of taxiways connected to existing Runway 11/29 to expedite transfer and minimize rework related to reconstruction of the existing runway.

A few of the milestones that are unique to a program of this type include managing the Army COE permitting timeline, timing of FAA reimbursable agreements to relocate Navigational Aids, and Airspace Procedure development timelines that must identify proposed procedure publication dates two to three years prior to opening.

The schedule on the next page provides an overview of our proposed approach and depicts the timing for the opening of your replacement runway based on current fiscal constraints. Should additional funding become available sooner, the schedule can be greatly accelerated.



Estimated Staffing and Level of Effort

As described in earlier sections, the Mead & Hunt team has recent experience with programs very similar to yours. Based on our successful efforts on a similar program and understanding a program that may extend 10 years, we foresee a combined effort of the leadership team, program implementation team, and design and construction teams. This effort will be spread across the team as necessary, adapting to the level of effort needed at any particular time. Work is primarily completed at the project manager level and below. For every hour the project manager spends on a topic, the team component (design engineer, administrative professional, etc.) could provide a tenfold higher effort to maximize value for the owner. This applies both to Mead & Hunt staff and our team members. Mead & Hunt leads all efforts with specialty support identified in our organizational chart, providing a focused core team and specialties that are called upon when necessary. In any year, between primary staff and specialties, up to 50 staff will be called upon to provide focused efforts on a program of this size, reporting back to the core delivery team. The leadership team including Ryan Hayes, Scott Cary, and Jeremy Lee are 100 percent available when needed, however we generally see these roles varying between 75 percent and 100 percent on average dependent on phase of the program. Availability of staff members is included in the matrix on page 27.

SOQ – RESOURCES
ORGANIZATIONAL CHART

Team Organization

More than any other team, we bring the proven experience, depth of resources, local support, program understanding, community relationships, commitment and leadership needed to make this a successful program. The following organizational chart and accompanying staff matrix provides our proposed program organization.

RUNWAY 11/29 REPLACEMENT PROGRAM

GRAND JUNCTION REGIONAL AIRPORT AUTHORITY BOARD
Kip Turner, AAE, Executive Director
Eric Trinklein, PE - Airport Project Manager

FAA ENGINEER
Marc Miller, PE

PROGRAM MANAGEMENT TEAM

Scott Cary, PE – Engineering Project Manager

Ryan Hayes, CM - Program Implementation Coordinator

STRATEGY & RESOURCES

Brad Rolf, PE, LEED GREEN

PRINCIPAL-IN-CHARGE

Ron Engel, PE

QA/QC
Dave Phillips, PE
Ryan Bergstrom, PE
Bill Ropposch, PE
Bill Van Hercke, PE - CH2M

PROGRAM IMPLEMENTATION COORDINATOR
Ryan Hayes, CM

DESIGN MANAGER
Scott Cary, PE

CONSTRUCTION MANAGER
Jeremy Lee, PE

Program Implementation Team

FAA COORDINATION
Mead & Hunt

LOCAL/AIRLINE COORDINATION
Mead & Hunt

GRANT ADMINISTRATION
Mead & Hunt

PROJECT DELIVERY SCHEDULING
Mead & Hunt

FINANCIAL PLANNING
Mead & Hunt
Leibowitz & Horton

AIRFIELD PLANNING/AGIS
Mead & Hunt

ENVIRONMENTAL PLANNING, WETLAND MITIGATION & PERMITTING
Mead & Hunt
River City
CH2M

PROCEDURE DEVELOPMENT
CH2M
Mead & Hunt

FAA/BLM/UTILITY COORDINATION
Mead & Hunt

LAND ACQUISITION
Mead & Hunt

AIR SERVICE
Mead & Hunt

COMMUNICATION OUTREACH
Mead & Hunt

Design and Construction Administration Team

AIRFRIELD DESIGN EARTHWORK
Mead & Hunt

DRAINAGE
Mead & Hunt
CH2M

UTILITY DESIGN
Mead & Hunt
David Evans

AIRFIELD ELECTRICAL/NAVAID DESIGN
CH2M
Mead & Hunt

FACILITY DESIGN
Mead & Hunt

AIRLINE TENANT DESIGN COORDINATION
Mead & Hunt

ROADWAY DESIGN
David Evans

GEOTECH/SOILS/TESTING
Ground Engineering
Mead & Hunt

SURVEY
River City

CONSTRUCTION ADMINISTRATION
Mead & Hunt

Name	Previous GJT Experience	Resume Included	Primary Role	Employer	Years of Experience	Percent Available	Years in Role	Planning/ Environmental Planning	Program Delivery/ Implementation	Utilities	Permitting/ Mitigation	CIP Programming	New Runways	Geotechnical Design/Mass Grading	Runway/ Taxiway Design	Airfield Electrical	Navigational Aids	FAA Approach Procedures	Landside Roadways	Security Fencing	AGIS Data Gathering	Project Administration
Scott Cary P.E. LEED AP	✓	✓	Program/Project Manager	Mead & Hunt	23	100	23	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
Ryan Hayes, CM	✓	✓	Program Implementation Coordinator	Mead & Hunt	16	100	11	✈	✈		✈	✈	✈					✈			✈	✈
Jeremy Lee, P.E.		✓	Construction Manager	Mead & Hunt	15	100	11	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
Ron Engel P.E.*		✓	Principal in Charge	Mead & Hunt	35	10	35	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
Brad Rolf P.E.	✓	✓	Strategic Advisor	Mead & Hunt	20	20	20	✈	✈	✈	✈	✈	✈					✈			✈	✈
Ryan Bergstrom P.E.*		✓	QA/QC Airfield Design	Mead & Hunt	14	10	4	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
Dave Phillips P.E.*		✓	QA/QC	Mead & Hunt	31	10	12	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
Bill Van Hercke P.E.		✓	QA/QC	CH2M	21	20	7	✈	✈	✈	✈	✈	✈	✈	✈			✈	✈	✈	✈	✈
Bill Ropposch, P.E.*	✓	✓	QA/QC Electrical/NavAids	Mead & Hunt	26	10	9			✈		✈	✈		✈	✈	✈	✈		✈	✈	✈
Jared Easterlin	✓	✓	Design/Construction	Mead & Hunt	6	100	6		✈	✈	✈	✈	✈	✈	✈					✈		✈
Kari Nichols P.E.*		✓	Drainage Lead	Mead & Hunt	17	50	13	✈		✈	✈	✈	✈	✈	✈				✈	✈		✈
Doug Stewart, P.E.		✓	Drainage Design	CH2M	28	35	21			✈	✈		✈	✈					✈	✈		
Sara Ciasto P.E.	✓	✓	Roadway Lead	David Evans	16	50	9			✈	✈	✈		✈					✈	✈		✈
Tim Dacey AIA	✓		Facilities Lead	Mead & Hunt	20	30	13	✈	✈	✈		✈				✈	✈			✈		✈
Jen Boehm, P.E.		✓	Design/Construction	Mead & Hunt	9	100	9		✈	✈	✈	✈	✈	✈	✈	✈			✈	✈		✈
Chris Swonke P.E.*		✓	Airfield Design/Construction	Mead & Hunt	12	50	12	✈		✈	✈	✈		✈	✈	✈	✈	✈	✈	✈	✈	✈
Chris Birkmeyer	✓	✓	Design Team	Mead & Hunt	24	20	14	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈	✈
Shan Rammah EIT		✓	Design/NavAids/GIS	Mead & Hunt	4	75	4	✈			✈	✈	✈	✈	✈			✈			✈	✈
Mike Southwick P.E.	✓	✓	Electrical/Navigation Lead	CH2M	31	30	31			✈		✈	✈		✈	✈	✈	✈		✈	✈	✈
Chris Hunter P.E.*			Electrical Design	Mead & Hunt	8	40	8			✈		✈	✈		✈	✈	✈	✈		✈		✈
Kurt Reno		✓	Construction Administration	CH2M	16	100	16				✈	✈	✈	✈	✈			✈			✈	✈
Scott Jacobs		✓	Electrical Design	CH2M	11	35	11			✈			✈		✈	✈	✈					
Chris Dodge		✓	Construction Administration	CH2M	9	100	9			✈				✈	✈				✈	✈		✈
K. Scott Thompson PLS	✓	✓	Survey	River City	36	25	36			✈	✈	✈	✈	✈	✈		✈	✈	✈	✈	✈	✈
Jeffrey W. Mace P.E.	✓	✓	Civil Support	River City	24	20	15				✈	✈	✈	✈	✈			✈			✈	✈
Alec K. Thomas, PLS	✓	✓	Survey	River City	8	50	6			✈		✈	✈		✈		✈	✈		✈	✈	✈
Ivan Geer, P.E.		✓	Permitting	River City	23	30	16			✈	✈	✈					✈	✈		✈		✈
Jason A. Smith, P.E.		✓	Geotechnical/QA	Ground Engineering	24	50	24				✈	✈	✈	✈	✈			✈			✈	✈
Chris Hutto		✓	Geotechnical/QA	Ground Engineering	20	100	20					✈	✈		✈	✈	✈	✈		✈	✈	✈
Amy Crandall P.E.		✓	Geotechnical/QA	Ground Engineering	12	50	12					✈	✈		✈	✈	✈	✈		✈		✈
Steve Horton	✓	✓	Finance	Leibowitz and Horton	36	10	27	✈	✈			✈	✈									✈

*Currently registered in multiple other jurisdictions

PROGRAM LEADERSHIP TEAM

The Mead & Hunt team is fully commited to providing you the best leadership team with individuals that have local and regional experience, combined with national expertise gained through many years of leading aviation projects. For the Runway 11/29 Replacement Project, we propose a Program Leadership Team that includes our best managers and provide the resources and expertise needed for a complex undertaking such as yours. Our Program Leadership Team provides the leadership necessary connect your total capital improvement program, program implementation, project design, and project construction.

Project Manager/Program Manager

Scott Cary, PE LEED AP will serve as the Project Manager and Program Manager. Scott has 23 years of airport engineering design and construction management experience. Scott is the Engineering Program Manager for the Pullman Moscow Regional Airport Runway Realignment, the overall design manager for the Meadows Field Runway complex rehabilitation, and the Quality Control Manager for the Augusta Ramp Rehabilitation among others.

In addition to the items specifically identified in our project experience and resume, Scott's progressive experience encompassing eight greenfield sites, more than 30 runways, and related programs is the ideal mix of experience and local knowledge to lead this complex program. Scott has experience supporting the GJT FedEx Ramp construction in 2002, the 2008 Runway 11/29 construction phasing, reviewing the Runway 11/29 preliminary design for GJT, and supporting the Environmental Assessment. Scott grew up on the Western Slope. He spent more than ten years, leading the redevelopment of the runway and taxiway system at the Aspen-Pitkin County Airport, was the client project manager for a Salt Lake City Runway Rehabilitation, and has delivered multiple military runway rehabilitations worldwide. This experience provides the ideal leader to develop and implement the efficient delivery of your program. Scott has more than 15 years of experience with the Denver ADO, and Northwest Mountain Region.

Scott will lead the Design and Construction Administration Team responsible for advancing our preliminary design, packaging construction programs with available funding and providing construction administration of contractor activity. Scott will be supported by our partners including CH2M, David Evans River City, and Ground Engineering. This team will refine the preliminary design with innovations, efficiencies and cost savings. The team will balance construction phases with the land transfer, utility relocation, commercial and cargo service needs and funding availability. Our design team will spend time in the field with our construction inspectors to see that the intent of the plan sets is properly put on the ground.

Scott is licensed professional civil engineer in the State of Colorado license number 35985.

Program Implementation Coordinator

Ryan Hayes CM, will serve as program implementation manager. Among his 16 years of aviation program experience, he has seven years of managing the planning, environmental and preliminary design of the GJT program, and will continue to be involved in all aspects of the program. Ryan has demonstrated his ability to coordinate and solve complex challenges, manage a large team, communicate clearly and effectively, maintain schedule and budget, and exceed the expectations of the FAA. Ryan will continue his role with GJT in developing the comprehensive strategy for the program, so the benefit and impact of every decision and action is considered from the perspective of the program, community and stakeholders. This program is of personal importance and priority to Ryan; he understands how important this program is to the region and is committed to seeing this program through to the end.

Ryan will lead the Program Implementation team with responsibility for preparing for the program steps to occur on schedule and to be able to adjust with the opportunity of funding availability and changing priorities. This team is led by Ryan and Mead & Hunt, and supported by our partner firms. The responsibilities of this team are among the most challenging program elements and will need to begin immediately to set the stage for the program to progress.

Construction Manager/Field Engineer

Jeremy Lee, P.E. will serve as the construction manager and field engineer. Jeremy has more than 15 years of experience managing infrastructure design and construction projects. His experience includes 11 years in the aviation industry and four years as a project engineer for a national construction contractor, delivering large programs. Work with the aviation industry includes coordinating with airport staff, community leaders, stakeholders, public agencies, and contractors to manage project delivery from concept to construction. Jeremy has delivered design and construction programs for the Gunnison-Crested Butte Regional airport, and more than ten years of delivery for the Yampa Valley Regional airport. In addition to these programs, Jeremy has experience on runway programs at Detroit, Pullman-Moscow Regional Airport, Elko, NV, and significant engagements as the onsite civil engineer for the Denver International Airport Hotel and Transit Center construction. Jeremy's experience will be invaluable as the program moves from design into construction.

Jeremy is a licensed civil engineer in the state of Colorado, license number PE 41728.

Strategy and Resource Manager

Brad Rolf P.E. will serve as the strategy and resource manager, supporting Ryan and Scott by managing Mead & Hunt's resources for communication, performance and delivery of program elements. Brad will personally invest in the performance of the program team, assisting with strategy development, to best serve the success of the Airport Authority. Brad's 20 years of airport consulting has produced strong FAA relationships at the Denver Airports District, Northwest Mountain Region, and Headquarters offices that he will call on to support the program. Brad has provided strategy support to Ryan Hayes for all of his past and current assignments at Grand Junction Regional Airport. His recent large airport improvement programs included projects at Denver International Airport, Centennial Airport, Aspen Airport, and many other airports across the region.

Brad is a licensed civil engineer in the state of Colorado, license number PE 44400.

Principal in Charge/Senior Technical Advisor

Ron Engel P.E., Mead & Hunt's Aviation Services Group Leader will serve as Principal in Charge and senior technical advisor. Ron's recent large runway programs have been at Detroit (MI) and Columbus (MS). Of his more than 30 years of aviation program experience, 18 years were with the Michigan DOT Aviation Division, where he annually managed $80 million in Airport Improvement Program funds across a variety of airports and programs. He will see that the team has the full resources of Mead & Hunt to perform at the highest level. Ron commits Mead & Hunt's more than 550 employees to the success of GJT.

MEAD & HUNT PARTNERS

The Mead & Hunt team provides the experience, depth of resources, local support, program understanding, community relationships, commitment and leadership you know, trust and need to make this a successful program. The Mead & Hunt team is comprised of carefully selected firms and individuals who will provide you with expert advice on your project issues. We will work together efficiently to accomplish your project tasks on the schedule that we create collaboratively with the Grand Junction Regional Airport staff. Our team for your project include the following:

CH2M

CH2M has more than 50 years of aviation experience at commercial service airports, with focus on supporting growth without letting a passenger or shipment miss a beat. CH2M's Denver based Aviation team, is actively delivering programs similar to yours, in the Northwest Mountain Region and beyond. Combined our firms have more than 120 years of experience in Aviation. The CH2M Denver Aviation team provides complimenting resources and lesson's learned from work at Rifle, Colorado Springs, Great Falls, and many other locations worldwide. Our firms have worked together in various arrangements dating back more than twenty years, including delivery of the new Northwest Arkansas Regional Airport in Bentonville, AR, in the late 1990s, who continues to be a Mead & Hunt client.

CH2M will provide services relating to QA/QC, Airfield Lighting, Navigational Aids, Construction Administration support, and other related engagements as necessary.

RIVER CITY CONSULTANTS

River City Consultant's principal engineers and surveyors have over 100 years of combined consulting experience in a broad range of service capabilities and have built solid relationships within our community. They have worked with and developed personal relationships with officials from many local, state, and federal agencies, utilities, and special districts including the City of Grand Junction, City of Fruita, Town of Palisade, Mesa County, Grand Valley Rural Power, Ute and Clifton Water, CDOT, Bureau of Land Management, and others.

River City Consultants have been instrumental in the successful completion of some of the largest and most prominent projects in Grand Junction and the surrounding areas including numerous public works projects. They bring an extensive resume of municipal design and land development projects involving survey, streets, sewers, water distribution, pedestrian trails, flood plain mapping and associated FEMA applications, watershed management, project management, and construction services including survey of at least 38 airport projects and an overall design survey for the current runway replacement program. In addition, staff has provided full service engineering services including permitting, environmental engineering, storm water management, reclamation, among others.

River City will be providing comprehensive surveying services, local permitting support and other related services.

GROUND ENGINEERING CONSULTANTS, INC.

Ground Engineering has provided geotechnical engineering and solutions in the Grand Valley and for GJT for more than ten years on all types of public and private transportation and infrastructure improvements. Ground Engineers will serve GJT from its Western Slope office, providing geotechnical exploration, analysis, and support for design and construction administration. Ground knows Grand Valley soils better than anyone, while also being intimately familiar with FAA criteria which are necessary assets for the massive earthwork of this program.

Ground Engineers will provide geotechnical investigation, geotechnical recommendations related to embankment management, quality assurance and quality control testing.

DAVID EVANS AND ASSOCIATES

David Evans and Associates, Inc. (DEA) practices holistically at the nexus of land use, development, and transportation to create beautiful and sustainable places. Founded in 1976, and headquartered in the internationally-acclaimed livable city of Portland, Oregon, DEA provides innovative designs that balance growth with environmental sensitivity. With offices throughout the USA, their experts not only create unique developments, they are known for finding workable, innovative solutions for complex projects.

Their staff experience in the Grand Valley supporting CDOT Region 3, the City of Grand Junction's Riverside Parkway, and design of the Grand Junction Regional Airport's landside improvements are examples of their understanding of the roadway needs of the City of Grand Junction, Mesa County, and the airport.

David Evans will lead the 27 ¼ Road realignment and support traffic related needs throughout the program.

LEIBOWITZ & HORTON

Steve Horton has provided financial solutions for commercial service airports of all size nationwide, partnering with Mead & Hunt across the country. Steve has offered to join our team, to assist in long range funding analysis, strategic financial planning and advice, and non-aeronautical revenue development. Steve knows GJT's fiscal environment and will integrate local knowledge and relationships into your financial strategy.

APPENDIX – RESUMES

SCOTT CARY, PE, LEED AP
ENGINEERING PROGRAM/DESIGN MANAGER

Scott Cary has 23 years of progressive engineering experience in aviation program management, airport design, facility design and construction administration for commercial and military airports. His experience includes green field construction, relocation of existing runway and taxiway systems, runway rehabilitations and extensions, deicing pads, runway safety area (RSA) improvements, apron reconstructions and terminal improvements. Scott's involvement in these projects spans from planning through construction, and often involves program management for more complex efforts.

Scott's diversified expertise provides the ideal leadership for more complex commercial airport programs. He is often called upon to push beyond traditional solutions to identify needs. This can manifest itself in relation to cost-effective pavement management solutions, process streamlining to decrease project timelines, innovative waste stream management, long-range facility planning, non-standard design methods or unique phasing requirements for operational or financial needs.

RELATED PROJECTS

- Pullman Moscow Regional Airport – Runway/Taxiway relocation – Engineering Project Manager
- Friedman Memorial Airport Relocation, Hailey Idaho – Program Manager
- St George Regional Airport relocation, St George, Utah, Quality Control Manager, Grading and Drainage package
- Boise Air Terminal (Gowen Field), Boise Idaho – Field Engineer - Third runway grading and assault strip construction
- Runway Safety Area Improvements (Two runway complex), Charles M. Schulz- Sonoma County Airport – Quality Control Manager
- Rehabilitate RW 12L/30R Complex, Meadows Field, Bakersfield, Californina – Design Project Manager
- Rehabilitate RW 16L/34R Salt Lake City Department of Airports, Salt Lake City International – Client Project Manager
- Rehabilitate RW 17/35 Montrose Regional Airport, Montrose, Colorado – Design Manager
- Rehabilitate/Extend Runway 15/33 Complex, Aspen-Pitkin County Airport, Aspen, Colorado – Program Manager
- Gunnison County Airport Runway Rehabilitation, Gunnison, Colorado -– Project Engineer
- Concourse C East Apron Expansion, Denver International Airport Denver, Colorado – Quality Control Manager



Education

- BS, Civil Engineering, University of Colorado

Licenses/Certifications

- Licensed Professional Engineer –Colorado, (16 years) Additonally registered in: Arizona, California, Idaho, Kentucky, Montana, New Mexico, Nebraska, Oklahoma, Texas, Utah, Washington, Wyoming
- LEED Accredited Professional (Licensed 10 years)

Number of years with firm

- Five

Number of years in proposed role

- 23

RYAN HAYES, CM
PROGRAM IMPLEMENTATION COORDINATOR

Ryan Hayes serves as an airport planner and project manager. He has responsibility for the management and development of airport master plans, feasibility and site selection studies, development programs, environmental documentation and noise compatibility studies. Ryan also serves as airport planning support for a number of airfield design and terminal design projects at Mead & Hunt.

Ryan has an educational background in Public Administration, with a specialization in Aviation Administration and is a Certified Member of the American Association of Airport Executives (AAAE). Ryan served in a staff position at McAllen International Airport and later joined the Nebraska Department of Aeronautics where he was involved in planning, capital improvements programming, regional air service studies, system planning and local airport compatible land use planning. He served as an airport planner and environmental specialist with a multi-disciplined consulting firm prior to joining Mead & Hunt, being responsible for numerous airport master plans, airport site selection studies and environmental documentation for airport improvements.

Ryan is very well-versed technically, analytical in his approach, and creative in his thought process. Ryan is a talented planner with solid written and oral communication abilities and the ability to both manage and assist with projects in accordance with sponsor expectations.

RELATED PROJECTS

- Terminal Area Plan Amendment and EA for Runway 11/29, Grand Junction Regional Airport – Grand Junction, Colorado – Project Manger
- Runway Realignment Project, Pullman Moscow Regional Airport – Pullman, Washington – Planning Support
- Master Plan and Terminal Assessment, Sheridan County Airport – Sheridan, Wyoming – Project Manager
- Master Plan and Airport Improvements EA, Aspen-Pitkin County Airport – Aspen, Colorado – Planning Support
- Terminal Programming Study, Northwest Arkansas Regional Airport – Bentonville, Arkansas – Project Manager/Project Planner
- Landside Planning Study, Augusta Regional Airport – Augusta, Georgia – Project Manager



Education

- MPA, Specialization in Aviation Administration, University of Nebraska – Omaha
- BS, Public Administration, University of Nebraska – Omaha

Licenses/Certifications

- American Association of Airport Executives (AAAE) Certified Member (CM) – 16 years
- Private Pilot License, Single Engine Land – 22 years
- Member/Northwest Chapter AAAE – 12 years
- Member/Airport Consultants Council (ACC) – 12 years
- Member/Colorado Airport Operators Association (CAOA) – 12 years
- Member/Wyoming Airport Operators Association (WAOA) – 12 years

Number of years with firm

- Five

Number of years in proposed role

- 11

JEREMY LEE, PE
CONSTRUCTION MANAGER

Jeremy Lee has more than 15 years of experience managing infrastructure design and construction projects. His experience includes 11 years in the aviation industry coordinating with airport staff, community leaders, stakeholders, public agencies, and contractors to manage project delivery from concept to construction. During design phases, Jeremy supports development while building support for funding to meet project goals and initiatives.

RELATED PROJECTS

Relocate Runway 5/23 and Associated Taxiways
Pullman-Moscow Regional Airport – Pullman, Washington

Based on the community's decision to move forward with relocation of their primary runway, Mead & Hunt assisted the community through the environmental process and has completed preliminary design to relocate the primary runway, taxiway(s) and deicing systems. Jeremy is supporting program management as a senior aviation engineer, for the $120 million program. Unique project elements include relocation of a high voltage transmission line, associated distribution lines, diverting a flood plain, significant wetlands habitat relocation, and relocating the runway and complete parallel taxiway system with a slight change in orientation, to significantly improve approach minimums.

Runway 6/24 Rehabilitation
Gunnison-Crested Butte Regional Airport – Gunnison County, Colorado

Jeremy managed the design of airfield improvements for rehabilitation of the 9,000 foot by 150 foot runway. Jeremy managed the technical team to develop the airport inventory which identified surface gradient, pavement design and other compliance issues. Participating in the master plan process, Working with the county staff and FAA project manager, Jeremy was able to gain support for the needs at Gunnison and prioritize funding for the runway program. This project was completed while Jeremy was employed by another firm.

Runway 10/28 Rehabilitation
Yampa Valley Regional Airport – Routt County, Colorado

Jeremy managed the design, bidding and construction management of airfield improvements including rehabilitation of the 10,000 foot by 150 foot Runway 10/28 in its entirety. The project included all seven connector taxiways and a new vehicle service roadway. From planning to implementation, Jeremy worked with county staff to develop a work plan that met available funding, coordinated county, state and Corps of Engineers permitting, and, in the end, delivered a $17.5 million design and construction program within 3% of original estimates. This project was completed while Jeremy was employed by another firm.



Education
- BS, Civil Engineering, Colorado School of Mines

Licenses/Certifications
- Licensed Professional Engineer – Colorado #41728 (Licensed nine years)

Number of years with firm
- One

Number of years in proposed role
- 11

RON ENGEL, PE
PRINCIPAL-IN-CHARGE

As Group Leader for Mead & Hunt's Aviation Group, Ron Engel is ultimately responsible for our aviation staff and the services we provide to our clients nationally. Ron has more than 38 years of experience in airport planning, design and construction at commercial service and general aviation airports. He is familiar with both FAA and state departments of transportation (DOT) processes, standards and procedures. His experience includes design and construction of runway, taxiway and apron pavements and lighting; entrance roads; parking lots; drainage systems; approach surveys; site inspections; and pavement evaluations.

Ron's extensive project management and design experience includes construction management of bituminous and concrete runways, aprons and taxiway systems. Ron serves as the principal-in-charge providing quality assurance for many of our aviation projects. This involves listening to the airport sponsors, reviewing project scopes, and reviewing draft through final documents. In this role, he makes site visits to airports as warranted to review our staff's field work and construction activities.

RELATED PROJECTS

Wide-Body Aircraft Parking Apron
Detroit Metropolitan Wayne County Airport – Detroit, Michigan

As part of an on-call engineering services contract Mead & Hunt performed the engineering design and construction administration for a wide-body aircraft parking apron. The apron was designed to accommodate a single B747-400 or two C-17 aircraft. The project included removal of an existing hangar building foundation and pavement section, relocation of existing utilities and construction of a new Portland cement concrete (PCC) apron with hot-mix asphalt (HMA) shoulders. Additional work associated with this apron included airfield signing and lighting, associated grading, utilities, storm sewer and electrical. The scope of the project and size of the concrete apron was revised at the client's request due to budget constraints one week prior to the bid advertisement date. Mead & Hunt reallocated additional design engineering resources and staff to the project to still provide bid documents by the bid advertisement date. Ron was the principal in charge on this project.

Reconstruct Runway 5R/23L
Wayne County Airport Authority – Ypsilanti, Michigan

This project included reconstruction of a 7,542-foot primary runway at Detroit's cargo airport, the runway was constructed to accommodate the loading of a B-747 traffic. The transverse RSA did not meet FAA grading criteria and was corrected as part of this project. A new drainage system of more than 6,000 linear feet of 60-inch storm drain was installed the full length of the runway. This phased project was set up with the most flexibility possible to take advantage of funding available for the project year. Extensive coordination with FAA was required. Ron was the project manager for this project.



Education

- BS, Civil Engineering, Michigan Technical University

Licenses/Certifications

- Licensed Professional Engineer – Indiana (pending), Michigan (Licensed 33 years), Ohio (12 years) and Virginia (5 years)
- Licensed Private Pilot

Number of years with firm

- 18

Number of years in proposed role

- 35

BRAD ROLF, PE, LEED GREEN
STRATEGY & RESOURCES

Brad Rolf is the Business Unit Leader for Mead & Hunt's Rocky Mountain and South Central Aviation Services. He oversees the operations of Mead & Hunt's aviation engineering and planning departments to serve client needs. Brad is a detail-oriented individual who possesses both a technical and practical understanding of airport development projects. Having started his aviation career as an intern, Brad now has more than 20 years of experience working with airports, the FAA, and stakeholders. His progressive development track has provided him with a thorough understanding of the aviation industry and client needs. Brad's responsibilities are concentrated solely on aviation projects and often include:

- Client satisfaction.
- Managing workload and resource assignments among staff.
- Quality control/assurance.
- Provide oversight and review of project deliverables.
- Develop and maintain project schedules.
- Conduct consultation with federal, state, local and tribal agencies.
- Manage interdisciplinary teams of subconsultants.
- Lead public involvement and outreach programs.

Brad's experience allows him to direct projects from initial conceptualization through project completion. He has led the recruitment and mentoring of staff and is dedicated toward the development of those around him. Brad successfully leads interdisciplinary teams toward successful completion of projects on schedule and within budget. He has the ability to effectively communicate complex technical issues with airport and agency personnel while also being able to speak one-on-one with the public.

Throughout Brad's career, he was involved in projects at the following airports, to name a few: Aspen/Pitkin County Airport, Charlotte/Douglas International Airport, Cincinnati/Northern Kentucky International Airport, Chicago O'Hare International Airport, Cleveland/Hopkins International Airport, Denver International Airport, Detroit Metropolitan Wayne County Airport Indianapolis International Airport, John F. Kennedy International Airport, Phoenix Sky Harbor International Airport, San Antonio International Airport, Seattle-Tacoma International Airport, Spokane International Airport and Will Rogers World Airport.



Education

- BS, Civil and Environmental Engineering, University of Cincinnati

Licenses/Certifications

- Licensed Professional Engineer –Colorado (Licensed 7 years)
- LEED Accredited Professional (Licensed 7 years)

Number of years with firm

- Five

Number of years in proposed role

- 20

JARED EASTERLIN, PE
PROJECT DELIVERY SCHEDULING AND AIRFIELD DESIGN EARTHWORK

Jared Easterlin has over six years of experience in the field, and has worked on a variety of projects from residential to heavy civil. Past projects include military and commercial airfield design, commercial site design and construction, roadway design, road rehabilitation program management, soil boring classification and analysis, foundation design, Mechanically Stabilized Earth (MSE) wall design, reinforced and stabilized slope design, heavy civil project management, and construction materials testing and special inspections.

RELATED PROJECTS

Runway Realignment Program
Pullman-Moscow Regional Airport – Pullman, Washington

Unique elements of this project include relocation of a high voltage transmission line, diverting a flood plain, significant wetlands habitat relocation, and relocating the runway and parallel taxiway system to significantly improve approach minimums. Jared assisted with program management duties by helping create an estimate for the program to track FAA funding dollars yearly and using that information to determine the construction feasibility for each phase of the program. He was also involved in developing the overall project schedule, yearly phasing schedules, cost estimates, and scopes of work for phasing. On the design side, Jared was involved in developing alternate designs for the runway pavements and implemented a life cycle cost analysis to determine the most economical section for the project. He also designed the construction access route and airfield perimeter road. Jared coordinated the project site geotechnical investigation and served as a construction administrator. Additionally, he assembled the engineering design reports, overall and yearly, which compiled all the information and assumptions that went into the design.

Apron A Reconstruction
Kirtland Air Force Base – Albuquerque, New Mexico

Mead & Hunt provided airfield design services to reconstruct Apron A, which has deteriorated due to age and stress related distresses. The apron will be reconstructed in Portland cement concrete (PCC) to support current US Forest Service tankers and future Air Force medium fleet aircraft operations. The proposed pavement geometry was updated to comply with current geometric and grading criteria. Jared was involved in the geometric layout and development of technical specifications. He also wrote the design analysis report to summarize the data, criteria and assumptions that governed the overall design. This project is currently scheduled for construction in 2018.



Education

- MS, Civil Engineering, University of Florida
- BS, Civil Engineering, University of South Carolina

Licenses/Certifications

- Professional Engineer – SC #33171, CO #51468 (Licensed one year)
- Certified Erosion Prevention and Sediment Control Inspector (#4511, Exp. 2017)

Number of years with firm

- Three

Number of years in proposed role

- Six

BILL ROPPOSCH, PE
QA/QC

Bill Ropposch is an electrical engineer with more than 25 years of experience designing airport electrical systems for both civilian and military airfields. He is responsible for preliminary and final designs as well as construction administration of airfield lighting systems, navigational aids (NAVAIDs), security systems, and other special systems associated with airfield improvement projects for both commercial service and general aviation airports. Bill's experience includes designing power and lighting systems, airport security systems, communications systems, airport signage and marking, Instrument landing systems (ILS), approach lighting systems (ALS), and standby and emergency power systems, along with project management and construction administration. Bill also prepares plans and specifications, reports and preliminary estimates for construction projects.

Bill's construction administration experience includes airfield lighting and signage projects, ILS installations, terminals, aircraft rescue and firefighting (ARFF) facilities, snow removal equipment (SRE) buildings and airfield electrical vaults.

RELATED PROJECTS

Reconstruct Runway 5R/23L

Wayne County Airport Authority– Ypsilanti, Michigan

This project involved a complete reconstruction of the runway. The pavement was designed to handle B-747 traffic. The project included coordination with FAA for reconstruction of FAA owned NAVAIDS. This also included new centerline lighting as well as new paved shoulders and new height intensity edge lighting. The runway grade was raised as much as 19 inches in some areas to get the pavement out of the ground water. This also minimized the earthwork associated with grading the transverse runway safety areas. A new mainline drainage system was installed. This included nearly 6,000 LF of storm sewer with up to 60 inches pipe buried at 30 feet deep. The airfield electrical duct system was also connected to the storm drainage system. The centerline of the runway was raised nearly two feet in some areas. This involved designing a temporary wedge in the runway so it could be reopened for winter use. This project had multiple alternates in the bid packages so that we would be able to complete a project with whatever size project FAA was able to fund.



Education

- BS, Electrical Engineering, University of Detroit

Licenses/Certifications

- Licensed Professional Engineer – Arizona (#52430), California (#E 19255), Georgia (#PE037166), Idaho (#15899), Indiana (#PE11011703), Kansas (#22545), Michigan (#046828), Minnesota (48376), Nebraska (#E-14323), North Dakota (#PE-9332), Ohio (#74605), Oregon (#84069PE), Pennsylvania (#PE077632), South Carolina (#29473), Texas (#122748), Washington (#46739), Wisconsin (#40886-006) (Licensed 17 years))

Number of years with firm

- Eight

Number of years in proposed role

- 25

KARI NICHOLS, PE
DRAINAGE

Kari Nichols is experienced in a wide variety of civil engineering design projects. Her experience consists of performing hydrologic and hydraulic computations; designing sanitary sewerage and water distribution systems; preparing grading and site improvement plans; and finalizing specifications and bidding documents. Kari has prepared storm water management plans for a variety of site development projects and is very familiar with storm water codes and regulations. Kari's project experience has included aviation, industrial, and military facilities; commercial and residential land development; and municipal infrastructure.

Kari has more than 15 years of experience in water resources engineering. Her background is in drainage and utilities design and construction management associated with municipalities, military and general aviation facilities, and private land development. She has worked on numerous airports providing innovative water resources solutions complying with FAA, the Clean Water Act, Federal Emergency Management Agency (FEMA)-mapped floodplains, and state and local water resources regulations.

RELATED PROJECTS

Runway Realignment Program
Pullman Moscow Regional Airport

Kari has worked on the Pullman Moscow Regional Airport as the drainage design lead, since 2012. This includes flood plain delineation, flood and stormwater conveyance design, 401 and 404 permit development and related items. Her unique detailed experience in drainage specifically in the airport environment has been invaluable in this program. Efforts during the environmental assessment reduced permitting timelines by more than a year.

Hillsboro Airfield Drainage Improvements
Port of Portland – Hillsboro, Oregon

Kari served as the project manager overseeing the design of these two airfield improvement projects. Kari also served as the task leader responsible for grading and stormwater management. The projects discharge to a navigable waterway with water quality impairments (303(d) listed water body). The design included best management practices to comply with environmental and FAA regulations. Work included analysis utilizing Clean Water Services watershed models and incorporated stormwater quality treatment elements in accordance with state and local regulations.



Education

- BS, Civil and Environmental Engineering, University of Wisconsin – Madison

Licenses/Certifications

- Licensed Professional Engineer – Alaska, Michigan, Oregon, Washington and Wisconsin (Licensed 14 years)

Number of years with firm

- 14

Number of years in proposed role

- 19

CHRIS SWONKE, PE, QSD
AIRFIELD DESIGN/CONSTRUCTION ADMINISTRATION

Chris Swonke is a senior project manager with 12 years of experience, 11 of those years focused on civil engineering and land development including landside and airside work at airports. He has diverse experience across the civil engineering spectrum. For aviation projects, Chris' clients range from the smallest general aviation airports to medium-hub airports. His design experience at these airports includes design for grading, striping, paving, airfield lighting and airfield signage. Chris' airfield design work also includes support of environmental and planning projects through cost estimates and alternatives analyses. Chris often performs some level of construction support for each of his design projects. Whether the role involves only answering requests for information during construction or requires him to be a full-time resident engineer, Chris has seen many of his projects through to fruition. Chris' design and construction experience is not limited to aviation projects. He has also designed and helped to construct streets, water, sewer, storm drain and natural gas for clients ranging from public works to private developers and military installations.

RELATED PROJECTS

Bachelor's Enlisted Quarters, NAS North Island
NAVFAC Southwest – San Diego, California

Chris participated in the design of a 740 personnel, 7-story dormitory to house personnel during carrier berthing at NASNI. He was responsible for utility infrastructure design and LID site components. Chris provided Construction Storm Water Prevention Plan support and Post-Construction Water Quality Management Plans. He also coordinated with base utilities (water, sewer), and private utilities (gas, power) for service. The stringent LID requirement and effluent requirements for the San Diego Bay required increased Storm Water Pollution Prevention Plan monitoring levels. Chris will draw on this experience for construction permitting.

Long Beach Airport On-call
Long Beach Airport – Long Beach, California

Chris was the project manager and designer of record for full reconstruction of Runway 7L-25R, a 6,191-foot long, 150-foot wide D-IV runway. This project included earthwork, paving, striping, phasing, storm drain, and lighting and signage elements. In addition, Chris performed construction support by attending weekly meetings and reviewing requests for information, product submittals and change orders. Chris was the lead design engineer for the civil portion for full reconstruction of Runway 7R-25L, a 5,415-foot-long, 150-foot wide B-11 runway. It intersects three other runways and has 13 crossing/connecting taxiways. The project included earthwork, paving, striping, phasing, storm drain, and lighting and signage elements.



Education
- BS, Civil Engineering, Texas A&M

Licenses/Certifications
- Licensed Professional Engineer –California #70519 (Licensed 8 years)
- Qualified SWPPP Developer - 20072

Number of years with firm
- Two

Number of years in proposed role
- 11

RYAN BERGSTROM, PE
QA/QC

Ryan Bergstrom has more than a decade of experience in airport design and resident engineering for numerous projects at both air carrier and general aviation airports. He is knowledgeable in FAA requirements and processes relating to airport development. He has established strong working relationships with multiple Seattle Airports District Office engineering staff. Ryan has served as project manager and project engineer in the design and construction of new and reconstruction projects involving both concrete and bituminous runways, taxiways and aprons. In addition to airfield pavement design, Ryan's experience includes grading and drainage layout and design; lighting, signage and marking layout; project coordination; and construction administration.

Ryan's construction-related responsibilities have included preparing construction documents, specifications and cost estimates; leading pre-bid, bid opening and pre-construction meetings; reviewing shop drawings for pavement mix designs and construction materials; preparing Construction Safety and Phasing Plans (CSPPs); and tracking daily construction logs, in-field quantities and change orders. His experience ranges from small, fast-track projects to large-scale projects with multi-year timelines involving multiple construction companies.

RELATED PROJECTS

Runway Realignment Program
Pullman-Moscow Regional Airport – Pullman, Washington

Ryan is currently serving as the design manager for the Runway Relocation Program discussed in our project experience. He also worked on the environmental assessment preliminary design phase to identify innovative and design efficiencies to reduce overall project costs. Ryan understands the complexity of the various design elements.

RSA Improvements
Arcata/Eureka Airport – McKinleyville, California

Ryan was responsible for construction observation for this project. The work involved the relocation of thresholds on Runway 14/32 and Runway 1/19 and the construction of a run-up apron and connector taxiway. The project cost was $4.25 million.

EMAS Installation On Runway 32 Departure End
Arcata/Eureka Airport – McKinleyville, California

Ryan was responsible for construction observation for the installation of an EMAS (Engineered Material Arresting System) on the departure end of Runway 32. An EMAS system was required do bring a non-compliant runway safety area into compliance. The project cost was $3 million.



Education

- BS, Civil Engineering, North Dakota State University

Licenses/Certifications

- Licensed Professional Engineer – North Dakota (June 12, 2007), Minnesota (7/21/2009) and Iowa (9/29/2009), Oregon, Washington (Licensed 9 years)

Number of years with firm

- Eight

Number of years in proposed role

- 15

DAVE PHILLIPS, PE
QA/QC

Dave Phillips has over 30 years of experience in airport design. This includes pavement evaluation and life-cycle cost analysis, design, coordination and preparation of specifications and bidding documents, along with construction supervision, layout, and inspection at both civilian and military airfields.

Dave has served as project manager or project engineer in the design and construction of numerous new and reconstruction projects involving both concrete and bituminous runways, taxiways and aprons. He also has diverse experience in design of aircraft refueling facilities, airfield electrical vaults, pavement drainage layers and perimeter roads. David has updated airport guidance sign layouts, and installed new and relocated navigational aids, drainage systems, aircraft arresting barriers, taxiway and runway edge lighting, pavement markings, approach lighting systems and instrument landing systems.

Dave's resident engineer responsibilities have consisted of coordination, layout, and inspection of projects ranging from the construction of new or reconstruction of existing concrete and bituminous runways, taxiways and aprons. His other responsibilities have included overseeing construction of new airfield electrical vaults, navigational systems, runway and taxiway edge lighting, aircraft refueling facilities, perimeter fencing, and vehicle access roadways and parking areas.

RELATED PROJECTS
Runway Rehabilitation/Reconstruction 13C/31C, 13L/31R
Columbus AFB, MS ANG
Columbus, Mississippi

Project Manager. Led two consecutive fast-paced designs to replace runways for one of the busiest training fields in the Air Force. Projects have been completed under budget and on schedule due to exceptional design and on-site engineering-during-construction services.
13C/31C: 300 ft x 10,000 ft. Cost: $32M.
13L/31R: 150 ft x 8000 ft Cost: $12M at Final Design.



Education
- BS, Civil Engineering, University of Wisconsin
- AAS, Civil Engineering, Madison Area Technical College
- AAS, Architecture, Madison Area Technical College

Licenses/Certifications
- Licensed Professional Engineer – Wisconsin (Licensed 24 years), Minnesota, Missouri, New Mexico

Number of years with firm
- 32

Number of years in proposed role
- 32

SHAN RAMMAH, EIT
FAA/BLM/UTILITY COORDINATION, AIRFIELD DESIGN

Shan Rammah is a project planner and engineer with over three years of experience specializing in airport planning and improvements projects at general aviation and air carrier airports. Shan gives a unique perspective on long range planning and implementation feasibility. His primary planning responsibilities include airport master plans, runway length studies, airspace analysis studies, alternatives development and Airports GIS. His primary engineering responsibilities include construction cost estimation, construction phasing, design of site grading, drainage, construction phasing, pavement sections and construction administration. He is experienced in various computer software programs such as ESRI ArcGIS and AutoCAD Civil 3D.

RELATED PROJECTS

Runway 6/24 Realignment Project
Pullman-Moscow Regional Airport – Pullman, Washington

The Pullman-Moscow Regional Airport is currently undergoing a $119 million runway realignment program. Shan currently serves as a project engineer. His work on the project includes client and public coordination, the management of the $120 million cost estimate and budget, and FAA airspace coordination for the proposed design and construction equipment.

Apron and Taxilane Rehabilitation Design
Roseburg Regional Airport – Roseburg, Oregon

Shan was the lead designer for a $1.3 million dollar apron and taxilane rehabilitation included design of site grading, plan set development and airport tenant coordination.

Taxiway C Reconstruction and Pavement Rehabilitation
Salem Municipal Airport – Salem, Oregon

Shan was the lead designer for a $2.2 million dollar taxiway and pavement rehabilitation project. Shan performed the grading design, plan set development, and airport tenant coordination.

Apron and Taxilane Rehabilitation Design
Roseburg Regional Airport – Roseburg, Oregon

Shan was the lead designer for a $1.3 million dollar apron and taxilane rehabilitation included design of site grading, plan set development, and airport tenant coordination.



Education

- BS, Civil Engineering, Virginia Polytechnic and State University

Licenses/Certifications

- Licensed Engineer In Training (EIT)

Number of years with firm

- Four

Number of years in proposed role

- Four

CHRIS BIRKMEYER, PE
AIRLINE TENANT DESIGN COORDINATION

Chris Birkmeyer has a diverse background in surveying, transportation, aviation and land development engineering. Prior to joining Mead & Hunt, Chris worked as a project manager for the FAA and funded runway rehabilitation and apron construction projects. His work in Colorado, consisted of the Land Development field with a focus on all aspects of resort master planned communities. His involvement ranged from project inception and planning through the record drawings and transfer of infrastructure to quasi-municipal jurisdictions.

Chris has experience working on airport projects ranging from field engineering for total runway reconstruction and extension projects to security fencing and terminal improvements. His extensive experience has not only allowed him to work as a project design engineer and manager, but also as an assistant program manager for several projects. Throughout his career he has developed a strong relationship with airport managers, architects and developers.

RELATED PROJECTS

Runway 7/25 Extension and Reconstruction - 2009
Eagle County Airport , Gypsum, Colorado

Chris was the resident field engineer for this runway extension and reconstruction project. This approximately $50 million, four year project extended the runway and parallel taxiway 1,000 feet to the east. The project included a full length runway reconstruction, as well as multiple new drainage facilities to minimize erosion on large fill slopes, electrical items and placement of approximately 100,000 tons of new asphalt concrete pavement.

Program Management -
Sun Valley Replacement Airport, Hailey, Idaho

Chris was the deputy program manager for a proposed replacement airport for the Sun Valley Airport. He coordinated deliverables and schedules with consultants involved with the replacement airport including existing site redevelopment, site planning, financial feasibility and coordination with the DEIS. He provided lead cost estimating for phased construction of two alternative airport sites including identification for areas of value engineering.

Rehabilitate Air Carrier and General Aviation Ramp
Augusta Regional Airport – Augusta, Georgia

Chris was the project manager in charge of design and construction management for the project. He developed construction plans, engineer reports, pavement design, project specifications, bidding documents along with construction supervision for GA and air carrier aprons reconstruction. Seven acres of existing asphalt apron was reconstructed with both concrete and asphalt.



Education

- BS, Civil Engineering, Bradley University

Licenses/Certifications

- Licensed Professional Engineer – Colorado (# 0038044), Georgia (#038940), South Carolina (#31405) (Licensed 14 years)

Number of years with firm

- Four

Number of years in proposed role

- 25

JENNIFER (JEN) BOEHM, PE, LEED AP BD+C
UTILITY DESIGN

Jen Boehm is an airport engineer with ten years of experience in airport design and construction. She has completed numerous projects at both air carrier and general aviation airports. Jen has extensive knowledge of FAA regulations, policies and procedures relating to airport development. Located in Bismarck, she has worked at a variety of both large-hub and general aviation airports in North Dakota, Colorado, Nevada, California, Utah and Idaho.

As a project manager and lead engineer, Jen has led a variety of airside improvements from design through bidding and construction. She has served as project engineer in the design and construction of new and reconstruction projects involving both concrete and bituminous runways, taxiways, aprons and service roads. Her responsibilities include pavement design; completing plans detailing geometric layout, phasing, grading, drainage and markings; developing technical specifications, engineer's reports and cost estimates; and construction administration.

Jen's construction-related responsibilities have included preparing construction documents, specifications and cost estimates; leading pre-bid, bid opening and pre-construction meetings; reviewing construction submittals; preparing Construction Safety and Phasing Plans (CSPPs); completing daily construction logs; tracking in-field quantities; and writing change orders. Her experience ranges from small, general aviation projects to larger projects with multi-year phases for construction.

RELATED PROJECTS
Runway 12L-30R Rehabilitation
Meadows Field Airport
Kern County Department of Airports, Bakersfield, California
Jen served as Design Engineer on this project. This project included evaluation of the existing airfield configuration, surface gradient evaluation and geotechnical evaluation. Work included a portion of runway reconstruction, runway rehabilitation, taxiway reconfiguration and construction, grading and electrical upgrades. Jen was responsible for developing cost estimates for the project including bid alternates that matched available funding. In addition, Jen completed a pavement design analysis for the project, developed phasing to match available funding and allow the airport to be operational during construction, completed the engineer's report summarizing criteria and design considerations and was responsible for the grading of the runway and taxiways.



Education
- BS, Civil Engineering, North Dakota State University

Licenses/Certifications
- Licensed Professional Engineer – Colorado, North Dakota
- LEED AP BD+C

Number of years with firm
- Four

Number of years in proposed role
- 10

BILL VANHERCKE, PE
SR. ADVISOR

Bill VanHercke has spent his entire 21 year career in the aviation engineering field. He has completed a wide range of airport projects, ranging from small GA to large hub airports. His experience and technical expertise include program management, FAA administration, airport planning and design, and construction management. Bill is an industry leader in completing big projects at regional airports in the FAA Northwest Mountain region, having completed design and construction management on 17 runways at 13 airports.

RELATED PROJECTS

Great Falls International Airport – Montana

Bill was the senior project manager and managed the airport's five year Capital Improvement Program (CIP). Projects included the reconstruction of Runway 16-34 and construction of Taxiway C, complete reconfiguration of the airport's Access road, expansion of the public pay parking lot, FAA administration for the terminal expansion, airport master plan update, construction of a new snow removal equipment building, and RSA grade improvements.

Glacier Park International Airport – Kalispell, Montana

Bill was the senior project manager responsible for managing all projects and FAA administration within the airport's five year CIP for the last 10 years. Recent projects completed include terminal upgrades, security checkpoint relocation, landside improvements, the rehabilitation of the primary runway and reconstruction of the cross-wind runway, land acquisition, entrance road and parking lot upgrades, and coordination for AGIS and wetland relocations.

Construct Runway 16R/34L
Denver International Airport – Denver, Colorado

Bill was the design manager and lead civil design engineer for the paving and lighting package of Runway 16R/34L. The job entailed leading a staff of civil engineers in the design of the 16,000-foot-long by 200-foot-wide FAA Group VI runway completed in 2004. Primary design responsibilities were the geometric design of runway and taxiway system including high-speed exit taxiways; vertical profile and grading design, including warping at taxiway intersections; pavement design and PCC jointing design.

Rehabilitate and Reconstruct Runway 11/29 – Loveland, Colorado

Bill managed the five year program at the airport, including the award-winning design and construction completed in August 2011. Design included Airplane Design Group II run-up aprons on both ends of TW A, asphalt mill and structural overlay of the main runway, analyzing geotechnical investigation reports to determine full-depth reconstruction requirements, RSA improvements, and constructing a new detention pond. Bill led meetings with the client and FAA, preparing scope of services, negotiating fee, managing subconsultants, and all internal and external financials.



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Education

- BS, Architectural Engineering, University of Colorado
- BS, Civil Engineering, Metropolitan State College of Denver

Licenses/Certifications

- Professional Engineer: CO (PE0038553), WA, MT (Licensed 13 years)

Number of years with firm

- 21

Number of years in proposed role

- Seven

MIKE SOUTHWICK, PE
AIRFIELD ELECTRICAL/NAVAID DESIGN

Mike Southwick is an expert on navigational aids, airfield lighting and is familiar with the changing requirements and needs of pilots, regulatory authorities, and airport operators in this regard. He is particularly familiar with new lower energy lighting solutions and has worked on the latest navigational aids at Chicago O'Hare International Airport, Denver International Airport, and Calgary International Airport, among others. He has designed pavement condition sensor systems, precision approach path indicators (PAPIs) and approach lighting systems (MALSRs and ALSFs); and lighting control systems for multiple operators, including lighting vaults under Category III conditions: medium-voltage design, instrument navigational aids (NAVAIDS) siting, and development of surface movement guidance and control systems (SMGCS).

RELATED PROJECTS

Runway 16R-34L and TW A Electrical Improvements
Snohomish County Airport (Paine Field) (PAE) – Everett, Washington

Mike led the design of the 2015 airfield lighting upgrades at PAE on the same runway planned for rehabilitation. The project included replacement of Taxiway A edge lights with new LED edge lighting, replacement of the runway in-pavement centerline lights with LED fixtures, addition of touchdown zone lights with LED fixtures, electrical vault modifications to right size the regulators for maximum power savings, airfield lighting control modifications, and new homerun cabling. The project was completed on time and within the $1 million budget.

Airfield Electrical Design Runway Development Program
Calgary International Airport – Calgary, Alberta, Canada

Mike designed the airfield lighting control and monitoring system (ALCMS) for a new runway and taxiway complex to CAT IIIb low visibility conditions. The ALCMS required phasing into the existing air traffic control tower (ATCT) and field electric center (FEC), with addition of a new ATCT and new FEC at different times in the project schedule. Airfield lighting included design of runway edge, centerline, and touchdown zone lights, rapid exit taxiway indicator lights, taxiway centerline, intersection and edge lights, as well as in-pavement and elevated hold line lights including stop bar and runway guard lights.

Electrical Design Runway 10R-28L Relocation
Columbus International Airport – Columbus, Ohio

Mike supported the first design phase, which included the closure of a parallel taxiway south of the runway, layout of new utility lines for future electrical services to relocated NAVAIDS, design modifications to the south perimeter security system including rerouting of communications, design of taxiway lighting and signage for the relocated parallel taxiway, and phasing of the airfield electrical for continual operation of Runway 10R-28L during construction.



ch2m

Education
- BS, Electronics Engineering Technology, Metropolitan State College of Denver

Licenses/Certifications
- Professional Engineer: CO PE 0031376, WA, ID, OH, CA, MS, AL, MO, MT, VA, OK (Licensed 21 years)

Number of years with firm
- 15

Number of years in proposed role
- 31

DOUG STEWART, PE
STORMWATER DRAINAGE LEAD

Doug Stewart has 28 years of experience in hydrology, hydraulics and stormwater management for transportation and land development projects with an emphasis on Airports. He has served as drainage lead for numerous FAA projects and Central Federal Lands task orders including performing a Lateral Migration Analysis to identify the imminent threat of Yampa River erosion to Deerlodge Road. As drainage lead for the Denver Aviation Center of Excellence, Doug has worked at 14 different Airports ranging from Centennial Airport to Dallas Fort Worth International Airport.

RELATED PROJECTS

Rehabilitate Stormwater/Airfield Drainage
Luis Munoz Marin International Airport – San Juan, Puerto Rico

Doug was responsible for analyzing Trenchless Technology methods for rehabilitating storm sewer pipe on the airport property, preparing plans, specifications, and cost estimates for the selected rehabilitation method, and coordinating with manufacturers and contractors to identify best methods and qualifications to use for the work.

Airport Drainage Improvements
Great Falls Airport – Great Falls, Montana

Doug reviewed existing airport drainage systems; developed a new system design to drain an improved paved area including new Taxiway C; performed StormCAD analysis of the system; designed a spill containment gate structure; developed erosion and sediment control plans, and performed ditch calculations for new outfall ditches.

Drainage Design
Denver International Airport – Denver, Colorado

Doug was the drainage design lead responsible for the preliminary and final design of multiple drainage facilities, including Runway 8-26, Runway 17ZR/34L, and multiple Remain Over Night (RON) apron and snow dump areas. One drainage system was designed for deicing fluids and a 5-year storm event. Another drainage system was designed for a 5-year storm event. Inlets, grates, diversion structures, and concrete pipe were designed for aircraft loading. A trench drain system was designed to convey deicing fluid flows.



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Education
- BS, Architectural Engineering, University of Kansas

Licenses/Certifications
- Professional Engineer: CO (0029899), NV, TX, UT, KS, NM, HI (Licensed 23 years)

Number of years with firm
- 12

Number of years in proposed role
- 21

KURT RENO
CONSTRUCTION FIELD INSPECTOR

Kurt Reno is an experienced construction manager and inspector with CH2M's Construction Management Services group in Denver, Colorado. He has extensive aviation experience, including military air bases and many years of experience working on construction projects at the United States Air Force Academy in Colorado Springs. He performed civil design reviews for new construction, and also delivered construction management and inspection services.

RELATED PROJECTS

Upgrade Runway 16-34 and Construct Taxiway C
Great Falls International Airport – Great Falls, Montana

Kurt managed the construction process and provided quality assurance inspection for the Runway and parallel Taxiway C project, which involved asphalt removal and paving, native soil testing, P-154 aggregate base, P-209 crushed aggregate base, P-401 HMA, and electrical upgrades.

West Side Re-Investment Projects
Colorado Springs Airport – Colorado Springs, Colorado

Kurt managed the construction process and provided quality assurance inspection for the West Side Re-Investment Projects, which involved asphalt removal and paving. He was responsible for cost control, responding to requests for information (RFIs), safety oversight, contractor payment request review, tracking quantities, field inspection of materials, and drawings and specification drawing clarification. He also, served as the site safety coordinator.

Rehabilitate Portions of Taxiway E4 E5
Colorado Springs Airport – Colorado Springs, Colorado

Kurt managed the construction process and provided quality assurance inspection for the reconstruction of Taxiways E4, and E5, which involved subgrade treatment, bituminous base course, underdrain, asphalt removal, electrical upgrades and lighting, drainage improvements, and asphalt paving. He was responsible for cost control, responding to requests for information (RFIs), safety oversight, contractor payment request review, tracking quantities, field inspection of materials, and drawings and specification drawing clarification, and client communications construction costs 6.1M, served as the site safety coordinator.



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Education

- MS, Construction Management, Western Carolina University (in process)
- MS, Human Relations, University of Oklahoma
- BS, Midwestern State University,
- AS, Educational and Instructional Technology, Community College of the Air Force
- AS, Engineering Assisting, Community College of the Air Force

Licenses/Certifications

- N/A

Number of years with firm

- 16

Number of years in proposed role

- 16

SCOTT JACOBS, PE
AIRFIELD ELECTRICAL DESIGN

Scott Jacobs is an electrical engineer with CH2M HILL's Transportation Business Group in Denver, Colorado. Scott has focused his entire career on airfield electrical systems, with a primary focus on runway and taxiway edge lighting, guidance signs and circuiting.

RELATED PROJECTS

Dallas Fort-Worth International Airport – Dallas, Texas

Scott retrofitted the majority of the airfield with LED in-pavement runway guard lights, replaced Runway 18R-36L quartz centerline lights with LED fixtures, removed the controller cabinets located adjacent to each runway hold bar location, and replaced cable for Runway 18R-36L centerline circuit. He designed nine new airfield guidance sign circuits for the east airfield, and replaced the cable between the controller cabinets and the stop bar lights. Scott replaced constant current regulators (CCRs) in the Southwest and Northeast Airfield Lighting Vaults to properly match the proposed LED circuit loads. The Airfield Lighting Control and Monitoring System (ALCMS) was updated based on these modifications.

Denver International Airport – Denver, Colorado

Scott replaced quartz taxiway centerline lights with LED fixtures for the rehabilitation of Concourse Taxiways. This included design of new circuits to de-energize portions of Taxiways AN, BS, BN, and CS where snow melters are placed during snow removal operations. he replaced all the homerun cable from the East Lighting Vault to each Concourse and performed vault modifications to install new circuit selector switches and installed a computer in Tower B to be able to control the new circuits.

Great Falls International Airport – Great Falls, Montana

Scott designed the installation of LED runway and taxiway edge lights for the reconstruction of Runway 16-34 and construction of Taxiway C and associated connectors including airfield signage and airfield circuiting. As part of this design, a new homerun ductbank was installed parallel to Runway 7-25. Runway 7-25 was decommissioned and lighted as Taxiway Z. Signage was updated to reflect this change. New spare ductbanks were installed along the length of the runway and taxiway. A new displaced threshold was created on Runway 16 and a new PAPIs were installed for both approaches.



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Education

- MS, Electrical Engineering, University of Wyoming
- BS, Electrical Engineering, University of Wyoming

Licenses/Certifications

- Professional Engineer: CO (0043815), MT, TX, CA (Licensed 7 years)

Number of years with firm

- 11

Number of years in proposed role

- 11

CHRIS DODGE, PE
DESIGN MANAGER AND FIELD INSPECTOR

Chris Dodge is an aviation engineer with CH2M HILL's Transportation Business Group in Denver, Colorado. He is experienced in a wide range of aviation and transportation projects, including detailed design and construction management. He has performed site inspections at numerous Rocky Mountain Regional airports, both large and small, and is qualified in using survey and inspection data to analyze contour master files and design models.

RELATED PROJECTS

2016 Improvements
Great Falls International Airport – Great Falls, Montana

Chris was the design manager for the rehabilitation of the airport's third cross-wind runway. He managed design of the project amongst all team disciplines while also reviewing the project scope, layout, and schedules and coordinated with the airport, FAA, and local airport tenants.

2015 Landside Improvements
Great Falls International Airport – Great Falls, Montana

Chris served as the construction manager on the airport's terminal loop roadway rehabilitation, reconstruction, and widening project. He conducted weekly progress meetings between public and private tenants and organizations. He performed reviews of material submittals and construction material testing. Additionally, he processed RFI's, RFQ's, Field Orders, Pay Applications, and other miscellaneous construction documentation.

Taxiway A Rehabilitation
Colorado Springs Municipal Airport – Colorado Springs, Colorado

Chris served as the construction manager for the rehabilitation of Taxiway A. He completed submittal reviews, processed RFI's, RFQ's, payment applications, field orders, and other various construction–related documents.

GA Apron Inspection
Fort Collins-Loveland Municipal Airport – Fort Collins-Loveland, Colorado

Chris was the resident engineer for the rehabilitation and reconstruction of the airport's general-aviation parking apron. He conducted weekly progress meetings, performed submittal reviews, measured quantities, processed RFI's, RFQ's, payment applications, field orders, and other construction management operations.



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Education

- BS, Civil Engineering (Emphasis in Construction Management), University of Colorado at Boulder

Licenses/Certifications

- Professional Engineer: CO (0048808) (Licensed 2 years)

Number of years with firm

- Nine

Number of years in proposed role

- Nine

K. SCOTT THOMPSON, PLS
PRINCIPAL/SURVEY PROJECT MANAGER

Scott Thompson is a principal and one of the founders of River City Consultants. He has been licensed as a Colorado Professional Land Surveyor (PLS 18480) since 1981 and a principal of surveying and engineering companies since 1986). Scott has extensive experience in boundary, design, and construction surveys on federal, state, local, and private projects. Since the founding of River City Consultants they have performed surveying services on over 37 airport projects including small local airports, regional airports and military installations on combined airports. Since 1985 Scott has performed and supervised design surveys and construction staking on numerous airports, including the initial layout of Telluride Airport, initial design surveys for Eagle County Airport, construction staking for numerous apron and runway projects throughout Western Colorado and design surveys for airports in Colorado, Utah and Wyoming. He also has extensive experience in the surveying of residential and commercial subdivisions, highways and utility projects.

RELATED PROJECTS

Grand Junction Regional Airport –Mesa County, Colorado

Scott completed site design surveys on eight acres of existing airport buildings and paved ramps for an airport improvement project. This project included the establishment of a control network for future construction projects.

North Boundary and BLM withdrawal survey

The project was successfully completed to establish new Government Lots for transfer from the BLM to the Airport Authority to accommodate a new runway.



RIVERCITY CONSULTANTS

Education
- N/A

Licenses/Certifications
- Professional Land Surveyor – Colorado #18480 (36 years); Utah #173499; Wyoming #4659

Number of years with firm
- 11

Number of years in proposed role
- 36

JEFFREY MACE, PE, CFM
PRINCIPAL/ENGINEERING PROJECT MANAGER

Jeffrey Mace is a principal and one of the founders of River City Consultants. He has been licensed as a Colorado Professional Engineer (P.E. 37343) since 2002 and has served as project manager and/or lead engineer on a wide variety of projects throughout Western Colorado as well as the Denver Metro area. Jeffrey has compiled a multidiscipline engineering history including land development, site design, highway design, hydrologic and hydraulic analysis/design, and structural design and evaluation.

RELATED PROJECTS
KE Road Improvements
Mesa County, Colorado

Jeffrey was the project manager and quality assurance supervisor. While upgrading a culvert to reduce flooding, portions of KE Road and 48.5 Road were redesigned to improve public safety, design speeds, and maneuverability for large vehicles. This project included approximately 2,000 LF of roadway redesign, including but not limited to; intersection redesign, shoulder and pavement section widening, floodplain analysis, drainage basin analysis, wetlands delineation and mitigation, and guardrail design. This project required that traffic be maintained during construction as well as coordination with utilities and landowners.

Lower Little Salt Wash Riverfront Trail Connection
Fruita, Mesa County, Colorado

Jeffrey was the project manager and quality assurance supervisor. They designed and surveyed a one-mile section of the Mesa County Riverfront Trail System along Little Salt Wash from the Colorado River to the new Fruita Community Center. The project consists of clearing and grubbing, grading, a base course placement, construction of a 10-foot wide concrete trail with shoulders, associated trail connections, and miscellaneous appurtenances (e.g. signs), and stormwater conveyance facilities (ditches and culverts). They developed horizontal and vertical alignments with crossings at Interstate 70, the railroad, Highway 6 & 50, and the North Young Drain. Alignment challenges included following serpentine wash while maintaining safe travel and sight distance and surveying of cross sections of the wash in order to analyze floodplain data in comparison with outdated FEMA mapping. Federal funding required CDOT review and coordination.



RIVERCITY CONSULTANTS

Education
- BS, Civil Engineering, University of Colorado

Licenses/Certifications
- Professional Engineer – Colorado #37343 (15 years)
- Certified Floodplain Manager – Colorado License US-13-07004

Number of years with firm
- 11

Number of years in proposed role
- 15

ALEC THOMAS, PLS
PROJECT SURVEYOR/PROFESSIONAL LAND SURVEYOR

Alec Thomas, a Professional Land Surveyor with River City Consultants since 2012, has been a licensed Colorado Professional Land Surveyor (PLS 38274) since 2011 and a Certified Federal Surveyor (CFedS #1718) since 2016. Alec is knowledgeable and skilled in boundary, design, and construction surveys, and has completed a variety of survey projects throughout Colorado. Since joining River City Consultants he has been the primary surveyor on over a dozen design surveys in Colorado, Wyoming and Utah.

RELATED PROJECTS

Wyoming ANG Airport – Cheyenne, WY

Alec was the project surveyor for site design surveys on existing airport buildings and paved ramps. This project included the establishment of a control network for future construction projects.

Grand Junction Regional Airport – Mesa County, Colorado

Alec was the surveyor for runway overlay and repaving design. This project included the establishment of control for data collection on the existing runway surface and for future construction.

Blanding Municipal Airport – Blanding, Utah

Alec was the surveyor for runway overlay and repaving design. This project included the establishment of control for data collection on the existing runway surface and for future construction.

Grand Junction Regional Airport – Mesa County, Colorado

Alec set control and processed the survey data for aerial photo control points, verification check points and ground detail survey points for 2000 acres of high accuracy aerial photogrammetry with LIDAR.



RIVERCITY CONSULTANTS

Education

- BS, Surveying and Mapping (with a Minor in Mathematics), Metropolitan State College of Denver

Licenses/Certifications

- Professional Land Surveyor – Colorado # 38274 (6 years)
- Certified Federal Surveyor - CFedS #1718 (1 year)

Number of years with firm

- Five

Number of years in proposed role

- Six

IVAN GEER, PE
PRINCIPAL/ENGINEERING PROJECT MANAGER

Ivan Geer is a principal of River City Consultants since September 2016. He has worked in many facets of the civil infrastructure industry in roles ranging from engineering consultant, production engineer/quality control, engineering manager, land/development manager, construction management, and executive leadership. Ivan's project experience includes wastewater treatment, water treatment, design build construction, water resources, civil engineering, aggregate resource development, and permitting and compliance.

RELATED PROJECTS

C Road Aggregate Resource Development
Parkerson Construction – Mesa County, Colorado

Ivan aided in the development of 80 acres of sand and gravel resource. This project required interfacing with numerous departments within the City of Grand Junction, Mesa County, the State of Colorado, and the federal government on issues including right of way, annexation, water quality, air quality, reclamation, utilities, mining engineering, wildlife, wetlands, transportation and conditional use.

McKelvie Reservoir
Mesa County, Colorado

Ivan helped with engineering, permitting and construction management of a private dam rehabilitation. This project included replacement of inlet and outlet structures, lining and grout sealing of the outlet piping, a new outlet valve and slope repair. Permit applications, plans and specification were developed and submitted to the State of Colorado Division of Water Resources for approval. Post approval construction management activities included bid document preparation, contractor selection, construction inspection and as-builts under the scrutiny of Colorado Division of Water Resources engineers.

30 Road UnderPass
Grand Junction Ready Mix – Mesa County, Colorado

Ivan was the construction inspector and quality assurance of 5,000+ yards concrete underpass installed under a railroad bridge. This project required on-site inspections of contractor and quality assurance lab testing methods involving the testing, handling, and placement of concrete on a large concrete pavement and retaining wall project.



RIVERCITY CONSULTANTS

Education

- BS, Civil Engineering, Environmental Concentration, University of Notre Dame

Licenses/Certifications

- Professional Engineer – Colorado #35518 (16 years)

Number of years with firm

- One

Number of years in proposed role

- 16

SARA CIASTO, PE

Sara Ciasto is a project manager with experience in transportation and civil engineering projects and major design-build projects. She has managed and been a member of the roadway design team on major highways, streets, interchanges and utility coordination projects. She has been involved with a variety of municipal transportation projects, including civil projects on airport properties and design-build projects on major highways. Sara has also provided design support during the alternatives analysis phase of transportation and environmental planning projects. She is a hands-on project manager who provides clients with the confidence that all facets of the project are understood and how they interconnect to each discipline. She has experience managing projects that start with planning elements and transition to design, which assists in appropriately planning each phase of work.

RELATED PROJECTS

Airport Landside Improvements
Grand Junction Regional Airport – Grand Junction, Colorado

As deputy project manager, Sara managed the roadway design for this $14 million multidisciplinary improvement project to increase circulation and safety. She oversaw civil and roadway design of three roundabout intersections and two parking lots, and provided overall coordination with engineers and designers. The project included roadway, drainage, signage, lighting, utility, irrigation and landscaping components.

Riverside Parkway
City of Grand Junction, Colorado

As utility designer and project engineer, Sara coordinated utility locating and potholing program for this 7-mile urban arterial, and completed preliminary design of required utility relocations. In addition to design, tasks included extensive coordination with the client and utility companies. Through final design, her responsibilities included the identification of each conflict between existing utilities and proposed facilities, communication of conflicts to the utility owners and client, and coordination as to how the conflicts would be mitigated. Sara assisted with overall project coordination between the various disciplines and in assembling the submittal packages. She participated in multiple project engineering tasks as well as quality control.

Operational Study
CDOT Region 3, Grand Junction, Colorado

Sara served as the design task manager and assisted with the creation, screening, development and advancement of potential alternatives to address the project Purpose and Need. She assisted with evaluation and documentation of existing roadway conditions and facilities, and her team also completed some preliminary utility coordination for the project area to try to identify any major potential utility conflicts with existing facilities.



Education

- BS, Civil Engineering, 2001, Colorado State University

Licenses/Certifications

- Professional Engineer: CO (39754) (11 years)

Number of years with firm

- Three

Number of years in proposed role

- Three

JASON SMITH, REM, PE

Jason Smith is a senior project engineer, the manager of engineering services, and a company principal with over 20 years of experience in geotechnical and environmental engineering, planning, management, project coordination, data analysis and report preparation for geotechnical and environmental projects. He has provided services on hundreds of projects including airports/airfield, hangars, educational facilities, commercial, retail, design-build transportation, industrial, energy, residential and commercial high-rises, municipal infrastructure, land development and heavy civil infrastructure including bridges and roadway networks. Jason's experience also includes geophysical analysis, detailed environmental assessment and remediation design.

RELATED PROJECTS

Jason has provided geotechnical services on over 50 aviation projects at the Grand Junction Airport, Eagle County Airport, Garfield County Airport, Meadow Lake Airport, Centennial Airport, Rocky Mountain Metro Airport, Front Range Airport, Ft. Collins/Loveland Airport, and Denver International Airport. Select projects include:

- Runway 11/29 New Construction – Grand County Regional Airport
- Runway 8-26 Upgrade to ARC D-II – Garfield County Airport
- Runway 17L-35R Reconstruction – Centennial Airport
- Taxiways A4, A5, A8, A9, A10 Reconstruction – Centennial Airport
- Runway 12R-30L Reconstruction – Rocky Mountain Metropolitan Airport
- SRE Facility – Centennial Airport

Jason has also provided geotechnical services for numerous hangars and airport support buildings, including:

- SRE Facility – Centennial Airport
- SRE Facility – Rocky Mountain Metropolitan Airport
- Liberty Media Flight Operations Hangar – Centennial Airport
- Hangars 19 & 20 – Front Range Airport
- TAC Air Hangar – Centennial Airport
- West Star Aviation Paint Hangar – Grand Junction Regional Airport



GROUND ENGINEERING

Education

- BS, North Dakota State University

Licenses/Certifications

- Professional Engineer: CO (45448) (Licensed 6 years)
- Registered Environmental Manager – NREP
- HAZWOPER Level III
- OSHA 40-Hour – Supervisor
- BLM Unexploded Ordnance
- ASTM Vapor Encroachment
- ACI Field Level 1
- CAPA LabCat Levels A, B, C
- Troxler Nuclear Safety
- eRailsafe – BNSF, UPRR

Number of years with firm

- 19

Number of years in proposed role

- 24

CHRIS HUTTO, CET



GROUND ENGINEERING

Chris Hutto is a senior project manager with 20 years of experience in construction management, materials testing, special inspections and civil inspections. He has performed services on more than 200 construction projects including commercial, industrial, energy, multifamily residential, high-rises, airports, dams and reservoirs, municipal infrastructure, land development and heavy civil infrastructure including bridges and highway work. The projects have included report generation and review, schedule coordination, data analysis and personnel management. Chris has performed field testing, special inspections, quality control inspection and quality assurance inspection including:

- Soils testing (field and laboratory) proof rolling inspections
- Retaining wall construction testing and inspections
- Drilled pier special inspections
- Concrete testing (field and laboratory)
- Structural masonry special inspections and testing
- Asphalt (field and laboratory) testing
- Drill and epoxy special inspection
- Post-tension tendon special inspections and elongation reporting
- Fireproofing special inspections and testing
- Chemically stabilized subgrade testing
- Sanitary and storm sewer pipe installation inspection
- Driven pile, micropile, screw pile and helical pier special inspection
- Reinforcing steel special inspection

His responsibilities have also included staff training, coordination, and client contact and service.

RELATED PROJECTS

- Aspen-Pitkin County Airport – AIP's 45 through 50 (QA)
- Eagle County Airport – AIP's 50 through 56 (QA)
- Eagle County Airport – Snow Removal Equipment Building (QA)
- Garfield County Regional Airport – AIP 23 (QA)
- Grand Junction Regional Airport – New Runway (Geotech)
- Lake County Airport Centennial Airport – Various Projects (QA)
- Meeker Airport – Runway Reconstruction – (Geotech & QC)
- Montrose Regional Airport – Rehabilitate Runway 17/35 (QA)
- Nucla Airport – Runway Reconstruction (QC)
- Centennial Airport - Englewood, CO – Various Projects
- Denver International Airport (DIA) – Various Projects

Education

- BS, Biology/Chemistry, Radford University

Licenses/Certifications

- Troxler Nuclear Gauge
- ACI Concrete Field Testing Technician – Grade 1
- ACI Concrete Strength Testing Technician
- ICC:
  - Reinforced Concrete Special Inspector
  - Structural Masonry Special Inspector
  - Spray-Applied Fireproofing Special Inspector
  - Commercial Building Inspector
- CAPA Level A - Laydown
- CAPA Level B – Plant Materials Control
- CAPA Level C – Volumetrics and Stability
- CDOT Basic Highway Construction Surveying
- CDOT Stormwater Management and Erosion Control
- WAQTC Embankment and Base Testing Technician
- NICET Level IV Construction Materials Testing – Soils
- NICET Level III Construction Materials Testing – Concrete
- NICET Level III Construction Materials Testing – Asphalt

Number of years with firm

- 20

Number of years in proposed role

- 20

AMY CRANDALL, PE

Amy Crandall is a project manager with 12 years of experience in geotechnical engineering planning, project coordination and planning, data analysis and final report preparation for geotechnical investigations. She has provided services on hundreds of projects including design-build transportation, airports, commercial, industrial, energy, high-rises, municipal infrastructure, land development and heavy civil infrastructure including bridges and roadway networks including FAA, CDOT and FHWA. Amy's experience also includes pavement evaluation, management and section design using the latest AASTHO ME Design methods.

Amy's field investigations include deep borings, large test pits, NX wireline coring, inclinometer installation, downhole/crosshole seismic testing, downhole camera logging and geophysical analysis.

Amy has also provided field testing and observation including soils testing (field and laboratory), drilled pier observation, concrete testing (field and laboratory), structural masonry testing and observation, asphalt field testing, chemically stabilized subgrade observation and testing, open hole observation and reinforcing steel observation.

RELATED PROJECTS

- Denver International Airport – Geotechnical Engineering for improvements to Runway 7/25 and Runway 17R-35L
- Denver International Airport – Concourses B and C improvements and GSE pavement areas.
- Centennial Airport – Runway 17R-35L, Taxiway D and Runway 10-28
- Fort Collins-Loveland Airport – Taxiways B & D, Runway 15-33 and Cross taxiways
- Rocky Mountain Metropolitan Airport – Runway 11L-29R
- Meadow Lake Airport - Taxiway B & B1, Runway 15-33
- Vance-Brand Airport – Taxiway B
- Rifle Airport – T-Hangar Access Taxiway



GROUND ENGINEERING

Education

- Geological Engineering, Colorado School of Mines

Licenses/Certifications

- Professional Engineer: CO (48276) (Licensed 4 years)
- 40-hour OSHA
- Nuclear Gauge safety
- ACI Field Level 1

Number of years with firm

- 12

Number of years in proposed role

- 12

STEVE HORTON
FINANCIAL

Steve Horton has over 36 years of experience as a management consultant providing project management, financial planning and operational consulting services to his clients. Steve's experience has included airport rates & charges studies, financial planning & analysis projects, financial/bond issue feasibility studies, cost-benefit analyses, airline agreement negotiations, FBO lease evaluations and negotiations, airport lease evaluations, master plan financial implementation analyses, passenger facility charge implementation programs, revenue enhancement programs and economic impact studies. He has served over 95 airport clients ranging in size from large GA airports and small non-hubs to the busiest commercial service airport in the nation.

RELATED PROJECTS
Master Plan
Eagle County Regional Airport – Eagle County, Colorado
Two separate legal entities to coordinate expenditures and finding.

Master Plan/Terminal Area Plan
Aspen/Pitkin County Airport – Pitkin County, Colorado
Significant environmental issues and community concerns to deal with and fund responsibly.

Master Plan, Terminal Area Study
Wichita Falls Municipal Airport – City of Wichita Falls, Texas
Long term funding of debt service for the terminal development.



Leibowitz&Horton™
Airport Management Consultants Incorporated

Education
- MBA, University of Texas, Austin
- BS, Electrical Engineering, University of Texas, Austin

Number of years with firm
- 27

Number of years in proposed role
- 27

Grand Junction Regional Airport Authority

Agenda Item Summary

TOPIC:	FAA Lease		
PURPOSE:	Information ☐	Guidance ☐	Decision ☒
RECOMMENDATION:	Staff recommends the Board approve this new lease with FAA, and authorize the Board Chairman to execute the document.		
LAST ACTION:	N/A		
DISCUSSION:	This is a new lease agreement to renew the original lease which expires in October 2017. The lease is for a 50ft x 50ft space which houses electrical equipment that serves the Air Traffic Control Tower. Staff has reviewed the lease and recommends approval.		
FISCAL IMPACT:	N/A		
ATTACHMENTS:	Lease Agreement and Exhibits		
STAFF CONTACT:	Eric Trinklein etrinklein@gjairport.com Office: 970-248-8597		

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

LAND LEASE ON AIRPORT

Lease No: DTFAWN-17-L-00037
Geographical Location Grand Junction, CO

THIS LEASE is hereby entered into by Grand Junction Regional Airport Authority whose address is 800 Eagle Drive, Grand Junction, CO 81506 hereinafter referred to as the Lessor and the United States of America, herein after referred to as the Government. This lease shall become effective when it is fully executed by all parties. The terms and provisions of this lease, and the conditions herein, bind the Lessor and the Lessor's administrators, successors, and assigns.
WITNESSETH: The parties hereto, for the consideration hereinafter mentioned covenant and agree as follows:

1. PREMISES (AUG-02): The Lessor hereby leases to the Government the following described property, hereinafter referred to as the premises:

A tract of land 50 feet by 50 feet located on Walker Field in SW ¼ of Section 30, Township 1 North of the Ute Base Line, Range 1 East of the Ute Principle Meridian; and more particularly identified as being located at: Lat 39°07'16"N Long 108°31'30.9"W
See attached Exhibit's A & B

A. Together with a right-of-way for ingress to and egress from the premises; (For Government Employees, their Agents and Assigns) a right-of-way for establishing and maintaining a pole line or pole lines for extending electric power and/or telecommunication lines to the premises; and a right-of-way for subsurface power, communication and/or water lines to the premises; all rights-of-way to be over said lands and adjoining lands of the Lessor, and unless herein described otherwise, to be by routes reasonably determined to be the most convenient to the Government.

B. And the right of grading, conditioning, and installing drainage facilities, and seeding the soil of the premises, and the removal of all obstructions from the premises which may constitute a hindrance to the establishment and maintenance of Government facilities.

C. And the right to make alterations, attach fixtures, and erect additions, structures, or signs, in or upon the premises hereby leased, which alterations, fixtures, additions, structures or signs so placed in or upon, or attached to the said premises shall be and remain the property of the Government.

2. TERM (AUG-02):
To have and to hold, for the term commencing on October 1, 2017 and continuing

through September 30, 2037 inclusive, PROVIDED, that adequate appropriations are available from year to year for the payment of rentals.

3. CONSIDERATION (NO COST) (AUG-02): The Government shall pay the Lessor no monetary consideration in the form of rental, it being mutually agreed that the rights extended to the Government herein are in consideration of the obligations assumed by the Government in its establishment, operation and maintenance of facilities upon the premises hereby leased.

4. INTERFERENCE WITH GOVERNMENT OPERATIONS (OCT-96):
The Lessor agrees not to erect or allow to be erected any structure or obstruction of whatsoever kind or nature on the site or adjoining land within the airport boundaries that may interfere with the proper operation of the facilities installed by the Government under the terms of this Lease unless consent hereto shall first be secured from the Government in writing.

5. FUNDING RESPONSIBILITY FOR GOVERNMENT FACILITIES (OCT-96):
The Lessor agrees that any relocation, replacement, or modification of any existing or future Government facilities covered by this Lease during its term or any renewal thereof made necessary by airport improvements or changes which in the Government's opinion interfere with the technical and/or operational characteristics of the Government facilities will be at the expense of the Lessor, except when such improvements or changes are made at the written request of the Government. In the event such relocation's, replacements, or modifications are necessitated due to causes not attributable to either the Lessor or the Government, funding responsibility shall be determined by the Government.

6. QUIET ENJOYMENT (OCT-96):
The Lessor warrants that they have good and valid title to the premises, and rights of ingress and egress, and warrants and covenants to defend the Government's use and enjoyment of said premises against third party claims.

7. SUBORDINATION, NONDISTURBANCE AND ATTORNMENT (JAN-14):
A. Lessor warrants that it holds such title to or other interest in the premises and other property as is necessary to the Government's access to the premises and full use and enjoyment thereof in accordance with the provisions of this lease. Government agrees, in consideration of the warranties and conditions set forth in this clause, that this lease is subject and subordinate to any and all recorded mortgages, deeds of trust and other liens now or hereafter existing or imposed upon the premises, and to any renewal, modification or extension thereof. It is the intention of the parties that this provision shall be self-operative and that no further instrument shall be required to effect the present or subsequent subordination of this lease. Government agrees, however, within twenty (20) business days next following the Contracting Officer's receipt of a written demand, to execute such instruments as Lessor may reasonably request to evidence further the

subordination of this lease to any existing or future mortgage, deed of trust or other security interest pertaining to the premises, and to any water, sewer or access easement necessary or desirable to serve the premises or adjoining property owned in whole or in part by Lessor if such easement does not interfere with the full enjoyment of any right granted the Government under this lease.

B. No such subordination, to either existing or future mortgages, deeds of trust or other lien or security instrument shall operate to affect adversely any right of the Government under this lease so long as the Government is not in default under this lease. Lessor will include in any future mortgage, deed of trust or other security instrument to which this lease becomes subordinate, or in a separate non-disturbance agreement, a provision to the foregoing effect. Lessor warrants that the holders of all notes or other obligations secured by existing mortgages, deeds of trust or other security instruments have consented to the provisions of this clause, and agrees to provide true copies of all such consents to the Contracting Officer promptly upon demand.

C. In the event of any sale of the premises or any portion thereof by foreclosure of the lien of any such mortgage, deed of trust or other security instrument, or the giving of a deed in lieu of foreclosure, the Government will be deemed to have attorned to any purchaser, purchasers, transferee or transferees of the premises or any portion thereof and its or their successors and assigns, and any such purchasers and transferees will be deemed to have assumed all obligations of the Lessor under this lease, so as to establish direct privity of estate and contract between Government and such purchasers or transferees, with the same force, effect and relative priority in time and right as if the lease had initially been entered into between such purchasers or transferees and the Government; provided, further, that the Contracting Officer and such purchasers or transferees shall, with reasonable promptness following any such sale or deed delivery in lieu of foreclosure, execute all such revisions to this lease, or other writings, as shall be necessary to document the foregoing relationship.

D. None of the foregoing provisions may be deemed or construed to imply a waiver of the Government's rights as a sovereign.

8. NOTIFICATION OF CHANGE OF LAND TITLE (AUG-02):
If the Lessor sells or otherwise conveys to another party or parties any interest in the aforesaid land, rights of way thereto, and any areas affecting said demised premises, they shall immediately notify the Government, in writing, of any such transfer or conveyance affecting the demised premises within 30 calendar days after completion of the "change in property rights". Concurrent with the written notification, the Lessor shall provide the Government copies of the legal document(s) (acceptable to local authorities) for transferring and or conveying the property rights.

9. NOTICES (OCT-96):
All notices/correspondence shall be in writing, reference the lease number, and be addressed as follows:

TO LESSOR: Grand Junction Regional Airport Authority
800 Eagle Drive
Grand Junction CO. 81506

TO GOVERNMENT: Federal Aviation Administration
Real Estate and Utilities Group, ALO-820
1601 Lind Ave SE Renton, WA. 98057

10. CONTRACT DISPUTES (Nov. 03)

A. All contract disputes and arising under or related to this lease contract shall be resolved through the Federal Aviation Administration (FAA) dispute resolution system at the Office of Dispute Resolution for Acquisition (ODRA) and shall be governed by the procedures set forth in 14 C.F.R. Parts 14 and 17, which are hereby incorporated by reference. Judicial review, where available, will be in accordance with 49 U.S.C. 46110 and shall apply only to final agency decisions. A Lessor may seek review of a final FAA decision only after its administrative remedies have been exhausted.

B. All Contract Disputes shall be in writing and shall be filed at the following address:

Office of Dispute Resolution for Acquisition, AGC-70,
Federal Aviation Administration,
800 Independence Ave, S.W.,
Room 323,
Washington, DC 20591,
Telephone: (202) 267-3290,
Facsimile: (202) 267-3720

C. A contract dispute against the FAA shall be filed with the ODRA within two (2) years of the accrual of the lease contract claim involved. A contract dispute is considered to be filed on the date it is received by the ODRA.
The full text of the Contract Dispute clause is incorporated by reference. Upon request the full text will be provided by the RECO.

11. PROTEST (NOV-03)

A. Protests concerning Federal Aviation Administration Screening Information Requests (SIRs) or awards of lease contracts shall be resolved through the Federal Aviation Administration (FAA) dispute resolution system at the Office of Dispute Resolution for Acquisition (ODRA) and shall be governed by the procedures set forth in 14 C.F.R. Parts 14 and 17, which are hereby incorporated by reference. Judicial review,

where available, will be in accordance with 49 U.S.C. 46110 and shall apply only to final agency decisions. A protestor may seek review of a final FAA decision only after its administrative remedies have been exhausted.

B. Offerors initially should attempt to resolve any issues concerning potential protests with the Real Estate Contracting Officer.

C. Protests shall be in writing and shall be filed at:

Office of Dispute Resolution for Acquisition, AGC-70,
Federal Aviation Administration,
800 Independence Ave, S.W.,
Room 323,
Washington, DC 20591,
Telephone: (202) 267-3290,
Facsimile: (202) 267-3720

At the same time as filing the protest with the ODRA, the protestor shall serve a copy of the protest on the Real Estate Contracting Officer (RECO).

D. A protest is considered to be filed on the date it is received by the ODRA and shall be filed:

(i) Not later than seven (7) business days after the date the protester knew or should have known of the grounds for the protest; or

(ii) If the protester has requested a post-award debriefing from the RECO, not later than five (5) business days after the date on which the RECO holds that debriefing.
The full text of the Protest clause is incorporated by reference. Upon request the full text will be provided by the RECO.

12. ANTI-KICKBACK (OCT-96):
The Anti-Kickback Act of 1986 (41 U.S.C. 51-58) (the Act), prohibits any person from (1) Providing or attempting to provide or offering to provide any kickback; (2) Soliciting, accepting, or attempting to accept any kickback; or (3) Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime Contractor to the United States Government or in the contract price charged by a subcontractor to a prime contractor or higher tier subcontractor.

13. COVENANT AGAINST CONTINGENT FEES (AUG-02):
The Lessor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration, or otherwise recover the full amount of the contingent fee.

14. OFFICIALS NOT TO BENEFIT (OCT-96):
No member of or delegate to Congress, or resident commissioner, shall be admitted to

any share or part of this contract, or to any benefit arising from it. However, this clause does not apply to this contract to the extent that this contract is made with a corporation for the corporation's general benefit.

15. NON-RESTORATION (OCT-96):
It is hereby agreed between the parties, that upon termination of its occupancy, the Government shall have no obligation to restore and/or rehabilitate, either wholly or partially, the property which is the subject matter of this lease. It is further agreed that the Government may abandon in place any or all of the structures and equipment installed in or located upon said property by the Government during its tenure. Such abandoned equipment shall become the property of the Lessor.

16. HAZARDOUS SUBSTANCE CONTAMINATION (MAY-00):
The Government agrees to remediate, at its sole cost, all hazardous substance contamination on the leased premises that is found to have occurred as a direct result of the installation, operation, and/or maintenance of the EG facility. The Lessor agrees to remediate at its sole cost, any and all other hazardous substance contamination found on the leased premises. The Lessor also agrees to save and hold the Government harmless for any and all costs, liabilities and/or claims by third parties that arise out of hazardous contamination found on the leased premises not directly attributable to the installation, operation and/or maintenance of the EG facility.

17. LEASE SUCCESSION (AUG-02):
This Lease supersedes lease no. DTFANM-08-L-0004 and all other previous agreements between the parties for the leased property described in this document.

24. SIGNATURE BLOCK (AUG-02):

IN WITNESS WHEREOF, the parties hereto have signed their names:
LESSOR:

_____ Date:_____
(Signature)

_____
(Official Title)

UNITED STATES OF AMERICA:

_____ Date:_____
(Signature)

_____
(Official Tile)

GRAND JUNCTION REGIONAL AIRPORT AUTHORITY ATCT EG LEASE DTFAWN-17-L-00037 EXHIBIT A

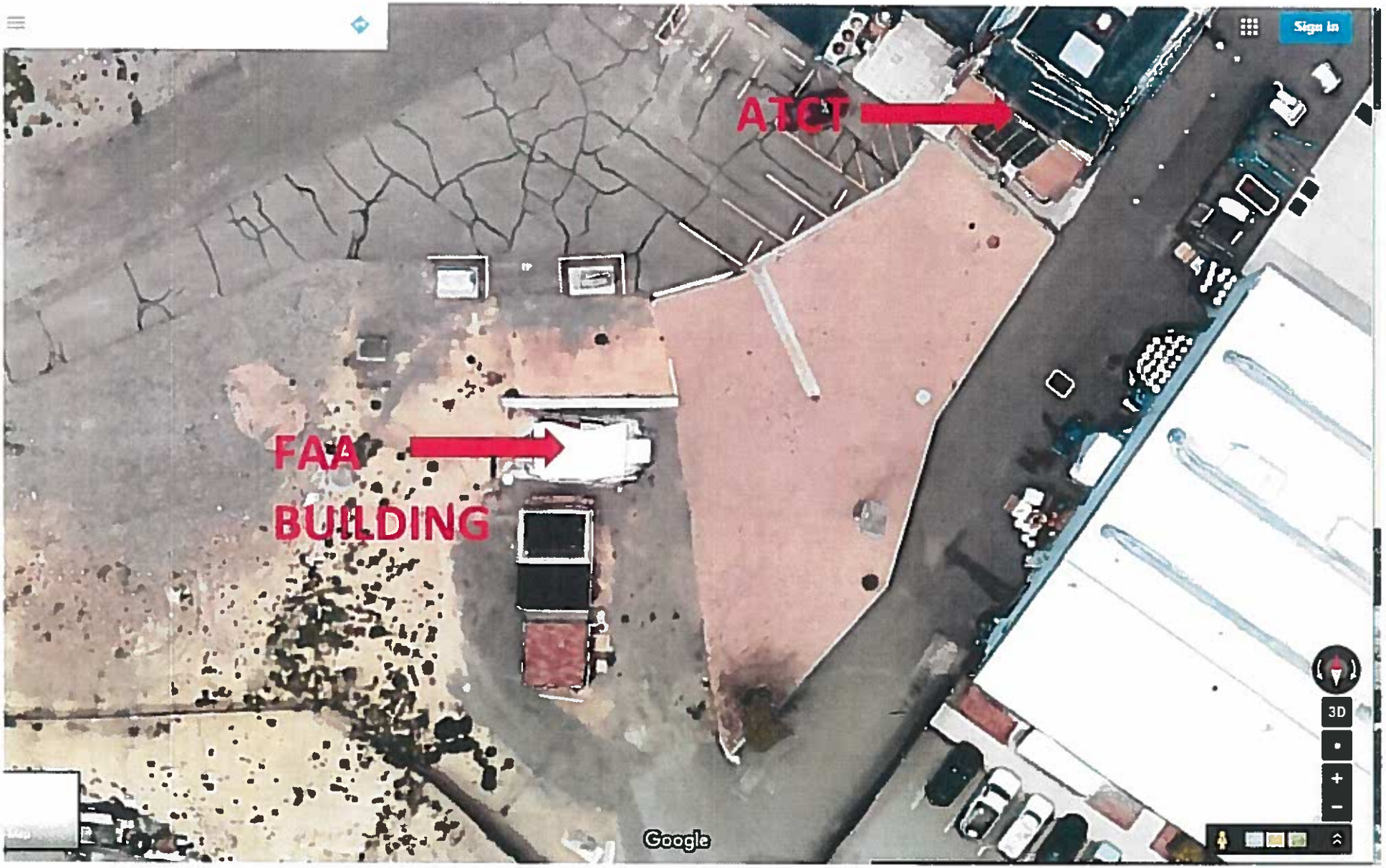
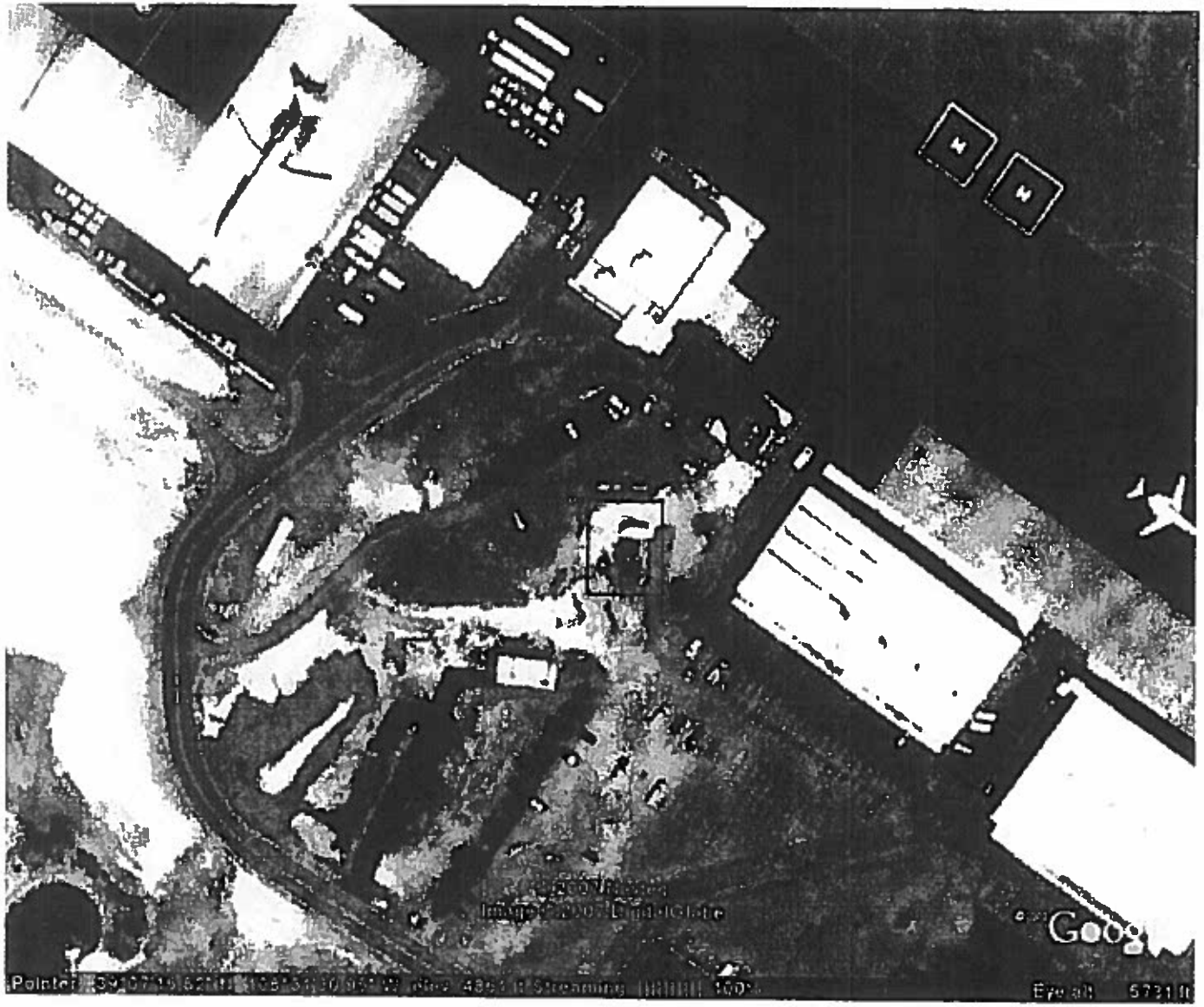


EXHIBIT 'B'



CERTIFICATION OF SIGNATURE AUTHORITY

I, _____, certify that I am the

_____ of the _____,

I further certify that _____, who signed said

agreement on behalf of the _____

was then _____ of said

_____, and that said agreement was

duly signed for and in behalf of the _____

by authority of its governing body, and is within the scope of its powers.

Done this _____ day of _____, 20_____.

By: _____

Title: _____

NOTARY ACKNOWLEDGMENT

STATE OF _____)
)
COUNTY OF_____)

On this _____ day of _____, _____, before me

_____, a Notary Public in and for the said County of

_____, State of _____, duly commissioned

and sworn, personally appeared_____, known to me to be

the person(s) whose name(s) is/are subscribed to the within instrument and that

he/she duly acknowledged to me that he/she executed the same.

IN WITNESS WHEREOF, I hereunto set my hand and official seal, at my office in the

County of _____, State of _____, the day and year in

this certificate first above written.

(Signed) _____

Notary Public in and for the County of

_____, State of

SEAL

_____

My Commission Expires: _____

Grand Junction Regional Airport Authority

Agenda Item Summary

TOPIC:	Grand Valley Power Easement Transfer
PURPOSE:	Information ☒ Guidance ☐ Decision ☒
RECOMMENDATION:	Staff recommends the Board sign the attached letter notifying the Bureau of Land Management of the proposed easement transfer.
LAST ACTION:	N/A
DISCUSSION:	Following the publication of the Draft EA for runway relocation and land transfer in 2015, the BLM notified Grand Valley Power and the Grand Junction Regional Airport that part of public land to be conveyed to the Grand Junction Regional Airport Authority contains a right-of-way for a Grand Valley Power transmission line. The transmission line in right-of-way COC-061164 issue to Grand Valley Power by the BLM. BLM has requested that Grand Valley Power and the Airport choose from three options for future administration of the right-of-way across the land to be conveyed. However, we would now like to notify you that Grand Valley Power and the Grand Junction Regional Airport Authority have agreed to negotiate an easement to replace the right-of-way with Grand Valley Power. The easement would be effective on the land transfer date. Grand Valley Power and the Grand Junction Regional Airport will begin negotiations immediately for this easement.
FISCAL IMPACT:	N/A
ATTACHMENTS:	Armstrong Invoices and associated Matrix
STAFF CONTACT:	Eric Trinklein etrinklein@gjairport.com Office: 970-248-8597

Katie Stevens
Bureau of Land Management
2815 H Road
Grand Junction, CO 81506

Subject: Grand Valley Power Right-Of-Way COC-061164

Dear Ms. Stevens:

Following the publication of the Draft EA for runway relocation and land transfer in 2015, the BLM notified Grand Valley Power and the Grand Junction Regional Airport that part of public land to be conveyed to the Grand Junction Regional Airport Authority contains a right-of-way for a Grand Valley Power transmission line. The transmission line in right-of-way COC-061164 issue to Grand Valley Power by the BLM.

BLM has requested that Grand Valley Power and the Airport choose from three options for future administration of the right-of-way across the land to be conveyed. Due to staff turnover at the Airport, our response to this request has been delayed. However, we would now like to notify you that Grand Valley Power and the Grand Junction Regional Airport Authority have agreed to Option No. 2 in which Grand Valley Power and the Grand Junction Regional Airport Authority will negotiate an easement to replace the right-of-way. The easement would be effective on the land transfer date. Grand Valley Power and the Grand Junction Regional Airport will begin negotiations immediately for this easement.

If you have any questions, please do not hesitate to contact me and thank you again for your continued willingness to partner with the Grand Junction Regional Airport.

Sincerely,

Airport Board Chairman