AIRPORT INFRASTRUCTURE MANAGEMENT
2016 PROJECTS, POLICIES & PERSPECTIVE

MARK H ADAMS, PE, ACTING SENIOR DIRECTOR
DENVER INTERNATIONAL AIRPORT
OCTOBER 19, 2015
INTRODUCTION & AGENDA

AIRPORT INFRASTRUCTURE MANAGEMENT

- Prequalification – Glenn Frieler
- DEN Collaboration – David Mashburn
- Resources – Keith Usher
- Facility Services – Frank Palumbo
- MEP Services – Lee Walinchus
- Tenant/Airlines/Signage Services – Jerry Olson
- Airside Services – Keith Johnson
- Landside Services – Michelle Martin
- Questions & Answers – Mark Adams
CITY AND COUNTY OF DENVER
PREQUALIFICATION BOARD
MAIN THINGS YOU SHOULD KNOW

Glenn M. Frieler P.E. – Director of Infrastructure and QA – Chair Person for CCD Pre-Qualification Board
DENVER INTERNATIONAL AIRPORT
October 19th 2015
PREQUALIFICATION BOARD

• What is the purpose of the Prequalification Board?

• Who is on the Prequalification Board

• What criteria does the Prequalification Board use to establish prequalification?
What is the purpose of the Prequalification Board?

- The Prequalification Board is a group which reviews all prequalification applications in order to recommend to the manager that he or she grant or deny a prequalification request.

- The Board follows Prequalification Rules which can be found at:
  - [http://www.denvergov.org/content/denvergov/en/contract-administration/bidding-process.htm](http://www.denvergov.org/content/denvergov/en/contract-administration/bidding-process.htm)

- Board reviews the experience, skill, financial resources and ability to perform the type and size of work an applicant is capable of completing.

- The goal of the process is to prequalify as many capable companies as possible.
PREQUALIFICATION BOARD MEMBERS

• The Prequalification Board consists of employees from city agencies that use construction bids to award projects or have knowledge and experience in subjects relevant to the Board’s duties.

• The current board members are:
  - Glenn Frieler
  - Mark Adams
  - Jim Barwick
  - James Potter
  - John Stubent
  - Michael Sheehan
  - Mark Tabor
  - Chris Martinez
  - Beth Zollo

• A representative from the City Attorney’s office assists the Board.

• The Prequalification Coordinator functions as the Board’s Staff Assistant.
WHAT IS PREQUALIFICATION

• Contractor prequalification is a status allowing a contractor to bid on City construction contracts
• Prequalification is based on categories of work and financial levels
• The Prequalification Board makes recommendations to the managers of Aviation and Public Works based on the information provided in the contractor’s application
PROCESS OF GRANTING PREQUALIFICATION

- A contractor must submit the six page “Contractor’s Prequalification Application” along with all required supplemental information.

- The Prequalification Coordinator verifies that all needed information has been submitted and processes application for Board review.
BOARD RECOMMENDATION REVIEW PROCESS

• Finance & Administration staff will review the applicant’s submitted reviewed/audited financial statements for:
  • Acceptable accounting practices
  • Quick assets
  • Working capital
FINANCIAL CAPABILITY

• The Board must deny the application if:
  • Quick assets and working capital are negative amounts *Rule 5.02 (1)*

• The company may not be prequalified at a financial level higher than $3 million if they do not submit a certified financial statement *Rule 4.05*

• The company may not be prequalified for a financial level higher than their individual project bonding capacity *Rule 5.02 (4)*
SAFETY

• The Board will review the company’s Experience Modification Rate Factors (EMRF) for the current and past five years Rule 5.04 (j)
  • A company with an average EMRF rating of 1.5 or greater will be automatically denied
  • A company with an average EMRF rating of 1.2 to 1.49 may be considered for automatic denial OR for granting prequalification at a lower financial level than the applicant might otherwise obtain
The Prequalification Coordinator will determine the three highest dollar level jobs submitted on the application for each of the categories requested by the applicant

• These will be averaged and the next highest dollar level will be recommended to the Board (i.e. if the average is $1.2 million, a prequalification level of $1.5 million will be recommended)

In determining the dollar value of projects, the following guidelines apply:

• Categories **1A - General Civil** and **2A - General Building** - the board uses the Final Contract Dollar Value

• For all other categories the board determines if the Self-Performed Value at least 50% of the Final Contract Value

  • If 50% or more the Board uses the category dollar value; if 49% or under - the Board uses the self-performed dollar value
DETERMINING 1.A GENERAL CIVIL PROJECTS

• 1.A – General civil is intended to allow for the prequalification of contractors that complete projects that meet the following guidelines:

  • Projects requiring work in three or more of the subcategories noted under “CIVIL” in Rule 3.01 in which none of the work done in the various subcategories is greater than 49% or less than 10% of the contract amount.
SPECIALTY CATEGORIES

• A specialty prequalification category is for work not included in a regular category or subcategory
  • The prequalification board may create a specialty category when required for a specific contract
  • This category will exist only until the contract for which it was established has been awarded

• Project Managers should submit a request for a Specialty Category in writing to the Prequalification Coordinator
  • The Project Manager will be requested to attend the board meeting in which the request is deliberated
PREQUALIFICATION DOLLAR LEVELS

Financial Levels

$1,500,000
$3,000,000
$6,000,000
$9,000,000
$12,000,000
$15,000,000
$18,000,000
$20,000,000
$25,000,000
ENVIROMENTAL PREQUALIFICATION

• Prequalification is required in 3A – Asbestos, 3B – Lead based Paint and 3C – Removal and disposal of hazardous materials and site remediation
  • Prequalification is required even with contract amounts less that $1 million dollars
• The same process is followed as with other prequalification requests. The applicant is required to submit additional information which is checked by the Board member from the Department of Environmental Health
PREVAILING WAGE AND DSBO

• The Prequalification Coordinator will check with both the Auditor’s Office and the Division of Small Business Opportunity on each applicant for compliance with City and County of Denver requirements.

• The Board may choose to recommend a lower dollar level than would otherwise be recommended or denial of an applicant based on the information obtained from either Prevailing Wage or DSBO.
LEGAL REVIEW

• The representative from the City Attorney’s office will review the litigation and OSHA disclosures submitted by the applicant and will advise the Board on any potential risks
PROJECT SPECIFIC PERMISSION

- Project specific permission (PSP) is granted **only** for categories of work for which the Contractor is prequalified.
- For **any** contract over $25 million, each bidder **must**
  - Be prequalified at the $25 million level
  - Request and receive project specific permission to bid on the contract
PROJECT SPECIFIC PERMISSION

• The Board will review the contractors application in determining whether to grant PSP
• Generally, project specific permission is granted to allow bids on contracts in an amount that is one financial level above the contractor’s current prequalification financial level
• A contractor who has not submitted certified audited financial statements may not receive PSP to bid any job over $3 million regardless of its bonding capacity, size of jobs or other circumstances
• Requests for PSP must be submitted to the Board no later than ten (10) days prior to the bid opening, or within the time specified by the contract documents
JOINT VENTURES

• If two or more contractors wish to form a joint venture to bid on a City contract, the joint venture itself must be prequalified

• At least one member of the joint venture must be prequalified individually

• Another joint venture member must be individually prequalified only if:
  • Its participation in the joint venture exceeds $1 million
  • Its financial capability, in terms of its prequalification limits, is being considered in determining the amount of the contract upon which the joint venture may be prequalified to bid
DETERMINING THE FINANCIAL CAPABILITY OF A JOINT VENTURE

• The maximum dollar amount of a contract on which a joint venture may be prequalified to bid is determined as follows

  • An amount equal to the sum of the current limits for each of the members in the joint venture which are individually prequalified

  • An amount not greater than the current prequalification limit of the Contractor who is a joint venture member and whose ownership interest in the joint venture is at least 51%
QUESTIONS?
AGENDA

- Contractor Class Schedule
- Technical Review Committee
- Design Review Committee
- Design Principles
CONTRACTOR CLASS SCHEDULE

Business Education Courses

Sponsored by Airport Infrastructure Maintenance (AIM) Division

Denver International Airport’s AIM Development Office is offering classes to contractors about providing services at DIA. The classes cover how to set up your company successfully to get airport projects, what it means to do work at an international airport, and special project prerequisites. Some classes will talk about upcoming 2018 projects, and others will review AIM Development processes and requirements. These classes are great for networking with industry experts and other entrepreneurs in the community. To register, visit http://business.flydenver.com/businessEducation.asp.

All sessions will be at WorldPort, Conference Room H, 24735 East 75th Ave., Denver.

DAY 1 - AIM Small Business Enterprise (SBE) Bonding Program
Oct. 27, 2015 | 8:30 a.m. - 4:30 p.m.
Lunch provided by Commerce Hub
Partnering with the U.S. Department of Transportation to provide Day 1 of a two-day program. Day 1 consists of three classes that focus on the Bonding Education Program, making a business plan, developing a business team and marketing basics, construction accounting, banking relationships, bonding insurance, and meeting with local surety agents.

→ Register with Curt Olson via email at: curtis@westcontractors.com, or via phone at: (303) 800-3711.

DAY 2 - AIM SBE Bonding Program
Nov. 8, 2015 | 8:30 a.m. - 4:30 p.m.
Lunch provided by Commerce Hub
Day 2 of the SBE Bonding Education Program includes: estimating and bidding with a guest speaker from Saunders Construction; how to deal with disputes and claims with a member of the Denver City Attorney’s staff; and how to best manage growth of a small business enterprise. Participants in the two-day program will receive a Certificate of Participation from USDOT.

→ Register with Curt Olson via email at: curtis@westcontractors.com, or via phone at: (303) 805-3711.

Upcoming AIM Infrastructure Projects
Nov. 18, 2015 | 1 p.m. - 4 p.m.
The director and supervisors who manage AIM civil infrastructure projects will review upcoming 2016 design and construction projects.

Upcoming AIM Facility Projects
Dec. 5, 2015 | 1 p.m. - 4 p.m.
The director and supervisors who manage AIM facility projects will review upcoming 2016 design and construction projects.
CONTRACTOR CLASS SCHEDULE

Business Education Courses
Sponsored by Airport Infrastructure Maintenance (AIM) Division

Denver International Airport’s AIM Development Office is offering classes to contractors about providing services at DIA. The classes cover how to set up your company successfully to get airport projects, what it means to do work at an international airport, and special project permitting. Some classes will focus on upcoming ODOT projects, and others will review AIM development processes and requirements. These classes are great for networking with industry experts and other entities in the community.

All sessions will be at WorldPort, Conference Room K, 24735 East 75th Ave., Denver.

DAY 1 - AIM Small Business Enterprise (SBE) Bonding Program
Oct 27, 2015
9:30 a.m. - 4:30 p.m.

Each session provided by Commerce Hub
Partnering with the U.S. Department of Transportation to provide Day 1 of a two-day program. Day 1 consists of three classes that focus on the bonding education program, forming a business plan, developing a business brand and marketing basics, accounting, building relationships, bonding insurance, and meeting with local bond agents.

DAY 2 - AIM SBE Bonding Program
Nov 5, 2015
8:00 a.m. - 4:00 p.m.

Each session provided by Commerce Hub
Day 2 of the AIM Bonding includes continuing education and networking with a guest speaker from Saunders Construction, how to best market services, and a member of the Denver City Attorney’s staff, and how to best manage growth of a Small Business Enterprise. Participants in the two-day program will receive a Certificate of Participation from the U.S. DOD.

Upcoming AIM Infrastructure Projects
Dec 9, 2015
1 p.m. - 4 p.m.
The director and supervisors who manage AIM’s infrastructure projects will review upcoming 2016 design and construction projects.

Upcoming AIM Facility Projects
Dec 9, 2015
1 p.m. - 4 p.m.
The director and supervisors who manage AIM’s facility projects will review upcoming 2016 design and construction projects.

Basics for Required Computer Programs – Afternoon 1
Jan 13, 2016
1 p.m. - 2:30 p.m.

Basics for Required Computer Programs – Afternoon 2
Jan 20, 2016
1 p.m. - 2:30 p.m.

Project Closeout Process
Feb 9, 2016
1 p.m. - 4 p.m.

Collaboration and Project Delivery Methods with AIM
Feb 23, 2016
1 p.m. - 4 p.m.

Airport Committee Functions
Mar 8, 2016
1 p.m. - 4 p.m.
The Capital Planning Committee (CPC), Design Review Committee (DRC), and Technical Review Committee (TRC)
CONTRACTOR CLASS – US DOT BONDING EDUCATION PROGRAM

U.S. DEPARTMENT OF TRANSPORTATION

DIA’S AIRPORT INFRASTRUCTURE MANAGEMENT (AIM)
CONTRACTORS AND SUBCONTRACTORS
BONDING EDUCATION PROGRAM

LAST CALL! Register Today for this Bonding Education Program

Denver International Airport has teamed up with US DOT to host this free Airport Infrastructure Management (AIM) Contractors and Subcontractors Bonding Education Program. This class will specifically address the airport operating environment. It is tailored for AIM construction contractors and subcontractors that are either currently contracting or wanting to compete for any type of AIM construction-related contracts, e.g. facilities, heavy highway or airfield projects.

You will hear from top executives in construction accounting, contract negotiation, dispute resolution, strategic planning and project estimating. You will also meet one-on-one with a bonding agent to determine a plan to increase your bonding capacity.

Enormous potential for growth

"This bonding class has been an invaluable learning experience. I think the growth our business will attain from this will be enormous."

Martin Nava, Jose Adalberto Brothers, Inc.

Would I encourage other people to come? Yes, yes, yes!

"I’ve learned a lot about contracts, bonding and accounting. We got good advice from some very smart people. We got a lot of insight into business. Would I encourage other people to come? Yes, yes, yes. I strongly recommend it. The people were fantastic."

Roger Boardman, MidState Concrete, Inc.

When: Two Days - Oct. 27 & Nov. 5
Time: 8:30 a.m. - 4:30 p.m.
Where: Worldport - Conference Room H
24335 East 75th Avenue
Denver, CO 80249 (near the airport)

Cost: FREE (to qualified businesses)

Register by Oct. 13 to:
email curtis@nwstdepen.com
or call 303.809.3711

Space is limited - You must pre-register.
Registration deadline is October 13!

This is a program of the U.S. DOT Small Business Services and the Surety & Fidelity Association of America.
For information about US DOT Small Business Services, go to
WORLD PORT
COLLABORATION

• DEN is now members of:
  • AIA, American Institute of Architects
  • USGBC, US Green Building Council
  • AGC, Association of General Contractors
  • DBIA, Design Build Institute of America
  • ACPA, American Concrete Pavement Association
  • CAPA, Colorado Asphalt Paving Association
  • ACI, American Concrete Institute

• We’re learning more and more about effective design build strategies and how to work within the City process with the MOD 4E Parking Structure and Fire Station 35

• In our Collaboration class, we have experts on collaboration speaking to the benefits and lessons learned. Julie Wienberg will summarize the process of our current Great Hall Renovation project
SPECIALIZATION – FIRM CENTRIC FOCUS

Early 20th Century: Project Centric Focus
Present Day: Firm Centric Focus

Source: 2015 A3LC Curt F. Dale Seminar Presentation
COMMUNICATION IN SILOS

Source: 2015 A3LC Curt F. Dale Seminar Presentation
COMMUNICATION – LOST IN TRANSLATION

Source: 2015 A3LC Curt F. Dale Seminar Presentation
A GOAL: COMMUNICATION IN COLLABORATIVE DELIVERY
In 2014, as part of a City’s Peak Performance initiative, DEN decided to improve the process of getting designs reviewed more regularly with a consistent system. The process was implemented in early 2015.

- We meet every 2 weeks
- We write down comments and publish minutes
- We make motions and require a quorum
- We don’t design, we critique, largely based upon our Design Principles
- We are represented by many divisions in the airport
- We’re getting a lot of good quality work started now
- We’re gaining momentum
Design Review Committee
Standards & Procedures

DENVER INTERNATIONAL AIRPORT
October 2015
INTENT OF THE DESIGN REVIEW PROCESS

To ensure that the proposed projects and designs are compatible with, and enhance, the aesthetic intent and design quality of airport facilities and way-finding systems
DEN BRAND & EXPERIENCE PRINCIPLES

A comprehensive collection of inspirational design directives for doing business at Denver International Airport
DEN DESIGN CRITERIA

• Overall Design Aesthetic
• Passenger Facing Elements
• Materials
• Signage
• Circulation
• Lighting
• Landscape
TIERED DESIGN REVIEW PROCESS

Projects for Review

- New construction
- Remodeling/renovation modification of existing spaces, structures and facilities
- Interior and exterior signage (other than regulatory traffic signs)
- Advertising
- Temporary displays/non-lease holder areas
- Art Exhibits
  - Art exhibits will follow the CCD Public Art Ordinance & Temporary Exhibit Guidelines

Chief Executive Officer Approval
WORKFLOW OF APPROVAL PROCESS
DESIGN REVIEW COMMITTEE

DRC Chair Role:
• Leads the DRC review and meeting
• Ensures governances of documented process, policies and standards
• Approves agenda items, based on submission completeness
• Makes sure CEO review takes place

DRC Member Role:
• Aesthetic and functional design-approval authority for all airport facilities and tenant improvements
• Reserves the right to reject any proposed designs which, in the DRC’s opinion, are considered to be in aesthetic conflict with the base-building design
• Each member may assign alternate as needed to participate in their absence and coordinates with DRC Coordinator
DESIGN REVIEW MEETINGS

Meeting Schedule
• Every other Thursday, starting at 2:00 pm in the Airport Office Building, 9th Floor, Executive Office Conference Room, at 8500 Pena Boulevard, Denver, CO 80249

Tenant/Designer Presentations
• No more than 10 minutes allocated
• Exceptions may be made at the discretion of the DRC Chair depending on the nature and complexity of the project being presented

Information Items
• Scheduled in increments of a maximum of 5 minutes and presented by the DRC City Liaison
• These items are not seeking approval and do not require action by the DRC
REVIEW BY CONSENT

• Criteria
  • Projects with complete application submissions as determined by City Liaison and approved by DRC Chair
  • Projects that clearly meet design guidelines with City Liaison recommendation for approval and with no recommended conditions.
  • No known opposition to project
  • Routine and non-controversial items
    • Examples could include: Approvals of signs which clearly meet design guidelines, Re-submittals of projects that clearly have met DRC comments of previous submission
DESIGN REVIEW COMMITTEE ACTIONS

• The DRC will either:
  • Approve the design
  • Approve a design subject to specific modifications, or;
  • Will deny the design and have the applicant revise and resubmit
SUBMISSION REQUIREMENTS: DOCUMENTS

• High Quality Renderings
  • A minimum of two renderings (more recommended) in electronic format (PDF) to show the Applicant’s design intent

• Floor and Reflected Ceiling Plan
  • One floor plan and one reflected ceiling plan
SUBMISSION REQUIREMENTS: DOCUMENTS

• Materials Board
  • Physical material samples indicating color, form and texture - material samples shall be securely affixed and applied adhesive shall not affect the material appearance

  • Material key plan that clearly relates to the material application in renderings for visual understanding

• Renderings
  • The renderings in conjunction with the materials board shall be of such a high quality as to accurately and clearly depict the design intent of the tenant’s proposal.
CONCEPT SUBMITTAL CHECKLIST

• Location Plan
  • Indicate which concourse and on which level the space is located, including passenger/customer flow

• Floor Plan
  • Include graphic scale

• Ceiling Plan
  • Call-out all ceiling materials, light fixtures and prominent elements

• Renderings
DESIGN REVIEW DOCUMENTS

- DEN Brand and Experience Principles
- Design Review Committee Standards & Procedures
- DRC Bylaws
- Tenant Development Guidelines
- Resource documents can be found at flydenver.com
DEN Design Principles

DEN Design Principles is a comprehensive collection of inspirational design directives for doing business at Denver International Airport. It was published in September of 2015.

DEN Design Principles
DESIGN PRINCIPLES – GUIDING CHANGE

• Collection of great design “patterns”
• Translation of our ‘brand’ into visual aides
• Collection of Design “Opportunities” and “Considerations” important to DEN
• Defines a way of Design Thinking
DESIGN REVIEW COMMITTEE

• Good design comes from “Visioning” to assure alignment between ‘brand’ and finished product.
• Common Basis for Communication of Design “Opportunities” and “Considerations”
• Training Design Review Committee members to be consistent with Design criteria and critiques
• Most beneficial as a book to communicate our idea of design to designers designing space and form in and around our airport.
WHERE TO FIND DESIGN PRINCIPLES
• We arrange quarterly meetings with vendors to present products that may have application at DEN
• We have a panel representing divisions of the airport that do, maintain, or sponsor projects
• We allow a presentation to the board, we ask questions in a collaborative fashion
• We respond with our findings from a technical point of view
• We may make recommendations to the specification committee, if the materials can be considered by our designers and contractors
FACILITY SERVICES

• Facility Services is responsible for the management of Design and Construction of our buildings
• We cover a large range of project types
• Concourse Expansions and Terminal Improvements
• Office remodels
• Conveyances, Elevators, Escalators, Power Walks
• Parking structures
• Deicing buildings
• Fire stations
• Cargo buildings & associated infrastructure work
UPCOMING CONTRACTS

• In the next few months, Facility Services will have RFPs for
  • Three separate On-Call General Construction Contracts
    • Each will have a maximum liability of $25 million
  • Two separate Defined Pool General Construction Contracts
    • Each will have a maximum liability of $2 million
• Competitive Bid for Jeppesen sign improvements
CURRENT ON-CALL PROJECTS
CURRENT ON-CALL PROJECTS
CURRENT ON-CALL PROJECTS
CURRENT ON-CALL PROJECTS
CURRENT ON-CALL PROJECTS
MEP SERVICES DEPARTMENT
THE YEAR IN REVIEW

LEE WALINCHUS, MANAGER OF MEP SERVICES
DENVER INTERNATIONAL AIRPORT
OCTOBER 19, 2015
MODERNIZATION

CUP MODERNIZATION

- Phase 1 - Boiler 5 (Back-up Boiler) purchase and installation (In Construction)
- Phase 2 - Boiler 2 replacement (On Call Design RFP)
- Phase 3 - CUP Heating water system Analysis and Design (In Design)
- Phase 4 - CUP systems Analysis and design (In Design)
- Phase 5 - CUP R-22 replacement (Design in 2016)
- Phase 6 - TBD by phases 3, 4 & 5
- Phase 7 - Cooling Tower waterproofing and lining (TBD)
- Phase 8 – CUP Electrical Upgrades (TBD)
BOILER #2 REPLACEMENT

- On Call Design – RFP out now
- Competitive bid construction
- Complete next year
CUP R-22 REPLACEMENT

• On Call Design - 2016, On Call Construction 2016 - 2020
CHILLER PCA ROOM REPLACEMENT

• On Call Design 2016, On Call Construction 2016-2017
LIFT STATION #1 IMPROVEMENTS

- On Call Design (current), Competitive Bid Construction,
  Complete next year
MISCELLANEOUS LIGHTING IMPROVEMENTS

• Airport Wide projects for interior and exterior lighting
QUESTIONS?
DIA Day UPCOMING PROJECTS IN 2016
AIRLINES, RENTAL CARS, TELECOM AND SIGNAGE

JERRY OLSON - ENGINEERING
DENVER INTERNATIONAL AIRPORT
October 19th, 2015
Airlines

Frontier

United

Southwest

American Airlines

Delta
RENTAL CARS

Hertz

Enterprise Rent-A-Car

AVIS
TELECOM

- AT&T
- Verizon Wireless
- Sprint
- T-Mobile
SIGNAGE

• Secondary wayfinding on Pena Boulevard and local streets

• Terminal complex signage upgrade
2016 AIRFIELD PROJECTS

KIMBERLY WATANABE, AIRSIDE SUPERVISOR
DENVER INTERNATIONAL AIRPORT
OCTOBER 19, 2015
TAXIWAY EC PAVEMENT REHABILITATION
JUNE – AUGUST, 2016

Description

• Remove and replace deteriorated concrete slabs in Taxiway EC
• Replace airfield lighting components that were removed with the pavement
• Project will also include asphalt shoulder repairs, the rehab of a short segment of Allium Drive, and providing drainage to electrical manholes
INSTALL 2 NEW AIRFIELD SIGN AT TAXIWAY F & F7

Description:
- Install two new airfield signs at the intersection of Taxiways F & F7 to enhance safety and to mitigate a surface deviation by a vehicle.
VANDRIVER STREET AT TAXIWAY AA PAVEMENT REHABILITATION MAY – JUNE, 2016

Description:

- Remove and replace deteriorated concrete pavement on the Vandriver VSR south of TW AA
- An opportunity may exist to reduce the amount of curvature in the existing alignment
VANDRIVER STREET DRAINAGE IMPROVEMENTS
JUNE-JULY, 2016

Description:
• This project will provide drainage improvements to Vandriver Street
• During a significant rain event the existing drainage system easily become overwhelmed with the amount of storm water runoff
• A new drainage system will be constructed that can adequately carry the existing storm water runoff
AIRFIELD DRAINAGE IMPROVEMENTS – ON GOING

Description:
- Drainage channels work will be performed
- Rehabilitate or replace deteriorated structures
- Repair erosion in existing drainage channels
Description:
- The Portland Cement Concrete Panels on Concourses A, B and C aprons and associated taxiways are exhibiting distresses. Panels will be removed and replaced.
ARFF STATION 3 PAVEMENT REHABILITATION

Description:
- Remove and replace deteriorated concrete slabs in front of ARFF Station #3
- This work will be designed “in House”
GATE APRON REHABILITATION & DRAINAGE IMPROVEMENTS MARCH – OCTOBER, 2016

• Pavement around the gates at Concourses B & C have deteriorated
• Pavement will be demolished and replaced
• Seven year program; 2016 will be the second season of construction
LANDSIDE ENGINEERING PROJECTS

MICHELLE MARTIN, LANDSIDE ENGINEERING SUPERVISOR
DENVER INTERNATIONAL AIRPORT
10/19/15
BRIDGE REHABILITATION PHASE II

- Replace the existing curb, bridge rail and approach/departure guardrail on ten structures
- Structures on inbound and outbound Pena Boulevard over the West Fork of Second Creek, Tower Road, Picadilly Road, Gun Club Road and Jackson Gap Street
• 78th Avenue repairs include erosion repairs and repair to the roadway
ROAD EROSION 2015 - 2016

- 78th Avenue erosion
ROAD EROSION 2015 - 2016

- 78th Avenue erosion
ROAD EROSION 2015 - 2016

- Libra Tributary work
ROAD EROSION 2015 - 2016

- Libra Tributary work
ANNUAL PAVEMENT REHABILITATION

• Spall Repairs on Peña Blvd, 75th Ave, 78th Ave
ANNUAL PAVEMENT REHABILITATION

- Crack Sealing – Airside Employee Parking lot, 71st Ave & Jackson Gap St
ANNUAL PAVEMENT REHABILITATION

- Panel Replacements on Peña Blvd, 75th Ave, 78th Ave, other secondary roads
- East/West Economy Parking Lots, Mt. Elbert Parking Lot
- Full depth removal/replacement of concrete pavement panels
ANNUAL PAVEMENT REHABILITATION

• 3” Asphalt Overlay on 75th Avenue
• Manhole Rehabilitation Landside – repair & rehabilitation of 148 sanitary manholes & 8 pipe segments. To start in December, 2015